

TEST TOOLS CATALOGUE

2016-2017



FLUKE

FLUKE VoltAlert

CAT 20 1000 V
SENSITIVITY RANGE
10-1000 VAC

FLUKE U.S.

New products from Fluke

Fluke Connect® Wireless Team

**See it. Save it. Share it.
All the facts, right in the field.**



Working with over 40 different Fluke Test Tools; Fluke Connect® allows you to identify and diagnose problems quickly and confidently, while securely sharing your data when you want, with who you want all through the Fluke Connect App*.

For information on Fluke Connect enabled Test Tools, see pages 2-11.



Fluke TiS Performance Series Infrared Cameras

See more detail with improved resolution.

- Up to 2.5 times¹ more pixels and 70%¹ better D:S (Distance to Spot)
- Reduce the amount of time it takes to get an in focus image with manual or fixed focus options
- Securely store and manage your images
 - 4 GB internal memory and 4 GB micro SD card²
 - One touch image review
 - Document critical information with your infrared image using IR-PhotoNotes™ or voice annotation²

For information on the Fluke TiS Performance Series Infrared Cameras, see pages 55-56.

¹ Compared to the Fluke Ti1XX infrared cameras
² Features vary by model, see specifications

Fluke 370 FC Series True-RMS Wireless AC/DC Clamp Meters

Advanced troubleshooting performance.

- Fluke Connect® available for Fluke 376, 375 and 374 models only.
- Log and trend measurements to pinpoint intermittent faults
- Capture measurements outside the arc flash zone with Bluetooth connectivity to your Apple® or Android® devices
- Transmit results wirelessly via Fluke Connect Measurements app
- Create and send reports right from the field
- The iFlex™ flexible current probe allows easy measurements around wires in tight spaces

For information on the Fluke 370 FC Series Clamp Meters, see page 29.



Fluke 1587 FC Insulation Multimeter High-performance 2-in-1 Insulation DMM

Four powerful diagnostic functions enabled with the Fluke Connect Measurements app:

1. PI/DAR timed ratio tests with TrendIt™ graphs identifies problems faster
2. Memory storage through Fluke Connect eliminates writing down results, reduces errors and saves data for historical tracking
3. Temperature Compensation establishes accurate baselines and relevant historical comparisons

For information on the Fluke 1587 FC Insulation Multimeter, see page 70.

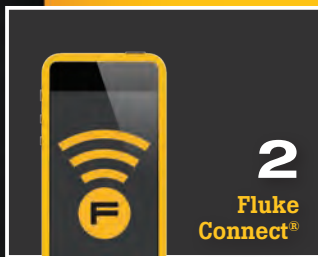
*Fluke Connect® and some models are not available in all countries. Contact your local Fluke Representative for more information.

Keep yourself updated with Fluke's latest new product releases
www.fluke.com/sg/newproducts

CONTENTS

FLUKE®

Fluke Corporation is the world leader in compact and professional electronic test tools. From industrial maintenance to commercial building operations, Fluke tools deliver the testing and troubleshooting capabilities to keep the world up and running.



2
Fluke
Connect®



12
Digital
Multimeters



25
Bench
Multimeters



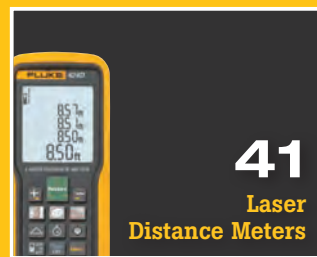
26
Clamp
Meters



33
Battery
Testers



35
Electrical
Testers



41
Laser
Distance Meters



43
Infrared
Thermometers



51
Infrared
Cameras



63
Indoor
Air Quality



68
Insulation
Resistance Testers



73
Earth
Ground Testers



76
Multifunction
Installation Testers



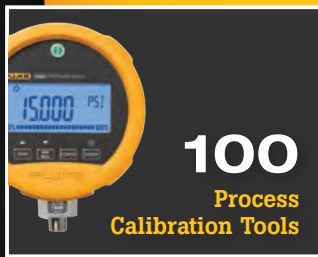
79
Portable
Appliance Testers



81
Power
Quality Analysers



93
ScopeMeters



100
Process
Calibration Tools



124
Vibration



127
Laser
Alignment



129
Radiation



131
Intrinsically
Safe



133
Fluke Kits



137
Accessories



148
Training
Centre



FLUKE CONNECT®



SEE IT. SAVE IT. SHARE IT.

All the facts, right in the field.



Share from anywhere

Stay on the same page even when you and your team are in different places, only with ShareLive™ video call. Securely connect and collaborate with others, so they can see what you see. Get approvals without leaving the field.



Save Time Reporting

Make better decisions faster than before. Organise your measurements by asset in one location with EquipmentLog™ history. Measure once, and cut out the paper with AutoRecord™ measurements.

When your measurements are associated with equipment, there is no need to record in the field and then transcribe into an office computer. Make decisions quicker than before by viewing temperature, mechanical, electrical and vibration measurements from one location.

Troubleshoot faster

Instantly trend and monitor intermittent problems with TrendIt™ graphs so you can easily identify trends and stop problems before they happen. Seeing is believing—trend data over time and prove your point.



Lock down your data

The Fluke Cloud™ storage infrastructure has been built to be one of the most flexible and secure cloud computing environments available today. Our cloud service provider uses state-of-the-art electronic surveillance, multi-factor access controls and 24/7 data centre staffing to make Fluke Cloud one of the most flexible and secure cloud computing environments available.

Learn More



www.fluke.com.sg

Reasons to connect your tools with Fluke Connect®



WORK FASTER

The Fluke Connect® app helps you conduct routine maintenance tasks and solve problems faster than ever before. Log, track, and share equipment records without leaving the plant floor. Troubleshoot issues from afar with live measurements and video; and securely store and access all of your images and data. With Fluke Connect enabled tools, you can do all of this using your phone—anytime, anywhere.



WORK MORE COLLABORATIVELY

With the Fluke Connect app and enabled tools, you can collaborate with others no matter where they are. See what your team is seeing, and vice versa. Share and watch live video and readings to troubleshoot problems from any location; and save yourself the time and effort of going to the plant floor or back to the office every time there's a question or issue.



REDUCE YOUR PAPERWORK

The Fluke Connect app allows you to enter data, create reports, and compare past with present findings using the app on your phone. Create and share equipment records on the spot and easily access and graph all of your maintenance data to identify trends and make fast decisions. With Fluke Connect tools, you can throw away the clipboard and say goodbye to manual data entry.



IMPROVE SAFETY

The Fluke Connect app and enabled tools improve the safety and convenience of electro-mechanical maintenance and troubleshooting. Take live readings of energised circuits and operational mechanical equipment from a safe distance and correlate different measurements (i.e. temperature and amperage or three-phase amperage) by using multiple instruments simultaneously (i.e. temperature and current measurement modules).



EXPERIENCE MORE THAN CONNECTIVITY

Collaborate and troubleshoot with others using ShareLive™ video call, so they can see what you are seeing. Easily create, access and manage maintenance records with EquipmentLog™ history. Identify and monitor deteriorating equipment and maintenance needs with TrendIt™ graphs and lock down your data while making it accessible anytime, anywhere using Fluke Cloud™ storage.



UTILISE THE WORLD'S LARGEST SUITE OF CONNECTED TEST TOOLS

Fluke Connect is already the world's largest wireless test and measurement system, and it's growing. More than 40 Fluke test tools can be connected including a range of infrared cameras, digital multimeters, insulation resistance testers, power quality analysers, scopemeters and vibration testers; that all come with the legendary Fluke quality, ruggedness and support.

The FREE App that turns your phone into a Fluke Tool. DOWNLOAD THE FREE APP!

By using the Fluke Connect® app, you can efficiently and safely capture, store and share maintenance data without leaving the field. You can securely connect and collaborate with others, so they can see what you see.

Download the Fluke Connect App FREE today



Fluke a3000 FC, a3001 FC, a3002 FC Wireless Current Clamp and Modules



Fluke a3000 FC

a3000 FC Wireless AC Current Clamp Module

A True RMS Current Clamp Meter that wirelessly relays measurements to other Fluke Connect® enabled master units.

- Measure up to 400 A AC
- Logging function: record and save up to 65,000 readings
- Use as a standalone meter or as part of a system
- Inrush function
- Three year warranty
- Weight: 0.22 kg



a3001 FC Wireless iFlex™ AC Current Module

A iFlex™ AC Current Module that wirelessly relays measurements to other Fluke Connect enabled master-units. It allows you to measure around awkward sized conductors or get into tight spaces and makes wire access easier.

- Measure up to 2500 A AC
- Logging function: record and save up to 65,000 readings
- Use as a standalone meter or as part of a system
- Inrush function
- Three year warranty
- Weight: 0.22 kg



a3002 FC Wireless AC/DC Current Module

For use with the i410 or i1010 AC/DC current clamps (sold separately). Wirelessly relay measurements from the i410 or i1010 clamp accessory to other Fluke Connect™ enabled master units.

- Measure up to 400 A AC or 400 A DC with i410
- Measure up to 600 A AC or 1000 A DC with i1010
- Use as a meter alone or as part of a system
- Record and save up to 65,000 readings
- Three year warranty
- Weight: 0.255 kg



Fluke a3001 FC



Fluke a3002 FC

Specifications

| | a3000 FC | a3001 FC | a3002 FC |
|--|--|--|---|
| Range | 0.5 A to 400.0 A AC | 0.5 A to 2500 A AC | up to 600 A AC and 1000 A DC |
| Resolution | 0.1 A | | |
| Accuracy | 400.0 A: 2 % ± 5 digits (10Hz to 100Hz), 2.5 % ± 5 digits (100Hz to 500Hz) | 3 % ± 5 digits (5Hz to 500Hz) | AC: 1.0% + 3 DC: 0.5% + 3 (45Hz to 1000Hz) |
| Inrush | Max displayed reading: 999.9A | | |
| Crest Factor (50Hz/60Hz) | 3 at 500 A, 2.5 at 600 A, 1.42 at 1000 A, add 2 % for C.F. > 2 | 3.0 at 1100 A, 2.5 at 1400 A, 1.42 at 2500 A, add 2 % for C.F. > 2 | |
| Maximum voltage between terminal and earth ground (module) | | | 30 V DC or AC RMS |
| LCD w/backlight | 3 ½ digits | | 3 ½ digits, 6000 counts, 4/sec update rate |
| Log rate/interval | 1 sec minimum/adjustable by PC or FC App | | |
| Battery type/life | 2 AA, NEDA 15 A, IEC LR6 / 400 hours | | |
| RF communications | 2.4 GHZ ISM Band | | |
| RF communication range | Open air, unobstructed: Up to 20 m. Obstructed, sheetrock wall: Up to 6.5m. Obstructed, concrete wall or steel electrical enclosure: Up to 3.5 m | | |
| Operating & Storage temp | -10 °C to +50 °C / -40 °C to +60 °C | | |
| Temperature coefficient | Add 0.1 X (specified accuracy) / °C (<18 °C or >28 °C) | | |
| Operating humidity | 0 % to 90 % (0 °C to 35 °C), 0 % to 75 % (35 °C to 40 °C), 0 % to 45 % (40 °C to 50 °C) | | |
| EMC | EN 61326-1:2006 | | |
| Safety compliance | IEC 61010-1, 600 V CAT III, 3rd edition Pollution Degree 2 | IEC 61010-1, 600 V CAT IV/1000 V CAT III, 3rd edition Pollution Degree 2 | |
| Safety rating | CAT III 600 V | CAT IV 600 V, CAT III 1000 V | |
| Certifications | CSA, CE, FCC: T68-FBLE IC: 6627A-FBLE | | |
| Ingress Protection rating | IP30 | IP42 | |
| Pollution Degree | 2 | | |
| Jaw Opening | 64 mm | 25.4 cm coil | |
| Size (HxWxD in cm) | 16.5 x 6.35 x 3.56 | 16.5 x 6.35 x 1.4 | 16.0 x 6.6 x 3.8 |

Recommended Accessories



i410/i1010
Current Clamp
(for a3002 FC)
See page 142



PC ADAPTER
Fluke Connect®
Wireless PC Adapter
See page 145

Recommended Kits

Buy more, Save more



Fluke Wireless a3000 FC Current Clamp Kit



Fluke Wireless a3001 FC iFlex™ AC Current Kit

For more details see page 133

Included Accessories

iFlex™ i2500 Flexible Current Probe (a3001FC), Magnetic Hanging Strap (a3002FC)

Ordering Information

| | |
|-------------------------|----------------------------------|
| FLK-A3000 FC | Wireless AC Current Clamp Module |
| FLK-A3001 FC | Wireless iFlex AC Current Module |
| FLK-A3002 FC | Wireless AC/DC Current Module |
| FLK-A3000 FC KIT | Wireless AC Current Clamp Kit |
| FLK-A3001 FC KIT | Wireless iFlex AC Current Kit |

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke a3003 FC and a3004 FC Wireless Current Clamp and Modules



Fluke a3003 FC

a3003 FC Wireless 2000 A DC Current Clamp Meter

The a3003 is the tool of choice for high current DC ammeter applications that require measurements up to 2000 A DC. The extra-wide jaw easily clamps around large conductors, typically found in mining, utility, marine, rail or other heavy manufacturing industries where large DC currents or large current carrying cables are found.

The a3003's unique jaw construction allows for a wide measurement range meaning that you can accurately make measurements from 10 A DC to 2000 A DC.

- Measures from 10 A to 2000 A DC
- Large jaw size (64 mm) for measuring large, high current conductors
- Logging function: record and save up to 65,000 readings
- Three year warranty
- Weight: 0.65 kg



N10140



Fluke a3004 FC

a3004 FC Wireless 4-20 mA DC Clamp Meter

A fully functional current clamp meter the a3004 tests or troubleshoots 4-20 mA control loops used with drive systems, PLC's, or building energy management systems. Now you can troubleshoot and repair 4-20 mA loops without breaking the loop or bringing down the system and save time.

- Send data to your laptop and go from logging to analysis and diagnosis.
- Use the Fluke Connect® wireless USB adapter to collect logged data from remote modules by walking past a working module and downloading logged data.
- Perform for analysis with your PC and share the results using Fluke Cloud™ storage and ShareLive™ video call.
- Three year warranty
- Weight: 0.299 kg



N10140

Recommended Accessories



PC ADAPTER
Fluke Connect®
Wireless PC Adapter
See page 145

Download the
**FREE Fluke
Connect App
today**



Specifications

| | a3003 FC | a3004 FC |
|---------------------------|--|---|
| Range | 1.0A to 999.9 A DC 1000 A to 2000 A DC | 0.05 mA to 20.99 mA DC 21.0 mA to 99.9 mA DC |
| Resolution | 0.1 A 1 A | 0.01 mA 0.1 A |
| Accuracy | 2% ± 5 digits 2.5% ± 5 digits | 0.2% ± 5 digits 1.0% ± 5 digits |
| LCD w/backlight | 3½ digits | |
| Log rate/interval | 1 sec minimum/adjustable by PC or front pannel | |
| Battery type | 2 AA, NEDA 15 A, IEC LR6 | |
| Battery life | 120 hours | 45 hours |
| Memory | Record up to 65,000 readings | |
| RF communications | 2.4 GHz ISM Band | |
| RF communication range | Open air, unobstructed: Up to 20 m, Obstructed, sheetrock wall: Up to 6.5 m, Obstructed, concrete wall or steel electrical enclosure: Up to 3.5 m | |
| Operating Temperature | -10°C to +50°C | |
| Storage Temperature | -40°C to +60°C | |
| Temperature coefficient | Add 0.1 X (specified accuracy) /°C (< 18°C or > 28°C) | |
| Operating humidity | 90% at 35°C, 75% at 40°C, 45% at 50°C | |
| Altitude | Operating 2,000 m, Storage 12,000 m | |
| EMC | EN 61326-1:2013 | |
| Safety compliance | IEC 61010-1, CAT IV 600 V, CAT III 1000 V, 3rd edition | |
| Safety rating | CAT IV 600 V, CAT III 1000V | |
| Certifications | cCSAus, CE, FCC: T68-FBLE IC: 6627A-FBLE | |
| Ingress Protection rating | IP42 | |
| Jaw Opening | 64 mm | 4.5mm |
| Size (HxWxD in cm) | 16.5 x 6.35 x 3.56 | 16.5 x 6.35 x 1.4 |

Included Accessories

2000 A Clamp Attachment (a3003),
4-20 mA Clamp Attachment
(a3004), Batteries, Hanging Strap,
Quick Start Guide

Ordering Information

FLK-A3003 FC Wireless 2000 AMP
DC Module

FLK-A3004 FC Wireless 4-20 mA
DC Module

Contact your local distributor for
price and availability.

www.fluke.com/sg/wtb

Fluke v3000 FC AC and v3001 FC DC Wireless Voltage Modules



Fluke v3000 FC



N10140

v3000 FC Wireless True-RMS AC Voltage Module

A fully functional True-RMS Voltage Meter that wirelessly relays AC voltage measurements to other Fluke Connect® enabled master units.

- True-RMS AC Voltage Module
- Measure up to 1000 V
- Use as a standalone meter or as part of the system
- Record and save up to 65,000 readings
- Weight: 0.22 kg

| AC Voltage | | | |
|--------------------|------------|---------------------------|-----------------|
| Range ¹ | Resolution | Accuracy ^{2,3,4} | |
| | | 45 Hz to 500 Hz | 500 Hz to 1 kHz |
| 6.000 V | 0.001 V | 1.0 % + 3 | 2.0 % + 3 |
| 60.000 V | 0.01 V | | |
| 600.0 V | 0.1 V | | |
| 1000 V | 1 V | | |

¹ All AC voltage ranges are specified from 1 % of range to 100 % of range.
² Crest factor of ≤ 3 at full scale up to 500 V, decreasing linearly to crest factor ≤ 1.5 at 1000 V.
³ For non-sinusoidal waveforms, add -(2 % of reading + 2 % full scale) typical, for crest factor up to 3.
⁴ Do not exceed 106 V-Hz.



Fluke v3001 FC



N10140

v3001 FC Wireless DC Voltage Module

A fully functional DC Voltage Meter that wirelessly relays DC voltage measurements to other Fluke Connect enabled master units.

- Measure up to 1000 V DC
- Use as a standalone meter or as part of the system
- Record and save up to 65,000 readings
- Weight: 0.255 kg

| DC Voltage | | | |
|------------|----------|------------|------------|
| Function | Range | Resolution | Accuracy |
| mV DC | 600.0 mV | 0.1 mV | 0.09 % + 3 |
| V DC | 6.000V | 0.001 V | 0.09 % + 3 |
| | 60.00 V | 0.01 V | |
| | 600.0 V | 0.1 V | |
| | 1000 V | 1 V | 0.15 % + 2 |

Specifications

| v3000 FC / v3001 FC | |
|--------------------------------|---|
| LCD w/backlight | 3½ digits, 6000 counts, updates 4/sec |
| Battery type | 2 AA, NEDA 15 A, IEC LR6 |
| Log rate/interval | Adjustable by PC from 1 sec to 1 hr, default 1 min |
| Battery life | 400 hours |
| Memory | Record up to 65000 readings |
| RF communications | 2.4 GHZ ISM Band |
| RF communication range | Open air, unobstructed: Up to 20 m, Obstructed, sheetrock wall: Up to 6.5 m, Obstructed, concrete wall or steel electrical enclosure: Up to 3.5 m |
| Operating temperature | -10 °C to +50 °C |
| Storage temperature | -40 °C to +60 °C |
| Temperature coefficient | 0.1 X (specified accuracy)/°C (< 18 °C or > 28 °C) |
| Operating humidity | 90 % at 35 °C, 45 % at 40 °C, 45 % at 50 °C |
| Altitude | Operating: 2,000 m, Storage: 12,000 m |
| EMC | EN 61326-1:2006 |
| Safety compliance | ANSI/ISA 61010-1 / (82.02.01): 3rd edition, CAN/CSA-C22.2 No 61010-1-12: 3rd edition, UL 61010-1: 3rd edition, IEC/EN 61010-1:2010 |
| Safety rating | CAT IV 600 V, CAT III 1000 V |
| Certifications | CSA, CE, FCC: T68-FBLE IC: 6627A-FBLE |
| Ingress Protection (IP) rating | IP42 |
| Pollution Degree | 2 |
| Size (HxWxD) | 16.5 cm x 6.35 cm x 1.4 cm |

Recommended Accessories



AC87
Heavy Duty Bus Bar Clip Set
See page 140



AC220
SureGrip™ Alligator Clips
See page 140



PC ADAPTER
Fluke Connect® Wireless PC Adapter
See page 145

Recommended Kits

Buy more, Save more



Fluke Wireless v3000 FC AC Voltage Kit



Fluke Wireless v3001 FC DC Voltage Kit



Fluke Wireless v3003 FC AC-DC Voltage Measurement Kit

For more details see page 133

Included Accessories

TL224 Test Leads, AC285 Alligator Clips, Magnetic Hanging Strap

Ordering Information

| | |
|-------------------------|--|
| FLK-V3000 FC | Wireless AC Voltage Module |
| FLK-V3001 FC | Wireless DC Voltage Module |
| FLK-V3000 FC KIT | Wireless AC Voltage Kit |
| FLK-V3001 FC KIT | Wireless DC Voltage Kit |
| FLK-V3003 FC KIT | Wireless AC-DC Voltage Measurement Kit |

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke t3000 FC Wireless K-Type Temperature Module



Fluke t3000 FC



N10140

The Fluke t3000 FC Wireless K-Type Temperature Module is one member of a family of wireless test tools that let you share test data using the Fluke Connect® app with ShareLive™ video call.

Fluke Connect Wireless Test Tools put tools, not your body, near live electrical panels. It's simple. Connect the t3000 FC wireless temperature module, or any of the other Fluke Connect remote modules, and read the results on the Fluke Connect Wireless Multimeter or a portable PC from a safe distance. Better still, the Fluke Connect test tools can send measurement data to your smartphone, so you can save and share measurements from the field with your team anytime, from anywhere.

Testing 3-phase is now faster and cheaper

When your cabinet is de-energised, attach a Fluke Connect voltage module to each phase. Close, re-energise and start taking readings. What used to take hours and use costly equipment can be done in minutes with an affordable Fluke Connect wireless system. Take 3-phase measurements in 1/3 the time. Add your laptop and go from logging to analysis and diagnosis. You can solve problems faster by seeing live measurements from multiple test points on a single screen.

Using t3000 FC temperature modules, you can:

- Spot temperature differences between three phases in 1/3 the time of previous methods.
- Send data to your laptop and go from logging to analysis and diagnosis.
- Record over time to monitor circuit load changes for an hour, a shift or a week.
- Use the Fluke Connect wireless USB adapter to collect logged data from remote modules by walking past a working module and downloading logged data.
- Perform for analysis with your PC and share the results using Fluke Cloud™ storage and ShareLive™ video call. View data or graphs to get input from team members.

Recommended Accessories



80PK-24 (714)
SureGrip™ Air
Temperature Probe
See page 143

80PK-9
General
Purpose Probe
See page 143



PC ADAPTER
Fluke Connect™
Wireless PC Adapter
See page 145

Recommended Kits

Buy more, Save more



Fluke Wireless t3000 FC Temperature Kit

For more details see page 133

Specifications

| | |
|---------------------------|---|
| Range | K-type: -200 °C to 1000 °C |
| Resolution | 0.1 °C |
| Accuracy | ± [0.5 % + 0.3 °C] counts |
| Input terminals | K-type mini |
| LCD w/backlight | 3 ½ digits |
| Log rate/interval | 1 sec minimum/adjustable by PC and FC app on smart phone |
| Battery type | 2 AA, NEDA 15 A, IEC LR6 |
| Battery life | 400 hours |
| Memory | Record up to 65,000 readings |
| RF communications | 2.4 GHZ ISM Band |
| RF communication range | Open air, unobstructed: Up to 20 m, Obstructed, sheetrock wall: Up to 6.5 m, Obstructed, concrete wall or steel electrical enclosure: Up to 3.5 m |
| Operating temperature | -10 °C to +50 °C |
| Storage temperature | -40 °C to +60 °C |
| Temperature coefficient | 0.01 % of reading +0.03 °C per °C |
| Temperature scale | ITS-90 |
| Operating humidity | 90 % at 35 °C, 75 % at 40 °C, 45 % at 50 °C |
| Altitude | Operating: 2,000 m, Storage: 12,000 m |
| EMC | EN 61326-1:2006 |
| Safety compliance | IEC 61010-1, CAT I, 3rd edition Pollution Degree 2 |
| Certifications | CSA, CE, FCC: T68-FBLE IC: 6627A-FBLE |
| Ingress Protection rating | IP42 |
| Pollution Degree | 2 |
| Size (HxWxD) and Weight | 16.5 cm x 6.35 cm x 1.4 cm; 0.22 kg |

(Not compatible with Fluke CNX test tools)



Download the
**FREE Fluke
Connect App**



Included Accessories

80PK-1 K-Type Bead Thermocouple
Magnetic Hanging Strap.

Ordering Information

FLK-T3000 FC Wireless K-Type
Temperature
Module

**FLK-T3000 FC
KIT** Wireless FC
Temperature Kit

Contact your local distributor for
price and availability.

www.fluke.com/sg/wtb

Fluke Connect® Accessories



Fluke Connect®
PC Adapter



N10140

Fluke Connect® ir3000 FC Connector

Connect your Fluke Test Tool with the ir3000 FC Connector and get all the benefits of the Fluke Connect mobile app. If you already have a Fluke 287/289 Digital Multimeter or Fluke 789 Process Tool in your tool box or tool belt or are considering purchasing one, add the ir3000 FC Connector so you can communicate with the Fluke Connect app.

- Fluke Connect ir3000 FC Connector allows you to wirelessly transfer data from your existing Fluke 287, 289 Digital Multimeters and Fluke 789 ProcessMeter™ to your smart phone
- Fits over the IR port of your existing Fluke tools
- Immediately enables you to graph, save, and share the tool's readings with your team from your smart phone
- Identify and diagnose problems quickly and confidently
- Efficiently and safely capture real-time readings of the primary display from the field
- Share results instantly with your team
- Upgradeable by USB

Supported Fluke Tools:

- DMMs: 287, 289
- Process Tool: 789

Supported Smart Phones:

- Android™ 4.4 & up
- iPhone® 4s & later



Specifications

| ir3000 FC | |
|------------------------|--|
| Battery type | Two AAA Alkaline batteries, ANSI-24A IEC-LR03 |
| Battery life | 6 hours of continuous transmission |
| RF communications | 2.4 GHz ISM Band |
| RF communication range | Open air, unobstructed: Up to 20m Obstructed, sheetrock wall: Up to 6.5m Obstructed, concrete wall or steel electrical enclosure: Up to 3.5m |
| Temperature | Operating: -10 °C to 50 °C Storage: -20 °C to 60 °C |
| Certifications | CSA, FCC, CE, IC |
| Warranty | Three years |
| Weight | 80g |
| Size (HxWxL) | 3.2cm x 7.6cm x 6.4cm |
| Compatibility* | Fluke 287, 289, 789 |

*At time of catalogue print, Fluke's ir3000 FC Connector is currently compatible with only the Fluke 287, 289 and 789 test tools. For updates on Fluke Connect test tool compatibility, go to www.fluke.com/au/connect.

Fluke Connect® Wireless PC Adapter

Fluke 3000 FC Wireless Test Tools show real-time measurements from remote modules up to 20 metres away on your PC. Fluke FC wireless test tools work together to help you troubleshoot faster.

The PC3000 FC Adapter and Software help you understand the information you measure. When you need to get information back to a PC the PC3000 FC Adapter and Software wirelessly collects up to 65,000 sets of time stamped MIN/MAX/AVG readings from FC remote modules. Software can display live readings from up to six modules simultaneously. Allows custom logging intervals and custom names for modules. Includes Windows SW3000 software.



Fluke Connect®
PC Adapter



N10140



Built with
**FLUKE
CONNECT™**

See it. Save it. Share it.
All the facts, right in the field.

Fluke Connect with ShareLive™ is the only wireless measurement system that lets you stay in contact with your entire team without leaving the field. The Fluke Connect mobile app is available for Android™ (4.3 and up) and iOS (4s and later) and works with over 40 different Fluke products—the largest suite of connected test tools in the world. There are more on the way; go to: www.fluke.com/au/connect to find out more.

Make the best decisions faster than ever before by viewing all temperature, mechanical, electrical and vibration measurements for each equipment asset in one place. Get started saving time and increasing your productivity.

Download the FREE Fluke Connect app at:



Smart phone not included with purchase

Ordering Information

| | |
|------------------------|--|
| FLUKE-IR3000 FC | Fluke Connect® ir3000 Connector |
| FLK-PC3000 FC | Fluke Connect® Wireless PC Adapter |

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke Connect®

Fluke Connect® Compatible Tools

See It. Save It. Share It. All the facts, right in the field.



The Fluke Connect® app and connectable tools are the most comprehensive way to stay in contact with your team without leaving the field. With over 40 connectable tools, confidently diagnosing and solving problems has never been easier.



Fluke 3000 FC Series Wireless Multimeter

The Fluke 3000 FC Series Wireless Multimeter with the Fluke Connect app has all the essentials for convenient test and measurement troubleshooting. Plus, the Fluke Connect wireless enabled modules measure AC, DC and AC+DC voltage, AC and DC current, plus temperature, all of which display on the Fluke 3000 FC Series Wireless Multimeter.

For more information, see page 14



Fluke 280 Series Digital Multimeters

The 280 Series is the next generation high performance industrial logging multimeters designed to solve complex problems in electronics, plant automation, power distribution and electro-mechanical equipment. With the ability to log data and review it graphically on-screen, you can solve problems faster and help minimise downtime.

For more information, see page 15



Fluke 374FC/375FC/376FC True-RMS AC/DC Clamp Meters

Fluke's 374, 375 and 376 Fluke Connect Clamp Meters offer advanced troubleshooting performance. Enabling Fluke Connect, benefit from logging and trend measurements to pinpoint intermittent faults, transmit results wirelessly via the Fluke Connect Measurements app and even create and send reports right from the field.

For more information, see page 29



Fluke Performance Series Infrared Cameras

The Performance Series infrared camera range (Fluke TiS75, TiS65, TiS60, TiS55, TiS50, TiS45, TiS40, TiS20 and TiS10) offer good image quality at an affordable price. With up to 320x240 resolution, you can see more detail in every image, even from a distance - detail that could indicate a potential issue.

For more information, see page 55

NEW



Fluke Professional Series Infrared Cameras

The Professional Series infrared camera range (Fluke Ti450, Ti400 and Ti300) give you in-focus, crisp, detailed images every single time. LaserSharp™ Auto Focus performs instant focus on your designated target. Experience the power of SuperResolution for 4x pixel enhancement and MultiSharp™ Focus delivering sharp focus on multiple objects from near to far.

For more information, see page 57

NEW



Fluke Expert Series Infrared Cameras

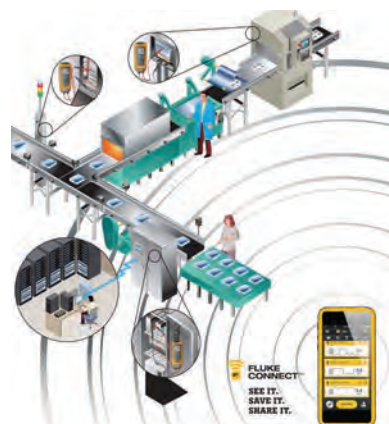
The Expert Series range (Fluke TiX560, TiX520 and TiX500) produce extremely detailed images and with the large LCD displays, you get a premium viewing experience. Articulation allows you to navigate over, under and around objects to capture those tough shots with ease.

For more information, see page 59

Fluke Connect® Field Applications



Phase-to-phase troubleshooting with Fluke Connect Wireless Tools.



Testing production controls with Fluke Connect Wireless Tools



Three-phase unbalance testing with Fluke Connect Wireless Tools

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke Connect® Compatible Tools



Fluke Connect®



Fluke 1587 FC Insulation Multimeter

The Fluke 1587 FC Insulation Multimeter combines a digital insulation tester with a full-featured, true-RMS Digital Multimeter in a single compact, handheld unit. When using the Fluke Connect Measurements app; PI/DAR timed ratio tests with TrendIt™ graphs allow for identifying problems faster. Also the historical tracking and trending of assets identifies degradation over time, and allows for real-time decisions to be made in the field.

For more information, see page 70



Fluke 1736 Power Logger and 1738 Advanced Power Logger

NEW

The Fluke 1736 and 1738 Three-Phase Power Loggers built with the Fluke Connect® mobile app and desktop software compatibility gives you the data you need to make critical power quality and energy decisions in real-time. These advanced power loggers automatically capture and log over 500 power quality parameters while also allowing you to troubleshoot more advanced power quality issues.

For more information, see page 88



Fluke 120B Series Industrial ScopeMeter® Hand-Held Oscilloscopes

NEW

The compact Fluke 120B ScopeMeter Series consisting of the Fluke 123B, 124B and 125B offer simplified testing, more insight and faster electro-mechanical troubleshooting. The series also integrates with the Fluke Connect mobile app and FlukeView® for ScopeMeter software to enable further collaboration, data analysis and archiving of critical test information.

For more information, see page 97



Fluke 789 ProcessMeter™

The Fluke 789 ProcessMeter is the ultimate troubleshooting tool for electricians and instrumentation professionals, combining the functionality of a loop calibrator with the power of a digital multimeter. By equipping the 789 with a temperature measurement module and the wireless data logging capabilities of Fluke Connect with ShareLive™ video call, process technicians can now do a lot more while carrying a lot less.

For more information, see page 105



Fluke 805 FC Vibration Meter

Make go or no-go maintenance decisions with confidence. The Fluke 805 FC Vibration Meter is the most reliable vibration screening device available for frontline mechanical troubleshooting teams that need repeatable, severity-scaled readings of overall vibration and bearing condition. Do all this while you stay in contact with your team using Fluke Connect with the ShareLive™ capability.

For more information, see page 126



Measuring Three-phase load draw with Fluke Connect Wireless Tools



Testing production line equipment with Fluke Connect Wireless Tools

For more details on the Fluke Connect tool range, go to:
www.fluke.com/flukeconnect-SEA

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb



DIGITAL MULTIMETERS

Fluke 3000 FC Wireless Digital Multimeter



Fluke 3000 FC

See it. Save it. Share it.

The Fluke 3000 FC True-RMS Wireless Multimeter and Fluke Connect® wireless test tools put tools, not your body, near live electrical panels. It's simple. Just de-energise the cabinet, open the panel while wearing PPE and connect the remote modules, whether they are voltage modules, current clamps, flexible current loops or thermometers. Then read the results on the 3000 FC Wireless Multimeter from a safe distance. You can display the meter measurement, plus readings from up to 3 wireless modules, while reducing the risk of arc flash by separating yourself from hazardous measurement situations. Better still, the Fluke 3000 FC Series Wireless Multimeter can send measurement data to your smartphone, so you can save and share measurements from the field with your team anytime, from anywhere.

Other capabilities of Fluke Connect and the 3000 FC Multimeter.

- Connect to your PC with USB dongle (optional) for analysis and diagnosis in detail.
- Perform for analysis with your smartphone and the FC App and share the results using Fluke Cloud™ storage and ShareLive™ video call. View data or graphs to get input from team members.

The Fluke 3000 FC Series Wireless Multimeter with the Fluke Connect app has all the essentials for convenient test and measurement troubleshooting.

- AC and DC voltage measurements to 1000V
- AC and DC current with 0.01 mA resolution
- Continuity, resistance, diode test, capacitance and frequency measurements
- MIN/MAX Recording
- CAT III 1000 V, Cat IV 600 V; IP54



Specifications

| Functions | Range | Basic Accuracy |
|------------------------|--|---|
| AC voltage | 600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000V | 1.0 % + 3 |
| DC voltage | 600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000V | 0.09 % + 2 |
| Continuity | 600 Ω | Meter beeps at < 25 Ω, beeper detects opens or shorts of 250 μs or longer |
| Resistance | 600 Ω, 600.0 Ω, 6.000 kΩ, 60.00 kΩ, 60.00 kΩ, 600.0 kΩ, 50.00 MΩ | 0.5 % + 1 |
| Diode test | 2.000 V | 1 % + 2 |
| Capacitance | 1000 nF, 10.00 μF, 100.0 μF, 9999 μF ¹ | 1.2 % + 2 |
| mA AC (45 Hz to 1 kHz) | 60.00 mA, 400.0 mA ³ | 1.5 % + 3 |
| mA DC ² | 60.00 mA, 400.0 mA ³ | 0.5 % + 3 |
| Frequency | 99.99 Hz, 999.9 Hz, 9.999 kHz, 99.99 kHz | 0.1 % + 1 |

¹ In the 9999 μF range for measurements to 1000 μF, the measurement accuracy is 1.2 % + 2.

² Input burden voltage (typical): 400 mA input 2 mV/mA.

³ 400.0 mA accuracy specified up to 600 mA overload.

For all specifications: accuracy is specified for one year after calibration, at operating temperatures of 18 °C to 28 °C, with relative humidity at 0 % to 90 %. Accuracy specifications take the form of ± [(% of Reading) + [Number of least significant digits]].



Recommended Accessories



C3004IND
Soft Tool Bag
See page 144



C35
Soft Carrying Case
See page 144



PC ADAPTER
Fluke Connect®
Wireless PC Adapter
See page 145



TL238
SureGrip™
Test Lead Set
See page 139

Recommended Kits

Buy more, Save more

Fluke 3000 FC General Maintenance System

Fluke 3000 FC Industrial System

Fluke 3000 FC HVAC System

For more details see page 133

Fluke 3000 FC/1AC-II Wireless Multimeter and Non-Contact Voltage Detector Kit



Fluke 3000 FC/TPAK Wireless Multimeter and Magnetic Hanger Combo Kit

For more details see page 134

Included Accessories

TL175 Test Leads, AC175 Alligator Clips, Manual Information Pack.

Ordering Information

FLK-3000 FC FC Wireless Digital Multimeter

FLK-3000 FC GM Wireless General Maintenance Kit

FLK-3000 FC IND Wireless Industrial System Kit

FLK-3000 FC HVAC Wireless HVAC System Kit

FLK-3000 FC /1AC-II Wireless Multimeter & Non-Contact Voltage Detector Combo Kit

FLK-3000 FC /TPAK Wireless Multimeter & Magnetic Hanger Combo Kit

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Fluke 280 Series True-RMS Logging Multimeters



Fluke 289/FC



Find little problems before they become big

The Fluke 287/FC and 289/FC are the next generation in high performance industrial logging multimeters. These high performance industrial logging multimeters are designed to solve complex problems faster in many applications. Log data and review it graphically on-screen to help minimise downtime.

Communicate wirelessly with your smart phone directly from the field with the Fluke Connect® app and get quick answers or next step authorisations faster than ever before. It's as simple as adding the Fluke ir3000 FC Connector to the standard Fluke 287 and 289 (connector sold separately).

- Large 50,000 count, 1/4 VGA dot matrix display with white backlight
- Logging function with expanded memory for unattended monitoring of signals over time. Using on-board TrendCapture, users can graphically review logged readings without needing a PC. Store up to 10,000 recorded events
- Save, name, and recall multiple logging sessions before PC download is necessary
- Field upgradeable and expandable meter lets you stay current as new capabilities are added.
- Two terminal 50 ohm range with 1 milliohm resolution, 10 mA source current. Useful for measuring and comparing differences in motor winding resistance or contact resistance (289/FC)
- Low-pass filter for accurate voltage and frequency measurements on adjustable speed motor drives and other electrically noisy equipment (289/FC)

Features

| | 287 | 289 |
|--|----------|----------|
| Multiple on screen displays | ● | ● |
| True-RMS AC bandwidth | 100 kHz | 100 kHz |
| dBV/dBm | ● | ● |
| DC mV resolution | 1 µV | 1 µV |
| Megohm range up to | 500 MΩ | 500 MΩ |
| Conductance | 50.00 nS | 50.00 nS |
| Continuity beeper | ● | ● |
| Elapse time clock/time of day clock | ● | ● |
| Min/Max/Avg/duty cycle/pulse width | ● | ● |
| Isolated optical DMM interface with USB PC connection | ● | ● |
| Auto/touch hold | ● | ● |
| Over 200 hours logging capacity with new power saving function | ● | ● |
| Lo Ohm capability | — | ● |
| Lo Z volts | — | ● |
| Lo Pass Filter | — | ● |
| Limited lifetime warranty | ● | ● |

Specifications

| Functions | Range | Basic Accuracy |
|-------------------------------|---|-------------------------------------|
| AC volts or DC volts | 50.000 mV, 500.00 mV, 5.0000 V, 50.000 V, 500.00 V, 1000.0 V | 0.025 % 0.4 % (True-RMS) (AC) |
| AC current DC current | 500.00 µA, 5000.0 µA, 50.000 mA, 400.00 mA, 5.0000 A, 10.000 A | 0.15 % 0.7 % (True-RMS) |
| Temperature (excluding probe) | -200.0 °C to 1350.0 °C | 1.0 % |
| Resistance | 50.000 Ω, 500.00 Ω, 5.0000 kΩ, 50.000 kΩ, 500.00 kΩ, 5.0000 MΩ, 50.00 MΩ, 500.0 MΩ | 0.05 % |
| Capacitance | 1.000 nF, 10.00 nF, 100.0 nF, 1.000 µF, 10.00 µF, 100.0 µF, 1000 µF, 10.00 mF, 100 mF | 1.0 % |
| Frequency | 99.999 Hz, 999.99 Hz, 9.9999 kHz, 99.999 kHz, 999.99 kHz | .005 % |

Recommended Accessories

TLK289
Industrial Test Lead Set
See page 139

TLK287
Electronic Test Lead Set
See page 138

TPAK
Magnetic Meter Hanger
See page 147

C280
Soft Case
See page 144

I410
AC/DC Current Clamp
See page 142

IR3000 FC
Fluke Connect® ir3000 Connector
See page 145

Recommended Kits

- Buy more, Save more
- Fluke 287 FlukeView® Forms Combo Kit**
 - Fluke 287 FlukeView® Forms Combo Kit with ir3000FC Connector**
 - Fluke 289 FlukeView® Forms Combo Kit**
 - Fluke 289 FlukeView® Forms Combo Kit with ir3000FC Connector**

For more details see page 134

Included Accessories

TL175 Test Leads, AC175 Alligator Clips, Probe Holder, 6 AA Batteries (installed), Calibration Certificate Sheet.

Ordering Information

- FLK-287** True-RMS Industrial Logging Multimeter with TrendCapture
- FLK-289** True-RMS Electronics Logging Multimeter with TrendCapture
- FLK-287/FVF** FlukeView Forms Combo Kit
- FLK-289/FVF** FlukeView Forms Combo Kit
- FLK-287/FVF/IR3000** Industrial Logging Multimeter and Software Combo Kit
- FLK-289/FVF/IR3000** Industrial Logging Multimeter and Software Combo Kit
- FLK-IR3000 FC** Fluke Connect® ir3000 Connector

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke 80 Series V Digital Multimeters



Fluke 87V

Fluke 83V



Performance and accuracy for maximum industrial productivity

The Fluke 80 Series V have improved measurement functions, troubleshooting features, resolution and accuracy to solve more problems on motor drives, in plant automation, power distribution, and electro-mechanical equipment.

The Fluke 87V has a unique function for accurate voltage and frequency measurements on adjustable speed motor drives and other electrically noisy equipment. A built-in thermometer conveniently allows you to take temperature readings without having to carry a separate instrument.

Electrical safety

All inputs are protected to CAT III 1000 V and CAT IV 600 V. They can withstand impulses in excess of 8,000 V to help protect you from arc blast resulting from surges and spikes.



Recommended Accessories



TPAK
Magnetic
Meter Hanger
See page 147



TL220
SureGrip™ Industrial
Test Lead Set
See page 139



TL175
TwistGuard™ Test Leads
See page 140



I400
AC Current Clamp
See page 141



C43
Small Soft Case
See page 144



CXT80
Extreme Case
See page 145



AC285
SureGrip™ Alligator
Clips
See page 140



TL224
SureGrip™ Silicone
Insulated Test Leads
See page 139

Recommended Kits

Buy more, Save more



Fluke 87V/E2 Industrial Electrician's Combo Kit

For more details see page 134

Included Accessories

TL175 Test Leads, AC175 Alligator Clips, Yellow Holster (H80M excl. TPAK), 80BK Temperature Probe (87V only), 9 V Battery (installed), User Manual and Technical Notes

Ordering Information

| | |
|---------------------|----------------------------------|
| FLUKE-83V | Industrial Multimeter |
| FLUKE-87V | True RMS Industrial Multimeter |
| FLUKE-87V/E2 | Industrial Electrician Combo Kit |

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Features

| | 87V | 83V |
|---|------------------------------|-----|
| True-RMS AC voltage and current for accurate measurements on non linear signals | ● | |
| Selectable filter for accurate voltage and frequency measurements on motor drives | ● | |
| 0.05 % DC accuracy | ● | |
| 6000 counts, 3-3/4 digits | ● | ● |
| 4-1/2 digit mode for precise measurements (20,000 counts) | ● | |
| Measure up to 1000 V AC and DC | ● | ● |
| Measure up to 10 A, 20 A for up to 30 seconds | ● | ● |
| Built in thermometer lets you carry one less tool (TC probe included) | ● | |
| Frequency to 200 kHz and % duty cycle | ● | ● |
| Resistance, continuity and diode test | ● | ● |
| 10,000 µF capacitance range for components and motor caps | ● | ● |
| Min/Max-Average recording with Min/Max Alert to capture variations automatically | ● | ● |
| Battery Life | 400 hours with backlight off | |
| Size | 201 mm x 98 mm x 52 mm | |
| Weight | 355g | |

Specifications

| Functions | Range | Basic accuracy | |
|---------------------------|--|---------------------|---------|
| | | 87V | 83V |
| DC volts | 600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000 V | 0.05 % | 0.1 % |
| AC volts | 600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000 V | 0.7 % (True-RMS) | 0.5 % |
| DC current | 600.0 µA, 6000 µA, 60.00 µA, 600.0 mA, 6.000 A, 10.00 A | 0.2 % | 0.4 % |
| AC current | 600.0 µA, 6000 µA, 60.00 µA, 600.0 mA, 6.000 A, 10.00 A | 1.0 % (True-RMS) | 1.2 % |
| Temperature (excl. probe) | -200 °C to 1090 °C | 1.0 % | — |
| Temperature Probe | -40 °C to 260 °C | 2.2 °C or 2 % | — |
| Resistance | 600.0 Ω, 6.000 kΩ, 60.00 kΩ, 600.0 kΩ, 6.000 MΩ, 50.00 MΩ | 0.2 % | 0.4 % |
| Capacitance | 10.00 nF, 100.0 nF, 1.000 µF, 10.00 µF, 100.0 µF, 9,999 µF | 1.0 % | 1.0 % |
| Frequency | 199.99 Hz, 1.9999 kHz, 19.999 kHz, 199.99 kHz | 0.005 % | 0.005 % |

Fluke 27 II, 28 II and 28 IIEx Industrial IP67 Digital Multimeters



Fluke 27 II

Fluke 28 II

The 27 II, 28 II and 28 IIEx Digital Multimeters are designed for tough work environments. All three meters have IP 67 waterproof and dustproof rating. They both have an extended operating temperature range of -15 °C to + 55 °C and 95 % humidity.

- Unique function for accurate voltage and frequency measurements on adjustable speed motor drives and other electrically noisy equipment (28 II, 28 IIEx)
- Built-in thermometer conveniently allows you to take temperature readings without having to carry a separate instrument (28 II, 28 IIEx)
- Hi-resolution 20,000 count display mode (28 II, 28 IIEx)
- Resistance and continuity. Relative mode to remove test lead resistance from low ohms measurements
- Large digit display with bright, two-level backlight
- Backlit keypad buttons allow for easy visibility in low-lit areas
- Optional magnetic hanger for easy setup and viewing freeing your hands for other tasks
- Intrinsically safe certifications from the world's leading certification bodies (28 IIEx)



Features

| | 27 II | 28 II | 28 II Ex |
|---|-------|-------|----------|
| Tested to withstand a 3 m drop | ● | ● | ● |
| Wide 1000 V measurement range | ● | ● | ● |
| True-RMS AC voltage and current for accurate measurements on non-linear signals | — | ● | ● |
| Low pass filter | — | ● | ● |
| Temperature | — | ● | ● |
| Average responding voltage and current measurements | ● | — | — |
| 10 A continuous (20 A for 30 seconds) | ● | ● | ● |
| Frequency and capacitance | ● | ● | ● |
| Record signal fluctuations using the Min/Max function | ● | ● | ● |

Specifications

| | 27 II | 28 II | 28 II Ex |
|--|------------------------------|------------------|---------------------|
| DC voltage | Range | 0.1 mV to 1000 V | |
| | Accuracy | 0.05 % + 1 | 0.05 % + 1 |
| AC voltage | Range | 0.1 mV to 1000 V | |
| | Accuracy | 0.5 % + 3 | 0.7 % + 4 |
| DC current | Range | 0.1 µA to 10 A | |
| | Accuracy | 0.2 % + 4 | 0.2 % + 4 |
| AC current | Range | 0.1 µA to 10 A | |
| | Accuracy | 1.5 % + 2 | 1.0 % + 2 |
| Resistance | 0.1 Ω to 50 MΩ | | |
| Display counts | 6000 | 6000/19,999 | 6000/19,999 |
| Capacitance | 1 nF to 9999 µF | | 10 nF to 9999 µF |
| Frequency | 0.5 Hz to 199.99 kHz | | |
| Temperature | -200 °C to +1090 °C | | -200 °C to +1090 °C |
| Low pass filter (measurement on VSD's) | Yes | | Yes |
| Compliance | CAT IV 600 V, CAT III 1000 V | | |
| Measurement method | Avg. responding | True-RMS | True-RMS |
| Power | Three AA batteries | | |
| Battery life | 800 hours | | 400 hours |
| Dimensions (DxWxH) | 6.35 cm x 10.0 cm x 19.81 cm | | |
| Weight with holster | 698.5 g | | |

Specialty Models

Fluke 28 IIEx Intrinsically Safe True-RMS Multimeter

CAT III 1000V/CAT IV 600V electrical safety rating

II 2 G Ex ia IIC T4



See page 132 for more information.



Recommended Accessories



TPAK
Magnetic Meter Hanger
See page 147



TLK-225
SureGrip™ Master Accessory Set
See page 139



PV350
Pressure-Vacuum Module
See page 146



I410
AC/DC Current Clamp
See page 142



CRT80
Extreme Hard Case
See page 145



C25
Meter Case
See page 144



TL175
TwistGuard™ Test Leads
See page 140



I2000 FLEX
AC Current Clamp Test Lead Kit
See page 141

Included Accessories

TL175 Test Leads, AC175 Alligator Clips, 80BK-A Temperature Probe (28 II), Holster, User Manual, Three AA batteries (installed)

Ordering Information

| | |
|---------------------|--|
| FLUKE-27II | Industrial Multimeter |
| FLUKE-28II | Industrial Multimeter |
| FLUKE-28IIEx | Intrinsically Safe Industrial Multimeter |

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke 170 Series Digital Multimeters

Versatile meters for field service or bench repair



Fluke 179

The three models of the Fluke 170 Series True-RMS Digital Multimeters (179,177,175) have the features needed to find most electrical, electro-mechanical and heating and ventilation problems. They are simple to use and have significant improvements over Fluke's standards, and a much larger display that's easier to view.

- True RMS voltage and current measurements
- 0.09% basic accuracy (177, 179)
- 6000 count resolution
- Digital display with analog bargraph and backlight (177, 179)
- Manual and automatic ranging
- Display Hold and Auto Hold
- Frequency and capacitance measurements
- Resistance, continuity and diode measurements
- Temperature measurements (179)
- Min-max-average recording
- Smoothing mode allows filtering of rapidly changing inputs
- Easy battery exchange without opening the case
- Closed case calibration through front panel
- Ergonomic case with integrated protective holster
- EN61010-1 CAT III 1000V / CAT IV 600V
- Measures twice as fast as other multimeters
- Battery life: 200 hours typical for alkaline.
- Size (HxWxL): 4.3 cm x 9.0 cm x 18.5 cm



Fluke 177



Fluke 175

Recommended Accessories



TPAK
Magnetic
Meter Hanger
See page 147



TL81A
Deluxe Electronic
Test Lead Set
See page 138



TL175
TwistGuard™ Test Leads
See page 140



I410
AC/DC Current Clamp
See page 142



C35
Soft Carrying Case
See page 144



Electrical safety

All inputs are protected to measurement CAT III 1000 V and CAT IV 600 V. These meters can withstand transient impulses in excess of 8000 V to help protect you from arc blasts resulting from surges and spikes.

Features

| Features | 179 | 177 | 175 |
|--|--------|--------|--------|
| Max voltage AC/DC | 1000 | 1000 | 1000 |
| True-RMS | ● | ● | ● |
| Temperature | ● | — | — |
| Basic DC accuracy | 0.09 % | 0.09 % | 0.15 % |
| Backlight | ● | ● | — |
| Min/Max/Avg | ● | ● | ● |
| Compatible with ToolPak™ meter hanging kit with magnet | ● | ● | ● |
| Limited lifetime warranty | ● | ● | ● |

Specifications

| Functions | Range | Best accuracy |
|-------------------------|---|---------------------------------------|
| DC voltage | 600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000 V | ± 0.09 % (177 and 179) ± 0.15 % (175) |
| AC voltage ¹ | 600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000 V | ± 1.0 % of reading |
| DC current | 60.00 mA, 400.0 mA, 6.000 A, 10.00 A ² | ± 1.0 % of reading |
| AC current ² | 60.00 mA, 400.0 mA, 6.000 A, 10.00 A ² | ± 1.5 % of reading |
| Resistance | 600.0 Ω, 6.000 kΩ, 60.00 kΩ, 600.0 kΩ, 6.000 MΩ, 50.00 MΩ | ± 0.9 % of reading |
| Capacitance | 1000 nF, 10.00 μF, 100.0 μF, 9999 μF | ± 1.2 % of reading |
| Frequency ³ | 99.99 Hz, 999.9 Hz, 9.999 Hz, 99.99 kHz | ± 0.1 % of reading |
| Temperature (Model 179) | -40 °C to +400 °C | 1.0 % of reading |

¹ All AC voltage and AC current ranges are specified from 5 % of range to 100 % of range.

² 10 A continuous, 20 A for up to 30 seconds.

³ Voltage frequency is specified from 2 Hz to 100 kHz. Current frequency is specified from 2 Hz to 30 kHz.

Included Accessories

Test Leads with 4mm Lantern Tips, Installed 9V Battery and User Manual, 80BK Temperature Probe (179 only).

Ordering Information

| | |
|------------------|-----------------------------|
| FLUKE-175 | True RMS Digital Multimeter |
| FLUKE-177 | True RMS Digital Multimeter |
| FLUKE-179 | True RMS Digital Multimeter |

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke 233 Remote Display Digital Multimeter



Fluke 233

The Fluke 233 Remote Display Digital Multimeter allows you to be in two places at once. The removable display solves several problems. First, you no longer have to hold both the meter and the test leads to make a measurement. It also allows you to measure where the measurement point is separated from controls or where the operator can't stay close to the meter during measurements due to various hazards or moving machinery.

- Wireless technology allows the display to be carried up to 9.1 metres away from the point of measurement for added flexibility
- The removable magnetic display can be conveniently mounted where it is easily seen
- Low-power 802.15.4 wireless technology does not interfere with measurement accuracy
- Use as a conventional multimeter when the display is connected
- True-RMS AC voltage and current
- Built-in thermometer
- Auto power off maximises battery life (400 hours)
- Radio transmitter automatically turns off when the display is connected to the meter
- Record signal fluctuations using the Min/Max function



Features

| Features | 233 |
|--|----------------------------|
| Removable magnetic display | • |
| True-RMS measurement | • |
| Digital display counts | 6000 |
| Display backlight | • |
| Built in thermometer | • |
| Resistance, continuity and diode test | • |
| Min/Max and average recording | • |
| Auto power off maximises battery life | • |
| Radio transmitter automatically turns off when the display is connected to the meter | • |
| Use as conventional multimeter when the display is connected | • |
| Safety rating | CAT IV 600V/CAT III 1000 V |
| Auto and manual ranging | • |
| Display Hold and AutoHold® | • |
| Unsafe voltage alert warns for voltages above 30V | • |
| 2 Low batteries indication | • |
| Ergonomic case with integrated holster | • |
| Selectable sleep mode preserves battery life | • |

Specifications

| Functions | Specifications | |
|--------------|----------------|---|
| DC voltage | Range | 0.1 mV to 1000 V |
| | Accuracy | 0.25 % + 2 |
| AC voltage | Range | 0.1 mV to 1000 V |
| | Accuracy | 1.0 % + 3 |
| DC current | Range | 0.001 A to 10 A |
| | Accuracy | 1.0 % + 3 |
| AC current | Range | 0.001 A to 10 A |
| | Accuracy | 1.5 % + 3 |
| Resistance | Range | 0.1 Ω to 40 MΩ |
| Capacitance | Range | 1000 nF to 9999 μF |
| Frequency | Range | 0.1 Hz to 50.00 kHz |
| Temperature | Range | -40 °C to +400 °C |
| Power | Range | 3 AA batteries main body, 2 AA batteries display module |
| Battery life | Range | 400 hours |
| Compliance | Range | CAT IV 600 V, CAT III 1000 V |
| Size (HxWxL) | Range | 5.3 cm x 5.3 cm x 19.3 cm |
| Weight | Range | 604 g |

Recommended Accessories

TPAK
Magnetic Meter Hanger
See page 147

TL220
SureGrip™ Industrial Test Lead Set
See page 139

80PK-22
SureGrip™ Immersion Temperature Probe
See page 143

I400S
AC Current Clamp
See page 141

80AK-A
Thermocouple Adapter
See page 143

AC285
SureGrip™ Alligator Clips
See page 140

TL175
TwistGuard™ Test Leads
See page 140

TLK289
SureGrip™ Industrial Test Lead Set
See page 139

TP175
TwistGuard™ Test Probes
See page 140

FTP-1
SureGrip™ Fused Test Probe Set
See page 140

TL224
SureGrip™ Silicone Insulated Test Leads
See page 139

C35
Soft Carrying Case
See page 144

C101
Hard Case
See page 145

C781
Meter Case
See page 144

Included Accessories

Test Leads with 4mm Lantern Tips, AC175 Alligator Clips, 80BK-A Temperature Probe, CD, AA Batteries and User Manual.

Ordering Information

FLUKE-233 Remote Display Digital Multimeter

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke 117, 115 and 113 True-RMS Digital Multimeters



Fluke 117

Fluke 115



Fluke 117 Electrician's Multimeter with Non-Contact Voltage

The Fluke 117 is for electricians working in commercial and non-commercial premises (like hospitals and schools). It includes extras like non-contact voltage detection for faster and safer operation.

Fluke 115 Field Service Testing Multimeter

An everyday multimeter for technicians, the 115 is for electrical and electronic testing in field service, industrial, and applications where more than the basic functions simplify work.

- VoltAlert™ technology for integrated non-contact voltage detection (117)
- AutoVolt feature for automatic AC/DC voltage selection (117)
- LoZ: Low input impedance prevents false readings due to "ghost voltage" (117)
- Large display and white LED backlight to work in poorly lit areas more effectively
- Compact ergonomic design for one-handed operation
- Min/Max/Avg to record signal fluctuations
- Compatible with optional magnetic hanger (TPAK) for hands free operation
- Current measurement 20 A (30 seconds momentary; 10 A continuous)
- Resistance, continuity, frequency and capacitance



Fluke 113

Fluke 113 Utility True-RMS Digital Multimeter

- Basic electrical and utility multimeter
- VCHECK™ LoZ low impedance measurement function to simultaneously test for voltage or continuity
- True-RMS for accurate AC measurements on non-linear loads
- Record signal fluctuations using the Min/Max function
- Diode and capacitance measurements
- Integral holster with probe holders for easy storage
- Auto and manual ranging for added user functionality
- Meets CAT IV 600 V standards for a higher level of safety

For more information, go to sg.fluke.com/113

Recommended Accessories



TPAK
Magnetic
Meter Hanger
See page 147



TL220
SureGrip™ Industrial
Test Lead Set
See page 139



TL175
TwistGuard™ Test Leads
See page 140



C115
Soft Carrying Case
See page 144

Recommended Kits

Buy more, Save more



Fluke 117/323 Electricians' Multimeter Combo Kit

For more details see page 134

Features

| Features | 117 | 115 | 113 |
|--|-----|-----|-----|
| VoltAlert™ detector | ● | — | — |
| AutoVolt/LoZ | ● | — | LoZ |
| Analogue bargraph | ● | ● | ● |
| Large backlit digital display | ● | ● | ● |
| True-RMS for accurate measurements on non-linear loads | ● | ● | ● |
| Min/Max recording | ● | ● | ● |
| Display hold | ● | ● | ● |
| 3-1/2 digits | ● | ● | ● |
| 6000 counts | ● | ● | ● |
| CAT III 600 V safety rated | ● | ● | ● |
| Three-year warranty | ● | ● | ● |

Specifications

| Functions | 117 | 115 | 113 | Accuracy |
|---------------|------------------|------------------|-------|-----------|
| Volts AC/DC | 600 V | 600 V | 600 V | 0.5 % + 2 |
| Current AC/DC | 10 A | 10 A | — | 1.0 % + 3 |
| Resistance | 40 MΩ | 40 MΩ | 60 kΩ | 0.9 % + 2 |
| Capacitance | 1 nF to 9,999 μF | 1 nF to 9,999 μF | — | 1.9 % + 2 |
| Diode test | Yes | Yes | Yes | — |
| Frequency | 5 Hz to 50 kHz | 5 Hz to 50 kHz | — | 0.1 % + 2 |

Included Accessories

TL175 Test Leads, AC175 Alligator Clips, Manual Information Pack

Ordering Information

| | |
|----------------------|-------------------------------------|
| FLUKE-113 | Utility True RMS Digital Multimeter |
| FLUKE-115 | True RMS Digital Multimeter |
| FLUKE-117 | Adv. Electrical True RMS Multimeter |
| FLUKE-117/323 | Electrical Combo Kit |

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Fluke 116 and 114 Digital Multimeters

HVAC/R and electrical troubleshooting



Fluke 116

Fluke 114



Fluke 116 Multimeter with Temperature and Microamps

The Fluke 116 is for heating, ventilation and air conditioning (HVAC) engineers. It includes temperature measurement and microamp current ranges to quickly troubleshoot HVAC problems.

Fluke 114 Electrical Multimeter

The Fluke 114 is for electrical troubleshooting and straightforward 'go/no-go' in residential/commercial testing. It has all the basic functions plus a special feature to prevent false readings caused by ghost voltage.

- Built in thermometer for HVAC applications (116)
- Microamps to test flame sensors (116)
- AutoVolt: Automatic AC/DC voltage selection (114)
- LoZ: Helps prevent false readings due to ghost voltage
- Min/Max/Avg to record signal fluctuations
- Resistance, continuity, frequency and capacitance
- Large white LED backlight to work in poorly lit areas
- Compact ergonomic design for one-handed operation
- Compatible with optional magnetic hanger (TPAK)

Features

| Features | 116 | 114 |
|--|-----|-----|
| Temperature | • | — |
| Microamps | • | — |
| Frequency | • | — |
| Capacitance | • | — |
| Diode test | • | — |
| AutoVolt/LoZ | • | • |
| Analogue bargraph | • | • |
| Large backlit digital display | • | • |
| True-RMS for accurate measurements on non-linear loads | • | • |
| Min/Max recording | • | • |
| Display hold | • | • |
| 3-1/2 digits | • | • |
| 6000 counts | • | • |
| CAT III 600 V safety rated | • | • |
| Three-year warranty | • | • |

Specifications

| Functions | Range | Best accuracy |
|--------------------------|-----------------------|---------------|
| Volts AC/DC | 600 V | 0.5 % + 2 |
| Current AC/DC (116 only) | 600.0 μ A | 1.0 % + 2 |
| Temperature (116 only) | +400 °C | 1.0 % + 18 |
| Resistance | 40 M Ω | 0.9 % + 2 |
| Capacitance (116 only) | 1 nF to 9,999 μ F | 1.9 % + 2 |
| Frequency (116 only) | 5 Hz to 50 kHz | 0.1 % + 2 |

Recommended Accessories

Fluke 116



80AK-A
DMM Adapter
See page 143



80PK-22
SureGrip™ Immersion
Temperature Probe
See page 143



80PK-8
Pipe Clamp
Temperature Probe
See page 143



80PK-27
SureGrip™ Industrial
Surface Temperature Probe
See page 143

Recommended Kits

Buy more, Save more



Fluke 116/323 HVAC Combo Kit



Fluke 116/62 MAX+ HVAC Technician's Combo Kit

For more details see page 134

Included Accessories

TL175 Test Leads, AC175 Alligator Clips, Manual Information Pack

Ordering Information

| | |
|---------------------------|--|
| FLUKE-114 | Electrical True RMS Digital Multimeter |
| FLUKE-116 | HVAC True RMS Digital Multimeter |
| FLUKE-116/323 | HVAC and Clamp Meter Combo Kit |
| FLUKE-116/62 MAX + | HVAC Multimeter and Infrared Thermometer Kit |

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke 77IV Digital Multimeter



Fluke 77IV

Versatile multimeter for field service or bench repair

The Fluke 77IV Digital Multimeter has the features needed to repair most electrical and electronic problems. This meter is simple to use and has significant improvements over Fluke's original 70 Series with more measurement functions, conformance to the latest safety standards, and a much larger display that is easier to view.

- Wide 1000 V measurement range
- Average responding AC measurements
- 0.3 % accuracy
- 10 amps continuous
- Frequency and capacitance
- Resistance and continuity
- Large display
- Backlight for work in dim areas
- Min/Max to record signal fluctuations
- Integral holster with probe holders
- Free your hands with the optional TPAK magnetic hanger
- Auto and manual ranging
- Battery Life: 400 hours typical
- Weight: 0.42kg
- Size (HxWxD): 185mm x 90mm x 43mm



Recommended Accessories



1400
AC Current Clamp
See page 141



C35
Soft Carrying Case
See page 144



TPAK
Magnetic
Meter Hanger
See page 147



TL225
SureGrip™ Stray
Voltage Adapter
Test Lead Kit
See page 139



12000 FLEX
AC Current Clamp
See page 141



TLK-225
SureGrip™ Master
Accessory Kit
See page 139

Specifications

| Function | Maximum | Max. resolution | Accuracy |
|-------------|-----------|-----------------|-----------|
| Voltage DC | 1000 V | 1 mV | ±(0.3%+1) |
| Voltage AC | 1000 V | 1 mV | ±(2.0%+2) |
| Current DC | 10 A | 0.01 mA | ±(1.5%+2) |
| Current AC | 10 A | 0.01 mA | ±(2.5%+2) |
| Resistance | 50 MΩ | 0.1 Ω | ±(0.5%+1) |
| Capacitance | 9,999 μF | 1 nF | ±(1.2%+2) |
| Frequency | 99.99 kHz | 0.01 Hz | ±(0.1%+1) |

Accuracies are best accuracies for each function.

General Specifications

Accuracy is specified for 1 year after calibration, at operating temperatures of 18 °C to 28 °C, with relative humidity at 0 % to 90 %. Accuracy specifications take the form of ±([% of Reading] + [Counts]).

| | |
|---|---|
| V Maximum voltage between any terminal and earth ground | 1000 V |
| Surge protection | 8 kV peak per IEC 61010 |
| W Fuse for mA input | 440 mA, 1000 V FAST Fuse |
| W Fuse for A input | 11 A, 1000 V FAST Fuse |
| Display | Digital: 6,000 counts, updates 4/sec |
| Bar Graph | 33 segments, updates 32/sec |
| Frequency | 10,000 counts |
| Capacitance | 1,000 counts |
| Operating altitude | 2,000 metres |
| Storage altitude | 12,000 metres |
| Operating temperature | -10 °C to + 50 °C |
| Storage temperature | -40 °C to + 60 °C |
| Temperature coefficient | 0.1 X (specified accuracy/°C (< 18 °C or > 28 °C)) |
| Electromagnetic compatibility (EN 61326-1:1997) | In an RF field of 3 V/M, accuracy = specified accuracy except in temperature: specified accuracy ± 5 °C |
| Relative humidity (maximum non-condensing) | 90 % to 35 °C; 75 % to 40 °C; 45 % to 50 °C |
| Battery life | 400 hours |
| Size (HxWxL) and Weight | 185mm x 90mm x 43mm; 420 grams |
| Safety compliance | ANSI/ISA S82.02.01, CSA C22.2-1010.1, IEC 61010 to 1000 V Measurement Category III, 600 V Measurement Category IV |
| Certifications | CSA, TÜV (EN61010), UL, II, (N10140), VDE |

Included Accessories

Test Leads with 4mm Lantern Tips, 9V Battery (installed), Manual Information Pack.

Ordering Information

FLUKE-77-4 Digital Multimeter

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Fluke 88V Automotive Multimeter



Fluke 88V



The right meter for auto-electric diagnosis

The Fluke 88V Automotive Multimeter is the most powerful automotive multimeter ever offered by Fluke. In addition to having all standard multimeter features like the ability to measure voltage, current, continuity, and resistance, the 88V can perform diode test and pulse width measurements.

This meter can take current measurements up to 20 A for 30 seconds and 10 A continuously. The optional magnetic hanger lets you attach the meter to most steel surfaces for easy set-up and viewing. The 88V is designed to be used in high energy environments like those found on hybrid vehicles.

- 0.1 % DC accuracy
- 4-1/2 digit mode for precise measurements (20,000 counts)
- Measure up to 1000 V AC and DC
- Current measurements up to 10 A, 20 A for up to 30 seconds
- Built-in thermometer for temperature measurements when you need them (temperature probe included)
- Resistance, continuity and diode test
- RPM measurements with inductive pickup (included)
- Millisecond pulse width measurements for fuel injectors
- Magnetic hanger to attach meter to the vehicle and free your hands for other tasks
- Min/Max/Average recording with Min/Max Alert to capture variations automatically
- Peak Min/Max to record transients as fast as 250 µs
- Relative mode to remove test lead resistance from low ohms measurements
- Auto and manual ranging for maximum flexibility
- Autohold™ to capture stable readings with only one touch of the leads
- Large display digits and two-level bright white backlight for increased visibility
- Analogue bar-graph to track changing or unstable signals
- Input Alert provides audible warning against wrong use of input jacks

Specifications

| | |
|-------------------------|---|
| DCV | Maximum Voltage: 1000 V Accuracy: Fluke 88 V: ± (0.1 % + 1) Best Resolution: Fluke 88 V: 0.01 mV |
| ACV | Maximum Voltage: 1000 V Accuracy: Fluke 88 V: ± (0.5 % + 2) AC Bandwidth: Fluke 88 V: 5 kHz Best Resolution: 0.01 mV |
| DC Current | Maximum Amps: 10 A Amps Accuracy: Fluke 88 V: ± (0.4 % + 2) Best Resolution: Fluke 88 V: 0.001 mA |
| AC Current | Maximum Amps: 10 A Amps Accuracy: Fluke 88 V: ± (1.2 % + 2) Best Resolution: 0.001 mA |
| Resistance | Maximum Resistance: 50 MΩ Accuracy: Fluke 88 V: ± (0.4 % + 1) Best Resolution: 0.1 Ω |
| Capacitance | Maximum Capacitance: 9,999 µF Accuracy: ± (1 % + 2) Best Resolution: 0.01 nF |
| Frequency | Maximum Frequency: 200 KHz Accuracy: ± (0.005 % + 1) Best Resolution: 0.01 Hz |
| Duty Cycle | Maximum Duty Cycle: 99.9 % Accuracy: within 2 % per KHz + 0.1 % Best Resolution: 0.1 % |
| Temperature Measurement | -200.0 °C to 1090 °C, 1.0 % excluding probe |
| 80BK Temperature Probe | -40 °C to 260 °C, 2.2 °C or 2 % whichever is greater |
| Conductance | Maximum Conductance: 60.00 nS Accuracy: ± (1.0 % + 10) Maximum Resolution: 0.01 nS |
| Operating Range | Operating Temperature: -20 °C to 55 °C Storage Temperature: -40 °C to 60 °C |
| Size and Weight | 5.2 cm x 9.8 cm x 20.1cm, 624 g |

Recommended Accessories



TLK281
Automotive Test Lead Kit
See page 146



TLK282
Deluxe Automotive Test Lead Kit
See page 146



901-610S
1A to 600A AC/DC Current Probe
See page 146



80PK-27
(requires 80AK)
SureGrip™ Surface Temperature Probe
See page 143



PV350
Pressure Vacuum Module
See page 146



TL82
TL82 Automotive Pin & Socket Adapter Set
See page 146



C35
Soft Carrying Case
See page 144

Recommended Kits

Buy more, Save more



Fluke 88V/A Automotive Multimeter Combo Kit

For more details see page 134

Included Accessories

High-impact Holster, Test Leads, User Manual and Quick Reference Guide

Ordering Information

FLUKE-88-5/A Automotive Multimeter

FLUKE-88-5/A KIT Automotive Multimeter Combo Kit

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Fluke PRV240 Proving Unit

NEW



Fluke PRV240



Unique, compact and convenient

The Fluke PRV240 Proving Unit is a portable, pocket-sized, battery-powered voltage source. It is unique in that it sources stable AC and DC voltages for both LoZ and HiZ instruments.

The Fluke PRV240 proving unit provides a safe and easy method for verifying proper operation of your test tool before attempting to test for either an energised source or a de-energised source without the need for cumbersome PPE, or in cases where no known voltage source is available. Your environment may still require minimal PPE such as hard, safety glasses or earplugs when using a proving unit.

The PRV240 reduces the risk of shock and arc flash by validating the functionality of test tools without placing yourself in a potentially hazardous electrical environment.

- Sources both AC and DC steady-state voltage - supplies 240 V DC/AC
- A single LED indicates functionality, making this unit a simple-to-use solution for verification of your test tool
- Compatible with both high impedance or low impedance multimeters, clamp meters or two pole testers
- Voltage is sourced through recessed contacts that are activated when tested probes are inserted to avoid accidental contact
- Includes Magnetic Hanging Strap
- Long battery life - 5,000 tests per set of four AA batteries

Recommended Accessories



TPAK
Magnetic Meter Hanger
See page 147

Fluke PRV240 Applications



Specifications

| | | |
|-----------------------|---|---|
| Output voltage | 240 V AC RMS or DC | $\pm 10\% \geq 1\text{ M}\Omega$ |
| | LoZ >3 k Ω load | 60 V AC typical 50 V AC RMS minimum |
| LED power indicator | Turns on when output voltage is present | |
| Battery | 4 AA Alkaline batteries NEDA | 24 A IEC LR03 |
| Battery life | 5000 (5-second duration) test cycles with >1 M Ω load, 300 tests minimum with >3 k Ω load | |
| Operating temperature | -10 °C to +50 °C | |
| Operating humidity | 0 % to 90 % (0 °C to 35 °C) | 0 % to 70 % (35 °C to 55 °C) Operating altitude |
| Operating altitude | 2000 m | |
| Dimensions | 11.7 cm x 7.4 cm x 2.8 cm, Pollution Degree 2 | |
| Weight | 0.23 kg includes batteries | |
| Safety | IEC61010-1, IEC61010-2-030 | |
| Warranty | One-year | |



Included Accessories

TPAK Hanging Strap, 4 AA Batteries, Instruction Sheet

Ordering Information

PRV240 Proving Unit

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Fluke 8846A, 8845A and 8808A Precision Bench Multimeters



Fluke 8846A



Fluke 8845A



Fluke 8808A



Fluke 8846A/8845A 6.5 Digit Precision Multimeters

These digital multimeters perform the functions you would expect to see in a multifunction DMM, including measuring volts, ohms and amps. Basic V DC accuracy of up to 0.0024 %, 10 A current range, and a wide ohms range give you an unbeatable combination of measurement capability.

Extend the meters' utility even more with their graphical display modes, including Trendplot™ paperless recorder mode, statistics and histograms—features you won't find on other multimeters

- 6.5 digit resolution
- Up to 0.0024 % accuracy
- Graphical analysis modes: TrendPlot, Histogram and Statistics
- Dual measurement inputs: front/rear
- Dual measurement display
- Wide measurement ranges
- IEEE, LAN, RS-232 interfaces
- USB memory device port (8846A)
- TL2X4 wire measurement technique
- Three-year warranty
- 17025 accredited report of calibration included

Fluke 8808A 5.5 Digit Multimeter

The Fluke 8808A multimeter has a broad range of functions, measuring volts, ohms and amps with a basic V DC accuracy of 0.015 %. The meter is easy to use and include innovative functions to simplify routine testing and precision 4 wire resistance measurements.

- 5.5 digit resolution
- Up to 0.015 % accuracy
- Dual measurement display
- Sensitive DC leakage current ranges
- Front panel setup keys
- TL2X4 wire measurement technique
- Three-year warranty

Specifications

| | 8808A | 8845A | 8846A |
|---|---|---|--|
| Display | Dual | Dual, graphical | |
| Resolution (digits) | 5.5 | 6.5 | |
| Measurements | V AC, V DC, I DC, I AC, Ω, Cont, Diode | V AC, V DC, I DC, I AC, Ω, Cont, Diode | |
| Basic V DC accuracy (% Reading + % Range) | 0.015 + 0.003 | 0.0035 + 0.0005 | 0.0024 + 0.0005 |
| Advanced measurements/functions | 2x4 wire ohms, freq, i-Leakage dedicated setup keys | 2x4 wire ohms, freq, period | 2x4 wire ohms, freq, period, capacitance, temp (RTD) |
| Math | Null, dBm, dB, Min, Max | Null, dBm, dB, Min, Max, Ave, Std Deviation, MX+B | |
| Analysis | Limit Compare | Limit Compare, TrendPlot, Histogram, Statistics | |
| USB memory device port | No | No | Yes |
| Interfaces | RS-232, USB via optional adapter | RS-232, IEEE-488.2, LAN, USB via optional adapter | |
| Safety rating | CAT I 1000 V, CAT II 600 V | CAT I 1000 V, CAT II 600 V | |

Recommended Accessories



TL2X4W-TWZ
2x4-Wire Ohms Tweezers Test Leads



TL2X4W-PTH
2x4-Wire Ohms Test Lead



Y8846D
Rack Mount Kit, Dual



884X-CASE
Molded Plastic Case

Sample Screens

Fluke 8846A/8845A



Built-in TrendPlot graphically plots extent of drift and intermittent events.



Critical measurement statistics are conveniently displayed together.

Included Accessories

LCI Line Power Cord, Test Lead Set, Spare Line Power Fuse, Programmers Manual/ User Manual on CD-ROM, 884X-USB USB to RS232 Cable Adapter, FVF-BASIC FlukeView® Forms Software Basic Version.

Ordering Information

- FLUKE 8808A** 5.5 Digit Multimeter
- FLUKE 8808A/SU** 5.5 Digit Multimeter (Software + Cable)
- FLUKE 8845A** 6.5 Digit Precision Multimeter
- FLUKE 8845A/SU** 6.5 Digit Precision Multimeter (Software + Cable)
- FLUKE 8846A** 6.5 Digit Precision Multimeter
- FLUKE 8846A/SU** 6.5 Digit Precision Multimeter (Software + Cable)

Calibration & Service Agreement units also available.

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb



CLAMP METERS

Clamps Selection Guide

| | Residential/Commercial Electrical | | | General Purpose | | | Industrial Electrical | HVAC/R | High-end Industrial/Utility | | Fluke Connect® | | | | Leakage | |
|----------------------------------|-----------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|-----------------|--------------------------------|--|--------------------------------|--|
| | 323 | 324 | 325 | 365 | 373 | 374FC | | | 375FC | 376FC/381 | 902 | 353 | 355 | a3000FC | | a3002FC¹ |
| Measurements | | | | | | | | | | | | | | | | |
| AC current | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| AC volts | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| Resistance | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| Continuity | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| DC Volts | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| DC current | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| True-RMS | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| Frequency | | | | | | | | | | | | | | | | |
| AC + DC voltage | | | | | | | | | | | | | | | | |
| AC + DC current | | | | | | | | | | | | | | | | |
| Min/Max/Avg | | | | | | | | | | | | | | | | |
| Temperature | | | | | | | | | | | | | | | | |
| Capacitance | | | | | | | | | | | | | | | | |
| Special features | | | | | | | | | | | | | | | | |
| Fluke Connect® enabled | | | | | | | | | | | | | | | | |
| Inrush current mode | | | | | | | | | | | | | | | | |
| Low Pass filter | | | | | | | | | | | | | | | | |
| Harmonics, power, data logging | | | | | | | | | | | | | | | | |
| 18" Flex™ Flexible Current Probe | | | | | | | | | | | | | | | | |
| 10" Flex™ Flexible Current Probe | | | | | | | | | | | | | | | | |
| Remote display | | | | | | | | | | | | | | | | |
| Flashlight/torch | | | | | | | | | | | | | | | | |
| Display | | | | | | | | | | | | | | | | |
| Display hold | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| Backlight | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| Specifications | | | | | | | | | | | | | | | | |
| Jaw opening | 30 mm | 30 mm | 30 mm | 18 mm | 32 mm | 34 mm | 34 mm | 30.5 mm | 58 mm | 58 mm | 58 mm | 34 mm | 254 mm | 64mm | 4.5mm | 40 mm |
| Current range AC RMS | 0 to 400.0 A | 0 to 400.0 A | 0 to 400.0 A | 0 to 200.0 A | 0 to 600.0 A | 0 to 600.0 A | 0 to 600.0 A | 0 to 600.0 A | 0 to 1400 A | 0 to 1400 A | 0 to 1400 A | 0.5 to 400 A | 0.5 to 2500 A | 0.5 to 600 A | 0.5 to 2000 A | 0 to 60 A |
| Accuracy AC current (50/60 Hz) | 1.50% ± 5 counts | 1.50% ± 5 counts | 2.00% ± 5 counts | 2% ± 5 counts | 2% ± 5 counts | 2% ± 5 counts | 2% ± 5 counts | 2% ± 5 counts | 1.5% ± 5 counts | 1.5% ± 5 counts | 1.5% ± 5 counts | 2% ± 5 counts | 3% ± 5 counts | AC: 1.0% ± 3 counts DC: 0.5% ± 3 counts | True-RMS | 1% ± 5 counts |
| AC Response | True-RMS | True-RMS | True-RMS | True-RMS | True-RMS | True-RMS | True-RMS | True-RMS | True-RMS | True-RMS | True-RMS | True-RMS | True-RMS | True-RMS | True-RMS | Averaging |
| Current range DC | | | | 0 to 200 A | 0 to 600.0 A | 0 to 600.0 A | 0 to 600.0 A | 0 to 999.9 A | 0 to 2000 A | 0 to 2000 A | 0 to 2000 A | 0 to 2000 A | 0 to 1000 A | 0 to 1000 A | 0 to 2000 A | 0.05 to 20.99 mA 21.0 mA to 99.9 mA |
| Accuracy DC current | | | | 2% ± 5 counts | 2% ± 5 counts | 2% ± 5 counts | 2% ± 5 counts | 2% ± 5 counts | 1% ± 5 counts | 1.5% ± 5 counts | 1.5% ± 5 counts | 1.5% ± 5 counts | 1.5% ± 5 counts | 0.5% ± 3 counts | 0.5% ± 3 counts | 0.2% ± 5 counts 1% ± 5 counts |
| Voltage range AC | 0 to 600.0 V | 0 to 600.0 V | 0 to 600.0 V | 0 to 600.0 V | 0 to 600.0 V | 0 to 1000.0 V | 0 to 1000.0 V | 600.0 V | 0 to 600.0 V | 0 to 600.0 V | 0 to 600.0 V | 0 to 2000 V | 0 to 2000 V | 0 to 600.0 V | 0 to 600.0 V | |
| Accuracy AC voltage | 1.5% ± 5 counts | 1.5% ± 5 counts | 1.5% ± 5 counts | 2% ± 5 counts | 1.5% ± 5 counts | 1.5% ± 5 counts | 1.5% ± 5 counts | 1% ± 5 counts | 1% ± 5 counts | 1% ± 5 counts | 1% ± 5 counts | 1.5% ± 5 counts | 1.5% ± 5 counts | 1% ± 5 counts | 1% ± 5 counts | |
| Voltage range DC | 0 to 600.0 V | 0 to 600.0 V | 0 to 600.0 V | 0 to 600.0 V | 0 to 600.0 V | 0 to 600.0 V | 0 to 1000 V | 0 to 600.0 V | 0 to 1000 V | 0 to 1000 V | 0 to 1000 V | 0 to 1000 V | 0 to 1000 V | 0 to 1000 V | 0 to 1000 V | |
| Accuracy DC voltage | 1% ± 5 counts | 1% ± 5 counts | 1% ± 5 counts | 2% ± 5 counts | 1% ± 5 counts | 1% ± 5 counts | 1% ± 5 counts | 1% ± 5 counts | 1% ± 5 counts | 1% ± 5 counts | 1% ± 5 counts | 1% ± 5 counts | 1% ± 5 counts | 1% ± 5 counts | 1% ± 5 counts | |
| Resistance range | 0 to 4000 Ω | 0 to 4000 Ω | 0 to 4000 Ω | 0 to 6000 Ω | 0 to 6000 Ω | 0 to 6000 Ω | 0 to 6000 Ω | 0 to 9999 Ω | 0 to 400 kΩ | 0 to 400 kΩ | 0 to 400 kΩ | 0 to 400 kΩ | 0 to 400 kΩ | 0 to 400 kΩ | 0 to 400 kΩ | |
| Frequency measurement range | | | | 500 Hz | 500 Hz | 500 Hz | 500 Hz | 500 Hz | 5 to 1000 Hz | 5 to 1000 Hz | 5 to 1000 Hz | 5 to 1000 Hz | 500 Hz | | | |
| Unit power | | | | | | | | | | | | | | | | |
| Auto off | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| Warranty and safety | | | | | | | | | | | | | | | | |
| Warranty (years) | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 |
| Category ratings (EN61010-1) | CAT III 600 V CAT IV 300 V | CAT III 600 V CAT IV 300 V | CAT III 600 V CAT IV 300 V | CAT III 600 V CAT IV 300 V | CAT III 600 V CAT IV 300 V | CAT III 1000 V CAT IV 600 V | CAT III 1000 V CAT IV 600 V | CAT III 1000 V CAT IV 600 V | CAT III 1000 V CAT IV 600 V | CAT III 1000 V CAT IV 600 V | CAT III 1000 V CAT IV 600 V | CAT III 600 V | CAT III 1000 V CAT IV 600 V | CAT III 1000 V CAT IV 600 V | CAT III 1000 V CAT IV 600 V | CAT III 300 V |

¹ Clamp not included

Fluke 381 Remote Display True-RMS AC/DC Clamp Meter with iFlex™



Fluke 381



The world's most advanced clamp meter

The Fluke 381 True-RMS AC/DC Clamp Meter combines iFlex flexibility with remote reading capability for the ultimate in innovation and safety. Now one technician can do jobs that would otherwise require two people. Clamp the Fluke 381 around a conductor, remove the display and walk across the room to operate controls or remove protective equipment, all while watching real-time readings.

The iFlex™ Flexible Current Probe (included) expands the measurement range to 2500 A AC while providing increased display flexibility. With a cord that runs 6 feet, you can finally measure those tight spaces, awkward sized conductors and disorganised wires.

- Remote display reads measurements up to 9.1 metres away
- iFlex Flexible Current Probe included, 18 inch circumference
- 2500 A AC current measurement with iFlex
- 999.9 A AC and DC current measurement with fixed jaw
- 1000 V AC and DC voltage measurement
- Frequency measurement to 500 Hz
- 60 kΩ resistance measurement
- Min/Max/Avg and inrush recording
- CAT IV 600 V, CAT III 1000 V
- Three-year warranty

See detailed specifications chart on page 27.

Fluke 365 Detachable Jaw True-RMS AC/DC Clamp Meter



Fluke 365



Where rugged meets reliable

The Fluke 365 True-RMS AC/DC Clamp Meter offers a small, detachable jaw with 1.2 metres of coil that makes it easy to take and read measurements in tight or hard-to-reach places.

- 200 A AC and DC current measurement with detachable jaw
- 600 V AC and DC voltage measurement
- Detachable jaw makes accessing wires and viewing the display easier
- Built in flashlight/torch allows for easy illumination and identification of wires
- CAT III 600 V
- Compact design fits in your hand and can be used while wearing protective equipment
- State of the art signal processing allows for use in noisy electrical environments while providing stable readings
- Large, easy to read, backlight display automatically sets the correct measurement range so you do not need to change switch positions while taking a measurement
- Three-year warranty

See detailed specifications chart on page 27.

Recommended Accessories

Fluke 381



TL175
TwistGuard™
Test Leads
See page 140



TLK289
Industrial Master
Test Lead Set
See page 139



C345
Large Soft Case
See page 144



FTP-1
SureGrip™ Fused
Test Probe Set
See page 140



i2500-10
10 inch iFlex™ Flexible
Current Probe
See page 29



AC87
Heavy Duty Bus Bar
Clip Set
See page 140

Fluke 365



FTPL-1
SureGrip™ Fused Test
Probe and Lead Set
See page 140



TL71
Premium
Test Lead Set
See page 138



C43
Small Soft Case
See page 144



TL220
SureGrip™ Industrial
Test Lead Set
See page 139



AC285
SureGrip™ Alligator
Clips
See page 140



TL224
SureGrip™ Silicone
Insulated Test Leads
See page 139

Included Accessories

18-inch iFlex™ Flexible Current Probe (Fluke 381 only), Test Leads, Soft Carrying Case, Instruction Card, Safety Information Sheet, Two AA Alkaline Batteries.

Ordering Information

FLUKE 381 Remote Display True-RMS AC/DC Clamp Meter with iFlex™

FLUKE 365 Detachable Jaw True-RMS AC/DC Clamp Meter

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Fluke 370 Series Clamp Meters



Fluke 376 FC with iFlex™

Be ready for anything

Our family of True-RMS Clamp Meters provides a range of state-of-the-art features to meet even the most demanding job requirements.

All four of the clamp meters have improved base features such as a large, backlit display, true-RMS standard, CAT IV safety rating and a durably constructed body. Additionally, the 376 FC, 375 FC and 374 FC are a part of the Fluke Connect® family of wireless test tools and are compatible with the iFlex™ Flexible Current Probe (included with the 376 FC, sold separately for the 375 FC and 374 FC), and provide increased measurement readings to 1000 A and 1000 V AC and DC.



Fluke 375 FC Fluke 374 FC Fluke 373



Specifications

| Functions | Range | 373 | 374 FC | 375 FC | 376 FC |
|-----------------------------|--------------|---------------|-----------------|-----------------|-----------------|
| Current AC | 0 to 600.0 A | 2% ± 5 counts | 2% ± 5 counts | 2% ± 5 counts | - |
| | 0 to 999.9 A | - | - | - | 2% ± 5 counts |
| Current DC | 0 to 600.0 A | - | 2% ± 5 counts | 2% ± 5 counts | - |
| | 0 to 999.9 A | - | - | - | 2% ± 5 counts |
| Voltage AC | 0 to 600.0 V | 1% ± 5 counts | 1.5% ± 5 counts | 1.5% ± 5 counts | 1.5% ± 5 counts |
| | 0 to 1000 V | - | - | - | 1% ± 5 counts |
| Voltage DC | 0 to 600.0 V | 1% ± 5 counts | 1% ± 5 counts | 1% ± 5 counts | - |
| | 0 to 1000 V | - | - | - | 1% ± 5 counts |
| Resistance range | - | 0 to 6000 Ω | 0 to 6000 Ω | 0 to 6000 Ω | 0 to 60 kΩ |
| Jaw opening | - | 32 mm | 34 mm | 34 mm | 34 mm |
| Max. wire size | - | 750 MCM | 750 MCM | 750 MCM | 750 MCM |
| Frequency measurement range | - | - | - | 500 Hz | 500 Hz |

Fluke iFlex™ Flexible Current Probe



Unprecedented measurement flexibility

The iFlex Flexible Current Probe expands the measurement range of select Fluke Clamp Meters to 2500 A AC while providing increased display flexibility, improved wire access and the ability to measure awkward-sized conductors. Available in 18 inch and 10 inch coil sizes.

- Compatible to Fluke 374 FC, 375 FC, 376 FC and 381
- CAT IV 600 V, CAT III 1000 V
- 7.5 mm coil diameter allows measurement in tight spaces
- 1.8 m cable
- Three-year warranty

Visit sg.fluke.com/clamp for additional specifications.

Recommended Accessories



TL223-1
SureGrip™ Electrical Test Lead Set
See page 139



C43
Small Soft Case
See page 144



TL175
TwistGuard™ Test Leads
See page 140



i2500-18
18 inch iFlex™ Flexible Current Probe
See page 29

For use with the Fluke 375 and 376



AC285
SureGrip™ Alligator Clips
See page 140



TL224
SureGrip™ Silicone Insulated Test Leads
See page 139

Fluke Connect® Enabled



Fluke 376 FC, 375 FC, and 374 FC are now a part of the Fluke Connect family of wireless test tools.

- Trend measurements, pinpoint intermittent faults and transmit results wirelessly by connecting your meter to your phone via Fluke Connect Measurements app
- Create and send reports right from the field
- Stay safely away from the arc flash zone through Bluetooth connectivity

Included Accessories

18-inch iFlex™ Flexible Current Probe (Fluke 376FC only), Test Leads, Soft Carrying Case, Instruction Card, Safety Information Sheet, Two AA Alkaline Batteries.

Ordering Information

| | |
|------------------------|---|
| FLUKE 373 | True-RMS AC Clamp Meter |
| FLUKE 374FC | True-RMS AC/DC FC Clamp Meter |
| FLUKE 375FC | True-RMS AC/DC FC Clamp Meter |
| FLUKE 376FC | True-RMS AC/DC FC Clamp Meter with iFlex™ |
| i2500-10 iFlex™ | Flexible Current Probe 25 cm |
| i2500-18 iFlex™ | Flexible Current Probe 45 cm |

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke 902 True-RMS HVAC Clamp Meter



Fluke 902

Just for our HVAC pros

HVAC (heating, ventilation, air conditioning) technicians require a service tool that can consistently keep up with their demands. The Fluke 902 expands the existing line of quality Fluke clamp meters by delivering the features necessary to diagnose and repair HVAC systems. Combined with true-RMS technology and a CAT III 600 V rating, the Fluke 902 helps technicians do their jobs safely and accurately.

- Designed for HVAC applications with capacitance, DC current (μ A) and temperature measurements
- Small body and jaws fit perfectly in your hand and into tight places
- Handy “Display Hold” button keeps measurements on the display
- Meter controls are positioned so current measurements can be done with one hand (index finger on clamp opening lever and thumb on rotary switch)
- Three-year warranty

See detailed specifications chart on page 27.

| Functions | Range | 902 |
|------------------|--------------------|--------------------|
| Current AC | 0 to 600.0 A | 2% \pm 5 counts |
| Current DC | 0 to 200.0 μ A | 1% \pm 5 counts |
| Voltage AC | 0 to 600.0 V | 1% \pm 5 counts |
| Voltage DC | 0 to 600.0 V | 1% \pm 5 counts |
| Resistance range | - | 0 to 9999 Ω |
| Jaw opening | - | 30.5 mm |
| Max. wire size | - | 750 MCM |

Recommended Accessories

Fluke 902



C781
Meter Case
See page 144



80PK-8
Pipe Clamp
See page 143



AC220
Alligator Clips
See page 140



Fluke 360 AC Leakage Current Clamp Meter



Fluke 360

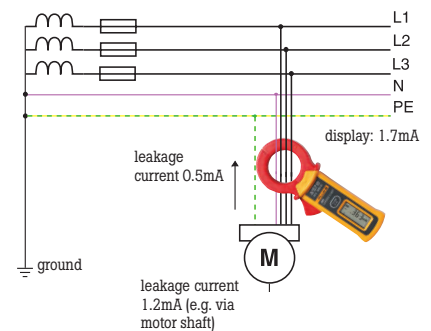
The unique jaw design of the Fluke 360 eliminates the influence of adjacent current conductors and measures leakage current down to 1 μ A for monitoring of insulation. The ergonomic design of the Fluke 360 ensures easy measuring. The measuring clamp fits into tight spaces and the wide display angle clearly shows the measurement result. The Data Hold button keeps the measured value on the display after removing the clamp for the measured conductor.

Current measurement

- Automatic ranging within the manually selected mA or range
- Ranges 3/30 mA and 30/60 A
- Current resolution 1 μ A/0.01 mA and 0.01 A/0.1 A
- Measurement of leakage protectives
- Advanced shielding to ensure accurate results when measuring near other conductors
- Frequency range 50 and 60 Hz
- Jaw size: 40 mm maximum conductor diameter
- Auto power off with audible warning buzzer

See detailed specifications chart on page 27.

| Functions | Range | Resolution | Accuracy |
|------------|-------------|------------|---|
| Current AC | 3mA | 0.001A | 1% \pm 5 counts |
| | 30mA | 0.01mA | |
| | 30A | 0.01A | 1% \pm 5 counts (0~50A) 5% \pm 5 counts (50~60A) |
| | 60A | 0.1A | |
| Frequency | 50 and 60Hz | - | - |



Included Accessories

Test Leads, Temperature Probe (Fluke 902 only), Soft Carrying Pouch and User Manual

Ordering Information

FLUKE-902 True RMS HVAC Clamp Meter

FLUKE-360 Leakage Clamp Meter

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Fluke 320 Series True-RMS Clamp Meters



Fluke 324

Fluke 323

Fluke 325



Go to work with the best

True-RMS measurements and optimised ergonomics make the 320 Series True-RMS Clamp Meters the best general troubleshooting tools for commercial and residential electricians. The 323, 324 and 325 are designed to verify the presence of load current, AC voltage and continuity of circuits, switches, fuses and contacts. These small and rugged clamp meters are ideally suited for current measurements up to 400 A in tight cable compartments. The Fluke 325 also offers DC current and frequency measurements.

- 400 A AC current measurement (AC and DC current; 325 only)
- 600 V AC and DC voltage measurement
- True-RMS AC voltage and current for accurate measurements on non-linear signals
- Resistance measurement to up to 40 kΩ with continuity detection
- Temperature and capacitance measurement (324 and 325 only)
- Frequency measurement (325 only)
- Slim, ergonomic design
- Large, easy to read backlight display (324 and 325 only)
- CAT IV 300 V/CAT III 600 V safety rating
- Hold button
- Two-year warranty
- Soft carrying case

Recommended Accessories



C43
Small Soft Case
See page 144



TL175
TwistGuard™
Test Leads
See page 140



TL223-1
SureGrip™ Electrical
Test Lead Set
See page 139



L210
Probe Light
and Extender
See page 147



Specifications

| | Residential/Commercial Electrical | | Light Industrial |
|--------------------------------|-----------------------------------|------------------|------------------|
| | 323 | 324 | 325 |
| Measurements | | | |
| AC current | ● | ● | ● |
| AC voltage | ● | ● | ● |
| Resistance | ● | ● | ● |
| Continuity | ● | ● | ● |
| DC volts | ● | ● | ● |
| DC current | | | ● |
| True-RMS | ● | ● | ● |
| Frequency | | | ● |
| Min/Max/Avg | | | ● |
| Temperature | | ● | ● |
| Capacitance | | ● | ● |
| Display | | | |
| Display hold | ● | ● | ● |
| Backlight | | | ● |
| Specifications | | | |
| Jaw opening | 30 mm | | |
| Max wire size | 600 MCM | | |
| Current range AC RMS | 0 to 400.0 A | | |
| Accuracy AC current (50/60 Hz) | 2.0 % ± 5 digits | 1.5 % ± 5 digits | 2.0 % ± 5 digits |
| AC response | True-RMS | | |
| Current range DC | - | - | 0 to 400 A |
| Accuracy DC current | - | - | 2.0 % ± 5 digits |
| Voltage range AC | 0 to 600.0 V | | |
| Accuracy AC voltage | 1.5 % ± 5 digits | | |
| Voltage range DC | 0 to 600.0 V | | |
| Accuracy DC voltage | 1 % ± 5 digits | | |
| Resistance range | 0 to 4000 Ω | | 0 to 40 kΩ |
| Frequency measurement range | - | - | 500 Hz |

Included Accessories

Test Leads, Soft Case, User Manual

Ordering Information

FLUKE-323 True RMS Clamp Meter

FLUKE-324 True RMS Clamp Meter

FLUKE-325 True RMS Clamp Meter

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke 350 Series AC/DC True-RMS Clamp Meters



Fluke 353

Fluke 355

Versatile, professional and accurate

Confidently take reliable readings with the True-RMS Fluke 353 and 355 Clamp Meters—the tools of choice for high current clamp-on amp meter measurements up to 2000 A.

- Reliably handle a wide range of high-current applications with 2000 A AC+DC True-RMS, 1400 A AC, and 2000 A DC
- Large 58 mm jaw
- Inrush current measurement
- High voltage measurement of 1000 V AC+DC True-RMS, 600 V AC, and 1000 V DC (355 only)
- Resistance to 400 k Ω (355 only)
- Continuity beeper (355 only)
- Frequency measurement to 1 KHz
- Selectable low-pass filter mode
- Min/Max/Avg
- Large display with backlight



Recommended Accessories

Fluke 355



80TK
Thermocouple Module
See page 143



TL175
TwistGuard™
Test Leads
See page 140



L215
SureGrip™ Electrical
Test Lead Set
See page 139



TL223-1
Test Lead Set
See page 139



C345
Large Soft Case
See page 144



C1600
Gear Tool Box
See page 145

Features

| | 353 | 355 |
|------------------------------------|-----|-----|
| True-RMS measurements | ● | ● |
| Display backlight | ● | ● |
| Motor start-up current | ● | ● |
| Min/Max/Average | ● | ● |
| Voltage AC/DC | ● | ● |
| Resistance measurement | | ● |
| Continuity measurement with beeper | | ● |

Specifications

| Functions | Range | 353 | 355 |
|-------------------|--------------------------|----------------------|----------------------|
| Current AC/DC | 0-40.00 A | 1.5% \pm 15 counts | 1.5% \pm 15 counts |
| | 0-400.0 A | 1.5% \pm 5 counts | 1.5% \pm 5 counts |
| | 0-2000 A; 1400 AC RMS | | |
| Crest Factor | | 2.4 | 2.4 |
| Voltage AC/DC | 0-4.000 V | | 1% \pm 10 counts |
| | 0-40.00 V | | 1% \pm 5 counts |
| | 0-400.0 V | | |
| | 0-600 V AC RMS | | |
| Resistance | 0-1000 V DC | | 1.5% \pm 5 counts |
| | 0-400.0 Ω | | |
| | 0-4.000 k Ω | | |
| | 0-40.00 k Ω | | |
| Continuity beeper | Appr. \leq 30 Ω | | |
| Frequency | 5.0Hz to 100.0Hz | | 0.2% \pm 2 counts |
| | 100.1Hz to 999Hz | | 0.5% \pm 5 counts |

| | |
|--------------|---|
| Power Supply | 6 x 1.5V AA NEDA 15A or 1EC LR6 |
| Battery life | 100 hours (with typical usage, backlight off) |
| Size (HxWxD) | 300 mm x 98 mm x 52 mm |
| Jaw opening | 58 mm |
| Weight | 0.814 kg |
| Warranty | Three year |

Included Accessories

Fluke 353: C43 Soft Meter Case, 6 AA Batteries, User Manual

Fluke 355: C43 Soft Meter Case, 6 AA Batteries, TL224 SureGrip™ Silicone Test Lead Set, TP2 Slim Reach Test Probe Set (2 mm), AC285 SureGrip™ Alligator Clip Set, User Manual

Ordering Information

FLUKE-353 True RMS AC/DC Clamp Meter

FLUKE-355 True RMS AC/DC Clamp Meter

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb



BATTERY TESTERS

Fluke BT500 Series Battery Analysers



Fluke BT521

Fluke BT510



More battery tests. Less time.

Fluke's BT500 Series Battery Analysers cover a broad range of battery test functions ranging from DC voltage and resistance tests to full condition testing using an automated string function testing and the test probe integrated infrared temperature measurement system. 500 Series Battery Analysers are designed for measurements on stationary batteries of all types.

- The world's fastest battery measurements- reduce time of a typical battery measurement with 50% from 8 seconds to 4 seconds.
- Unique CATIII 600V safety rating
- **Key measurements:** Battery resistance, DC and AC voltage, DC and AC current, ripple voltage, frequency and battery temp.
- **Sequence measurement mode:** Automatic or manual sequence testing of battery strings with automatic measurement storage including voltage, resistance and temperature (with BTL21 intelligent test probe).
- **Optimised user interface:** Quick, guided setup ensures you're capturing the right data every time.
- **Intelligent test probe set (BT520 and BT521):** Integrated LCD display, infrared temperature measurement (BT521 only), verbal audio feedback and captures voltage readings and temperature logging automatically or via integrated save button.

Recommended Accessories



1410
AC/DC Current Clamp
See page 142

Intelligent Test Probe



Integrated LCD display

Specifications

| Functions | Range | Resolution | Accuracy | BT510 | BT520 | BT521 |
|--|---|------------|------------|-------|-------|-------|
| Battery resistance ¹ | 3 mΩ | 0.001 mΩ | 1 % + 8 | ● | ● | ● |
| | 30 mΩ | 0.01 mΩ | 0.8 % + 6 | ● | ● | ● |
| | 300 mΩ | 0.1 mΩ | 0.8 % + 6 | ● | ● | ● |
| | 3000 mΩ | 1 mΩ | 0.8 % + 6 | ● | ● | ● |
| V DC | 6 V | 0.001 V | 0.09 % + 5 | ● | ● | ● |
| | 60 V | 0.01 V | 0.09 % + 5 | ● | ● | ● |
| | 600 V | 0.1 V | 0.09 % + 5 | ● | ● | ● |
| | 1000 V | 1 V | 0.09 % + 5 | | | ● |
| V AC (45 Hz to 500 Hz with 800 Hz filter) | 600 V | 0.1 V | 2 % + 10 | ● | ● | ● |
| Frequency (displayed with Vac and Aac) ² | 500 Hz | 0.1 Hz | 0.5 % + 8 | ● | ● | ● |
| AC voltage ripple (20 KHz Max) | 600 mV | 0.1 mV | 3 % + 20 | ● | ● | ● |
| | 6000 mV | 1 mV | 3 % + 10 | ● | ● | ● |
| A DC/A AC (with accessory Fluke i410) | 400 A | 1 A | 3.5 % + 2 | | | ● |
| Temperature | 0 °C to 60 °C | 1 °C | 2 °C | | | ● |
| Meter mode | 999 records for each measurement position with time stamp | | | | | |
| Sequence mode | Up to 100 profiles and 100 profile templates (Each profile stores up to 450 batteries) with time stamp | | | | | |

General Specifications

| | |
|--|--|
| Size (HxWxD) and Weight | 220 x 103 x 58 mm, 850 g |
| Screen dimensions | 77 x 56 mm |
| Interface | USB mini |
| Operating temperature | 0 °C to 40 °C |
| Lithium-ion battery charging temperature | 0 °C to 40 °C |
| Operating humidity | Non-condensing (10 °C), <=80 % RH (at 10 °C to 30 °C), <=75 % RH (at 30 °C to 40 °C) |
| IP rating | IP40 |
| Radio | FCC Class A |
| Vibration requirements | MIL-PRF-28800F: Class 2 |
| Drop test requirements | 1 metre |
| Temperature coefficients | Add 0.1 x specified accuracy for each degree C above 28 °C or below 18 °C |
| Safety compliance | 600 V CAT III |

¹ The measurement is based on AC injection method. The injected source signal is <100 mA, 1 kHz.

² Trigger level V AC: 10 mV, A AC: 10 A

Included Accessories

4-wire Test Pin (set), BTL10 Basic Test Lead (set), TL175 TwistGuard™ Test Leads with Adapter, L300 Attachable LED Flashlight (2) (BT520 and BT521 only), BTL20 Intelligent Test Probe Set, with extender (no temperature sensor) (BT520 only), BTL21 Intelligent Test Probe Set, with extender and temperature sensor (BT521 only), i410 AC/DC Current Clamp (BT521 only), BP500 Lithium-ion Battery, BC500 AC Charger, Mini-USB Cable, Shoulder Strap, Belt Strap, Magnetic Hanging Strap, FlukeView® Battery Management Software, Soft Carrying Case, Spare Fuses (2), Battery Tags (BT520 and BT521 only)

Ordering Information

FLK-BT510 Basic Battery Analyser
FLK-BT520 Battery Analyser
FLK-BT521 Advanced Battery Analyser

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb



ELECTRICAL TESTERS

Fluke 9040 and 9062 Phase Rotation Indicators

Take the guesswork out of phase/motor rotation measurements



Fluke 9040

Fluke 9062



Fluke 9040 Phase Rotation Indicator

The Fluke 9040 is effective for measuring phase rotation in all areas where three-phase supplies are used to feed motors, drives and electrical systems. The Fluke 9040 is a rotary field indicator and can provide clear indication of the 3 phase via an LCD display and the phase rotation direction to determine correct connections. It allows rapid determination of phase sequence and has a voltage (up to 700 V) and frequency range suitable for commercial and industrial applications. Test probes supplied with the instrument have a variable clamping range for safe contact, especially in industrial sockets.

- 3 phase indication
- Indication of phase rotation
- Clear LCD display
- No battery required

Fluke 9062 Motor and Phase Rotation Indicator

The unique Fluke 9062 provides rotary field and motor rotation indication with the benefits of contactless detection.

- 3 phase indication
- Indication of phase rotation
- Indication of motor rotation direction
- Contact free determination of the rotation
- direction of running motors

Made for commercial and industrial environments, the Fluke 9062 provides rapid indication of 3 phase rotation using test leads supplied or can be used to determine motor rotation on synchronous and asynchronous 3 phase motors. The contactless detection is ideal for use on motors where the shaft is not visible. Test probes supplied with the instrument have a variable clamping range for safe contact, especially in industrial sockets.

Recommended Accessories



TLK290
Flexible Socket
Probe Set
See page 139



TLK291
Fused Test
Probe Set
See page 140



C25
Meter Case
See page 144

Fluke 9062 Applications



Determine the presence of phase sequence of multiphase electrical supplies.



Determine the rotation of running motors by placing the instrument on the motor casing.



Check the correct rotation of motors prior to connection.

Specifications

| | 9040 | 9062 |
|-----------------|------------------------|------------------------|
| Voltage range | 40 - 700 V | Up to 400 V |
| Phase display | - | 120 - 400 V AC |
| Frequency range | 15 - 400 Hz | 2-400 Hz |
| Operating time | Continuous | Continuous |
| Size (HxWxD) | 124 mm x 61 mm x 27 mm | 124 mm x 61 mm x 27 mm |
| Power supply | from unit under test | 1 x 9V |
| Weight | 0.20 kg | 0.15 kg |
| Warranty | Two Year | |

Included Accessories

Fluke 9040: Alligator Clips - Black (3)
Standard Test Probes - Black (3)
Flexible Test Probes - Black (3)
User Manual

Fluke 9062: Alligator Clips - Black (3)
Flexible Test Probes - Black (3)
Test Leads - Black (3)
9V Battery, User Manual

Ordering Information

FLUKE-9040 Phase Rotation Indicator

FLUKE-9062 Motor and Phase Rotation Indicator

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Fluke T5 Series Electrical Testers and VoltAlert™ family



Fluke T5-600

Fluke T5-1000

Fluke T5 Series Voltage, Continuity and Current Testers

The Fluke T5 Electrical Testers let you check voltage, continuity and current with one compact tool. With the T5, all you have to do is select volts, ohms, or current and the tester does the rest. OpenJaw™ current lets you check current up to 100A - without breaking the circuit. Its tough test leads stow neatly in the back of the tester, making it easy to tote the T5 in your tool pouch. Detachable SlimReach™ test probes are customised for national electrical standards. The test leads accept optional accessories such as clips and specialty probes. The optional H5 holster lets you clip the T5 onto your belt. Available in 600V and 1000V models.

- Excellent front-line troubleshooting and measurement tool
- Available in 600 V and 1000 V models
- Digital display
- OpenJaw™ current measurement
- Rotary switch selects volts, amps and ohms functions
- Heavy-duty test leads



Fluke LVD1A

Fluke LVD2

Fluke 1AC-II

Fluke VoltAlert™ Family

The next generation VoltAlert™ AC non-contact voltage testers from Fluke are easy to use. Electricians, maintenance, service and safety personnel, and homeowners can quickly test for energised circuits in the workplace or at home. Certified up to CAT IV 1000 V.



Recommended Accessories



Recommended Kits

Buy more, Save more



Fluke T5-600/62 MAX+/1AC-II Infrared Thermometer and Electrical Tester Kit



Fluke T5-H5-1AC-II Electrical Tester Kit

For more details see page 135

Specifications

| Functions | T5-1000 | T5-600 |
|---|----------------------------|---------------------------|
| Measure AC/DC voltage | 1000 V | 600 V |
| Measure AC current (average) | 100 A | 100 A |
| Measure continuity | < 25 Ω | < 25 Ω |
| Measure resistance | 1000 Ω | 1000 Ω |
| DC polarity indicator | Yes | Yes |
| Detachable probe tips with optional probe tips styles | Yes | Yes |
| Digital display | Yes | Yes |
| Safety rating | 1000 V Overvoltage CAT III | 600 V Overvoltage CAT III |
| Warranty | Two-year | Two-year |

*Voltage levels will vary depending on country of intended use.

| Functions | 1AC-II | LVD1A | LVD2 |
|---------------|----------------------|----------------|---------------------|
| Voltage range | 90 V AC to 1000 V AC | 40 to 300 V AC | 90 V AC to 600 V AC |
| Audible alert | • | — | • |
| Flashlight | — | • | • |
| On/Off | • | — | • |

Included Accessories

Fluke T5-600 & T5-1000: Detachable Probes and Instruction Sheet

Ordering Information

| | |
|--------------------------|--|
| FLUKE T5-600 | Electrical Tester |
| FLUKE T5-1000 | Electrical Tester |
| FLUKE T5-H5-1AC KIT | Electrical Tester Kit with Holster and 1AC |
| FLUKE T5-600/62 MAX+/1AC | Electrical Tester IR Thermometer, Voltage Detector Kit |
| FLUKE 1AC-A1-II | VoltAlert™ Voltage Detector |
| FLUKE LVD1A | Volt Light |
| FLUKE LVD2 | Volt Light |

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke 2042 Cable Locator



Transmitter

Receiver



The Fluke 2042 is a professional general purpose cable locator. It is ideal for tracing cables in walls and underground, locating fuses/breakers on final circuits and locating interruptions and short-circuits in cables and electrical floor heating systems.

It can also be used for tracing metallic water and heating pipes. The unit is supplied as a complete kit comprising of a transmitter and receiver in a purpose-made carry case. The receiver also incorporates a torch function for working in dimly lit locations.

- For all applications (live or dead cables) without additional instruments
- Set includes a transmitter and a receiver
- Proven digitally coded sender signal guarantees clear signal identification
- Transmitter with LCD-display for transmitting level, transmitting code and external voltage
- Receiver with a backlight LCD-display for level of receiving signal, code of receiving signal and live voltage indication

- Automatic or manual adjustment of receiving signal sensitivity
- Switchable acoustic receiving signal
- Auto-Power-Off
- Additional torch lamp function for working in dark environments
- Additional transmitters are available for extension or to distinguish between several signals.

Specifications

| | Transmitter | Receiver |
|---------------------------------|----------------------------|----------------------------------|
| Voltage Measurement Range | 12V, 50V, 120V, 230V, 400V | |
| Frequency Range | 0..60 Hz | |
| Output signal | 125 kHz | |
| Voltage | Up to 400V AC/DC | |
| Tracing depth cable location | | 0...2.5m wall/underground cables |
| Main voltage detection | | 0...0.4m |
| Operating Temperature | 0 to 40°C | 0 to 40°C |
| Storage Temperature | -20°C to +60°C | -20°C to +60°C |
| Humidity (Without Condensation) | Max. 80% relative | Max. 80% relative |
| Operating Altitude | Up to 2000 m | Up to 2000 m |
| Electrical Safety | EN 61010-1 | |
| Overvoltage Category | Cat. III 300 V | |
| Voltage Test | • | • |
| Indication of polarity | • | • |
| Resistance measurement | | |
| Batteries | 6 pc Batteries 1.5V | 1 pc Battery 9V |
| Size (HxWxD) | 190 mm x 85 mm x 50 mm | 250 mm x 65 mm x 45mm |
| Weight | 0.45 kg | 0.36 kg |
| Warranty | Two Years | |

Recommended Accessories



2042T
Transmitter

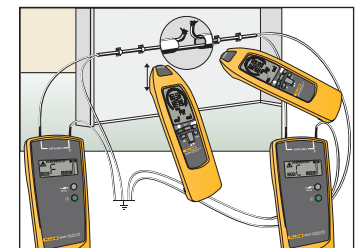
Fluke 2042 Applications



Location of fuses/breakers and assignment to circuits



Tracing of underground cables (max. depth 2.5 m)



Precise location of cable interruptions with additional transmitter

Included Accessories

TL27 Heavy Duty Test Lead Set (2), TP74 Lantern Tip Test Probe Set, AC285 Alligator Clip Set, Soft Carrying Case, Hard Case

Ordering Information

FLUKE-2042 Cable Locator (Transmitter & Receiver)

FLUKE-2042T Cable Locator Transmitter

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Fluke T Series Voltage and Continuity Testers



Fluke T150

Fluke T130



N10140



Fluke T90



Fluke T110, T130, T150

Rugged, high-quality testers for fast test results the way you need them

Fluke's family of Two-Pole Voltage Testers are built with state-of-the-art measurement and safety technology. These testers offer everything you expect from Fluke and a little bit more.

- Rugged, high-quality construction is built to last. This includes a heavy duty molded case, a thicker cord with wear indicator, sturdy battery case, and well fitting and durable probe protector.
- Fast test results the way you need them, with large, easy-to-use buttons, bright backlights, and clear audible and physical indicators designed for any work situation.
- Enhanced ergonomic design feels good in your hand, is easy to use (even with gloves on) and quick, secure probe docking.
- Compliant with regulation HSE GS 38 (tip caps) and IEC EN 61243-3: 2010



Fluke T110

Fluke T90

Recommended Accessories



C150
Soft Case
See page 144

Electrical Testers

Features

| | T90 | T110 | T130 | T150 |
|---|-----|-------------|-------------|-------------|
| Backlit LED indicator | • | • | • | • |
| Backlit LCD Digital Display | | | LCD | LCD |
| Continuity test - visual results | • | • | • | • |
| Continuity test - audible results | • | with on/off | with on/off | with on/off |
| Vibratory indicator under load | | with on/off | with on/off | with on/off |
| Display Hold | | | • | • |
| Voltage Test | • | • | • | • |
| Indication of polarity | • | • | • | • |
| Resistance measurement | | | | • |
| Switchable Load | | • | • | • |
| Single pole test for phase detection | • | • | • | • |
| Rotary field indicator | | • | • | • |
| Probe tip protection | • | • | • | • |
| Voltage display with discharged batteries | • | • | • | • |
| Electrical torch function | | • | • | • |
| Wear indicator test lead wire | • | • | • | • |



Specifications

| | T90 | T110 | T130 | T150 |
|--|--|-----------------------------|-----------|--------------|
| Voltage AC/DC | 12V - 690V | 12V - 690V | 6V - 690V | 6 V - 690 V |
| Continuity | 0 - 400 kΩ | | | |
| Frequency | 0 - 60 Hz | 0 - 400 Hz | | |
| Phase rotation | - | 100 V - 690 V | | |
| Resistance measurement | - | - | - | Up to 1999 Ω |
| Response time (LED ladders) | < 0.1 s | | | |
| 200 kΩ input impedance | Current draw 3,5 mA @ 690 V, Current draw 1,15 mA @ 230 V | | | |
| 7k Ω input impedance (with load buttons pressed) | - | current draw 30 mA @ 230 V | | |
| Safety rating | CAT II 690V CAT III 600V | CAT III 690V CAT IV 600V | | |
| IP rating | IP54 | IP64 | IP64 | IP64 |
| Battery type | Alkaline supplied, usable with 1.2 V NiCD or NiMH rechargeable batteries | | | |
| Size (HxWxD) | 100 mm x 250 mm x 125 mm | | | |
| Weight | 1.3 kg | | | |
| Warranty | Three Years | | | |

Included Accessories

2 AA Batteries and Instruction Sheet

Ordering Information

FLUKE-T90 Voltage/Continuity Tester

FLUKE-T110 Voltage/Continuity Tester with Switchable Load

FLUKE-T130 Voltage/Continuity Tester with LCD Switchable Load

FLUKE-T150 Voltage/Continuity Tester with LCD, OHMS, Switchable Load

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke 1000FLT Fluorescent Light Tester



Fluke 1000FLT

The most complete lamp tester helps save you time, reduce costs

The Fluke 1000FLT allows you to perform 5 tests with 1 compact tool. If your job requires keeping large numbers of fluorescent lights shining, the Fluke 1000FLT is an indispensable tool. This tester is a real time and money saver.

- Saves time and reduces costs: Perform all 5 essential lighting tests in under 30 seconds to pinpoint problems and verify operation when done
- Survives on-the-job handling: Drop-tested to survive from a two metre ladder
- Easy to use: Bright indicator light plus audible alert
- Built to last, easy to maintain: The Fluke 1000FLT's extendable test rod is all metal and very rugged. But should the need arise, this test rod is easily replaced
- Long life: Backed with a three-year warranty

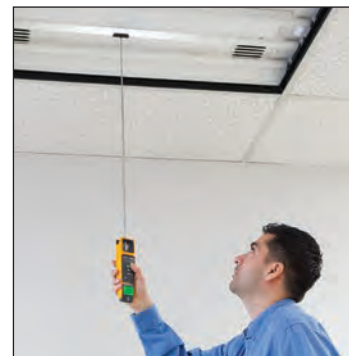
Save time, reduce costs.

The Fluke 1000FLT offers 5 essential lighting tests:

- 1 Lamp test: test bulb without removing from fixture.
- 2 Ballast test: easily determine if ballast is working.
- 3 Non-contact voltage: quickly check for voltage presence.
- 4 Pin continuity test: tests if filaments have continuity.
- 5 Ballast-type test: determine if ballast is electronic or magnetic without taking fixture apart– identify energy wasting ballasts.



Fluke 1000FLT Applications



Lamp test: Test bulb without removing from fixture



Non-contact voltage: Quickly check for voltage presence



Pin continuity test: Test if filaments have continuity

Specifications

Test Specifications

| | |
|----------------------------|--|
| Lamp Test Max Output | 3000 V peak-peak |
| Ballast Test | 20 kHz |
| Ballast Type Discriminator | ≤3 m distance |
| Pin Continuity Test | < 1 kΩ |
| NCV (VoltAlert™) | 85 to 277 V AC, 45 to 67 Hz, ≤10 cm distance |
| Temperature | Operating -10 °C to +50 °C, Storage -40 °C to +60 °C |
| Relative Humidity | 85 % maximum |
| Safety rating | IEC 61010-1, pollution degree 2 |

Mechanical & General Specifications

| | |
|-----------------------------|---|
| Size | 21.5 cm x 3.0 cm x 6.5 cm |
| Weight | 0.37 kg |
| Battery type | 4 x AA alkaline IEC LR6 |
| Battery life | 40 hours |
| Auto Power Off | 20 minutes after non-use |
| Low Battery Indicator | Power button light blinks when power is low (typically 85 % of capacity depleted) |
| Operating altitude | < 2000 m |
| Electromagnetic Environment | EN 61326-1: Portable |
| Resistance to impact | 2 metre drop |
| Warranty | 3 years |

Included Accessories

4 AA Alkaline Batteries, H1000 Holster, Quick Reference Guide.

Ordering Information

FLUKE-1000FLT Fluorescent Light Tester

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb



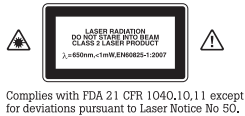
LASER DISTANCE METERS

Fluke 424D, 419D and 414D Laser Distance Meters



Fluke 419D Fluke 424D Fluke 414D

Fluke 424D



Complies with FDA 21 CFR 1040.10.11 except for deviations pursuant to Laser Notice No. 50.

Introducing the next generation of Fluke Laser Distance Meters

Measure farther, with greater accuracy, in more situations.

- **Instant measurements up to 100m:** Just point, click and done
- **Measure with greater accuracy:** Up to ± 1 mm, no scales to interpret or misread
- **Do the work of two:** Instead of holding the tape, your helper can do other jobs
- **The most advanced 2 laser technology for distance measurement**
- **Speed up the job:** Easily measure hard-to-access areas, like high ceilings, without climbing a ladder
- **Keep it on the level:** New inclination sensor on the Fluke 424D helps with leveling, height tracking, measuring around obstacles
- **Reduce estimating errors let the meters do the math:** Find area and volume. Easily add and subtract distances. Use Pythagoras calculations for height
- **Improved battery life:** Automatic shut-off feature
- Three-year warranty

The Fluke 424D and 419D Laser Distance Meters additionally offer:

- Improved visibility with backlit screen
- Ability to measure up to 80 m for 419D, 100 m for 424D
- Tripod mode allows you to mount to a tripod for measuring long distances
- Stake out function
- Enhanced Pythagoras calculation for determining distance indirectly from three other measurements
- Audible keypad feedback
- Storage of the last twenty measurements for quick recall of distance
- Strong environmental protection with IP54 (water spray and dust proof) sealing

The Fluke 424D Laser Distance Meter additionally offers:

- Inclination sensor for taking measurements in hard to reach areas
- Compass provides a "heading" for distance measurement
- Automated end-piece correction: when measuring from an edge or corner, a built-in sensor detects the position of this bracket and automatically changes the reference point

Recommended Kits

Buy more, Save more



Fluke 414D/62MAX+ Laser Distance Meter/Infrared Thermometer Combo Kit

For more details see page 136

Fluke 419D Application



Features

| | 424D | 419D | 414D |
|---------------------------------------|----------------------|----------------------|------------|
| Maximum measurement distance | 100 m | 80 m | 50 m |
| Accuracy | ± 1 mm | ± 1 mm | ± 2 mm |
| Battery life (number of measurements) | 5000 | 5000 | 3000 |
| Area measurement | Yes | Yes | Yes |
| Volume measurement | Yes | Yes | Yes |
| Pythagoras calculations | Full | Full | 1+2 |
| Plus and minus calculations | Yes | Yes | Yes |
| Measurement storage | 20 complete displays | 20 complete displays | 5 results |
| Backlight | Yes | Yes | No |
| Minimum/Maximum | Yes | Yes | Yes (Pyth) |
| Audible keypad feedback | Yes | Yes | - |
| Tripod mount | Yes | Yes | - |
| Corner angle measurement | Yes | - | - |
| Stake out | Yes | Yes | - |
| Dust and splash proof | IP54 | IP54 | IP40 |
| Compass | Yes | - | - |
| Inclination sensor | Yes | - | - |
| Display | 4 line | 3 line | 2 line |
| Automated end-piece correction | Yes | - | - |

Included Accessories

2 AAA Batteries, User Manual on CD, Quick Reference Guide, Vinyl Carrying Pouch

Ordering Information

- FLUKE-414D** Laser Distance Meter, 50m
- FLUKE-419D** Laser Distance Meter, 80m
- FLUKE-424D** Laser Distance Meter, 100m
- FLUKE-414D 62 MAX+ KIT** Laser Distance Meter/Infrared Thermometer Combo Kit

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb



THERMOMETERS

Digital Infrared Thermometer Selection Guide

| | 60 Series | | | 560 Series | | | 570 Series | | |
|---------------------------------------|--------------------|---------------|---------------|--------------------|--------------------|--------------------|--------------------|---------------------------------|--|
| | Fluke 61 | Fluke 62 MAX | Fluke 62 MAX+ | Fluke 63 | Fluke 561 | Fluke 566 | Fluke 568/568Ex | Fluke 572-2 | |
| Temperature range | -18 to 275 °C | -30 to 500 °C | -30 to 650 °C | -32 to 535 °C | -40 to 550 °C | -40 to 650 °C | -40 to 800 °C | -30 to 900 °C | |
| Distance to spot | 8:1 | 10:1 | 12:1 | 12:1 | 12:1 | 30:1 | 50:1 | 60:1 | |
| Laser sighting | single-point laser | Single laser | Dual laser | single-point laser | single-point laser | single-point laser | single-point laser | offset dual laser, output <1 mW | |
| Accuracy | 2% | 1,50% | 1,00% | 1% | 1% | 1% | 1% | 1% | |
| Response time | < 500 mSec | < 500 mSec | < 300 mSec | < 500 mSec | < 500 mSec | < 500 mSec | < 500 mSec | < 500 mSec | |
| Recommended distance to spot | Up to 2 m | Up to 2 m | Up to 2 m | Up to 2.5 m | Up to 2.5 m | Up to 4.5 m | Up to 7.5 m | Up to 9 m | |
| Adjustable emissivity | | • | • | | • | • | • | • | |
| MIN/MAX readings | | • | • | -/• | • | • | • | • | |
| AVG readings | | • | • | | • | • | • | • | |
| DIF readings | | • | • | | • | • | • | • | |
| Backlit LCD | • | • | • | • | • | • | • | • | |
| Audible Hi/Lo alarm | | | | | | | | | |
| Visible Hi/Lo alarm | | | | | | | | | |
| Includes contact probe | | | | | | | | | |
| Probe input (types) | | | | | Thermocouple K | Thermocouple K | Thermocouple K | Thermocouple K | |
| Data logging (number of measurements) | | | | | | 20 points | 99 points | 99 points | |
| PC interface | | | | | | | USB | USB 2.0 | |
| FlukeView® Forms software compatible | | | | | | | • | • | |

Recommended Applications



Plant/facilities maintenance

Preventive and predictive maintenance
Energy audits
Vehicle and fleet maintenance programs
Faulty electrical/circuit connections
Petrochemical/hazardous locations
Motors, pumps and bearings



Heating/ventilation/air conditioning/refrigeration

Leaky ductwork
Thermostats
Temperature balancing
Steam distribution systems
Compressor lines



Manufacturing processes

Molding temperature measurement
Printing, paper and converting
Thermoforming plastics
Electronics
Paint curing/drying
Food
Chemical and pharmaceutical



Safety and protection

Fire localisation
Hazardous materials
Faulty ballasts
Search and rescue
Smoldering embers
Equipment maintenance

Fluke 560 Series Infrared Thermometers



Fluke 568

Fluke 561



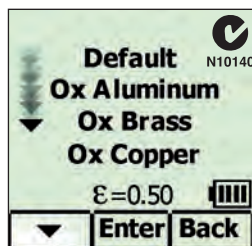
Fluke 561, 566 and 568 Infrared and Contact Thermometers

With a straight-forward user interface and soft-key menus, the Fluke 561, 566 and 568 make even complex measurements easy. With just a few pushes of a button you can easily adjust emissivity, start data logging, or turn on and off alarms. With a rugged, easy-to-use design, the Fluke 561, 566 and 568 can stand up to tough industrial, electrical, and mechanical environments.

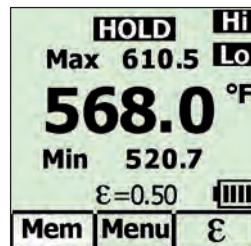
- Measure up to 800 °C
- Easily access advanced features with the soft-key buttons and graphical display
- Measure smaller objects from further away
- Compatibility with most type K thermocouples
- Confidently measure more surfaces, with adjustable emissivity and built-in materials table (568)
- Log and download measurements for reporting (568)
- Two levels of backlight (566, 568)
- Audible and visual alarms alert you to measurements outside of set limits
- Min/Max/Dif functions
- Includes KTC bead probe
- 1% measurement accuracy
- Versatile interface with six languages



Choose your language



Select the measurement surface



See complete measurement details in seconds

Specifications

| | 561 | 566 | 568/568 Ex |
|---------------------------------------|------------------------------------|---------------------------------------|------------------|
| Infrared temperature range | -40 °C to 535 °C | -40 °C to 650 °C | -40 °C to 800 °C |
| Accuracy | Greater of ± 1 % or ± 1 °C | | |
| Distance to Spot (D:S) | 12:1 | 30:1 | 50:1 |
| Sighting | Laser point | | |
| Typical distance to target | Up to 2.5 m | Up to 4.5 m | Up to 7.5 m |
| Probe type | Thermocouple K | | |
| Contact temperature range | -40 °C to 550 °C | -270 °C to 1372 °C | |
| Number of on-board memory locations | — | 20 | 99 |
| PC download and software | — | — | FlukeView® Forms |
| Soft-key feature menu navigaton | — | Yes | |
| Min/Max/Avg/Dif | Min/Max/Dif | Min/Max/Avg/Dif | |
| Material type adjustment (emissivity) | Hi/Med/Lo | Material table or 0.1 to 1.00 by 0.01 | |
| Two levels of backlight | — | Yes | |
| High and low alarms | — | High and low alarms | |
| Hands-free logging | — | — | Yes |
| Battery | 2 AA | | |
| Included case | Hard case (except 561/R and 561/P) | Hard case | |
| Warranty | Two-year | | |

Speciality Model

Fluke 568Ex Intrinsicly Safe Infrared Thermometer



- Measure -40 °C to 800 °C
- 50:1 distance to spot ratio with dual laser sighting for fast, accurate targeting
- Display resolution 0.1 °C of reading
- Adjustable emissivity and predefined emissivity table
- Safety Certification ATEX/IECEx for Class1, Div 1 and Div 2 or Zone 1 and 2 hazardous environments

See *Intrinsicly Safe products* on page 132

Recommended Accessories



Included Accessories

Thermocouple K-type Velcro Pipe Probe (561 only), K-type Thermocouple Bead Probe (566 & 568 only), FlukeView® Forms Software (568 only), USB Cable (568 only), Hard Carrying Case, 2 AA Batteries and User Manual with Measurement Guide

Ordering Information

| | |
|--------------|---------------------------------|
| FLUKE-561 | HVACPro Infrared Thermometer |
| FLUKE-566 | IR Thermometer |
| FLUKE-568 | IR Thermometer |
| FLUKE-568 Ex | Intrinsicly Safe IR Thermometer |

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke 572-2 High Temperature Infrared Thermometer



Fluke 572-2



The best choice when things are really hot

The Fluke 572-2 Infrared Thermometer is the one product you can use in high temperature industrial environments all around the world. This is the best choice for when you need accurate results for high temperature readings from a long distance. Combined with ease of use and Fluke's ruggedness and reliability you can't go wrong.

- Measure -30 °C to 900 °C
- 60:1 distance to spot ratio with dual laser sighting for fast, accurate targeting
- 12 or 24 hour clock
- Last reading Hold (20 seconds)
- High and low temperature alarm
- Data storage and review (99 data sets)
- Compatible with standard mini-connector K-type thermocouples, including ones you already own and have installed
- Current Temperature plus MAX, MIN, DIF, AVG temperature displays
- Adjustable emissivity and predefined emissivity table
- Infrared and thermocouple temperature on backlit display
- FlukeView® Forms documenting software

Recommended Accessories



80PK-1
Bead Probe
See page 143



80PK-8
Pipe Clamp
Temperature Probe
See page 143



80PK-9
General Purpose Probe
See page 143



80PK-11
Type-K Flexible Cuff
Thermocouple
Temperature Probe
See page 143



80PK-25
SureGrip™ Piercing
Temperature Probe
See page 143



80PK-26
SureGrip™ Tapered
Temperature Probe
See page 143

Specifications

| | |
|--|--|
| Infrared temperature range | -30 °C to 900 °C |
| Infrared accuracy (calibration geometry with ambient temperature 23 °C ± 2 °C) | ≥ 0 °C: ± 1°C or ± 1 % of the reading, whichever is greater ≥ -10 °C to <0 °C: ± 2 °C < -10 °C: ± 3 °C |
| Infrared repeatability | ± 0.5 % of reading or ± 0.5 °C, whichever is greater |
| Display resolution | 0.1 °C |
| Distance:Spot | 60:1 (calculated at 90 % energy) |
| Minimum spot size | 19 mm |
| Laser sighting | Offset dual laser, output < 1 mW |
| Spectral Response | 8 μm to 14 μm |
| Response Time (95 %) | < 500 ms |
| Emissivity | Digitally adjustable from 0.10 to 1.00 by 0.01 or via built-in table of common materials |
| Hi/Low alarms | Audible and two-color visual |
| Min/Max/Avg/Dif | Yes |
| Switchable celsius and fahrenheit | Yes |
| Backlight | Two levels, normal and extra bright for darker environments |
| Trigger lock | Yes |
| Data storage | 99 points |
| Display | Dot matrix 98 x 96 pixels with function menus |
| Communication | USB 2.0 |
| K-type thermocouple input temperature range | -270 °C to 1372 °C |
| K-type thermocouple input accuracy (with ambient temperature 23 °C ± 2 °C) | < -40 °C: ± (1 °C + 0.2 %/1 °C) ≥ -40 °C: ± 1 % or 1 °C, whichever is greater |
| Operating temperature | 0 °C to 50 °C |
| Storage temperature | -20 °C to 60 °C |
| Size (HxWxD) | 177 x 164 x 52 mm |
| Weight | 0.322 kg |
| Power | 2 AA Batteries |
| Battery life | 8 hours with laser and backlight on; 100 hours with laser and backlight off, at 100 % duty cycle (thermometer continuously on) |
| Warranty | Two years |

Included Accessories

K-type Thermocouple Bead Probe, USB 2.0 Computer Interface Cable, FlukeView® Forms Documenting Software, Hard Carrying Case, Getting Started Guide (print) and User Manual (CD).

Ordering Information

FLK-572-2 Infrared Thermometer

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke 62 MAX and 62 MAX+ Infrared Thermometers



Fluke 62 MAX

Fluke 62 MAX+



N10140



- **Dust and water-resistant:** IP54 rated for dust/water resistance
- **Rugged:** 3m drop tested
- **Ergonomically designed:** Completely redesigned for a more natural hand fit
- **Distance to spot:** Precise laser technology makes for more accurate and repeatable measurements
- **Dual lasers:** The 62 MAX+ has dual rotating lasers to help you identify area to be measured. The measurement area is the spot between the dots
- **Min/Max/Avg/Dif:** Displays the minimum, maximum or average temperature, or the difference between two measurements
- **Alarm:** Hi and Lo alarms for rapid display of measurements outside the limits

| | 62 MAX | 62 MAX+ |
|--------------------|--|--|
| Temperature range | -30 °C to 500 °C | -30 °C to 650 °C |
| Accuracy | ± 1.5 °C or ± 1.5 % of reading, whichever is greater -10 °C to 0 °C: ± 2.0 -30 °C to -10 °C: ± 3.0 | ± 1.0 °C or ± 1.0 % of reading, whichever is greater -10 °C to 0 °C: ± 2.0 -30 °C to -10 °C: ± 3.0 |
| Emissivity | 0.10 to 1.00 | |
| Optical resolution | 10:1 (calculated at 90 % energy) | 12:1 (calculated at 90 % energy) |
| Compliance | EN/IEC 61010-1: 2001 | |
| Laser safety | FDA and EN 60825-1 Class II | |

Recommended Accessories

Fluke 60 Series



C23
Soft Carrying Case
See page 144



H6
Electrical Tester
Holster
See page 145

Recommended Kits

Buy more, Save more

Fluke T5-600/62 MAX+/1AC-II Infrared Thermometer and Electrical Tester Kit

For more details see page 135

Fluke 116/62 MAX+ Technician's Combo Kit

For more details see page 134

Fluke 414D/62 MAX and Laser Distance Meter/Infrared Thermometer Combo Kit

For more details see page 136

Fluke 60 Series Infrared Thermometers



Fluke 61 Fluke 63



N10140

The Fluke 60 Series Non-Contact Thermometers are the ideal professional diagnostic tools for quick and accurate temperature measurements.

These handheld tools are ideal for measuring surface temperatures of rotating, hard-to-reach, electricity live or dangerously hot targets like electrical motors and – panels, and heating and ventilation systems. The laser sighting system guides measurements to the right target and in less than a second, the large temperature display provides a readout of the surface temperature.

- Laser guided sighting system for easy targeting with 1% accuracy
- Up to 12:1 optical resolution
- Backlit display for easy reading in the dark
- Temperatures up to 535°C

Specifications

| | 61 | 63 |
|---|--|---|
| Range | - 18 to 275°C | - 32 to 535 °C |
| Response time | < 500ms | ≤ 0.5 second |
| Resolution | 0.2 °C | 0.2 °C |
| Repeatability (% of reading) | ± 2% or ± 2 °C | ± 0.5% or ≤ ± 1 °C |
| Accuracy: (assumes ambient operating temperature of 23°C) | For targets at: -18 to -1°C: ± 3°C -1 to 275°C: ± 2% of reading or ± 2°C | For targets at: -32 to -26°C: ± 3°C -26 to -18°C: ± 2.5°C -18 to 23°C: ± 2°C 23°C -510°C: ± 1%, of reading or ± 1°C For targets above 510°C: ± 1.5% of reading |
| Typical distance to target | Up to 1 m | Up to 2 m |
| Emissivity | Fixed at 0.95 | Fixed at 0.95 |
| Battery Life | 12 hours with laser & backlight on | 10 hours with laser & backlight on |
| Size (mm) and Weight | 184 x 45 x 38, 0.227 kg | 200 x 160 x 55, 0.320 kg |

Included Accessories

Fluke 62 MAX and 62 MAX+:
2 AA Batteries and Instruction Sheet

Fluke 60 Series IR Thermometers:
9V Battery (61), Hard Carrying Case and 9V Batteries (63)

Ordering Information

| | |
|--------------------------|--|
| FLUKE-61 | IR Thermometer |
| FLUKE-62 MAX | Single Laser IR Thermometer, 10:1 Spot |
| FLUKE-63 | IR Thermometer |
| FLUKE-62 MAX PLUS (+) | Dual Laser IR Thermometer, 12:1 Spot |
| FLUKE 62 MAX+/323/1AC | IR Thermometer Clamp Meter and Voltage Detector Kit |
| FLUKE-414D/62 MAX+ KIT | Laser Distance Meter/Infrared Thermometer Combo Kit |
| FLUKE-T5-600/62 MAX+/1AC | Electrical Tester IR Thermometer, Voltage Detector Kit |
| 1587KIT/62 MAX+ | 2-in-1 ADV Elec Kit with 62MAX+i400 AC Current Clamp |

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Fluke 50 Series II Thermometers

Lab accuracy in a field thermometer



Fluke 54 II B

Fluke 53 II B



The Fluke 50 Series II Contact Thermometers offer fast response and laboratory accuracy in a rugged handheld test tool.

- Laboratory accuracy: $\pm (0.05\% + 0.3^\circ\text{C})$
- Large backlit dual display
- Min/Max/Avg
- Electronic offset function maximises overall accuracy
- Supports a wide range of thermocouple types
- Temperatures displayed in $^\circ\text{C}$, $^\circ\text{F}$, or Kelvin (K)

Powerful data logging capabilities

The Fluke 53 II B and 54 II B can log up to 500 points of data to internal memory.

- User-adjustable recording intervals
- Real-time clock captures the exact event time
- Recall function lets logged data be easily reviewed
- Download data to optional FlukeView® PC software



Fluke 51 II

Fluke 52 II

Speciality Model

Fluke FoodPro™ and FoodPro Plus Food Safety Thermometers

The Fluke FoodPro Thermometer Series provides a complete temperature measurement and monitoring solution for food service professionals. It includes two useful temperature inspection tools, which are designed to enable foodservice professionals to quickly and accurately measure food product temperatures and to help detect potential food safety problems.

The Fluke FoodPro non-contact thermometer is the first line of defense against improper receiving, storage and holding temperatures. Using an infrared measurement technique, the highly accurate FoodPro quickly reads surface temperatures, allowing workers to make rapid and frequent temperature measurements – faster than contact units and without fear of cross contamination. The easy-to-see illumination light shows you the measurement area.



Included Accessories

Fluke 50 Series Thermometers: Impact Absorbing Holster, Two Bead Probe Thermocouples 80PK-1 (54 and 52 only) One Bead Probe Thermocouple, 80PK-1 (51 and 53 only)

Fluke FoodPro (FP) & FoodPro Plus (FPP): AA Battery and Quick Start Guide (FP), Built in Contact Probe, 9V Alkaline Battery, Quick Start Guide, Operator's Guide, Soft Carry Pouch (FPP)

Ordering Information

| | |
|----------------------|--|
| FLUKE-51 II | Single Input Digital Thermometer |
| FLUKE-52 II | Dual Input Digital Thermometer |
| FLUKE 53 II B | Single Input Digital Thermometer w/ Data Logging |
| FLUKE 54 II B | Dual Input Digital Thermometer |
| FLUKE FP | FoodPro™ Food Safety Thermometer |
| FLUKE FP PLUS | FoodPro™ Plus Food Safety Thermometer |

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Specifications

| | 51 II | 52 II | 53 II B | 54 II B |
|---|------------------------|---------------|---------------|---------------|
| Thermocouple types | J,K,T,E | J,K,T,E | J,K,T,E,N,R,S | J,K,T,E,N,R,S |
| Number of inputs | Single | Dual | Single | Dual |
| Time stamp | Relative Time | Relative Time | Time of Day | Time of Day |
| Splash/Dust resistant | ● | ● | ● | ● |
| Dual display with backlight | ● | ● | ● | ● |
| Min/Max/Avg recording | ● | ● | ● | ● |
| (T ₁ -T ₂) True differential | ● | ● | | ● |
| Data logging up to 500 points | | | ● | ● |
| IR data port for interface to PC | | | ● | ● |
| Compatible with FlukeView® Software | | | ● | ● |
| Battery life | 1000 hours typical, AA | | | |
| Size (HxWxD) | 173 x 86 x 38 mm | | | |
| Weight | 0.4 kg | | | |
| Warranty | Three Year | | | |

Temperature range and accuracy

| | |
|---|------------------------------------|
| J-type Thermocouples | -210°C to 1200°C |
| K-type Thermocouples | -200°C to 1372°C |
| T-type Thermocouples | -250°C to 400°C |
| E-type Thermocouples | -150°C to 1000°C |
| N-type** Thermocouples | -200°C to 1300°C |
| R** and S-type** Thermocouples | 0°C to 1767°C |
| Temperature accuracy above -100°C: | |
| J, K, T, E, and N-type** | $\pm [0.05\% + 0.3^\circ\text{C}]$ |
| R** and S-type** | $\pm [0.05\% + 0.4^\circ\text{C}]$ |
| Temperature accuracy below -100°C: | |
| J, K, E, and N-types | $\pm [0.20\% + 0.3^\circ\text{C}]$ |
| T-type | $\pm [0.50\% + 0.3^\circ\text{C}]$ |

Fluke VT04 and VT04A Visual Infrared Thermometers



Fluke VT04



Alarm and time lapse features:

- Hi/Lo temperature alarm—Screen flashes if user-selected temperature is exceeded
- Time lapse image capture— automatically capture images
- Auto-monitoralarm—automatically capture images after a userselected temperature alarm has been triggered

No training required: Fully automatic with built-in intelligence.

True pocket size design: Forty percent smaller than entry-level infrared cameras.

Hot and cold spot trackers: Automatically identifies hottest and coldest spots within field of view.

Detect Issues Instantly

Fluke Visual Infrared Thermometers combine the convenience of a spot thermometer with the visual advantage of an infrared camera creating a brand new tool category.

Compact and intuitive, the Fluke VT04A and VT04 Visual Infrared Thermometers blend a visual image with a heat map overlay, to help quickly identify the location of issues.

Breakthrough affordability: Half the cost of infrared cameras that require training and software.

Built-in digital camera: Every Fluke Visual Infrared thermometer has a built-in digital camera.

Exclusive thermal heat map blending overlay: Blend digital and thermal images to instantly show the exact location of the issue. Blend between 0 %, 25 %, 50%, 75 %, and full thermal with one button.

NEAR and FAR mode: Align the visual and thermal lenses to correctly identify the location of the issue

Centre measurement box: See the exact area of temperature measurement right on the screen

Temperature alarms and automated monitoring features: Identify intermittent problems by monitoring equipment over time or get alerts when a temperature is outside the expected range

SmartView® reporting software: Store up to 10,000 images per GB on included SD card and make professional reports on included professional software.

Recommended Kits

Buy more, Save more



Fluke VT04 Visual Infrared Thermometer Maintenance Combo Kit

- VT04 Visual IR Thermometer
- 1507 Insulation Multimeter



Fluke VT04 Visual Infrared Thermometer HVAC Combo Kit

- VT04 Visual IR Thermometer
- 902 True RMS HVAC Clamp Meter
- 116 Digital Multimeter



Fluke VT04 Visual Infrared Thermometer Electrical Combo Kit

- VT04 Visual IR Thermometer
- 117 Digital Multimeter
- 376 AC/DC True-RMS Clamp Meter

For more details see page 136

See the difference

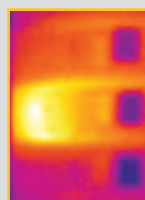
See how a traditional Infrared thermometer and an entry level infrared camera make it challenging to communicate the issue on breaker 20.



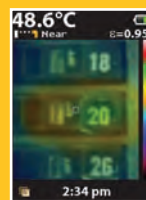
Visual inspection
No issues are obvious to the naked eye.



Traditional IR Thermometer
Optimised for single point measurements



Entry level infrared camera
Challenging to see the exact location



Visual IR Thermometer
Digital image with heat map overlay detects the exact location of the issue

Included Accessories

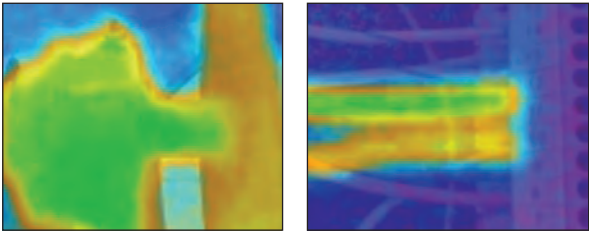
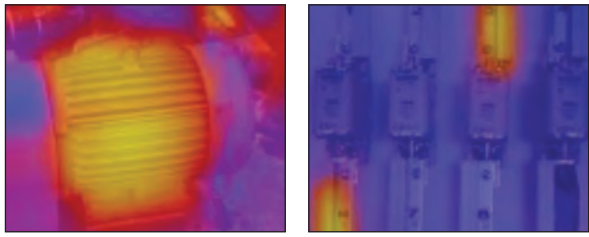
Hard Case (VT04), Soft Case (VT04A) Hand Strap, Mini SD Card and Adapter, SmartView® Software on CD, Lithium-ion Battery and Micro USB Charger/Power Supply (including mains adapters) (VT04) or 4 AA Batteries (VT04A), Quick Start Guide, User Manual

Ordering Information

| | |
|--------------------|---|
| FLK-VT04A | Visual Infrared Thermometer |
| FLK-VT04 | Visual Infrared Thermometer |
| FLK-VT04-MAINT-KIT | Visual Infrared Thermometer Maintenance Combo Kit |
| FLK-VT04-HVAC-KIT | Visual Infrared Thermometer HVAC Combo Kit |
| FLK-VT04-ELEC-KIT | Visual Infrared Thermometer HVAC Combo Kit |

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Specifications

| Key features | VT04A | VT04 |
|--------------------------|---|---------------------|
| Built-in digital camera | Yes | |
| Thermal heat map overlay | Yes, five blending modes | |
| Image optics system | PyroBlend™ Plus Optic | |
| |  | |
| Field of view | 28° x 28° | |
| |  | |
| Hi-Lo temperature alarms | Yes | |
| Time lapse image capture | Yes | |
| Auto-monitor alarm | Yes | |
| Battery type | 4 AA batteries | Li-Ion rechargeable |
| Training | No training required | |
| Ergonomics | Slim pocket-sized design | |
| Hot and cold markers | Yes | |
| Case | Soft Case | Hard Case |

| General features | |
|--|---|
| Battery life | 8 hours |
| Temperature measurement range | -10 °C to +250 °C |
| Temperature measurement accuracy | +/- 2 °C or +/- 2 % |
| Temperature measurement | Yes, centrepoint |
| Storage medium (micro SD card) | Stores up to 10,000 images per Gb (4 Gb card included) |
| Infrared spectral band | 6.5 µm to 14 µm |
| Level and span | Auto |
| Focus mechanism | Focus free, no training required with built-in intelligence |
| Focus options - exclusive user selectable NEAR/FAR options | NEAR > 23 cm; FAR < 23 cm |
| File format | .is2 format saved to SD card. Users can create professional reports or export images in SmartView. BMP, DPI, GIF, SPE, FIF, SPEG, JPG, PNG, TIF, TIFF |
| Size | 21 cm x 7.5 cm x 5.5 cm |
| Weight | < 300 g |
| Warranty | 2 years |

SmartView® Software

Document problems

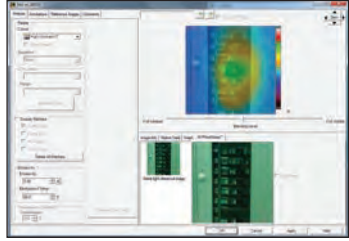
Producing a professional report with Smartview software is just as powerful as the VT02 and VT04 tools themselves. You will be able to communicate the issues that you've detected or document repairs that have been fixed.

Free upgrades. Free to share

We don't charge you for software upgrades. They're free for the life of the product. We enable you to share this software with others.

The smart choice

- Extensive optimisation and analysis tools with multiple viewing options
- Multiple reporting options and templates
- Enhance and analyse images quickly and easily
- Report Wizard guides you through automatic report generation
- Communicate image details with text annotation drag and drop feature
- Lifetime software upgrades, and no sharing limitations



Sample SmartView software view.

Fluke VT04 Application



Contact your local distributor for price and availability.
www.fluke.com/sg/wtb



INFRARED CAMERAS



8 REASONS TO CHOOSE FLUKE INFRARED CAMERAS

Superior image quality

Fluke maximises the performance of every pixel with industry leading spatial resolution to give you crisp detailed images and more accurate measurements, even when you have to take them from further distances. Patented IR-Fusion® technology with AutoBlend™ mode produces a transparent infrared and visible light image that shows brilliant detail and pinpoints the exact location of the problem making your job easier.

Fluke Connect® Tools

The largest system of connected test tools in the world. The Fluke Connect® app and connectable tools are the most comprehensive way to stay in contact with your team without leaving the field. With over 40 connectable tools, confidently diagnosing, solving and communicating problems has never been easier. See it. Save It. Share It. All the facts, right in the field.

Fluke Connect® App

With the Fluke Connect® app and enabled tools, you can collaborate with others no matter where they are. See what your team is seeing, and vice versa. Share and watch live video and readings to troubleshoot problems from any location. In addition save yourself the time and effort of going to the plant floor or back to the office every time there's a question or issue.

Best-in-class focus systems

Every infrared camera user knows that focus is the single most important aspect when conducting an infrared inspection. Without an in-focus image, temperature measurements may be off by as much as 20 degrees, making it easier to miss a problem. That's why Fluke engineered the only infrared cameras on the market with LaserSharp® Auto Focus—instantly capture an in-focus image with the touch of a button for consistently in-focus images. EVERY. SINGLE. TIME. Another option gives you optimum focus flexibility with the IR-OptiFlex™ Focus System which combines focus free ease-of-use with manual focus.

Customer driven design

Our design team is on the job, in the factory and out in the field for countless hours with our customers to continually deliver better products based around your applications and how you work. The resulting intelligent 3 button menu design allows you to operate our simple, intuitive on-screen menu interface— even while wearing gloves. We pay attention to even the smallest details providing you with an LED charge indicator on your battery insuring you don't unexpectedly lose power and offering replaceable SD cards so you don't have to delete your work to add to it. Not only can you operate a Fluke infrared camera with one hand behind your back, but you may never have to open the operating manual either.

Legendary ruggedness

We test our cameras to exceed specifications, so we drop them, soak them, shock them, and shake them for hours on end. Our tools are relentless, built tough to withstand the harsh environments where you work, for years to come.

Reputation for quality

Fluke is well known for designing and building "Best in Class," top quality products. With over 65 years of experience and a line of award winning products, such as Product of the Year from Plant Engineering and the 2013 Engineering Choice Award from Control Engineering, we continue to maintain our long time reputation and commitment to quality.

Dedicated Training

Learn how to use a Fluke thermal camera to reach your full business potential. If you are interested in improving your skills, knowledge or business, we offer seminars, webinars and product training. Learn how to get started, what to do, understanding what the results mean, and then being able to identify the best solutions.

Fluke Ti Series Infrared Cameras Ranges



Performance Series

What?

Fluke TiS75, TiS65, TiS60, TiS55, TiS50, TiS45, TiS40, TiS20, TiS10 Infrared Cameras

Who?

Technicians and Contractors

Where?

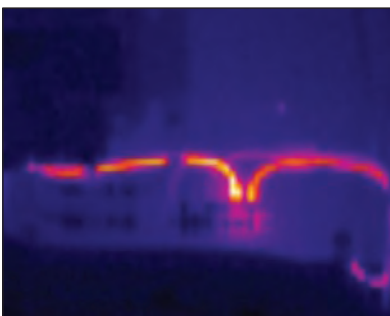
The widest range of Maintenance Applications including:

- Electrical, Mechanical
- HVAC
- Building Diagnostics
- Domestic/Commercial/Industrial Facilities

Why?

Affordable and feature-rich cameras producing quality images, with easy operation for quick scans and/or intermittent inspections.

With IR-OptiFlex™ IR-Fusion® with AutoBlend™, Fluke Connect® and SmartView® software.



Professional Series

What?

Fluke Ti450, Ti400, Ti300 Infrared Cameras

Who?

Professional In-house, Contract and Service Thermographers

Where?

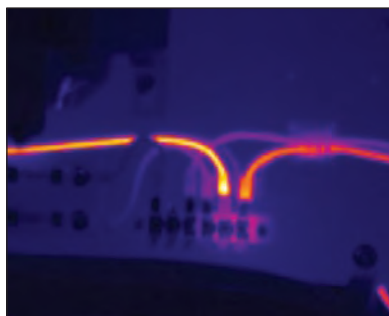
Industrial and Commercial Areas:

- Industrial Maintenance
- Heavy Commercial Facility Maintenance
- Oil and Gas Maintenance
- Reliability Inspections

Why?

High quality images and advanced features like SuperResolution, LaserSharp™ Auto Focus & MultiSharp™ mode. Consistently in-focus images, on multiple objects near to far.

IR-Fusion® with AutoBlend™, Fluke Connect® and SmartView® software. Rugged. Easy-to-use touch screen.



Expert Series

What?

Fluke TiX560, TiX520, TiX500 Infrared Cameras

Who?

Engineers, Researchers, Designers and Advanced Thermographers

Where?

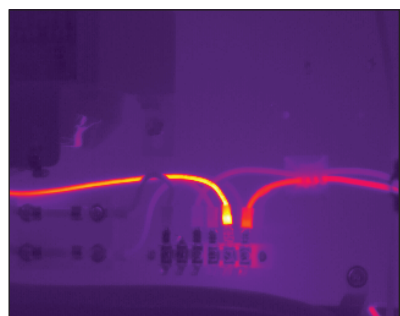
R&D, Quality Control and Predictive Maintenance, particularly for demanding sectors like:

- Industrial
- Oil and Gas
- Utilities (Generation Transmission, Distribution)
- Electrical, Mechanical
- Medical, Biological/Sciences

Why?

Needle-sharp resolution on an extra-large 5.6 inch articulating colour TFTLCD display with daylight operation. Field swappable lenses extend applications. HD quality images give greater impact in reports. Integral camcorder.

With IR-OptiFlex™ IR-Fusion® with AutoBlend™, Fluke Connect® and SmartView® software.



Fluke Ti Infrared Cameras

Infrared Cameras: Uptime or Downtime. Your Results Matter.

Fluke strives to create infrared cameras that are intuitive and easy to use with advanced focusing features that integrate the accuracy of distance laser technology and auto focus – so you get in-focus images every, single, time with LaserSharp™ Auto Focus. Blend digital and infrared images into one clear image with Fluke patented IR-Fusion®. The Fluke line of infrared cameras are not just about accuracy, they are about reliability, durability, image quality and performance.

IR-Fusion® Technology: Infrared and visual images fused together in one image

See things both ways - Infrared and visual (visible light) images fused together communicating critical information faster and easier – traditional infrared images are no longer enough.

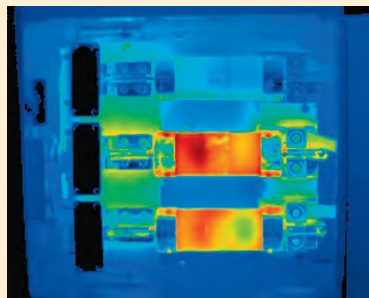
Find it, fix it, fast!

Temperature changes can indicate problems in many areas you see everyday, some include:

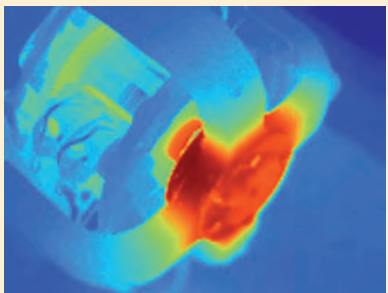
- **Inside electrical distribution and service** (Switch gear, panels, controls, fuses, transformers, receptacles, lighting, conductors, bus bars, motor controlcentres)
- **Motors, pumps and mechanical** (Electric motors and generators, pumps, compressors, evaporators, bearings, couplings, gearboxes, gaskets/seals, belts, rollers, disconnects)
- **Process** (Tanks and vessels, pipes, valves and traps, reactors, process insulation)
- **HVAC/R** (Air conditioning, heating, air handlers, refrigeration)
- **Outside electrical distribution - utilities** (Transformers, bushings, insulators, transmission lines, other exterior conductors, service connections, disconnects, capacitor banks)



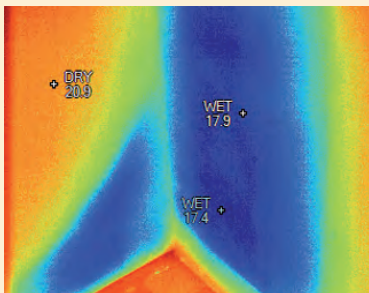
Overheating bearing cap



Three-phase switch-gear load imbalance

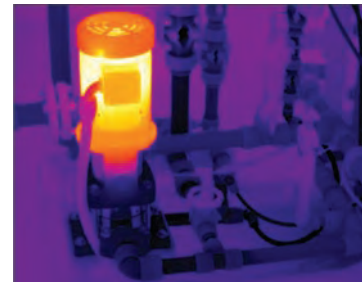


Overheated motor

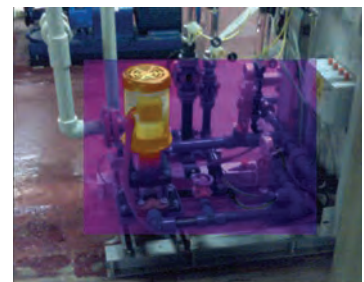


Cool corner in a building

The flexibility of Fluke IR-Fusion® technology



Full infrared



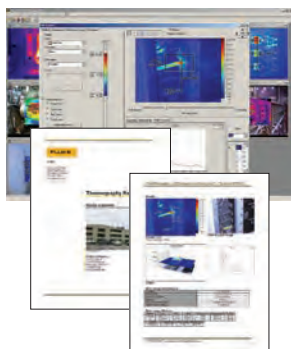
IR-Fusion® Picture-in-picture, AutoBlend™ mode



IR-Fusion® with colour alarms



IR-Fusion® Full visible light – viewed in SmartView® software.



Fluke SmartView® Software Analysis and reporting software

Everything you need for image optimisation, analysis and reporting.

View, optimise and analyse infrared video recordings

- SmartView tools and controls allow easy access to viewing and editing functions
- Step through videos frame by frame and convert frames to still images for analysis and to include in reports

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke Performance Series Infrared Cameras

TiS10, TiS20, TiS40, TiS45, TiS50, TiS55, TiS60, TiS65, TiS75



Fluke TiS45

Fluke TiS60



Fluke TiS50

Fluke TiS55



The lightest, most rugged and easiest-to-use professional infrared cameras around

The Performance Series Infrared Cameras offer good image quality at an affordable price. With up to 260x195 resolution, you can see more detail in every image, even from a distance - detail that could indicate a potential issue. With a rugged design and easy-to-use user interface, these cameras are ideal for troubleshooting tasks.

Every model comes standard with Fluke Connect® and a smart battery with five-segment LED charge level display, 3.5 inch (landscape) 320x240 LCD display, and a 5 megapixel industrial-performance digital camera. Reduce the amount of time it takes to get an in-focus image with manual focus (TiS75, TiS65, TiS55, TiS45) or fixed focus (TiS60, TiS50, TiS40, TiS20, TiS10) options.

Built for performance with features that help you easily and quickly identify problems before they become expensive failures.

Get improved resolution that delivers the right image quality you need to make the proper diagnosis:

- Up to 320 x 240 resolution
- Reduce the amount of time it takes to get an in-focus image with manual or fixed focus options
- Securely store and manage your images from anywhere
 - WiFi upload to Fluke Cloud™
 - Free storage with Fluke Cloud
 - Share images in real-time with Fluke Connect
 - Removable 4GB micro SD card
 - Voice annotation
- Edit and analyse images then create and send reports from your smartphone directly from the field with Fluke Connect

Recommended Accessories



Included Accessories

Universal AC Power Adapter, Lithium-ion Smart Battery (TiS75/65/60) includes 2 each and other models 1 each, Two-Bay Battery Charger (TiS75/65/60), USB Cable, Micro SD Card (TiS45-TiS75), Hard Carrying Case (TiS40-TiS75), Soft Transport Bag, Adjustable Hand Strap (TiS40-TiS75), Quick Reference Guide & Safety Sheet and SmartView® Software via Free Download.

Ordering Information

| | |
|----------------|------------------------------|
| FLK-TiS75 30Hz | Infrared Camera Manual Focus |
| FLK-TiS75 9Hz | Infrared Camera Manual Focus |
| FLK-TiS65 30Hz | Infrared Camera Manual Focus |
| FLK-TiS65 9Hz | Infrared Camera Manual Focus |
| FLK-TiS60 9Hz | Infrared Camera Fixed Focus |
| FLK-TiS55 30Hz | Infrared Camera Manual Focus |
| FLK-TiS55 9Hz | Infrared Camera Manual Focus |
| FLK-TiS50 9Hz | Infrared Camera Fixed Focus |
| FLK-TiS45 30Hz | Infrared Camera Manual Focus |
| FLK-TiS45 9Hz | Infrared Camera Manual Focus |
| FLK-TiS40 9Hz | Infrared Camera Fixed Focus |
| FLK-TiS20 9Hz | Infrared Camera Fixed Focus |
| FLK-TiS10 9Hz | Infrared Camera Fixed Focus |

Fluke TiS75 Performance Series Infrared Camera



Fluke TiS75

Easy-to-use frontline troubleshooting

Easily see potential problems with precisely blended IR and visual images—with a 5MP visual camera, 320x240 resolution (76,800 pixels), and a large 3.5 inch LCD.

Get precise focus as close as 15 cm with manual focus version. Fluke renowned diagnostic tools such as Fluke Connect® and SmartView® software included for data sharing, storage, in-depth analysis and reporting.

- In-focus quality images with the easy to use manual focus operation
- Professional quality images – 320x240 resolution (76,800 pixels)
- D:S of 504:1
- Temperature measurement range –20 °C to 550 °C
- Find problems fast with exclusive IR-Fusion® Blending and PIP mode – capture the details you need to analyse problems and clearly identify the location
- Smart battery system – includes two lithium ion smart batteries with five-segment LED charge level display and charging bay
- Email and share images in real time with Fluke Connect®
- Easily pinpoint problems with a built-in laser pointer
- Easy-to-use user interface with one-touch image access
- Stores thousands of images – 4 GB internal memory and 4 GB micro SD card
- Rugged and reliable

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

| | TiS75 | TiS65/TiS60 | TiS55/TiS50 | TiS45/TiS40 | TiS20 | TiS10 |
|---|--|--|--|--|--|--|
| Key features | | | | | | |
| IFOV (spatial resolution) | 2.0 mRad | 2.4 mRad | 2.8 mRad | 3.9 mRad | 5.2 mRad | 7.8 mRad |
| Detector resolution | 320 x 240 | 260 x 195 | 220 x 165 | 160 x 120 | 120 x 90 | 80 x 60 |
| Field of view | 35.7 ° x 26.8 ° | | | | | |
| Distance-to-Spot | 504:1 | 409:1 | 346:1 | 252:1 | 189:1 | 128:1 |
| Wireless connectivity | Yes | | | | | |
| Fluke Connect® enabled | Yes | | | | | |
| IR-Fusion® technology | Yes | | | | | |
| AutoBlend™ mode | 5 presets (0%, 25%, 50%, 75%, 100%) | | | | 3 presets (0%, 50%, 100%) | – |
| Picture-In-Picture (PIP) | 5 presets (0%, 25%, 50%, 75%, 100%) | | | | – | |
| Focus system | Manual focus, Minimum focus distance, 0.15 m | Fixed focus, Minimum focus distance 0.45 m | Manual focus, Minimum focus distance, 0.15 m | Fixed focus, Minimum focus distance 0.45 m | Manual focus, Minimum focus distance, 0.15 m | Fixed focus, Minimum focus distance 0.45 m |
| Ruggedised display | 3.5 inch (landscape) 320 x 240 LCD | | | | | |
| Rugged, ergonomic design for one-handed use | Yes | | | | | |
| Thermal sensitivity (NETD) | ≤ 0.08 °C at 30 °C target temp (80 mK) | | | ≤ 0.09 °C at 30 °C target temp (90 mK) | ≤ 0.10 °C at 30 °C target temp (100 mK) | ≤ 0.15 °C at 30 °C target temp (150 mK) |
| Temperature measurement range (not calibrated below -10 °C) | -20 °C to +550 °C | | -20 °C to +450 °C | | -20 °C to +350 °C | |
| Level and span | Smooth auto and manual scaling | | | | | |
| Fast auto toggle between manual and automodes | Yes | | | | | |
| Fast auto-rescale in manual mode | Yes | | | | | |
| Minimum span (in manual mode) | 2.5 °C | | | | | |
| Minimum span (in auto mode) | 5 °C | | | | | |
| Built-in digital camera (visible light) | 5MP | | | | | |
| Frame rate | 9 Hz or 30 Hz | 9 Hz | 9 Hz or 30 Hz | 9 Hz | 9 Hz or 30 Hz | 9 Hz |
| Laser pointer | Yes | | | | | – |
| Data storage and image capture | | | | | | |
| Extensive SD memory system | Internal 4GB memory and 4GB micro SD card | | | | Internal 4GB memory (optional 4GB micro SD card sold separately) | |
| Image capture, review, save mechanism | One-handed image capture, review, and save capability | | | | | |
| Image file formats | Non-radiometric (.bmp) or (.jpeg) or fully-radiometric (.is2); No analysis software required for non-radiometric (.bmp, .jpg) files | | | | | |
| Instant Upload | Upload captured images to Fluke Connect server with the use of a Wifi connection | | | | | |
| Memory review | Thumbnail review | | | | | |
| Software | SmartView® software -full analysis and reporting software and Fluke Connect® | | | | | |
| Export file formats with SmartView® software | BMP, DIB, GIF, JPE, JFIF, JPEG, JPG, PNG, TIF, and TIFF | | | | | |
| Voice annotation | Yes, Bluetooth Headset (sold separately) | | | | | – |
| IR-PhotoNotes™ | Yes (3 images) | | Yes (1 image) | | – | |
| Standard video recording | Yes | | – | | | |
| Radiometric video recording | Yes | | – | | | |
| Video file formats | Non-radiometric (MPEG - encoded .AVI) and fully radiometric (.IS3) | | – | | | |
| Battery | | | | | | |
| Batteries (field-replaceable, rechargeable) | Two lithium ion smart battery packs with five-segment LED display to show charge level | | One lithium ion smart battery packs with five-segment LED display to show charge level | | | |
| Battery life | 4+ hours | | | | | |
| Battery charge time | 2.5 hours to full charge | | | | | |
| Battery charging system | Two-bay battery charger or in- imager charging | | In-imager charging (optional external charger sold separately) | | | |
| AC operation | AC operation with included power supply (100 V AC to 240 V AC, 50/60 Hz) | | | | | |
| Temperature measurement | | | | | | |
| Accuracy | ± 2 °C or 2% (at 25 °C nominal, whichever is greater) | | | | | |
| On-screen emissivity correction | Yes (both value and table) | | | | | |
| On-screen reflected background temperature compensation | Yes | | | | | |
| On-screen transmission correction | Yes | – | Yes | – | Yes | – |

Fluke Professional Series Infrared Cameras Ti450, Ti400 and Ti300



Fluke Ti450



Fluke Ti400



Fluke Ti300



This trio of Fluke Infrared Cameras are equipped with LaserSharp™ AutoFocus for in-focused images. Every. Single. Time. The new Fluke Ti450 with MultiSharp™ Focus delivers images focused throughout the camera's field of view & offers SuperResolution for 4x pixel enhancement.

Fluke Ti450 Infrared Camera

- Capture clear images focused throughout the field of view with MultiSharp™ Focus
- Get an instant in-focus image of your designated target with LaserSharp® Auto Focus.
- -20 °C to +1200 °C
- 320x240 detector resolution
- Get 4x the pixels with SuperResolution. View spectacular 640x480 IR images.
- Detect and communicate issues faster with patented Fluke IR-Fusion® with AutoBlend™ mode
- Faster communication with wireless image transfer directly to your PC, Apple® iPhone® or iPad®
- With Fluke Connect® securely connect and collaborate with others, so they can see what you can see without leaving the field.

Fluke Ti400 Infrared Camera

- Optimised for electrical, industrial and building applications
- -20 °C to +1200 °C
- 320x240 detector resolution
- Detect and communicate issues faster with patented Fluke IR-Fusion® with AutoBlend™ mode
- Faster communication with wireless image transfer directly to your PC, Apple® iPhone® or iPad®
- With Fluke Connect® securely connect and collaborate with others, so they can see what you can see without leaving the field.
- One-handed, easy-to-use user interface
- Ruggedised capacitive high-resolution 640x480 touch screen for quick menu navigation

Fluke Ti300 Infrared Camera

- Optimised for electrical, industrial and building applications
- -20 °C to +650 °C
- 240x180 detector resolution
- Detect and communicate issues faster with patented Fluke IR-Fusion® with AutoBlend™ mode
- Faster communication with wireless image transfer directly to your PC, Apple® iPhone® or iPad®
- With Fluke Connect® securely connect and collaborate with others, so they can see what you can see without leaving the field.
- Video recording both standard and radiometric
- Rechargeable, field replaceable smart batteries with LED display to show charge levels for excellent field flexibility

Recommended Accessories



FLK-LENS/TELE2
Telephoto infrared lens
(2x magnification)



FLK-LENS/WIDE2
Wide-angle infrared lens



FLK-TI-VISOR3
Thermal imager visor



TI-TRIPOD3
Tripod mounting
base accessory



Fluke SmartView® IR Analysis Reporting Software & Mobile App

Included Accessories

AC Power Supply and Battery Pack Charger, Rugged Lithium-ion Smart Battery Packs x 2, USB Cable, HDMI Video Cable, Rugged, Hard Carrying Case, Soft Transport Bag, Adjustable Hand Strap, Warranty Registration, and SmartView® Software available via Free Download.

Ordering Information

| | |
|----------------------|---|
| FLK-Ti450 9Hz | Infrared Camera |
| FLK-Ti450 60Hz | Infrared Camera |
| FLK-Ti400 9Hz | Infrared Camera |
| FLK-Ti400 60Hz | Infrared Camera |
| FLK-Ti300 9Hz | Infrared Camera |
| FLK-Ti300 60Hz | Infrared Camera |
| FLK-LENS/ 4XTELE2 | Infrared Tele-photo Lens (4X magnification) |
| FLK-LENS/ TELE2 | Infrared Tele-photo Lens (2X magnification) |
| FLK-LENS/ WIDE2 | Infrared Wide Angle Lens |

FLUKE CONNECT® Pushing the boundaries of team communication.



You can wirelessly sync images directly from your camera to the Fluke Connect® system, and attach to an asset record or work order. Having access to maintenance records simultaneously at the inspection site and from the office or an off-site location enables faster decision making and real time collaboration between team members. You can also live stream the camera display to your smartphone or PC and remotely control the camera.

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Specifications

| | Ti450 | Ti400 | Ti300 |
|---|---|---------------------------|---------------------------|
| Imaging Performance | | | |
| Detector resolution | 320 x 240 (76,800 pixels)—or 640 x 480 with SuperResolution | 320 x 240 (76,800 pixels) | 240 x 180 (43,200 pixels) |
| SuperResolution | On camera and in software. Captures and combines 4x the data to create a 640x480 image | | - |
| Infrared spectral band | 7.5 <m to 14 <m (long wave) | | |
| Frame Rate | 9 Hz refresh rate or 60 Hz refresh rate depending upon model variation | | |
| Thermal sensitivity (NETD) | ≤ 0.05 °C at 30 °C target temp (50 mK) | | |
| IFOV with standard lens (spatial resolution) | 1.31 mRad, D:S 753:1 | 1.31 mRad, D:S 753:1 | 1.75 mRad, D:S 573:1 |
| Minimum focus distance | 15 cm | | |
| IFOV with optional 2x telephoto smart lens | 0.65 mRad, D:S 1529:1 | 0.65 mRad, D:S 1529:1 | 0.87 mRad, D:S 1147:1 |
| Minimum focus distance | 45 cm | | |
| IFOV with optional wide-angle smart lens | 2.62 mRad, D:S 377:1 | 2.62 mRad, D:S 377:1 | 3.49 mRad, D:S 283:1 |
| Minimum focus distance | 15 cm | | |
| Focus Mechanism | | | |
| MultiSharp™ Focus System | Yes, focused near and far, throughout the field of view | | - |
| LaserSharp® Auto Focus System | Yes, for consistently in-focus images. Every. Single. Time. | | |
| Advanced manual focus | Yes | | |
| Temperature | | | |
| Temperature measurement range (not calibrated below -10 °C) | -20 °C to +1200 °C | -20 °C to +1200 °C | -20 °C to +650 °C |
| Temperature measurement accuracy | ± 2 °C or 2 % (at 25 °C nominal, whichever is greater) | | |
| On screen correction – emissivity, BG & transmission | Yes | | |
| IR-Fusion® information | | | |
| Picture-in-picture (PIP) | Yes | | |
| Full screen infrared | Yes | | |
| AutoBlend™ mode | Min, Mid, Max IR plus full visible on camera; continuously variable in software | | |
| Colour alarms (temperature alarms) | High temperature, low temperature, and isotherms (within range) | | |
| Image presentation | | | |
| Standard Palettes | Ironbow, Blue-Red, High Contrast, Amber, Amber Inverted, Hot Metal, Grayscale, Grayscale Inverted | | |
| Ultra Contrast™ Palettes | Ironbow Ultra, Blue-Red Ultra, High Contrast Ultra, Amber Ultra, Amber Inverted Ultra, Hot Metal Ultra, Grayscale Ultra, Grayscale Inverted Ultra | | |
| Level and span | Smooth auto-scaling and manual scaling of level and span | | |
| Fast auto toggle between manual and auto modes | Yes | | |
| Fast auto-rescale in manual mode | Yes | | |
| Minimum span (in manual mode) | 2.0 °C | | |
| Image capture and data storage | | | |
| Image capture, review, save mechanism | One-handed image capture, review, and save capability | | |
| Storage medium | Micro SD Memory Card, on-board flash memory, save-to-USB capability, direct download via USB-to-PC connection | | |
| File formats | Non-radiometric (.bmp) or (.jpeg) or fully-radiometric (.is2) Video: non-radiometric (MPEG - encoded .AVI) and fully-radiometric (.IS3) | | |
| Memory review | Thumbnail view navigation and review selection | | |
| Built-in digital camera (visible light) | 5MP | | |
| Other time-saving and productivity features | | | |
| Wireless Connectivity | Yes. Wifi, Bluetooth, Fluke Connect app, Fluke Connect tools connectivity* | | |
| LED light (torch) | Yes | | |
| Digital zoom | 2x and 4x | | - |
| Laser distance meter | Yes | | |
| Software | SmartView® software—full analysis and reporting software and Fluke Connect® system * | | |
| Voice annotation | 60 seconds maximum recording time per image; reviewable playback on camera | | |
| IR-PhotoNotes™ | Yes (5 images) | | |
| Text annotation | Yes | Yes | Yes |
| Video recording | Standard and radiometric | | |
| Streaming video | Via USB to PC and HDMI to HDMI compatible screen | | |
| Remote control operation | Yes | Yes | No |
| Auto capture (temperature and interval) | Yes | Yes | Yes |

* Wireless connectivity and Fluke Connect® are not available in all regions.

Fluke Expert Series Infrared Cameras

TiX560, TiX520 and TiX500



Fluke TiX560



Fluke TiX520



Fluke TiX500



LaserSharp® Auto Focus

Get an in-focus image like never before with just a touch of a button. LaserSharp® Auto Focus, exclusive to Fluke, uses its built-in laser distance meter to calculate the distance to your designated target with pinpoint accuracy. On target and in-focus. Every. Single. Time.

Brilliant Image Quality

- Enhanced image quality and temperature measurement accuracy - turn your 320 x 240 images into 640 x 480 images. That's 4x the resolution and pixels with SuperResolution.

Your view of infrared technology is about to change 180°

With a 180° articulating FlexCam® lens, the largest LCD touchscreen and leading spatial resolution for a 320x240 infrared camera in its class¹, the answer is right before your eyes, even when your target isn't.

- Easily navigate over, under and around objects with the 180° articulating lens and see the image before you capture it
- Resolution TiX560, TiX520 and TiX500**
320 x 240 (76,800 pixels) and 640x480 (307,200 pixels) with SuperResolution Mode
- Temperature range**
TiX560 -20°C to +1200°C
TiX520 -20°C to +850°C
TiX500 -20°C to +650°C
- Premium in-field viewing experience with the only 5.7 inch responsive touchscreen LCD in its class¹-150% more viewing area³
- Get an in-focus image with the touch of a button. LaserSharp® Auto Focus, exclusive to Fluke, uses a built-in laser distance meter that calculates and displays the distance to your designated target with pinpoint accuracy²
- See the details you need with smart lenses—2x and 4x telephoto, wide angle, and 25 micron macro—no calibration required, interchangeable between compatible cameras
- See, save and share from the field and connect to the largest selection of wireless test and measurement tools with Fluke Connect®

¹ Compared to industrial handheld infrared cameras with 320x240 detector resolution as of September 1, 2015.

² Up to 30 metres.

³ Compared to a 3.5 inch screen.

Infrared Cameras

Recommended Accessories



FLK-LENS/TELE2
Telephoto infrared lens
(2x magnification)



FLK-LENS/WIDE2
Wide-angle infrared lens



FLK-LENS/4XTELE2
Telephoto infrared lens
(4x magnification)



FLK-LENS/25MAC2
Infrared 25 Micron
Macro lens



FLK-TiX5XX-NECK
Neck Strap



FLK-TiX5XX-HAND
Hand Strap



TI-CAR-CHARGER
Car Charger



FLK-TI-BLUETOOTH
Bluetooth Headset

Included Accessories

AC Power Supply and Battery Pack Charger, Rugged Lithium-ion Smart Battery Packs x 2; USB Cable; HDMI Video Cable; Rugged, Hard Carrying Case, Adjustable Neck and Hand Strap, Bluetooth Headset (where available), Warranty Registration Card and Calibration Certificate. Flash Drive includes Product Manuals and SmartView® Software.

Ordering Information

| | |
|------------------------------|---|
| FLK-TiX560 9Hz | Infrared Camera 320x240; 9 Hz |
| FLK-TiX560 60Hz | Infrared Camera 320x240; 60 Hz |
| FLK-TiX520 9Hz | Infrared Camera 320x240; 9 Hz |
| FLK-TiX520 60Hz | Infrared Camera 320x240; 60 Hz |
| FLK-TiX500 9Hz | Infrared Camera 320x240; 9 Hz |
| FLK-TiX500 60Hz | Infrared Camera 320x240; 60 Hz |
| FLK-LENS/ 25MAC2 | 25 Micron Macro Infrared Lens |
| FLK-LENS/ 4XTELE2 | Infrared Tele-photo Lens (4x magnification) |

Fluke 4x Telephoto Infrared Smart Lens

A 4x telephoto lens can help identify a potential issue in your equipment, even when your target is as tiny and distant as a failed splice on a high electrical line or an overheated refractory on a tall flare stack.

- With smart lenses you can just attach the lens to any compatible camera and start taking images.
- This lens includes a patent-pending lens attachment system that holds the lens securely in place, reducing lens wobble.
- Made of 100% diamond-turned germanium with an engineered coating, the most efficient available material to transmit energy to the detector.



25 Micron Macro Infrared Smart Lens

Get an incredibly detailed image of very small objects so you can gain insight into thermal buildup and dissipation on printed circuit boards, identify a faulty or undersized component, or potentially even pinpoint precise faulty locations on those components. See details as small as 25 microns, which is smaller than the average human hair.

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Specifications

| | TiX560 | TiX520 | TiX500 |
|--|--|--|--------|
| Key Features | | | |
| IFOV with standard lens (spatial resolution) | 1.31 mRad, D:S 764:1 | | |
| Detector resolution | 320 x 240 (76,800 pixels) | | |
| Field of view | 24 °H x 17 °V | | |
| Minimum focus distance | 15 cm | | |
| IFOV with optional 2x telephoto smart lens | 0.65 mRad, D:S 1528:1 | | |
| Field of view | 12 °H x 9 °V | | |
| Minimum focus distance | 45 cm | | |
| IFOV with optional 4x telephoto smart lens | 0.33 mRad, D:S 3056:1 | | |
| Field of view | 6.0 °H x 4.5 °V | | |
| Minimum focus distance | 1.5 m | | |
| IFOV with optional wide-angle smart lens | 2.62 mRad, D:S 399:1 | | |
| Field of view | 46 °H x 34 °V | | |
| Minimum focus distance | 15 cm | | |
| Minimum micron spot size with optional macro smart lens | 25 microns | | |
| Field of view | 36.1° X 27.1° | | |
| Working distance | ~8 mm to ~14 mm with optimal at 10 mm | | |
| SuperResolution | On camera and in software | In software | |
| Image sharpening | Yes | — | |
| LaserSharp® Auto Focus | Yes, for consistently in-focus images. Every. Single. Time. | | |
| Laser distance meter | Yes, calculates distance to the target for precisely focused images and displays distance on screen | | |
| Advanced manual focus | Yes | | |
| Streaming video (remote display) | Via HDMI or WiFi in remote control mode | Via HDMI or WiFi to SmartView | |
| Touchscreen display (capacitive) | 14.4 cm diagonal landscape color VGA (640 x 480) LCD with backlight | | |
| Wireless connectivity | Yes | | |
| Wireless compatibility | Yes, to PC, iPhone® and iPad® (iOS 4s and later), Android™ 4.3 and up, and WiFi to LAN | | |
| Fluke Connect® app compatible | Yes | | |
| Fluke Connect® tool compatible | Connects wirelessly to select Fluke Connect® enabled tools. Five simultaneous connections supported | | |
| IR-Fusion® technology | Yes | | |
| AutoBlend™ mode | Yes | | |
| Picture-In-Picture (PIP) | Yes | | |
| Continuous AutoBlend™ | Set AutoBlend™ level across continuum | — | |
| Rugged, ergonomic design | Rotatable (articulating lens) >180 degrees | | |
| Thermal sensitivity (NETD) | ≤ 0.045 °C at 30 °C target temp (45 mK) | ≤ 0.05 °C at 30 °C target temp (50 mK) | |
| Filter Mode (NETD improvement) | ≤ 0.03 °C at 30 °C target temp (30 mK) | ≤ 0.04 °C at 30 °C target temp (40 mK) | — |
| Level and span | Smooth auto and manual scaling | | |
| Touchscreen adjustable level/span | Yes. Span and level can be easily and quickly set by simply touching the screen | | |
| Fast auto toggle between manual and auto modes | Yes | | |
| Fast auto-rescale in manual mode | Yes | | |
| Minimum span (in manual mode) | 2.0 °C | | |
| Minimum span (in auto mode) | 3.0 °C | | |
| Built-in digital camera (visible light) | 5 megapixel industrial performance | | |
| Frame rate | 60 Hz or 9 Hz versions | | |
| Laser pointer | Yes | | |
| LED light (torch) | Yes | | |
| Digital Zoom | 2x, 4x, 8x | 2x, 4x | 2x |

Fluke Expert Series Infrared Cameras

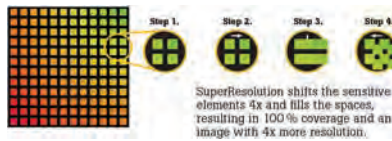
TiX1000, TiX660 and TiX640



It's time to see what you're missing

Up to 3.1 million pixels with SuperResolution. Instantly capture highly detailed images and start analysing your images while still in the field. See incredible detail from a distance or extremely close up. On camera, you get up to 10x the pixels of a standard 320x240 camera (based on the TiX1000). SuperResolution mode, available when viewed in SmartView® software, lets you see HD resolution with up to 3.1 million pixels— 4x the on-camera standard resolution.

Your work as an expert thermographer is defined by the quality of the infrared images you take and your ability to analyse what's before you. The most pressing challenge lies not in analysing what you see, but the fear of missing something you can't.



Recommended Accessories



Take the guesswork out of your inspection and analysis

- **The first HD infrared camera with our Fluke Connect® technology**—10 times the on-camera pixels than standard 320x240 cameras (1024x768 resolution, 786,432 pixels)
- **Enhanced image quality and temperature measurement accuracy**—get 4 times the resolution and pixels than standard mode with SuperResolution (up to 3,145,728 pixels)
- **Work from greater distances.** See a 5 mm target from 35 m away using the TiX1000 with the Super Telephoto lens
- **Get a premium in-field viewing experience** for quick issue identification with the large 5.6 inch high resolution LCD screen
- **Save time focusing** with the most advanced focus options available for consistently in focus image: LaserSharp® Auto Focus, auto focus, manual and EverSharp multifocal recording features—available on one camera.
- **The Fluke Expert Series offers the best flexibility of the entire Fluke infrared camera portfolio** to capture spectacular images close up or from a distance. The TiX1000, TiX660 and TiX640 are compatible with 8 lens options (2x and 4x telephoto lenses, 2 wide angle lenses, 3 macro lenses and 1 standard lens) so great images can be captured despite certain obstacles



PREMIUM IMAGE QUALITY

SPATIAL RESOLUTION

TiX1000
0.6 mRad
TiX660 and TiX640
0.8 mRad

RESOLUTION

TiX1000
1024 x 768 (786,432 pixels)
TiX660 and TiX640
640 x 480 (307,200 pixels)

SUPER RESOLUTION MODE

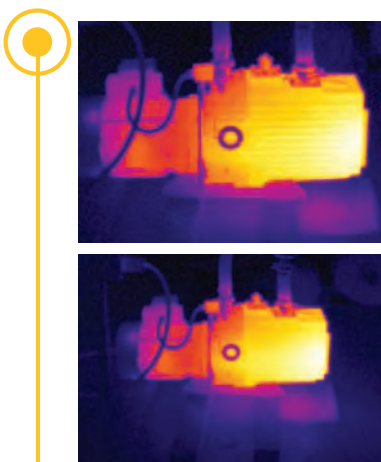
TiX1000
2048 x 1536 (3,145,728 pixels)
TiX660
1280 x 960 (1,228,800 pixels)

FIELD OF VIEW

TiX1000
32.4 ° x 24.7 ° (1.0/30 mm)
TiX660 and TiX640
30.9 ° x 23.1 ° (1.0/30 mm)

TEMPERATURE RANGE

TiX1000 & TiX660
-40 to 2000 °C
TiX640
-40 to 1200 °C



For more information regarding Fluke SuperResolution cameras, please contact Fluke Australia direct on **+65 6799 5566** or email us at **info.asean@fluke.com**



Super Resolution:
The most spectacular images ever from a Fluke Infrared Camera

Fluke CV Series ClirVu® Infrared Windows



Compliance without compromise. Safety without sacrifice.

Increase the safety and speed of electrical thermal imaging inspections with the Fluke ClirVu® IR Windows. Reduce the risk of arc-flash and electrocution, increase the safety of your personnel and reduce the time and cost of preventive maintenance.

- Save time with a quick and easy 5 minutes or less installation
 - One technician
 - One hole with standard Greenlee® punch
 - Panel door does not need to be removed
 - Grounds instantly to metal enclosure with patent-pending AutoGround™ process
 - Maintains panel arc test ratings up to 63kA when properly installed
- Torture Tested™ to the highest arc blast test ratings
 - IEEE C37.20.7: 63 kA Arc tested at KEMA, UL50/50E/50V, UL1558, IEC60529-1: IP67, IEC 60068, NEMA 4/12, CSA C22.2 NO. 14-13:2012, and CE
- Convenience of both quick turn (CV400, CV300, CV200) or security keyed access (C401, CV301, CV201)
- Fluke IR Windows offered in three sizes 50 mm, 75 mm and 95 mm
- Work permit requirements and NFPA 70E processes are significantly reduced
- Full PPE is often not required so inspections are done faster and more comfortable

Quick & Easy Installation in 5 minutes or less



Specifications

| | CV400 | CV401 | CV300 | CV301 | CV200 | CV201 |
|--|--|--------------|-----------------------|--------------|--------------------|--------------|
| Size | 95 mm | | 75 mm | | 50 mm | |
| Voltage Range | Any | | | | | |
| NEMA Environment Type | Type 4/12 (indoor/outdoor) | | | | | |
| AutoGround™ | Yes | | | | | |
| ClirVu® Optic | Yes | | | | | |
| Operating temperature | -40 °C to + 232 °C and + 260°C Intermittent | | | | | |
| Body material | EZAC & ZA-27 High Strength Zinc/ Aluminum Alloy | | | | | |
| Ratings and testing | | | | | | |
| Arc-Tested (IEEE C37.20.7) | 63 kA for 30 cycles @ 60Hz at KEMA | | | | | |
| UL 50V component recognition | Yes | | | | | |
| UL 50/NEMA Environmental Rating | NEMA Type 4/12 | | | | | |
| UL 1558 | Yes | | | | | |
| CSA C22.2 No. | Yes | | | | | |
| CSA Type Rating | Type 4 | | | | | |
| IP rating | IP67 at TUV | | | | | |
| Lloyds Register | Up to 11 kV marine switchgear, indoor or outdoor (offshore only) | | | | | |
| Vibration rating | IEC60068-2-6 at TUV | | | | | |
| Humidity rating | IEC60068-2-3 at TUV | | | | | |
| Install | | | | | | |
| Actual mounting hole diameter required | 115.42 mm | | 89.89 mm | | 61.37 mm | |
| Greenlee Punch Kit = Punch/Die | 742BB = 2984AV/2983AV | | 739BB = 1431AV/1432AV | | 76BB = 441AV/442AV | |
| Door Latch | Hand Turn | Security Key | Hand Turn | Security Key | Hand Turn | Security Key |
| Optics | | | | | | |
| Optic insert diameter | 95 mm | | 75 mm | | 50 mm | |
| Warranty | Lifetime replacement against manufacturing defects | | | | | |

Ordering Information

| | |
|--------------------|---|
| FLUKE-CV401 | 95 mm, Infrared Window, Security Key Door Latch |
| FLUKE-CV400 | 95 mm, Infrared Window, Hand Turn Door Latch |
| FLUKE-CV301 | 75 mm, Infrared Window, Security Key Door Latch |
| FLUKE-CV300 | 75 mm, Infrared Window, Hand Turn Door Latch |
| FLUKE-CV201 | 50 mm, Infrared Window, Security Key Door Latch |
| FLUKE-CV200 | 50 mm, Infrared Window, Hand Turn Door Latch |



INDOOR AIR QUALITY

Fluke 975 AirMeter™

Simple, one-touch air velocity



Fluke 975



The Fluke 975 AirMeter test tool raises indoor air monitoring to the next level by combining five powerful tools in one rugged and easy-to-use handheld device. The Fluke 975 offers an unparalleled feature-set for HVAC and facilities technicians, helping them work more quickly and accurately, with the ease of use and durability customers expect from a Fluke meter.

Use the AirMeter to respond to comfort-related calls from occupants, verify the operation of building HVAC control systems and determine whether adequate ventilation exists. Also be able to monitor air flow and velocity, test for dangerous carbon monoxide leaks, perform duct traversals and optimise HVAC systems to manage energy costs.

- Simultaneously measures, logs and displays temperature, humidity, CO₂ and CO on a bright, backlit LCD display
- % of outside air calculation
- One-touch air flow and velocity with available probe*
- Dew point and wet bulb temperature
- CO₂ and CO field calibration feature
- Min/Max/Avg on all measured and calculated readings
- Audible and visual threshold alarms
- Extensive discrete or continuous data logging capacity, downloadable to PC via USB interface
- Includes NIST-traceable certificate of calibration
- Automatically compensates for barometric pressure changes
- Two-year warranty

*Included with Fluke 975V, optional with Fluke 975.

Recommended Accessories



Fluke 975VP
AirMeter Velocity Probe
for use with Fluke 975
AirMeter.

Recommended Kits

Buy more, Save more



Fluke 975V AirMeter™ Calibration Kit with Velocity Probe

For more details see page 136

Fluke 975 Application



Specifications

| Feature | Range | Display resolution | Accuracy |
|---|---|--------------------------------------|--|
| Measured specifications | | | |
| Temperature | -20 °C to 60 °C | 0.1 °C | ± 0.9 °C from 40 °C to 60 °C ± 0.5 °C from 5 °C to 40 °C ± 1.1 °C from -20 °C to 5 °C |
| Relative humidity | 10 % to 90 % RH non-condensing | 1 % | ± 2 % RH (10 % RH to 90 % RH) |
| Air velocity | 50 fpm to 3000 fpm 0.25 m/sec to 15 m/sec | 1 fpm 0.005m/sec | 4 % or 4 fpm 3 % or 0.015 m/sec whichever is greater Accuracy specification only valid for velocity readings above 50 fpm. |
| CO ₂ | 0 to 5000 ppm | 1 ppm | Warm up time 1 min (5 minutes for full specification) 2.75 % + 75 ppm |
| CO | 0 to 500 ppm | 1 ppm | ± 5 % or ± 3 ppm, whichever is greater, @ 20 °C and 50 % RH |
| Calculated specifications | | | |
| Dew point temperature | -44 °C to 57 °C | 0.1 °C | ± 1 °C when temp: -20 °C to 60 °C RH: 40 % to 90 % ± 2 °C when temp: -20 °C to 60 °C RH: 20 % to 40 % ± 4 °C when RH: 10 % to 20 % |
| Wet bulb temperature | -16 °C to 57 °C | 0.1 °C | ± 1.2 °C when RH: 20 % to 90 % temp: -20 °C to 60 °C ± 2.1 °C when RH: 10 % to 20 % |
| Volume flow rate (in a duct) | 0 to 3,965 M ³ /m 0 to 140,000 cfm) | 0.001 M ³ /min (1 cfm) | N/A: The volume flow calculation will be a simple average of the data points times the duct area |
| % outside air (based on temperature) | 0 to 100 % | 0.1 % | N/A |
| % outside air (based on CO ₂) | 0 to 100 % | 0.1 % | N/A |

Included Accessories

3 AA Alkaline Batteries, User Manual, Calibration Cap, FlukeView® Forms Software, Power Adapter, International Power Plugs, Air Velocity Probe (Fluke 975V only)

Ordering Information

FLUKE-975 AirMeter™
FLUKE-975V AirMeter™ with Velocity
FLUKE-975VP Air Velocity Probe

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Fluke 922 Airflow Meter/Micromanometer



Fluke 922



The Fluke 922 makes airflow measurements easy by combining three tools: differential pressure, airflow, and velocity into a single, rugged meter. The 922 was designed and built for how (and where) you do your job, with performance, ruggedness and ease of use, setting the Fluke 922 apart from the competition. The bright white display and ruggedised holster and wrist strap let you take the Fluke 922 into less than ideal environments. The colour-coded hoses help you keep track of where your readings are coming from. The simple, intuitive interface means you can measure pressure, velocity, or airflow at the push of a button.

The Fluke 922 helps you analyse airflow easily

- Powerful meter provides differential and static pressure, air velocity and flow readings
- Convenient coloured hoses help proper interpretation of pressure readings
- Easy to use without sacrificing performance
- Bright, backlit display for clear viewing
- User-defined duct shape and size for maximum airflow accuracy
- Resolution down to 0.001 in H2O
- 99 point data storage capacity
- Min/Max/Average/Hold functions for easy data analysis
- Auto power off saves battery life

Use the Fluke 922 Micromanometer to:

- Measure pressure drops across key HVAC equipment to drive peak performance and extend equipment life
- Match ventilation to occupant loads
- Monitor indoor vs. outdoor pressure relationships and manage the building envelope
- Promote indoor comfort and quality
- Perform duct traversals for accurate airflow readings

Specifications

| | |
|-----------------------------|---|
| Operating Temperature | 0 °C to +50 °C |
| Storage Temperature | -40 °C to +60 °C |
| Operating Relative Humidity | Non condensing (<10 °C) 90% RH (10 °C to 30 °C) 75% RH (30 °C to 40 °C) 45% RH (40 °C to 50 °C) without Condensation |
| IP Rating | IP40 |
| Operating Altitude | 2000 m |
| Storage Altitude | 12000 m |
| EMI, RFI, EMC | Meets requirements for EN61326-1 |
| Vibration | MIL-PREF-28800F, Class 3 |
| Max Pressure at Each Port | 10 PSI |
| Data storage | 99 readings |
| Warranty | Two-year |
| Power | Four AA batteries |
| Size (HxWxD) | 175 mm x 77.5 mm x 41.9 mm |
| Weight | 0.64 kg |
| Battery | Four AA batteries |
| Battery Life | 375 hours without backlight, 80 hours with backlight |
| Warranty | Two Year |

| | Range | Accuracy |
|-------------------|---|--|
| Air pressure | ± 4000 Pascals ± 16 in H2O ± 400 mm H2O ± 40 mbar ± 0.6 PSI | ± 1 % + 1 Pascal ± 1 % + 0.01 in H2O ± 1 % + 0.1 mm H2O ± 1 % + 0.01 mbar ± 1 % + 0.0001 PSI |
| Air velocity | 250 fpm to 16,000 fpm (1 to 80 m/s) | ± 2.5 % of reading at 2000 fpm (10.00 m/s) |
| Air flow (volume) | 0 to 99,999 cfm 0 to 99,999 m ³ /hr 0 to 99,999 l/s | Accuracy is a function of velocity and duct size |
| Temperature | 0 °C to 50 °C | 0.1 °C |

Recommended Accessories



PT12
Pitot Tube
30.48 cm



TPAK
Magnetic
Meter Hanger
See page 147

Recommended Kits

Buy more, Save more



Fluke 922 Airflow Meter/ Micromanometer Kit

For more details see page 136

Included Accessories

Fluke 922: Two Rubber Hoses, Wrist Strap, 4 AA Batteries 1.5V Alkaline, User Manual and Soft Carrying Case

Fluke 922 Kit: Fluke 922 Airflow Meter, 30.48 cm Pitot tube, ToolPak, Two Rubber Hoses, Wrist Strap, 4 AA Batteries 1.5V Alkaline, User Manual and Hard Carrying Case.

Ordering Information

FLUKE-922 Airflow Meter

FLUKE-922/KIT Airflow Meter Kit

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Fluke 971 Temperature Humidity Meter



Fluke 971

Temperature and humidity are two important factors in maintaining optimal comfort levels and good indoor air quality. Quickly and conveniently take accurate humidity and temperature readings with the Fluke 971. It is invaluable for facility maintenance and utility technicians, HVAC-service contractors, and specialists who assess indoor air quality (IAQ). Lightweight and easy to hold, it's the perfect tool for monitoring problem areas. With a rugged holster and protected sensor, the Fluke 971 is built to perform and made to last.

- New and improved digital sensor for faster response times
- Backlit dual display of humidity and temperature
- Measures dew point and wet bulb temperatures
- 99 record storage capacity
- Ergonomic design with belt clip and protective holster
- Compact and lightweight at 188 g
- Temperature range from -20 °C to 60 °C
- Relative humidity from 5 % to 95 %
- Min/Max/Avg/Hold functions
- Low battery indicator
- One-year warranty



N10140

Specifications

| | |
|-----------------------------|---|
| Temperature range | -20 °C to 60 °C |
| Temperature accuracy | 0 °C to 45 °C -20 °C to 0 °C and 45 °C to 60 °C |
| Resolution | 0.1 °C |
| Response time (temperature) | 500 ms |
| Temperature sensor type | NTC |
| Relative humidity range | 5% to 95% R.H. |
| Relative humidity accuracy | 10% to 90% R.H. @ 23 °C < 10%, >90% R.H. @ 23 °C |
| Humidity sensor | Electronic capacitance polymer film sensor |
| Data storage | 99 points |
| Response time (humidity) | For 90% of total range - 60 sec with 1 m/s air movement |

General

| | |
|-----------------------|---|
| Operating temperature | Temperature: -20 °C to 60 °C Humidity: 0 °C to 60 °C |
| Storage temperature | -20 °C to 55 °C |
| Battery life | 4 AAA alkaline, 200 hours |
| Safety | Complies with EN61326-1 |
| Size (HxWxD) | 194 mm x 60 mm x 34 mm |
| Weight | 0.188 kg |
| Warranty | One Year |

Specialty Model

Fluke RLD2 UV Refrigerant Leak Detector Flashlight

Leak detection made easy. The compact, easy-to-use, RLD2 UV flashlight uncovers refrigerant leaks instantly. Use the UV light to find the leakage area, then, use the laser pointer to pinpoint the exact leak location. With 100,000 hours of life, and four operating modes, this versatile leak detector is a must have for HVAC technicians.



- Six UV LEDs (395 nm wavelength) detect leak detection dyes
- Laser pointer clearly locates centre of the UV field for accuracy
- Three LED flashlight with 100,000 hour LED life
- Operating temperature 0 °C to 50 °C
- Four operating modes: flashlight, UV light, laser light, UV/laser light combination
- Convenient detachable key chain carabiner and AAA battery included

Recommended Accessories



C23
Soft Carrying Case
See page 144



C550
Tool Bag
See page 144



LVD1A
Volt Light
See page 37



C1600
Gear Tool Box
See page 145

Included Accessories

Fluke 971: 4 AAA Alkaline Batteries, Operation Manual

Fluke RLD2: Chain Carabiner and Batteries

Ordering Information

FLUKE-971 Temperature Humidity Meter

FLUKE-RLD2 Leak Detector Flashlight

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Fluke 985 Airborne Particle Counter



Fluke 985



The Fluke 985 Particle Counter is ideal for troubleshooting and monitoring indoor air quality issues and verifying HVAC filter performance in critical locations. With its easy to read and fully configurable channel display, lightweight yet rugged form and highly accurate measurements, the Fluke 985 is the perfect tool for the maintenance, HVAC, and IAQ professional.

- **Six channels and particle size range of 0.3 µm to 10.0 µm:** Assures accurate measurements even for critical locations requiring ISO Class 5 – 9 certification.
- **Ultra-lightweight and ergonomic design:** Promises easy single-hand operation in tight or awkward spaces with less operator fatigue
- **Long battery life:** Ten hours of standard-use battery life to last a full work day
- **Large 3.5 inch QVGC colour display:** Easy navigation and viewing with the intuitive icons and large font options
- **10,000 record storage:** Quick access to historical data
- **On-screen data presentation:** Data can be viewed in a traditional tabular or trend graph view at the user's preference
- **Personalised setting and configurations:** Customisable settings for the display, sample methods, and alarm settings for sample count
- **Data export options:** Download data to a PC using a USB memory stick, USB cable or Ethernet connection. No special software is required to download or view data
- **Option password control:** Confirms security when required
- **USB/Ethernet charge cradle:** Assures device is always ready to go when needed

Specifications

| | |
|-----------------------|---|
| Channels | 0.3 µm, 0.5 µm, 1.0 µm, 2.0 µm, 5.0 µm, 10.0 µm |
| Flow rate | 0.1 cfm (2.83 L/min) |
| Light source | 775 nm to 795 nm, 90mW class 3B laser |
| Count modes | Raw counts, #/m3, #/ft3, #/liter in Cumulative or Differential mode |
| Counting efficiency | 50 % @ 0.3 µm; 100 % for particles > 0.45 µm (per ISO 21501) |
| Zero count | 1 count/5 minute (JIS B9921) |
| Concentration limits | 10 % at 4,000,000 particles per ft3 (per ISO 21501) |
| Data storage | 10,000 records (rotating buffer) |
| Alarms | Counts, low battery, sensor fail |
| Delay time | 0 to 24 hours |
| Sample inlet | Isokinetic probe |
| Security | Administrator password control (optional) |
| Communication mode | USB or Etheret |
| Calibration | PSL particles in air (NIST traceable) |
| Size (HxWxD) | 272 x 99 x 53 mm |
| Weight | 0.68 kg |
| Power adapter | 100 V AC to 240 V AC, 12 V DC, 2.5 A |
| Rechargeable battery | Li-ion 7.4 V 2600 mAh; 10 hours typical use (5 hours continuous sampling) / 3.5 hours |
| Operating environment | 10 °C to 40 °C / < 95 % non-condensing relative humidity |
| Storage environment | -10 °C to 50 °C / Up to 98 % non-condensing relative humidity |
| Warranty | One Year |

Specialty Model CO-220 Carbon Monoxide Meter



- Stand-alone CO meter that does not require a digital multimeter
- Large backlit LCD displays CO levels from 0 ppm to 999 ppm
- Beeper triggers with increasing frequency as CO levels rise
- MAX hold function stores and displays the maximum CO level
- Automatic sensor zeroing and self-test upon startup

For more information, goto www.fluke.com/au/co-220

CO-205 Aspirator Kit

The CO-205 flue gas sampling accessory kit includes:

- Stainless steel sampling tube
- Aspirator to draw flue sample
- Replaceable particulate filter
- Nose cap for connection to the Fluke CO-220



Included Accessories

Fluke 985: Cradle for charging and convenient USB and Ethernet Communications, ENET CAT5E 7-foot Cable, USA-A to Mini-B 6-foot Cable, 12V DC Power Supply, Zero Count Inlet-Filter, Filter Adapter, Sample Inlet Protective Cap, Hard Case, Getting Started Manual and User Manual CD.

Fluke CO-220: C50 Soft Carrying Case and Battery.

Ordering Information

- FLUKE-985 Particle Counter
- FLUKE-CO-220 Carbon Monoxide Meter
- FLUKE-CO-205 Aspirator Kit

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb



INSULATION & EARTH GROUND TESTERS

Insulation Tester Selection Guide



| Installation Test Functionality | 1503 | 1507 | 1577 | 1587 FC | 1587T | 1550C | 1555 |
|---|----------------------------|------------------------------|----------------------------|------------------------------|----------------------------|----------------------------------|---|
| Test voltages | 500V, 1000V | 50V, 100V, 250V, 500V, 1000V | 500V, 1000V | 50V, 100V, 250V, 500V, 1000V | 50V, 100V | 250V, 500V, 1000V, 2500V, 5000V | 250V, 500V, 1000V, 2500V, 5000V, 10000V |
| Insulation Resistance Test Range | 0.1MΩ - 2GΩ | 0.01MΩ - 10GΩ | 0.1MΩ - 600MΩ | 0.01 MΩ - 2GΩ | 0.01MΩ - 100MΩ | 200KΩ - 1TΩ | 200KΩ - 2TΩ |
| Polarisation Index/Dielectric Absorption Ratio | | ● | | ● | | ● | ● |
| Auto Discharge | ● | ● | ● | ● | ● | ● | ● |
| Time Ramp test (Breakdown) | | | | | | ● | ● |
| Pass/Fail Comparison | | ● | | | | | |
| Estimated Number of Insulation resistance Tests | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 @ 5000 V | 1000 @ 10000 V |
| Voltage > 30V Warning | ● | ● | ● | ● | ● | ● | ● |
| Memory | | | | ● | | (99 locations) | (99 locations) |
| Remote Test Probe | ● | ● | ● | ● | ● | | |
| Lo Ohms | ● | ● | | | | | |
| Display | Digital LCD | Digital LCD | Digital LCD | Digital LCD | Digital LCD | Digital LCD / Analogue Bar Graph | Digital LCD / Analogue Bar Graph |
| Continuity | (200mA) | (200mA) | ● | ● | ● | | |
| Multimeter Functionality | | | | | | | |
| AC/DC Volts | ● | ● | ● | ● | ● | | |
| Current | | | ● | ● | ● | | |
| Resistance | ● | ● | ● | ● | ● | | |
| Temperature (contact) | | | | ● | ● | | |
| Temperature Compensation | | | | ● | | | |
| Lo-Pass Filter | | | | ● | ● | | |
| Capacitance | | | | ● | ● | ● | ● |
| Diode Test | | | | ● | ● | | |
| Frequency | | | | ● | ● | | |
| MIN/MAX | | | | ● | ● | | |
| Fluke Connect® enabled | | | | ● | | | |
| Other | | | | | | | |
| Hold/Lock | ● | ● | ● | ● | ● | ● | ● |
| Backlight | ● | ● | ● | ● | ● | | |
| Software | | | | | | (Fluke View® Forms Basic) | (Fluke View® Forms Basic) |
| Warranty (in years) | 1 | 1 | 3 | 3 | 3 | 3 | 3 |
| Battery | 4 AA (NEDA 15A or IEC LR6) | 4 AA (NEDA 15A or IEC LR6) | 4 AA (NEDA 15A or IEC LR6) | 4 AA (NEDA 15A or IEC LR6) | 4 AA (NEDA 15A or IEC LR6) | Rechargeable | Rechargeable |

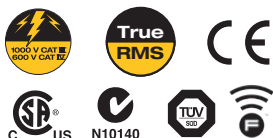
Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke 1587 FC and 1577 Insulation Multimeters



Fluke 1587 FC

Fluke 1577



Two powerful tools in one

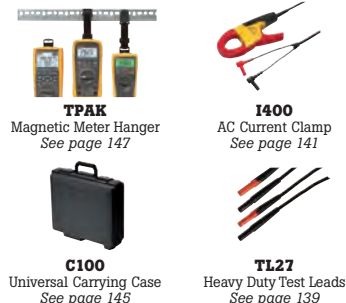
The Fluke 1587 FC and 1577 Insulation Multimeters combine a digital 1 kV insulation tester with a full-featured, True-RMS digital multimeter in a single compact, handheld unit, which provides maximum versatility for both troubleshooting and preventive maintenance.

- Insulation test (1587 FC: 0.01 MΩ to 2 GΩ) (1577: 0.1 MΩ to 600 MΩ)
- Insulation test voltages (1587 FC: 50 V, 100 V, 250 V, 500 V, 1000 V), (1577: 500 V, 1000 V) for many applications
- Live circuit detection prevents insulation test if voltage > 30 V is detected for added user protection
- Auto-discharge of capacitive voltage for added user protection
- Filter for motor drive measurements (1587 FC only)
- AC/DC voltage, DC millivolts, AC/DC milliamps, resistance (Ω), and continuity
- Capacitance, diode test, temperature, Min/Max, and frequency (Hz) (1587 FC only)
- Auto power off to save battery power
- Large display with backlight and large digits
- Included accessories: Remote probe, test leads and probes, alligator clips, (Type K thermocouple, 1587 FC only)
- Accepts optional Fluke TPAK magnetic hanging system to free your hands for other work
- Rugged, utility hard case allows you to bring everything you need for the job

The Fluke 1587 FC Insulation Multimeter adds four powerful new diagnostic functions through the Fluke Connect® Measurements app:

- PI/DAR timed ratio tests with TrendIt™ graphs identifies moisture and contaminated insulation problems faster
- Memory storage through Fluke Connect eliminates writing down results, reduces errors and saves data for historical tracking over time
- Temperature Compensation through app for establishing accurate baselines and relevant historical comparisons
- Historical tracking and trending of assets identifies degradation over time, allows real-time decisions to be made in the field with Fluke Connect® Assets (sold separately)

Recommended Accessories



Recommended Kits

Buy more, Save more



Fluke 1587/i400 Current Clamp FC Kit



Fluke 1587 FC Advanced Electrical Troubleshooting Kit



Fluke 1587 FC/MDT Advanced Motor and Drive Troubleshooting Kit

For more details see page 135

Specifications

| | 1587 FC | 1577 |
|--|-------------------|------------------|
| Insulation test voltages 50 V, 100 V, 250 V, 500 V, 1000 V | ● | — |
| Insulation test voltages 500 V, 1000 V | — | ● |
| Insulation resistance | 0.01 MΩ to 2.0 GΩ | 0.1 MΩ to 600 MΩ |
| Auto-discharge of capacitive voltage | ● | ● |
| Insulation test smoothing reading | ● | — |
| Frequency | ● | — |
| Capacitance | ● | — |
| Diode test | ● | — |
| Temperature | ● | — |
| Min/Max | ● | — |
| Low-pass filter (for work on VSDs) | ● | — |
| AC/DC voltage | ● | ● |
| DC millivolts | ● | ● |
| AC/DC milliamps | ● | ● |
| Resistance | 0.1 Ω to 50 MΩ | 0.1 Ω to 50 MΩ |
| Continuity | ● | ● |
| Warranty | Three-year | Three-year |
| Remote probe, test leads, alligator clips | ● | ● |
| Type K thermocouple | ● | — |
| Rugged, utility hard case | ● | ● |
| Auto power off | ● | ● |

Included Accessories

Fluke 1577/1587 FC: Remote Probe, Test Leads, Alligator Clips, K-type Thermocouple (1587 FC only), Hard Case, User Documentation.

Ordering Information

| | |
|---------------------------|--|
| FLUKE-1577 | Insulation Multimeter |
| FLUKE-1587T | Insulation Multimeter for Telecommunications |
| FLUKE-1587FC | Insulation Multimeter with Fluke Connect |
| FLUKE-1587/MDT FC | FC 2-in-1 ADV Motor & Drive Kit w/9040, i400 |
| FLUKE-1587/1400 FC | FC 2-in-1 Insulation Multimeter with i400 |
| 1587KIT/62MAX FC | FC 2-in-1 ADV Elec Kit w/62MAX+ i400 |

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Fluke 1507 and 1503 Insulation Resistance Testers



Fluke 1507

Fluke 1503

These lightweight, affordable insulation testers are perfect for troubleshooting, commissioning and preventive maintenance applications.

- Automatic calculation of polarisation index and dielectric absorption ratio (1507 only)
- Multiple test voltages: 50 V, 100 V, 250 V, 500 V, 1000 V (1507 only)
- Remote test probe for rapid testing
- Insulation test range 0.01 MΩ to 10 GΩ (1507), 0.1 MΩ to 2000 MΩ (1503)
- Compare (Pass/Fail) function for repetitive tests (1507 only)
- Live circuit detection prevents insulation test if voltage > 30 V is detected
- Auto-discharge of capacitive voltage
- AC/DC voltage: 0.1 V to 600 V
- Lo ohms/Earth-bond continuity (200 mA) for checking connections and motor windings
- Resistance: 0.01 Ω to 20.00 Ω
- One-year warranty



Features

| | 1503 | 1507 |
|---|------|------|
| User selectable test voltages for many applications | ● | ● |
| Additional test voltages 50V, 100V, 250V | | ● |
| Special remote control probe for easy and safe measurements | ● | ● |
| Auto-discharge of capacitive voltage for added user protection | ● | ● |
| Live circuit detection prevents insulation test if voltage > 30 V is detected for added user protection | ● | ● |
| Save both time and money with Automatic calculation of Polarisation Index and Dielectric Absorption Ratio | | ● |
| Auto Power off to save batteries | ● | ● |
| Large display with backlight | ● | ● |
| Continuity function (200 mA) | ● | ● |
| Compare function (pass/fail) for fast repetitive tests | | ● |

Specifications

| | 1503 | 1507 |
|------------------------------|--|--|
| Insulation | | |
| Insulation test range | 0.1 MΩ to 2000 MΩ | 0.01 MΩ to 10 GΩ |
| Test voltages | 500 V, 1000 V | 50 V, 100 V, 250 V, 500 V, 1000 V |
| Test voltage accuracy | + 20 %, - 0 % | + 20 %, - 0 % |
| Insulation test current | 1mA nominal | 1mA nominal |
| AC/DC Voltage measurement | 600 V (0.1 V resolution) | 600 V (0.1 V resolution) |
| Resistance measurement range | 0.01 Ω to 20 kΩ | 0.01 Ω to 20 kΩ |
| Auto discharge | Discharge time < 0.5 second for C = 1 μF or less | Discharge time < 0.5 second for C = 1 μF or less |
| Maximum capacitive load | Up to 1 μF | Up to 1 μF |
| Open circuit test voltage | > 4 V, < 8 V | > 4 V, < 8 V |
| Short circuit current | > 200 mA | > 200 mA |
| General | | |
| Battery life | Meter: 1000 hours Insulation Test: > 1000 tests | |
| Size (HxWxD) | 203 mm x 100 mm x 50 mm | |
| Weight | 0.55 kg | |

Recommended Accessories



Fluke 1507/1503 Applications



Insulation test at a distribution panel



Wiring test in a small distribution box – all in one spot

Included Accessories

TL224 Test Leads, TP74 Test Probes, Clips PN 1958654 (red) and PN 1958646 (black), Holster, Remote Probe and User Manual.

Ordering Information

FLUKE-1507 Insulation Tester
FLUKE-1503 Insulation Tester

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke 1555 and 1550C Insulation Resistance Testers



Fluke 1555

Fluke 1550C



- Automatic calculation of Dielectric Absorption (DAR) and Polarisation Index (PI) with no additional setup
- Guard system eliminates the effect of surface leakage current on high-resistance measurements

Powerful troubleshooting and predictive maintenance tools

The Fluke 1555 and redesigned Fluke 1550C Insulation Resistance Testers offer digital insulation testing up to 10 kV, making them ideal for testing a wide range of high voltage equipment including switchgear, motors, generators and cables.

- Large digital/analogue LCD for easy viewing
- Capacitance and leakage current measurement
- Ramp function for breakdown testing
- Three-year warranty
- Test voltages up to 5 kV (1550C) and 10 kV (1555) provide solutions for all applications
- Warning function alerts the user that line voltage is present and gives a voltage reading up to 600 V AC or DC for increased user safety
- Measurements can be stored in up to 99 memory locations, and each location is assigned a unique, user-defined label for easy recall
- Long battery life gives the user over 750 tests between changes

Specifications

The tester's accuracy is specified for one year after calibration at operating temperatures of 0 °C to 35 °C. For operating temperatures outside the range (-20 °C to 0 °C and 35 °C to 50 °C), add ± .25 % per °C, except on the 20 % bands add ± 1 % per °C.

| Insulation resistance measurement | | |
|-----------------------------------|-----------------|----------------------|
| Test voltage (DC) | Range | Accuracy (± reading) |
| 250 V | < 250 kΩ | unspecified |
| | 250 kΩ to 5 GΩ | 5 % |
| | 5 GΩ to 50 GΩ | 20 % |
| | > 50 GΩ | unspecified |
| 500 V | < 500 kΩ | unspecified |
| | 500 kΩ to 10 GΩ | 5 % |
| | 10 GΩ to 100 GΩ | 20 % |
| | > 100 GΩ | unspecified |
| 1000 V | < 1 MΩ | unspecified |
| | 1 MΩ to 20 GΩ | 5 % |
| | 20 GΩ to 200 GΩ | 20 % |
| | > 200 GΩ | unspecified |
| 2500 V | < 2.5 MΩ | unspecified |
| | 2.5 MΩ to 50 GΩ | 5 % |
| | 50 GΩ to 500 GΩ | 20 % |
| | > 500 GΩ | unspecified |
| 5000 V | < 5 MΩ | unspecified |
| | 5 MΩ to 100 GΩ | 5 % |
| | 100 GΩ to 1 TΩ | 20 % |
| | > 1 TΩ | unspecified |
| 10000 V (1555 only) | < 10 MΩ | unspecified |
| | 10 MΩ to 200 GΩ | 5 % |
| | 200 GΩ to 2 TΩ | 20 % |
| | > 2 TΩ | unspecified |

| Functions | Range | Accuracy (± reading) |
|-------------------------|-------------------------------|------------------------|
| Leakage current | 1 nA to 2 mA | ± (5 % + 2 nA) |
| Capacitance measurement | 0.01 µF to 15.00 µF | ± (15 % rdg + 0.03 µF) |
| Live circuit warning | 30 V to 600 V AC/DC, 50/60 Hz | ± (15 % + 2 V) |

Recommended Accessories

Fluke 1550C



TLK1550-RTL
Integral Test Lead
and 10 kV Clamp



FVF-BASIC
FlukeView® Forms
Software
See page 145



IR189USB
USB-IR Cable
See page 147



CXT1555
Pelican
Carrying Case

Recommended Kits

Buy more, Save more



Fluke 1550C 5 kV Insulation Tester Kit



Fluke 1555 10 kV Insulation Tester Kit

For more details see page 135

Included Accessories

Test Cables with Alligator Clips (red, black, green), Infrared Adapter with Interface Cable, FlukeView® Forms Basic CD, AC Power Cord, Soft Carrying Case, User Manual, Quick Reference Card, Software License Agreement, Registration Card, FlukeView Forms Installation Guide, USB-IR Cable Installation Guide, IP67 Hard Case (Kit only), Certificate of Calibration (Kit only), Ruggedised Alligator Clips (Kit and 1555 only).

Ordering Information

| | |
|------------------------|-----------------------------|
| FLUKE-1550C | 5 kV Insulation Tester |
| FLUKE-1555 | 10 kV Insulation Tester |
| FLUKE-1550C/KIT | 5 kV Insulation Tester Kit |
| FLUKE-1555/KIT | 10 kV Insulation Tester Kit |

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Fluke 1620-2 Series Geo Earth Ground Testers



Fluke 1625-2



Fluke 1623-2



The Fluke 1620-2 series offer data storage and download capabilities via USB port, have a large display and world class accessories that will simplify and speed up testing time.

These unique earth ground testers that can perform all four types of earth ground measurement:

- 3- and 4-Pole Fall-of-Potential (using stakes)
- 4-Pole Soil Resistivity testing (using stakes)
- Selective testing (using 1 clamp and stakes)
- Stakeless testing (using 2 clamps only)
- IP56 rated for outdoor use
- Professional carrying case
- USB data storage and transfer

In addition, the Fluke 1625-2 offers these advanced features:

- Automatic Frequency Control (AFC) - identifies existing interference and chooses a measurement frequency to minimise its effect, providing more accurate earth ground value
- R* measurement - calculates earth ground impedance at 55 Hz to more accurately reflect the earth ground resistance that a fault-to-earth ground would see
- Adjustable limits - for quicker testing

Earth ground resistance and soil resistivity should be measured when:

- Designing earth ground systems
- Installing new ground system and electrical equipment
- Periodically testing ground and lightning protection systems
- Installing large electrical equipment such as transformers, switchgears, machines, etc.

Features

| | 1623-2 | 1625-2 |
|---|--------------|--------------|
| One-button measurement concept | ● | |
| 3- and 4-pole Fall of Potential, earth resistance loop testing | ● | ● |
| 4-Pole soil resistivity testing | ● | ● |
| 2-Pole resistance measurement AC | | ● |
| 2-and 4-pole resistance measurement DC | | ● |
| Selective testing, no disconnection of ground conductor (1 clamp) | ● | ● |
| Stakeless testing, quick ground loop testing (2 clamps) | ● | ● |
| Measuring frequency 128 Hz | ● | |
| Earth impedance measurement at 55 Hz | | ● |
| Automatic frequency control (AFC) (94 – 128 Hz) | | ● |
| Measuring voltage switchable 20/48V | | ● |
| Programmable limits, settings | | ● |
| Continuity with buzzer | | ● |
| Dust/water resistance | IP56 | IP56 |
| Safety rating | CAT II 300 V | CAT II 300 V |

Specifications

| | 1623-2 | 1625-2 |
|-----------------------|------------------------------|------------------------------|
| Resistance ranges | 0 to 20 kΩ | 0 to 300 kΩ |
| Operating error | ± 10% | ± 5% |
| Test voltage | 48 V | 20 / 48 V |
| Short circuit current | > 50mA | 250 mA |
| Weight | 1.1 kg (including batteries) | 1.1 kg (including batteries) |
| Size (WxHxD) | 250 x 133 x 187 mm | |
| Battery type | 6 x AA alkaline cells | |
| Warranty | Two year | |

These products are for unpowered installations measuring grounding connections.

For more information, go to www.fluke.com.sg

Recommended Accessories



EI-1623
Selective/stakeless clamp set for 1623



EI-1625
Selective/stakeless clamp set for 1625



ES-162P3
Stake/reel set for 3-pole measurements



ES-162P4
Stake/reel set for 4-pole measurements



EI-162BN 320MM
Split Core Transformer for use with Fluke 1625



CABLE REEL
Ground/Earth Cable Reel

Recommended Kits

Buy more, Save more



Fluke 1623-2 GEO Earth Ground Tester Kit



Fluke 1625-2 GEO Earth Ground Tester Kit

For more details see page 135

Included Accessories

Fluke 1623-2: Protective Holster, 2 Test Leads, 2 Alligator Clips, User Manual.

Fluke 1623-2 Kit: Same as above plus Stake/Reel, Set 4 Pole and Selective/Stakeless Clamp Set.

Fluke 1625-2: Protective Holster, 2 Test Leads, 2 Alligator Clips, User Manual.

Fluke 1625-2 Kit: Same as above plus Stake/Reel, Set 4 Pole and Selective/Stakeless Clamp Set.

Ordering Information

- FLUKE-1623-2** Basic GEO Earth Ground Tester
- FLUKE-1623-2 KIT** Basic GEO Earth Ground Tester Kit
- FLUKE-1625-2** Advanced GEO Earth Ground Tester
- FLUKE-1625-2 KIT** Advanced GEO Earth Ground Tester Kit

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke 1621 Basic Earth Ground Tester

Earth ground tester for resistance measurement



Fluke 1621



N10140

Hand-held Earth Ground Tester for resistance measurement

The Fluke 1621 is an easy-to-use earth ground tester. For ground resistance testing, the 1621 is the first line of defence in detecting reliable ground connections. The unit features basic ground testing methods including 3-pole Fall-of-Potential as well as 2-pole ground resistance tests. Its convenient size, rugged holster, and large, clear LCD display make it an ideal field earth ground tester, for most electrical grounding work environments. With a simple user interface and intuitive functionality, the Fluke 1621 is a handy grounding tool for electrical contractors, utility test engineers, and earth ground specialists.

- 3-pole Fall-of-Potential earth testing for basic measurements
- 2-pole resistance measurements for added versatility
- Easily capture values with single-button operation
- Ensure accurate measurements with automatic 'noise' voltage detection
- Hazardous voltage warning offers increased user protection
- Clearly read and record data with a large, backlit display
- Instantly be alerted to measurements outside of your set limit, when you use the adjustable limit setting
- Safety rating CAT II 600 V

Recommended Accessories



CABLE REEL 50 M
Ground/earth wire

CABLE REEL 25 M
Ground/earth wire

ES-162P3
Stake/reel set for 3-pole measurements

EARTH STAKE
Ground/earth stake

CXT280
Extreme Case
See page 145

Recommended Kits

Buy more, Save more



Fluke 1621 Basic Earth Ground Tester Kit

For more details see page 135

Included Accessories

Fluke-1621: Two Measuring Leads with Alligator Clips - 2 m, Protective Holster, User Manual and CD.

Fluke-1621 Kit: 2 Cable Reels with Wire (1-50 m, 1-25 m), 3 Earth Ground Stakes, 1 Test Lead (red and black 2 m), 2 Alligator Clips, Batteries, User Manual, Hard Carrying Case.

Ordering Information

FLUKE-1621 Basic GEO Earth Ground Tester

FLUKE-1621 KIT Basic GEO Earth Ground Tester Kit

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Specifications

| | |
|-------------------------|--|
| Measuring functions | 3-pole earth ground resistance, 2-pole AC resistance of a conductor, Interference voltage |
| Intrinsic error | Refers to the reference temperature range and is guaranteed for one year |
| Measuring rate | 2 measurements/second |
| Battery | One 9 volt alkaline (LR61) |
| Battery condition | LO-BAT is displayed if voltage drops below 6.5 V |
| Voltagess | Between jacks H/C2 and E/C1 : 250 Veff maximum (effective voltage) Between jacks S/P2 and E/C1 : 250 Veff maximum |
| Climatic class | VDE/VDI 3540 RZ (conforming to KWG as per DIN 40040, 4/87) |
| Temperature performance | Working: -10 °C to +50 °C Operating: 0 °C to +35 °C Storage: -20 °C to +60 °C |
| Temperature coefficient | ± 0.1 % of range per degree Kelvin |
| Size | 113 mm x 54 mm x 216 mm including holster |
| Weight | 850 g including standard accessories, volume approximately 600 cm ³ |

Note: If the tester is not going to be used, or is being stored for a long period, remove the battery and store separately from the tester to avoid damage from battery leakage.

The four temperature ranges for the tester exists to satisfy European Standards requirements; the instrument can be used over the full working temperature range by using the temperature coefficient to calculate accuracy at the ambient temperature of use. These products are for unpowered installations measuring grounding connections.

Maximum deviations

| Parameter | Influence Factor | Deviation Influence |
|----------------|--------------------------------------|---------------------|
| E ₁ | Position | 0 % |
| E ₂ | Supply Voltage | 0 % |
| E ₃ | Temperature E ₃ | 2.3 % |
| E ₄ | Serial interference voltage (20 V) | 0.6 % |
| E ₅ | Probe and auxiliary probe resistance | 10 % |

| | |
|-------------------------------|--|
| Test Voltage | 3.7 kV |
| Protection Type | IP 40; IEC/EN 60529 |
| Electromagnetic Compatibility | Emission: IEC/EN 61326 Class B Immunity: IEC/EN 61326 Annex C |

R₂ Resistance Measurement

| | |
|------------------------------|--|
| Measuring method | Current-voltage measurement with improved cross-talk attenuation, no compensation of measuring lead resistance, with probe (3-pole) or without probe (2-pole), as per IEC/EN 61557-5 |
| Open circuit voltage | 23 to 24 V AC |
| Short circuit current | > 50 mA AC |
| Measuring frequency | 128 Hz |
| Maximum permissible overload | 250 Veff |

Fluke 1630 Earth Ground Clamp Meter



Fluke 1630



Earth Ground loop resistance measurements for commercial, industrial, and utility applications

The clamp-on ground testing technique used by the Fluke 1630 simplifies ground loop testing and enables non-intrusive leakage current measurement. The compact and rugged design makes the Fluke 1630 easy to use in small places and harsh environments, while the 'display hold' and the continuity testing with an audible alarm function ensures convenience in use. The novel technique means that earth ground loop testing and continuity testing can be completed without breaking the circuit.

The Fluke 1630 is ideally suited for the following applications:

- Ground loop checks on any earthing system
- Continuity tests on earth bonding circuits and connections
- Inspection of lightning protection systems
- Leakage current measurement for troubleshooting on earth ground systems

Stakeless testing system

The Fluke 1630 uses the Stakeless testing method, which eliminates the need to disconnect parallel ground rods and find suitable locations for placing auxiliary ground stakes. This saves time and enables users such as industrial and utility electricians, and field service electricians and contractors, to perform earth ground loop tests in locations where it is not possible to use other techniques, including inside buildings or on power pylons. With the Stakeless testing method, earth ground stakes are no longer necessary.

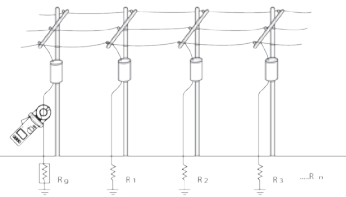
The Fluke 1630 Earth Ground Clamp is placed around the earth ground rod or the connecting cable. A known voltage is induced by one half of the clamp and the current is measured by the other half. The tester automatically determines the ground loop resistance at this grounding connection.

- A wide ground loop resistance range, from 0.025 Ω to 1500 Ω, to satisfy all requirements
- Large jaw opening of 35 mm for tests on ground conductors and/or equipotential bus bars
- Measurement of ground leakage current, from 0.2 mA to 1000 mA, without needing to disconnect - ideal for system troubleshooting
- Wide AC current measurement range from 0.2 A to 30 A allows one instrument for multiple applications
- User-defined HI / LO Alarm limits, for rapid measurement evaluation
- Handy 'display hold' button for capturing readings in hard-to-reach places
- Time saving memory function automatically records and stores measured values
- Automatic self calibration ensures correct measurement every time
- Overload protection: 200 A
- ≥ 8 hours battery life (continuous operation)

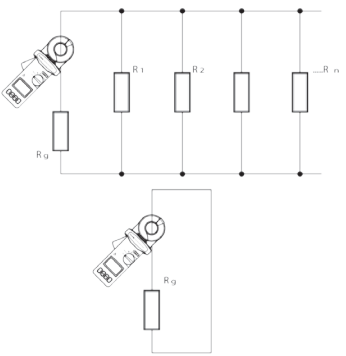
Specifications

| | |
|-----------------------|---|
| Operating error | Refers to the operating temperature range and is guaranteed for 2 years |
| Storage temp. range | -20 °C to 60 °C |
| Reference temp. range | 23 °C ± 5 °C |
| Storage humidity | < 75 % R _H |
| Operating humidity | < 85 % R _H |
| Display | 9999 digit LC-display with special symbols |
| Protection | IP20 according to IEC 529/EN 60529 |
| Safety | 300 V, CAT III / pollution degree 2 IEC 61010-1 |
| Weight | 640 g |
| Conductor size | 35 mm approximately |
| Size (LxWxD) | 257 mm x 100 mm x 47 mm |
| Emission | IEC 1000 4-2, IEC 61326-1 class B |
| Immunity | IEC 61000-4-2, 8 kV (air) criteria A IEC 61000-4-3, 3 V/m performance criteria A |
| Range selection | Auto |
| Overload indicator | "OL" on display |
| Measuring time | 0.4 sec |
| Measuring frequency | 3.333 kHz |

Ground Resistance Measurement Principle



Equivalent Circuit Diagram



Included Accessories

Rugged Carrying Case with Shoulder Strap, Resistance Test Loop, 9V Battery, Operating Instructions and User Manual.

Ordering Information

FLUKE-1630 Earth Ground Clamp Meter

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb



MULTIFUNCTION & PORTABLE APPLIANCE TESTERS

Fluke 1650 Series Multifunction Installation Testers



Fluke 1654B



Fluke 1653B



Fluke 1652C



Extra functionality, faster testing, and as rugged as ever

The Fluke 1650 Series builds on the rugged reputation of the earlier 1650 Series, only it's re-designed to meet your need for more productive test tools. With features like the fast, high current loop test (including a non-trip test) and a variable RCD trip current setting, accuracy is even better and the test cycle even faster. With the addition of a unique Zero Adapter accessory for accurate mains test lead compensation, the 1650 Series continues to set the standard in installation testers.

These testers verify the safety of electrical installations in domestic, commercial and industrial applications. They can ensure that fixed wiring is safe and correctly installed to meet the requirements of IEC 60364, HD 384 and BS 7671 17th Edition wiring regulations.

1654B - The complete tester for advanced users

From all the test functions you need to in-built memory for documenting results. This makes it the complete solution for professionals, especially contractors, everyone who would want to have the best tool available and always understands (or know) how to use.

1653B - The ideal tester for professional trouble-shooters

This is the instrument that is indeed ideal for professional users due to its additional functionality. It is also ideal since even though it has high-end features, it is still easy to use – even after longer periods of non-use; because operating it is intuitive and not forgotten easily.

1652C - The everyday tester, for every electrical installer

This is the instrument that can be used every single day (day in, day out), and covers all the basic needs. It is the preferred tester for every front-line electrician/installer.

Comparison Chart

| Measurement Function | 1652C | 1653B | 1654B |
|---|----------------|----------------|----------------|
| Voltage & Frequency | ● | ● | ● |
| Insulation Resistance | ● | ● | ● |
| Continuity & Resistance | ● | ● | ● |
| Loop & Line Resistance | ● | ● | ● |
| Loop & Line Resistance - mΩ resolution | | | ● |
| Prospective Earth Fault Current (PEFC/IK) Prospective Short-Circuit current (PSC/IK) | ● | ● | ● |
| RCD switching time | ● | ● | ● |
| RCD tripping level | Ramp test ● | Ramp test ● | Ramp test ● |
| RCD variable current | ● | ● | ● |
| Automatic RCD test sequence | ● | ● | ● |
| Test pulse current sensitive RCDs (Type A) | ● | ● | ● |
| Test smooth DC sensitive RCDs (Type B) | | | ● |
| Earth Resistance | | ● | ● |
| Phase Sequence Indicator | ● | ● | ● |
| Other Features | | | |
| Self-test | ● | ● | ● |
| Illuminated Display | ● | ● | ● |
| Memory, Interface | | | |
| Memory | | ● | ● |
| Extended Memory | | | ● |
| Computer Interface | | ● | ● |
| Time and date (when used with FlukeView® software) | | ● | ● |
| Software (optional) | | ● | ● |

Recommended Accessories



TLK 290
Test Probe Kit
See page 139



MAINS TEST CORD
for Fluke 1650B



FVF-SC2
Fluke ViewForms®
Software (Fluke 1653B)
See page 145



ES165X
Earth Spike Test Kit
(Fluke 1653B
and 1654B only)



TP165X
Remote Control Probe

Included Accessories

6 AA Cell Batteries, C1600 Hard Carrying Case, Zero Adapter, Mains Test Cord, TL165X STD Standard Test Lead Set, TP165X Remote Control Probe and Lead, Padded Carrying Strap, Quick Reference Guide, User Manual on CD

Ordering Information

FLUKE-1652C Multifunction Installation Tester
FLUKE-1653B Multifunction Installation Tester
FLUKE-1654B Multifunction Installation Tester

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Specifications

AC Voltage Measurement

| Range | Resolution | Accuracy (50 Hz - 60 Hz) | Input Impedance | Overload Protection |
|-------|------------|--------------------------|-----------------|---------------------|
| 500 V | 0.1 V | ± (0.8% + 3 digits) | 3.3 MΩ | 660 Vrms |

Continuity Testing

| Range (autoranging) | Resolution | Test Current | Open Circuit Voltage | Accuracy |
|---------------------|------------|--------------|----------------------|-------------------|
| 20 Ω | 00.1 Ω | > 200 mA | > 4 V | ± (1.5%+3 digits) |
| 200 Ω | 0.1 Ω | | | |
| 2000 Ω | 1 Ω | | | |

Insulation Resistance Measurement

| Model | Test Voltage | Insulation Resistance Range | Resolution | Test Current | Accuracy |
|-----------------------|--------------|-----------------------------|------------|---------------|---------------------|
| 1653B / 1654B | 50 V | 10 kΩ to 50 MΩ | 0.01 MΩ | 1 mA @ 50 kΩ | ± (3% + 3 digits) |
| 1653B / 1654B | 100 V | 100 kΩ to 20 MΩ | 0.01 MΩ | 1 mA @ 100 kΩ | ± (3% + 3 digits) |
| | | 20 MΩ to 100 MΩ | 0.1 MΩ | | |
| 1653B / 1654B / 1652C | 250 V | 10 kΩ to 20 MΩ | 0.01 MΩ | 1 mA @ 250 kΩ | ± (1.5% + 3 digits) |
| | | 20 MΩ to 200 MΩ | 0.1 MΩ | | |
| 1653B / 1654B / 1652C | 500 V | 10 kΩ to 20 MΩ | 0.01 MΩ | 1 mA @ 500 kΩ | ± (1.5% + 3 digits) |
| | | 20 MΩ to 200 MΩ | 0.1 MΩ | | ± (1.5% + 3 digits) |
| | | 200 MΩ to 500 MΩ | 1 MΩ | | ± 10% |
| 1653B / 1654B / 1652C | 1000 V | 100 kΩ to 200 MΩ | 0.1 MΩ | 1 mA @ 1 MΩ | ± (1.5% + 3 digits) |
| | | 200 MΩ to 1000 MΩ | 1 MΩ | | ± 10% |

Loop Impedance Measurement

| Range | Resolution | Accuracy ¹ |
|--------|-----------------|---|
| 10 Ω | 0.001 Ω (1654B) | Hi Current mΩ mode: ± (2 % + 15 digits) |
| 20 Ω | 0.01 Ω | No Trip mode: ± (3 % + 6 digits) |
| | | Hi Current mode: ± (2 % + 4 digits) |
| 200 Ω | 0.1 Ω | No Trip mode: ± (3 %) |
| | | Hi Current mode: ± (2 %) |
| 2000 Ω | 1 Ω | ±6 % ² |

Notes

¹Valid for resistance of neutral circuit <20 Ω and up to a system phase angle of 30°. Test leads must be zeroed before testing.

²Valid for mains voltage >200 V.

PFC, PSC Test

| | |
|-----------------------------|--|
| Range | 0 to 10 kA or to 50kA |
| Resolution and Units | Resolution: $I_k < 1000$ A, Units: 1 A Resolution: $I_k > 1000$ A, Units: 0.1kA |
| Accuracy | Determined by accuracy of loop resistance and mains voltage measurements |

RCD Testing

| RCD Type ⁶ | | Model 1652C | Model 1653B | Model 1654B |
|-----------------------|----------------|-------------|-------------|-------------|
| AC ¹ | G ² | ● | ● | ● |
| AC | S ³ | ● | ● | ● |
| A ⁴ | G | ● | ● | ● |
| A | S | ● | ● | ● |
| B ⁵ | G | | | ● |
| B | S | | | ● |

Notes

¹ AC - Responds to AC

² G - General, no delay

³ S - Time delay

⁴ A - Responds to pulsed signal

⁵ B - Responds to smooth DC

⁶ RCD test inhibited for V >265 AC

RCD tests permitted only if the selected current, multiplied by earthing resistance, is <50 V.

Earth Resistance Test (RE) – Fluke 1654B and 1653B only

| Range | Resolution | Accuracy |
|--------|------------|----------------------|
| 200 Ω | 0.1 Ω | ± (2% + 5 digits) |
| 2000 Ω | 1 Ω | ± (3.5% + 10 digits) |

General Specifications

| | |
|---------------------|--|
| Battery type | Alkaline supplied, usable with 1.2 V NiCD or NiMH rechargeable batteries |
| Size (HxWxD) | 100 mm x 250 mm x 125 mm |
| Weight | 1.3 kg |
| Warranty | Three Year |

Slim Probe Design



Thanks to its slim probe with integral test button, you can safely make one-handed measurements on hard to reach points, while keeping your eyes on the panel. This remote probe is powered by the tester so always operable (does not require additional batteries).

Zero Adapter



For easy, always reliable and accurate compensation for test leads and mains cords. This adapter can be used for all different kind of mains plugs as well as test accessories like probes, alligator clips etc.

Complete Kit



All 1650 models are equipped with detachable leads that can be replaced in case of damage or loss. A durable hard case will protect your instrument in tough field conditions.

Fluke 6200-2 and 6500-2 Portable Appliance Testers



Fluke 6200-2



Fluke 6500-2



Perform more tests each day

The Fluke 6200-2 and 6500-2 Portable Appliance Testers (PAT) have redesigned auto-test capabilities to help you increase the number of portable appliance tests completed each day. It is designed to enable you to work faster without compromising safety – yours or your customer's.

The Fluke 6200-2 Portable Appliance Tester offers:

- Dedicated key for each test for 'one-touch' testing
- Pre-set pass/fail levels to save time
- Large display for easy reading
- Single mains socket for appliance connection
- Separate IEC socket for easy mains/extension lead testing
- Detachable test leads for quick field replacement
- Integral carrying handle

The Fluke 6500-2 Portable Appliance Tester delivers all of this capability, plus:

- Integral QWERTY keyboard for rapid data entry
- Additional Compact Flash memory card capability for back-up data storage and USB port for transfer to PC
- Large backlit graphics display
- Pre-set, auto-test sequences for user convenience
- Integral site, location and description codes for faster data processing
- Memory review facility for more on-site control

Features

| Measurement functions | 6200-2 | 6500-2 |
|--|--------|--------|
| LN Mains Volts | ● | ● |
| Outside Limits Indicators | ● | ● |
| Null out facility for earth bond lead | ● | ● |
| Protective Earth Resistance PE (200mA) | ● | ● |
| Protective Earth Resistance PE (25 A) | ● | ● |
| Insulation 500V DC | ● | ● |
| Insulation 250V DC | ● | ● |
| Protective Earth Conductor Current | ● | ● |
| Touch Current | ● | ● |
| RCD Test | ● | ● |
| Substitute leakage current | ● | ● |
| Appliance Power kVA | ● | ● |
| Appliance Load Current | ● | ● |
| Seven Segment Custom LCD | ● | ● |
| Colour dot matrix display | | ● |
| Back Light | ● | ● |
| USB Flash drive port | ● | ● |
| USB Port-Printing/downloading | | ● |

| | | |
|----------------------------|---|---|
| External printer output | ● | ● |
| Front Panel QWERTY Key pad | | ● |

| | | |
|---|---|---|
| IEC Lead Test | ● | ● |
| Auto-testing | | ● |
| Pass / Fail Level Programmable Indicators | | ● |
| Data Storage | | ● |
| Limited Data Storage | | ● |
| Polarity Checks | ● | ● |
| Graphical Help Menu Online | | ● |
| Programme Mode | | ● |
| Real time clock | | ● |

Recommended Accessories



SP-SCAN-6000
Barcode Scanner
(6500-2 only)



DMS COMPLI
Data Management
Software



C1600
Rugged, molded
plastic case
See page 145

Fluke 6500-2 Application



Included Accessories

Test Lead, Test Probe, Crocodile Clip, Mains Cord, USB Stick, USB Cable, Hard Carrying Case, Quick Reference Guide and User Manual on CD.

Ordering Information

FLUKE-6200-2 Portable Appliance Tester

FLUKE-6500-2 Portable Appliance Tester

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Portable Appliance Testers

Specifications

The accuracy specification for the display range is defined as \pm (%reading + digit counts) at $23\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$, $\leq 75\%$ RH. Between $0\text{ }^{\circ}\text{C}$ and $18\text{ }^{\circ}\text{C}$ and between $28\text{ }^{\circ}\text{C}$ and $40\text{ }^{\circ}\text{C}$, accuracy specifications may degrade by $0.1 \times$ (accuracy specification) per $^{\circ}\text{C}$. The measurement range meets the service operating errors specified in EN61557-1: 1997, EN61557-2: 1997, EN61557-4: 1997, EN61557-6: 1997, DIN VDE404-2.

Power-on Test

The test indicates reversed L-N, missing PE, and measures the mains voltage and frequency.

| | |
|-----------------------------|---|
| Display Range | 90 V to 264 V |
| Accuracy at 50 Hz | \pm (2% + 3 counts) |
| Resolution | 0.1V (1V - model 6200) |
| Input Impedance | $> 1\text{ M}\Omega$ // 2.2 μF |
| Maximum Input Mains Voltage | 264 V |

Earth Bond Test

| | |
|------------------------------------|--|
| Display Range | 0 to 19.99 Ω |
| Accuracy (After Bond Test Zeroing) | 6200-2: \pm (2.5% + 4 counts) 6500-2: \pm (5% + 4 counts) |
| Resolution | 0.01 Ω |
| Test Current | 200 mA AC - 0% + 40% into 1.99 Ω 25 A AC \pm 20% into 25 m Ω at 230 V |
| Open Circuit Voltage | $> 4\text{ V AC}$, $< 24\text{ Vac}$ |
| Bond Test zeroing | can subtract up to 1.99 Ω |

Insulation Test (Riso)

| | |
|----------------------|---|
| Display Range | 0 to 299 M Ω |
| Accuracy | \pm (5% + 2 counts) from 0.1 to 300 M Ω |
| Resolution | 0.01 M Ω (0 to 19.99 M Ω) 0.1 M Ω (20 to 199.9 M Ω) 1 M Ω (200 to 299 M Ω) |
| Test Voltage | 500 V DC - 0% + 25% at 500 k Ω load 250 V DC - 0% + 25% at 250 k Ω load (6500-2) |
| Test Current | $> 1\text{ mA}$ at 500 k Ω load, $< 15\text{ mA}$ at 0 Ω |
| Auto discharge time | $< 0.5\text{ s}$ for 1 μF |
| Max. Capacitive Load | Operational up to 1 μF |

RCD Test: Trip Current (6500-2 only)

| | |
|-------------------|------------|
| Operational Error | $\pm 10\%$ |
| Nominal | 30 mA |
| Accuracy | $\pm 5\%$ |

RCD Test: Trip Time (6500-2 only)

| | |
|----------------------------------|--|
| Standard Requirement | 61557 Part 6: Tolerance of rated test current 0% to +10% |
| Operational Error | $\pm 10\%$ |
| RCD Type | AC General-Purpose 30 mA |
| Display range | 310 ms |
| Resolution | 0.1 ms |
| Accuracy | 3 ms |
| Trip time limit at 100% (30 mA) | 300 ms |
| Trip time limit at 500% (150 mA) | 40 ms |

Touch Current Test

| | |
|---|-----------------------|
| Display Range | 0 to 1.99 mA AC |
| Accuracy | \pm (4% + 2 counts) |
| Resolution | 0.01 mA |
| Internal Resistance (via probe) | 2 k Ω |
| Measuring method | Probe |
| The appliance under test is energised at mains potential. | |

Substitute Leakage Current Test

| | |
|-------------------|-------------------------|
| Display Range | 0 to 19.99 mA AC |
| Accuracy | \pm (2.5% + 3 counts) |
| Resolution | 0.01 mA |
| Test Voltage | 100V AC $\pm 20\%$ |
| Operational Error | 10% |

Load/Leakage Test: Load Current

| | |
|--|-----------------------|
| Display Range | 0 to 10 A |
| Accuracy | \pm (4% + 2 counts) |
| Resolution | 0.1 A |
| The appliance under test is energised at mains potential | |

Load/Leakage Test: Load Power

| | |
|--|---|
| Accuracy | \pm (5% + 3 counts) |
| Resolution | 1 VA (0 to 999 VA), 0.1 kVA ($> 1.0\text{ kVA}$) |
| The appliance under test is energised at mains potential | |

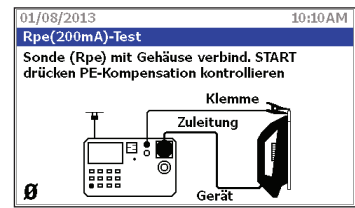
Load/Leakage Test: Leakage Current

| | |
|--|-----------------------|
| Display Range | 0.25 to 19.99 mA |
| Accuracy | \pm (4% + 4 counts) |
| Resolution | 0.01 mA |
| The appliance under test is energised at mains potential | |

PELV Test

| | |
|---------------------|-----------------------|
| Accuracy at 50 Hz | \pm (2% + 3 counts) |
| Overload protection | 300 V RMS |
| Warning threshold | 25 V RMS |

Features



Fast professional testing mode
The professional testing mode enables you to conduct more tests faster and more efficiently than ever before.



Rapid data entry (6500-2)

With a full QWERTY keyboard, alphanumeric data entry is faster, easier and more convenient. The integral site, location and description codes further speed up data entry on site, and contribute to more efficient testing and results management.



One-touch testing

Tests are selected on the 6200-2 and 6500-2 with just one button. This greatly simplifies testing.



Built-in handle and separate hard case

The strong, lightweight enclosure features an integral carrying handle and fits neatly into the separate hard case (supplied as standard). Unlike typical portable appliance testers with large cumbersome integral cases, the Fluke 6200-2 and 6500-2 are easier to carry around in the field.

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb



POWER QUALITY ANALYSERS

Power Quality Tools

For industrial and Commercial Applications



| Basic measurements | Application use | Single phase | | | Three phase | | | | | | |
|---|--|--------------|-----|-----|-------------|------|------|------|--------------------|------|------|
| | | VR1710 | 345 | 43B | 430 II | 1730 | 1736 | 1738 | 1740 | 1750 | 1760 |
| RMS Voltage | Detailed RMS trending shows how connected loads behave. | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| RMS Current | | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Energy studies | | | | | | | | | | | |
| Measure V, I, kW, Cos/DPF, kWhr | Get detailed power and energy consumption profiles during energy audits and pinpoint savings opportunities. | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Measure MIN/MAX and AVG values | | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 10 day logging | | | | ● | ● | ● | ● | ● | ● | ● | ● |
| Energy aggregation | | | | ● | ● | ● | ● | ● | ● | ● | ● |
| Utility meter pulse input | | | | | | ● | ● | ● | | | |
| Energy Loss (Eff. kW, Reactive kVAR, Unbalance kVAR, Distortion kVAR, Neutral kVAR) | | | | ● | ● | ● | | ● | ● | ● | ● |
| Energy loss calculator | | | | | | ● | | ● | | | |
| Basic harmonics study | | | | | | | | | | | |
| THD measurement (V & I) | Discover the source of distortion in your installation, so that you can filter those loads or move them to separate circuits. | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Harmonics 1 to 25 for V & I | | | ● | ● | ● | ● | ● | ● | (not 1743) | ● | ● |
| Tabular values | | | | | | ● | ● | ● | ● | ● | ● |
| Neutral current measurement | | | | | ● | ● | ● | ● | ● | ● | ● |
| Crest factor | | | | ● | ● | ● | | ● | ● | ● | ● |
| Advanced harmonics study | | | | | | | | | | | |
| Full harmonic spectrum | If distorting loads are causing problems in your installation, you need comprehensive data to identify the source and create a solution. | | ● | ● | ● | | ● | ● | ● | ● | ● |
| Power harmonics | | | ● | ● | ● | | | | ● | ● | ● |
| Harmonics 1 to 50 and DC | | | | ● | ● | ● | | | (no DC) (not 1743) | ● | ● |
| k-factor | | | | | ● | ● | | | | ● | ● |
| %Fundamental and %RMS | | | | ● | ● | ● | | | ● | ● | ● |
| Basic Industrial PQ Troubleshooting | | | | | | | | | | | |
| Oscilloscope function | When troubleshooting in the field, graphical data enables you to trace the source of the problem at hand. | | ● | ● | ● | | ● | ● | ● | ● | ● |
| Voltage dips and swells | | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Phasor diagram | | | | | | ● | | | | ● | ● |
| Trend recording | | | ● | ● | ● | ● | ● | (FC) | (FC) | ● | ● |
| Inrush current | | | | ● | ● | ● | | ● | ● | ● | ● |
| Fluke Connect® enabled | | | | | | | | ● | ● | | |
| Advanced industrial PQ troubleshooting | | | | | | | | | | | |
| Comprehensive logging capability | Complex installations often require a deeper dive into measurement data. Multiple loads may be interacting randomly to cause a single problem. | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Transient capture | | | ● | ● | ● | ● | | | ● | ● | ● |
| Flicker | | | ● | | | ● | | | ● | ● | ● |
| EN50160 analysis | | | | | | ● | | | ● | ● | ● |
| Complex System interaction event capture (manual threshold setting) | | | | | | | | | | | ● |
| Random/variable system event capture (Adaptive threshold setting) | | | | | | | | | | ● | |
| 400 Hz | | | | | ● | | | | | | |
| Utility PQ benchmarking | | | | | | | | | | | |
| Phase sequence components | Before you install sensitive loads, make sure you understand the existing quality of power delivered by your utility. Comparing benchmarks over time can help pinpoint potential areas of concern. | | | | ● | | | | ● | ● | |
| Interharmonics | | | | | ● | | | ● | ● | ● | |
| Mains signaling | | | | | ● | | | ● | ● | ● | |
| IEC61000-4-30 Class A | | | | | ● | | | | | | ● |
| Software | | | | | | | | | | | |
| PowerLog | To make use of the power data you collect, you need software that can help analyse your findings and share them with equipment providers and plant management. | ● | ● | | ● | | ● | ● | | | |
| PQ Log | | | | | | | | | ● | | |
| Power Analyse | | | | | | | | | | ● | |
| PQ Analyse | | | | | | | | | | | ● |
| FlukeView Forms | | | | | ● | | | | | | |
| FSD card (max 32 GB) | | | | | | 8 GB | | | | 8 GB | |
| Fluke Energy Analysis | | | | | ● | | | | | | |

Fluke 345 Power Quality Clamp Meter

The ideal meter to troubleshoot modern electrical loads



Fluke 345



The Fluke 345 is more than just a power meter; it combines the functions of a clamp meter, oscilloscope, data logger and digital power meter into one handy device. The Fluke 345 is ideal for working with variable frequency motor drives, high efficiency lighting and other loads using switching electronics.

- **AC/DC current:** Clamp-on measurement of AC current up to 1400 A RMS and DC current up to 2000 A without breaking the circuit
- **Highest safety rating:** CAT IV 600 V power analyser is rated for use at the service entrance
- **Accurate in noisy environments:** Clamp meter performs even with distorted waveforms present on electronic loads with low-pass filter
- **Data logging:** Identify intermittent faults by logging any power quality parameter for minutes, or over a month, including harmonics
- **Troubleshoot harmonics:** Analyse and log harmonics digitally or graphically
- **Inrush current:** Capture and analyse nuisance tripping from 3 seconds to 300 seconds
- **View graphs and generate reports:** Use power analyser with included Power Log software
- **Three phase power:** Built-in capability for balanced loads
- **Verify batteries:** Direct measurement of DC ripple (%) for battery and DC systems

Recommended Accessories

Fluke 345



TP220
Industrial Test Probes
See page 139



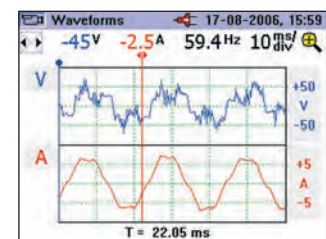
AC220
Alligator Clips
See page 140



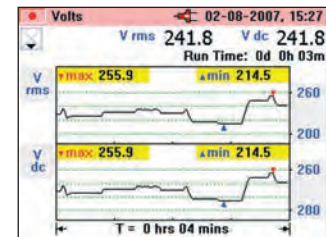
TLK291
Fused Test Probe Set
See page 140



C550
Tool Bag
See page 145



View waveforms for equipment checking and setup



Log parameters over time to track down intermittent faults

Specifications

Current measurement

| | |
|--------------------|---|
| DC, DC RMS, AC RMS | All measurements DC and 15 Hz to 1 kHz. Maximum overload 10,000 A or RMS x frequency < 400,000. Amps RMS is a true RMS measurement (AC + DC) |
| Measuring range | 0 – 2000 A DC or 1400 AC RMS |
| Harmonics | All measurements up to 30th harmonic (40th harmonic for 15 Hz to 22 Hz); Frequency range FO : 15 Hz to 22 Hz and 45 Hz to 65 Hz; Iacrms > 10A |

Voltage measurement

| | |
|--------------------|---|
| DC, DC RMS, AC RMS | All measurements DC and 15 Hz to 1 kHz. Maximum overload 1,000 V RMS. Volts RMS is a true-RMS measurement (AC + DC) |
| Measuring range | 0 – 825 V DC or AC RMS |
| Harmonics | All measurements up to 30th harmonic; Frequency range FO : 15 Hz to 22 Hz and 45 Hz to 65 Hz; Vacrms > 1V |

Watts measurement (single-and three-phase) DC, DC RMS, AC RMS

| | |
|-----------------|------------------------------|
| Measuring range | 0 – 1650 kW DC or 1200 kW AC |
|-----------------|------------------------------|

VA measurement (single-and three-phase) DC, DC RMS, AC RMS

| | |
|-----------------|--------------------------------|
| Measuring range | 0 – 1650 kVA DC or 1200 kVA AC |
|-----------------|--------------------------------|

VAR measurement (single-and three-phase)

| | |
|-----------------|---------------|
| Measuring range | 0 – 1250 kVAR |
|-----------------|---------------|

Power factor (single-and three-phase)

| | |
|-----------------|--|
| Measuring range | 0.3 cap...1.0... 0.3 ind (72.5° cap...0°... 72.5° ind) |
|-----------------|--|

Displacement power factor

| | |
|-----------------|--|
| Measuring range | 0.3 cap ... 1.0 ... 0.3 ind (72.5° cap ... 0° ... 72.5° ind) |
|-----------------|--|

Kilowatt hour (kWhr)

| | |
|-----------------|-------------|
| Measuring range | 40,000 kWhr |
|-----------------|-------------|

Scope function

| | |
|-----------|---------------------------------------|
| Time base | 2.5 ms, 5 ms, 10 ms, 25 ms, 50 ms/div |
|-----------|---------------------------------------|

Inrush current function All measurements DC and 15 Hz to 1 kHz

| | |
|--------|--------------------|
| Ranges | 40, 400 and 2000 A |
|--------|--------------------|

Memory

| |
|--|
| Up to 50 screen shots and over 150,000 individual measurement values |
|--|

Included Accessories

Soft Carrying Case, Power Log Software, Test Probes, Test Leads, Alligator Clips, International AC Adapter/Battery Eliminator, User Manual.

Ordering Information

FLUKE-345 Power Quality Clamp Meter

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke 43B Power Quality Analyser



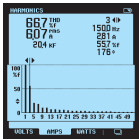
Fluke 43B

The Fluke 43B Power Quality Analyser performs the measurements you need to maintain power systems, troubleshoot power problems, and diagnose equipment failures. The 43B has 20 storage locations and can store data as well as screens.

- **Basic measurements:** Voltage, current and power harmonics up to 51st, THD
- **Oscilloscope function:** View voltage and current waveforms
- **Transients:** Capture up to 40 voltage transients and waveform events
- **Detailed event capture:** Cursors give time and date of sags and swells
- **FlukeView® software:** Analysis and reporting, supplied with USB connection lead
- **Warranty:** Three-years for analyser, one-year for accessories

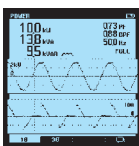


Harmonics



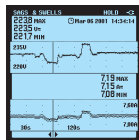
- Voltage, current and power harmonics
- Up to 51st harmonic
- Total harmonic distortion (THD)
- Phase angle of individual harmonics

Power



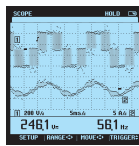
- Watts, power factor, COS ϕ , VA and VAR
- Voltage and current waveforms

Sags and Swells



- Continuously measure volts and amps on a cycle-by-cycle basis for up to 16 days
- Use cursors to read time and date of sags and swells

Volts/Amps/Hertz



- Connect-and-View™ scope for quick waveform display
- View voltage and current channels simultaneously

Recommended Accessories



I2000FLEX
AC Flexible
Current Clamp
See page 141



I1000S
AC Current Clamp
See page 141



80TK
Thermocouple Module
See page 143



80T-150UA
Universal
Temperature Probe
See page 143

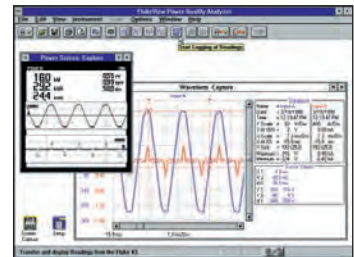


TL220
SureGrip™ Industrial
Test Lead Set
See page 139



AC220
Alligator Clips
See page 140

FlukeView® Power Quality Analyse Software



Capture measurement screens for professional-looking reports with FlukeView® Power Quality Analyser software (included)

Included Accessories

TL224 Test Lead Set, AC220 Alligator Clip Set, TP4 Test Probe Set, BP120MH Rechargeable Battery Pack, BB120 Shielded BNC Adapter, PM8907 Line Adapter/Charger, i400s AC Current Clamp, TP1-1 Test Probe Set, C120 Hand Carrying Case, OC4USB Interface Cable, SW43W FlukeView Software, VPS-40 Voltage Probe, User and Application Manual

Ordering Information

FLUKE-43B Power Quality Analyser (Single-phase)

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Specifications

| Menu items | Measurements | Ranges | Accuracy |
|---|---|--|---|
| Volts/Amps/Hz | Volts - True RMS (AC+DC) Amps - True RMS (AC+DC) Mains frequency CF Crest Factor | 5,000 V - 1250 V 50.00A - 1250 kA 10 - 15.0 kHz 1.0 - 10.0 | $\pm(1\%+10)$ $\pm(1\%+10)$ $\pm(0.5\%+2)$ $\pm(5\%+1)$ |
| Power | Watts, VAR, VA PF, DPF, COS ϕ | 250 W - 1.56 GW 0.25 - 0.9 0.90 - 1.00 | $\pm(4\%+4)$ ± 0.04 ± 0.03 |
| Harmonics | Volts Amps Watts K-factor | 1 st to 51 st harmonic 1 st to 51 st 1 st to 51 st 1.0 to 30.0 | $\pm(3\%+2)$ to $\pm(15\%+5)$ $\pm(3\%+2)$ to $\pm(15\%+5)$ $\pm(5\%+2)$ to $\pm(30\%+5)$ $\pm 10\%$ |
| Sags & Swells | Voltage and Current | 4 min-16 days selectable | $\pm(2\%+10)$ |
| Transient Capture | 40 ns pulse width Up to 40 transients | Select 20/50/100/200% above or below line voltage | $\pm 5\%$ of full scale |
| Inrush Current | 1 sec. to 5 min selectable | 1 A to 1000 A | $\pm 5\%$ of full scale |
| Ohms/Continuity/ Capacitance/ Range | Ohms Capacitance | 500.0 Ω to 30.00 M Ω 50.00 nF to 500.0 μ F | $\pm(0.6\%+5)$ $\pm(2\%+10)$ |
| Temperature (with accessory) | $^{\circ}$ C | -100.0 $^{\circ}$ C to 400.0 $^{\circ}$ C | $\pm(0.5\%+5)$ |
| Scope | DC, AC, AC+DC, peak, peak-peak, Hz, duty cycle, phase, pulse width, crest factor | Sampling rate: Bandwidth: Voltage BW (Channel 1) Current BW (Channel 2) | 25 MS/sec 20 MHz 15 kHz |
| Screen saves | All functions | 20 screens | |
| Recording | V/A/Hz, Power, Harmonics, Ω /Cap, Temperature, Scope | 4 min - 16 days selectable | Select any two parameters display mode in each |

Fluke VR1710 Power Quality Recorder



Fluke VR1710



N10140

Easy-to-use solution for detecting and recording voltage quality problems

The Fluke VR1710 is a single-phase, plug-in voltage quality recorder that provides fast and easy recording of voltage trends, dropouts, harmonics and general power quality including dips and surges to help maintenance and facilities management personnel easily pinpoint the root cause of voltage problems. Voltage quality parameters including RMS average, transients, flicker, and harmonics up to the 32nd are recorded using a user-selected average period from 1 second to 20 minutes.

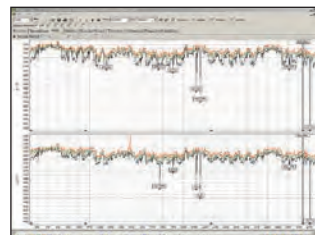
- Fast and easy recording of voltage trends, dropouts and power quality: Easily pinpoint the root cause of single phase voltage problems
- Extremely easy to use: Plugs directly into the mains power socket and capture data
- Quickly see what happened and when: Min, Max, and Average RMS values (1/4 cycle) with time stamp, transient display (>100 µs) with time stamp
- Easily identify problems: Power quality or equipment related Flicker recording to EN 61000-4-15, individual harmonic and THD values with trends
- Includes PowerLog software: For quick download, analysis and automatic reporting
- Save time: Generate power quality reports automatically with pre-set templates

Applications

| | |
|------------------------|--|
| Voltage recording | Monitors and records supply voltage; measures RMS average, minimum and maximum values, and checks whether the socket outlet is providing voltage within tolerance. |
| Distortion measurement | Measure frequency and harmonics; check whether the distorting loads (UPS systems, drives, etc.) are affecting your other equipment. |
| Flicker measurement | Quantify the affects of switching loads on lighting systems. |
| Voltage transients | Capture those intermittent, momentary events that may be affecting your equipment; the full waveform is captured with date, timestamp, and duration. |

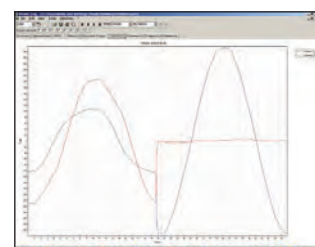
Specifications

| | |
|------------------------------|---|
| Operating voltage | 70 V to 300 V |
| Min/Max/Avg RMS value | Resolution 0.125 V |
| Number of events | 175,000 |
| Dips/Interruptions | Yes |
| Time resolution | 5 ms |
| Voltage resolution) | 0.125 V |
| Over-voltages | Yes |
| Frequency | Yes |
| Harmonics measurement | EN 61000-4-7 (up to 32nd) |
| Flicker measurement | EN 61000-4-15 |
| Number of recording channels | 1 Phase to Neutral, 2 Phase/Neutral to Ground |
| Recording time | 1 day to 339 days depending on average time from 1 second to 20 minutes |
| Transients | Yes |
| Frequency range | 50 Hz ± 1 Hz and 60 Hz ± 1 Hz |
| Safety category rating | CAT II 300 V |

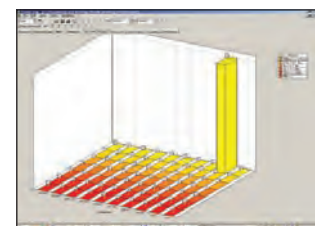


PowerLog Setup – Simple set up of internal clock, logging periods, and intervals with default values for quick results.

PowerLog View – Data presentation showing RMS voltage and harmonic trends, actual transients, summary information and statistics in accordance with EN50160.



Actual transient display (> 100 µs) with time stamp – Quickly identify issues with included graphical software.



Statistical analysis of voltage event – reduces analysis time by tracking event quantities and magnitudes.



Includes PowerLog software

Included Accessories

USB Cable, PowerLog Software CD, Universal Power Cord Adapters

Ordering Information

FLK-VR1710 Voltage Quality Recorder

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke 430-II Series Three-Phase Power Quality Analysers



Fluke 437-II



Fluke 435-II

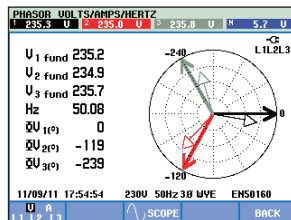
Fluke 434-II

The Fluke 434-II, 435-II and 437-II Power Quality Analysers help locate, predict, prevent and troubleshoot power quality problems in three and single-phase power distribution systems. Additionally, the Fluke-patented energy loss algorithm, Unified Power Measurement, measures, quantifies and monitors energy losses due to harmonics and unbalance issues, allowing the user to pinpoint the origin of energy waste within a system.

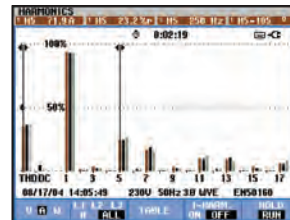
- **Patented energy loss management:** Classic active and reactive power measurements unbalance and harmonic power and energy are quantified to pinpoint true system energy losses
- **Realtime PowerWave data capture:** Capture fast RMS data, show single cycle RMS value to characterise electrical system dynamics (generator start-ups, UPS switching etc.)
- **Highest safety rating in the industry:** CAT IV 600 V/ CAT III 1000 V rated for use at the service entrance
- **Automatic transient mode:** Capture 200 kHz waveform data on all phases simultaneously up to 6 kV
- **Fully Class-A compliant:** Conduct tests according to the stringent international IEC 61000-4-30 Class-A standard intervals for 435-II and 437-II
- **Troubleshoot real-time:** Analyse the trends using the cursors and zoom tools—even while background recording continues
- **Measure all three phases and neutral:** With included four iFlex flexible current probes
- **Monitor energy loss caused by power quality issues**



On all inputs



Phasor diagram.



Track harmonics up to the 50th, and measure and record THD.

Recommended Accessories



15SPQ3
3 pack of 5 A precision current clamps
See page 141



1600S FLEX
AC Current Clamp
See page 141



C437-II
Water-tight hard case with rollers
See page 145



1430-FLEXI-TF-4PK
6000A Fluke 43X Thin Flexi 24inch 4 Pack
See page 92

Energy Loss Calculator

| Energy Loss Calculator | | | |
|------------------------|-------|--------|---------------------|
| | Total | Loss | Cost |
| Effective kW | 35.9 | U 488 | \$ 48.83 /hr |
| Reactive kvar | 21.5 | U 175 | \$ 17.49 /hr |
| Unbalance kVA | 2.52 | U 1.5 | \$ 0.15 /hr |
| Distortion kVA | 7.17 | U 57.2 | \$ 5.72 /hr |
| Neutral A | 29.3 | U 57.7 | \$ 5.77 /hr |
| Total | | | k \$ 683 /yr |

11/10/11 10:49:38 230V 50Hz 3Ø WVE EN50160
 LENGTH 100 m DIAMETER 25 mm² METER RATE 0.10 kWh HOLD RUN

Included Accessories

TL430 Test Lead and Alligator Clip Set, i430flex-TF-II (60cm 4 Clamps), BC430 Power Adapter, BP290 Single Capacity Li-ion Battery, International Plug Adapter Set, WC100 Colour Coding Clips and Regional Decals, 8GB SD Card, PowerLog on CD, USB Cable A-B Mini, C1740 Soft Case (434-II, 435-II), C437 Hard Case (437-II).

Ordering Information

| | |
|---------------------------|--|
| FLUKE-437-II | 400Hz Three-Phase Power Quality and Energy Analyser |
| FLUKE-437-II/BASIC | 400Hz Three-Phase Power Quality and Energy Analyser (without Clamps) |
| FLUKE-435-II | Three-Phase Power Quality and Energy Analyser |
| FLUKE-435-II/BASIC | Three-Phase Power Quality and Energy Analyser (without Clamps) |
| FLUKE-434-II | Three-Phase Energy Analyser |
| FLUKE-434-II/BASIC | Three-Phase Energy Analyser (without Clamps) |

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Selection Table

| | 434-II | 435-II | 437-II |
|--------------------------------|------------------------|------------------------|------------------------|
| Standard compliance | IEC 61000-4-30 Class S | IEC 61000-4-30 Class A | IEC 61000-4-30 Class A |
| Volt Amp Hz | ● | ● | ● |
| Dips and swells | ● | ● | ● |
| Harmonics | ● | ● | ● |
| Power and energy | ● | ● | ● |
| Energy loss calculator | ● | ● | ● |
| Unbalance | ● | ● | ● |
| Monitor | ● | ● | ● |
| Inrush | ● | ● | ● |
| Event waveform capture | ● | ● | ● |
| Flicker | ● | ● | ● |
| Transients | ● | ● | ● |
| Mains signaling | ● | ● | ● |
| Power wave | ● | ● | ● |
| Power inverter efficiency | ● | ● | ● |
| 400Hz | ● | ● | ● |
| C1740 Soft Case | ● | ● | ● |
| C437-II Hard Case with rollers | ● | ● | ● |
| SD card (Max 32 GB) | 8 GB | 8 GB | 8 GB |

Fluke 1730 Three-Phase Electrical Energy Logger



Fluke 1730



The Fluke 1730 Three-Phase Electrical Energy Logger introduces a new simplicity to discovering sources of electrical energy waste. Discover when and where energy in your facility is being consumed; from the service entrance to individual circuits. Profiling energy usage across your facility helps you identify opportunities for energy savings, and provides you with the data you need to act on them.

- **Key measurements:** Voltage, Current, Power, Power Factor and associated values enable energy saving strategies to be implemented.
- **Bright, colour touch screen:** Perform convenient in-the-field analysis and data checks with full graphical display.
- **Highest safety rating in the industry:** 600 V CAT IV/1000 V CAT III rated for use at the service entrance and downstream.
- **Comprehensive logging:** All measured values are automatically logged and can be reviewed during logging and before downloading for on-the-go analysis. More than 20 separate logging sessions can be stored on the instrument.
- **Two USB ports:** One for PC connection and another for fast, simple download to standard USB thumb drives, or other USB devices.
- **Optimised measurement accessories:** Flat voltage cable and thin flexible current probes ensure easy installation even in tight spaces.
- **All new, Energy Analyse application software:** Download, analyse and automated reporting for a complete picture of energy saving potential.

Specifications

| Accuracy | | | | |
|--------------------------|--------------|----------------------|----------------------|---|
| Parameter | | Range | Resolution | Intrinsic Accuracy at Reference Conditions (% of Reading + % of Full Scale) |
| Voltage | | 1000 V | 0.1 V | ± (0.2 % + 0.01 %) |
| Current: Direct input | iFlex1500-12 | 150 A | 0.1 A | ± (1 % + 0.02 %) |
| | | 1500 A | 1 A | ± (1 % + 0.02 %) |
| | iFlex3000-24 | 300 A | 1 A | ± (1 % + 0.02 %) |
| | | 3000 A | 10 A | ± (1 % + 0.02 %) |
| | iFlex6000-36 | 600 A | 1 A | ± (1.5 % + 0.03 %) |
| | | 6000 A | 10 A | ± (1.5 % + 0.03 %) |
| i40s-EL clamp | 4 A | 1 mA | ± (0.7 % + 0.02 %) | |
| | 40 A | 10 mA | ± (0.7 % + 0.02 %) | |
| Frequency | | 42.5 Hz to 69 Hz | 0.01 Hz | ± (0.1 %) |
| Aux input | | ± 10 V dc | 0.1 mV | ± (0.2 % + 0.02 %) |
| Voltage Min/Max | | 1000 V | 0.1 V | ± (1 % + 0.1 %) |
| Current Min/Max | | defined by accessory | defined by accessory | ± (5 % + 0.2 %) |
| Cosφ/DPF | | 0 ≤ Cosφ ≤ 1 | 0.01 | ± 0.025 |
| Power factor | | 0 ≤ PF ≤ 1 | 0.01 | ± 0.025 |
| THD on voltage | | 1000 % | 0.1 % | ± (2.5 % ± 0.05 %) |
| THD on current | | 1000 % | 0.1 % | ± (2.5 % ± 0.05 %) |

| Environmental specifications | |
|------------------------------|---|
| Operating temperature | -10 °C to +50 °C |
| Storage temperature | -20 °C to +60 °C |
| Operating humidity | 10 °C to 30 °C max. 95 % RH 30 °C to 40 °C max. 75 % RH 40 °C to 50 °C max. 45 % RH |
| Operating altitude | 2000 m (up to 4000 m derate to 1000 V CAT II/600 V CAT III/300 V CAT IV) |
| Storage altitude | 12,000 m |
| External protection | Holster, Kensington lock slot |

Recommended Accessories



117XX-FLEX 3000/3PK
3000A 24 inch, 3 pk
See page 92



117XX-FLEX 6000/3PK
6000A 36 inch, 3 pk
See page 92



173X-HANGER KIT
Hanging strap Kit



140S-EL/3PK
40A Clamp-on Current Transformer 3 pack

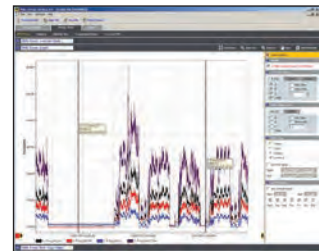


C17XX
Soft case



3PHVL-1730
Cable Assembly

Fluke Energy Analyse Software



Included Accessories

3 x i1730-flex 1500 (iFlex Flexible Current Probe 1500A 12 inch), 2 x 1730TLO.1M (Test lead; Straight Plug; 0.1m; Silicon; Red), 3PHVL-1730 (Cable Assembly, Voltage Test Lead 3-Phase+N), 1730-TL2M (Test Lead, Straight Plug; 2m; PVC Red), C1730 Soft Case, WC100 Colour Localisation Set, 4 x Dolphin Clamps

Ordering Information

FLUKE-1730 Three-Phase Energy Logger

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke 1736 and 1738 Three-Phase Power Loggers



Fluke 1736



Fluke 1738



More visibility, reduced uncertainty

The Fluke 1736 and 1738 Three-Phase Power Loggers built with Fluke Connect® mobile app and desktop software compatibility give you the data you need to make critical power quality and energy decisions in real-time. The ideal test tools for conducting energy studies and basic power quality logging, the 1736 and 1738 automatically capture and log over 500 power quality parameters so you have more visibility into the data you need to optimise system reliability and savings.

- **Measure all three phases and neutral** with included 4 flexible current probes.
- **Comprehensive logging:** More than 20 separate logging sessions can be stored on the instruments. In fact, all measured values are automatically logged so you never lose measurement trends.
- **Capture dips, swells, and inrush currents:** Includes event waveform snapshot and high resolution RMS profile, along with date, timestamp and severity to help pinpoint potential root causes of power quality issues
- **Optimised user interface:** Capture the right data every time with quick, guided, graphical setup and reduce uncertainty about your connections with the intelligent verification function.
- **Complete “in-the-field” setup through the front panel or Fluke Connect App:** No need to return to the workshop for download and setup or to take a computer to the electrical panel.

- **Fully integrated logging:** Connect other Fluke Connect devices to the Fluke 1738 to simultaneously log up to two other measurement parameters, virtually any parameter available on a Fluke Connect wireless digital multimeter or module.
- **Energy Analyse Plus application software:** Download and analyse every detail of energy consumption and power quality state of health with our automated reporting.

Recommended Accessories



117XX-FLEX 1500/3PK/4PK
1500A 12 inch iFlex®
Current Clamps
(Purchase as individual, 3pk or 4pk)
See page 92



C17XX
Soft Case



117XX-FLEX 3000/3PK/4PK
3000A 24 inch iFlex®
Current Clamps
(Purchase as individual, 3pk or 4pk)
See page 92



FLK-WIFI/BLE
Fluke WiFi/BLE
Adapter



117XX-FLEX 6000/3PK/4PK
6000A 36 inch iFlex®
Current Clamps
(Purchase as individual, 3pk or 4pk)
See page 92



**MP1-MAGNET
PROBE 1**
Magnet Probes
for 4mm banana,
Set of 4



FLUKE-173X AUX
Input adapter



117XX I40S-EL/3PK
40A Clamp-on
Current Transformer
(Purchase as individual or 3pk)
See page 92

1736/UPGRADE
Upgrade Kit for 1736 to 1738
Image unavailable

Included Accessories

Power Supply, Voltage Test Leads, Alligator Clips (4x), 12in 1500A Flexible Current Probe (4x), Soft Case, Energy Analyse Plus Software, WiFi Adapter, Line Cords, Colour Coding Set and Documentation on USB Flash Drive, Magnetic Hanging Strap (1738 only), Magnetic Voltage Probes (4x) (1738 only)

Ordering Information

FLUKE 1736/B Power Logger, Basic Version (excl. current probes)

FLUKE-1736/INTL Power Logger, International Version (incl. current probes)

FLUKE 1738/B Power Logger, Advanced Version (excl. current probes)

FLUKE-1738/INTL Power Logger, International Advanced Version (incl. current probes)

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Specifications

Accuracy

| Parameter | Range | Max resolution | Intrinsic accuracy at reference conditions (% of reading + % of full scale) |
|--------------------------------|----------------------|----------------------|---|
| Warranty | 1000 V | 0.1 V | ± (0.2 % + 0.01 %) |
| Current | i17xx-flex 1500 12" | 150 A 1500 A | ± (1 % + 0.02 %) ± (1 % + 0.02 %) |
| | i17xx-flex 3000 24" | 300 A 3000 A | ± (1 % + 0.03 %) ± (1 % + 0.03 %) |
| | i17xx-flex 6000 36" | 600 A 6000 A | ± (1.5 % + 0.03 %) ± (1.5 % + 0.03 %) |
| | i40s-EL clamp | 4 A 40 A | ± (0.7 % + 0.02 %) ± (0.7 % + 0.02 %) |
| Frequency | 42.5 Hz to 69 Hz | 0.01 Hz | ± (0.1 %) |
| Aux input | ± 10 V DC | 0.1 mV | ± (0.2 % + 0.02 %) |
| Voltage min/max | 1000 V | 0.1 V | ± (1 % + 0.1 %) |
| Current min/max | defined by accessory | defined by accessory | ± (5 % + 0.2 %) |
| THD on voltage | 1000 % | 0.1 % | ± 0.5 |
| THD on current | 1000 % | 0.1 % | ± 0.5 |
| Voltage harmonics 2nd ... 50th | 1000 V | 0.1 V | ≥ 10 V: ± 5 % of reading < 10 V: ± 0.5V |
| Current harmonics 2nd ... 50th | defined by accessory | defined by accessory | ≥ 3 % of current range: ± 5 % of reading < 3 % of current range: ± 0.15 % of range |
| Unbalance | 100 % | 0.1 % | ± 0.2 |

Fluke 1740 Series Three-Phase Power Quality Loggers Memobox



Fluke 1743

Fluke 1744



Fluke 1745



Compact and rugged, the Fluke 1740 Series Three-phase Power Quality Loggers are everyday instruments for technicians who troubleshoot and analyse power distribution systems. Capable of simultaneously logging up to 500 parameters for up to 85 days and capturing events, the Fluke 1740 Series helps uncover intermittent and hard-to-find power quality issues. The included Power Quality Log Software quickly assesses the quality of power at the service entrance, substation, or at the load, according to the latest EN50160 standard.

- **Plug and play:** Setup in minutes with automatic current probe detection and powering
- **Installs inside the cabinet:** Compact, fully-insulated housing and accessories fit easily in tight spaces, next to live power
- **Determines the root cause:** Included PQ Log software quickly analyses trends, creates statistical summaries, and generates detailed graphs and tables
- **Measure voltage with premium accuracy:** IEC61000-4-30 Class-A compliant voltage accuracy (0.1 %)

Loggers for every application

The portable Fluke 1740 Series power quality loggers are designed for easy installation and use, anywhere in low- and medium-voltage applications. There are three models to choose from to meet your basic or advanced power logging needs:

Fluke 1743: IP65 water-proof model for logging the most common power parameters including V, A, W, VA, VAR, PF, energy, flicker, voltage events (dips, swells, interruptions), and THD.

Fluke 1744: Includes the same features as the Fluke 1743. In addition to common power parameters, the Fluke 1744 also measures voltage and current harmonics, inter-harmonics, mains signalling, unbalance, and frequency.

Fluke 1745: Advanced IP50 power quality logger with the same measurement capability as the 1744, plus real-time LCD and five hour UPS.

Selection Guide

| | 1745 | 1744 | 1743 |
|--|-----------|------------------|------|
| Measurement of common power parameters: V, A, W, VA, VAR, PF, energy, flicker, voltage events (dips, swells, interruptions), and THD | ● | ● | ● |
| Measurement of voltage and current harmonics to the 50th, unbalance, frequency and mains signaling | ● | ● | |
| Dust/water resistance | IP 50 | IP 65 waterproof | |
| Display | LED + LCD | LED | LED |
| Memory | 8 MB | 8 MB | 8 MB |
| UPS ride-through | > 5 hrs | 3s | 3s |
| EN 50160 | ● | ● | ● |

Specifications

| General | |
|------------------------|---|
| Intrinsic error | Refers to the reference conditions and is guaranteed for two years |
| Warranty | 2 years |
| Recalibration interval | 2 years recommended |
| Quality system | Developed, designed, and manufactured according to DIN ISO 9001 |
| Reference conditions | 23 °C ± 2 K; 74 °F ± 2 K, V _m = 230 V ± 10 % 50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz Phase Sequence L1, L2, L3 Interval Length: 10 minutes Wye Connection (L1, L2, L3 to N) Power Supply: 88 V to 265 V AC |

Recommended Accessories

FS17XX IP65-TF
3000A IP65 4-Phase Thin Flexi Set (1743, 1744 only)
See page 92

FS17X5-TF-II
3000A 4-Phase Thin Flexi Set (1745 only)
See page 92

FS3000/6000A-TF-4
3000A/6000A 4-Phase Thin Flexi Set 90cm
See page 92

11A/10A CLAMP PQ3
3-Phase 1A/10A Mini Current Clamp
See page 92

11A/10A CLAMP PQ4
4-Phase 1A/10A Mini Current Clamp
See page 92

120/200A CLAMP PQ3
3-Phase 20A/200A Mini Current Clamp
See page 92

120/200A CLAMP PQ4
4-Phase 20A/200A Mini Current Clamp
See page 92

15A/50A CLAMP PQ3
3-Phase 5A/50A Mini Current Clamp
See page 92

15A/50A CLAMP PQ4
4-Phase 5A/50A Mini Current Clamp
See page 92

Included Accessories

FS17XX IP65 TF-II Thin Flexible Current Clamp Set (1743 & 1744), FS17X5-TF-II Thin Flexible Current Clamp Set (1745), VL1735/1745 Voltage Lead Set (1745), Power Log Software, RS232 Interface Cable and RS232-USB Adapter, 4x Black Dolphin Clips, WC17XX Colour Localisation Set, Carrying Bag, Test Certificate with Measurement Values, Manual on CD.

Ordering Information

- FLUKE-1745** Power Quality Logger Memobox
- FLUKE-1744** Power Quality Logger Memobox
- FLUKE-1743** Power Quality Logger Memobox

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke 1750 Three-Phase Power Recorder



Fluke 1750



Record every power quality parameter, every cycle, all the time

Setting up a Power Quality Analyser to capture detailed power quality data has never been easier than it is with the Fluke 1750. This Three-Phase Power Recorder captures the most important data for up to 30 days without losing the most important details. It automatically records every power quality parameter and event, on every cycle – all the time. Once the data is captured; download via Ethernet or directly to the 2GB SD card (without the need of any other device). The Fluke 1750 features a wireless front panel for viewing measurements, data and setting up, implemented via a tablet computer using Bluetooth communication.

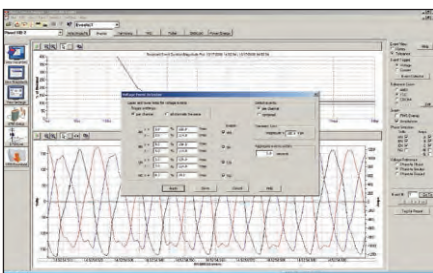
- **Power quality that meets the standard:** All measurements comply with IEC61000-4-30 standards for correct evaluation of all measured values including voltage, current, power, harmonics, flicker etc.
- **Quick and reliable configuration:** PDA wireless “front panel interface” provides a window into what the instrument is recording, enabling quick and reliable configuration even in awkward test locations
- **Threshold-free set up:** Apply thresholds after data is collected with Fluke Power Analyse Software—no need to worry about missed information due to incorrect setups

- **Captures everything:** Cross-channel and current triggering capture every measurement, on every channel, every time
- **Measure every parameter:** Voltage and current on three phases, neutral and ground
- **5 MHz, 8000 Vpk waveform capture:** Get a detailed picture of even the shortest events.
- **Plug and play:** Set up in minutes with self-identifying current probes and single-lead voltage connections.
- **No need to reconnect wires:** Swap channels internally with the wireless front panel or PC when connections are not correct.

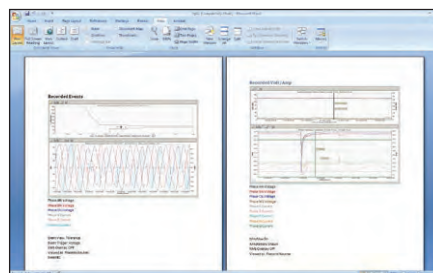
Specifications

Power Quality Measurement Standards

| | |
|--|--|
| Conformance | IEC 61999-1-4 Class 1, IEC 61000-4-30, IEEE519, IEEE1159, IEEE1459 and EN50160 |
| Clock/calendar | Leap years, 24-hour clock |
| Real-time clock accuracy | Not more than ± 1 s/day |
| Internal memory capacity for data | At least 2 GB |
| Maximum recording period | At least 31 days |
| Measurement time control | Automatic |
| Maximum number of events | Limited only by the size of the internal memory |
| Power requirements | 100 to 240 V RMS ± 10 %, 47-63 Hz, 40 W |
| Operating time during interruptions (internal UPS operation) | 5 mins per interruption, 60 mins total operating time without recharging |
| Size | 215 mm x 310 mm x 35 mm |
| Weight | 6.3 kg |



Apply thresholds to data after collection using a variety of standard or customised templates.



Simplified report writer feature included in Fluke Power Analyse Software.

Recommended Accessories



3210-PR-TF-II
1000A Thin flexible current transformer 61cm (24") (20A – 1000A)



CS1750/1760
Soft Case for 1750 & 1760



3310-PR-TF-II
5000A Thin flexible current transformer 61cm (24") (100A – 5000A)



140S-EL
40A Clamp-on Current Transformer



3312-PR-TF-II
5000A Thin flexible current transformer 122cm (48") (100A – 5000A)



155-EL
5A Clamp-on Current Transformer
See page 141



Included Accessories

ARCHOS 43 Internet Tablet and Charger Power Plug Adapters, 4 - 400A Current Probes (3140), 5 Test Leads and Clips, SD Memory Card, Fluke Power View and Fluke Power Analyse Software, Power Cord with International Plug Set, Ethernet Cable, Colour Localisation Set, Soft Carrying Case, Printed Getting Started Manual, CD with Software and User Manual PDF

Ordering Information

FLUKE-1750 Three-Phase Power Quality Recorder

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke 1760 Three-Phase Power Quality Recorder



Fluke 1760



Class-A compliance for the most demanding power quality tests

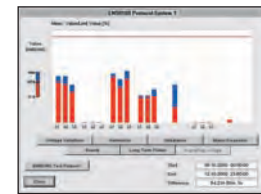
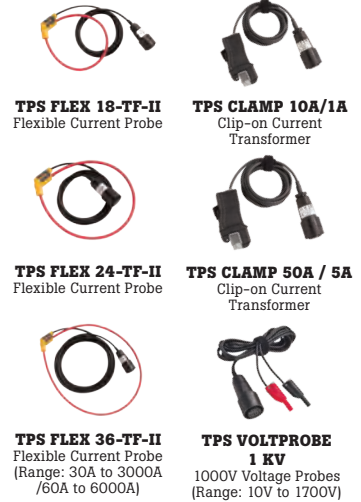
The Fluke 1760 Three-Phase Power Quality Recorder is fully compliant to IEC 61000-4-30 Class-A, for advanced power quality analysis and consistent compliance testing. Designed for analysis of utility and industrial power distribution systems, in medium and low-voltage networks, the Fluke 1760 provides the flexibility to customise thresholds, algorithms, and measurement selections. It has 8 input channels (4 currents/4 voltages or 8 voltages), and captures the most comprehensive details on user selectable parameters.

- **Fully Class-A compliant:** Conduct tests according to the stringent international IEC 61000-4-30 Class-A standard
- **GPS time synchronisation:** Correlate data with events or datasets from other instruments with precision
- **Flexible and fully configurable thresholds and scale factors:** Allows user to pinpoint specific issues by defining the detailed criteria for detection and recording of disturbances.
- **10 MHz, 6000 Vpk waveform capture:** Get a detailed picture of even the shortest event
- **2 GB data memory:** Enables detailed, simultaneous recording of numerous power parameters for long periods of time
- **Comprehensive software (included):** Provides trend diagrams for root cause analysis, statistical summaries, report writing and real-time data monitoring in the online mode
- **Plug and play:** Allows quick setup with automatic sensor detection; sensors are instrument powered, eliminating the need for batteries

Specifications

| | 1760 Basic | 1760TR Basic | 1760 INTL | 1760TR INTL |
|---|-------------------|--------------|-----------|-------------|
| Power quality statistics according to EN50160 | ● | ● | ● | ● |
| Voltage event list (dips, swells and interruptions) | ● | ● | ● | ● |
| Continuous recording of: | | | | |
| Voltage | ● | ● | ● | ● |
| Current | ● | ● | ● | ● |
| Power P, Q, S | ● | ● | ● | ● |
| Power factor | ● | ● | ● | ● |
| kWh | ● | ● | ● | ● |
| Flicker | ● | ● | ● | ● |
| Unbalance | ● | ● | ● | ● |
| Frequency | ● | ● | ● | ● |
| Voltage and current harmonics to the 50th/ Interharmonics | ● | ● | ● | ● |
| THD | ● | ● | ● | ● |
| Mains signaling | ● | ● | ● | ● |
| Triggered recordings | ● | ● | ● | ● |
| Online mode (Oscilloscope, transients and events) | ● | ● | ● | ● |
| Fast transient analysis up to 10 MHz | | ● | | ● |
| 4, 600V voltage probes | | | ● | ● |
| 4 dual-range flexible current probes (1000 A / 200 A AC) | | | ● | ● |
| GPS time sync receiver | | | ● | ● |
| Memory | 2 GB Flash memory | | | |

Recommended Accessories



The included PQ Analyse software provides a detailed overview of several power quality parameters.

Included Accessories

4x TPS Flex 24-TF-II Flexible Current Probes, 4x TPS VoltProbe 600V, 2GB Internal Flash Memory, ST1760 Standard Ethernet Cable, RS232 Interface Cable and RS232-USB Adapter, CS1760 Crossover Ethernet Cable, 1 Mains Cable, PC Software on CD, WC17XX Colour Localisation Set, GPS-time Sync (1760TR only) CS 1750/1760 Carrying Bag, Hardware and Software Manual.

Basic Models: Excl. Current Clamps TPS Flex 24-TF-II.

Ordering Information

| | |
|---------------------------|---|
| FLUKE-1760TR INTL | High Speed Transient Power Quality Recorder Topas and Kit |
| FLUKE-1760TR BASIC | High Speed Transient Power Quality Recorder Topas |
| FLUKE-1760 INTL | Power Quality Recorder Topas and Kit |
| FLUKE-1760 BASIC | Power Quality Recorder Topas |

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Power Quality Current Clamps

| Fluke Model Number | i3000 Flex 4PK | i400s | i430-FLEXI-TF-4K | i5sPQ3 | 1000A 3210 PR TF Flex | Fluke i17XX-flex 1500A 12 IN | Fluke i17XX-flex 3000A 24 IN | Fluke i17XX-flex 6000A 36 IN | Fluke i17XX i40s-EL Clamp-on Current Transformer |
|---|---|--|--|----------------------------------|---|--|--|--|--|
| Description | 4 ... phase 3000A Flexible current clamp set | Single phase 400A current clamp (4 required) | 4 ... phase 3000A Flexible current clamp set | 3 ... phase 5A Current clamp set | 1000A Single phase flexible current clamp | 1500 A Single phase flexible current clamp IP 50 | 3000 A Single phase flexible current clamp IP 50 | 6000 A Single phase flexible current clamp IP 50 | 4/40A Current clamp (3 required) |
| Old Fluke model # | | | | | 3210-PR | Fluke-1730 iFlexi 1500 A 12 IN | Fluke-1730 iFlexi 3000 A 24 IN | Fluke-1730 iFlexi 6000 A 36 IN | Fluke-1730 i40s-EL Clamp-on Current Transformer |
| Fluke 1750 | | | | | • | | | | |
| Fluke 43X | • | • | • | • | | | | | |
| Fluke 1730 | | | | | | • | • | • | • |
| Nominal current range(s) | 30 A 300 A 3000 A | 40 A 400 A | 3000 A | 5 A | | 1A to 150A, 10A to 1500A | 3A to 300A, 30A to 3000A | 6A to 600A, 60A to 6000A | 40mA to 4A, 0.4A to 40A |
| Cont. AC current range | 1 A ... 30 A 1 A ... 300 A 1 A ... 2400 M | 0.5 A ... 40 A 5 A ... 400 A | 30 A ... 3000 A | 0.01 A ... 6 A | 0.5 A ... 1000 A | 1 A ... 150 A 10 A to 1500 A | 1 A ... 300 A 10 A ... 3000A | 1 A ... 600 A 10 A ... 6000 A | 1 A ... 150 A 10 A ... 1500 A |
| Highest current | 4000 A | 1000 A | 100 kA | 70 A | 1000 A | 1500 A | 3000 A | 6000 A | 200 A |
| Lowest measurable current | 1:00 AM | 0.5 A | 30 A | 10 mA | 0.5 A | 1 A | 3 A | 6 A | 0.04 A |
| Basic accuracy (48 ... 65 Hz) ¹⁾ | 2% + 2 A | 2% + 0.15 A | 1% | 1% | ± 1% of reading | 0,70% | 0,70% | 0,70% | 0,50% |
| Usable frequency | 10 Hz ... 100 kHz | 45 Hz ... 3 kHz | 10 Hz ... 7 kHz | 40 Hz ... 5 kHz | 40 Hz ... 5 kHz | 40 Hz ... 5 kHz | 40 Hz ... 5 kHz | 40Hz ... 5kHz | 40Hz ... 5kHz |
| Requires battery | • | | | | | | | | |
| Flex head length | | Clamp opening: 32mm | 61 cm | Clamp opening: 15mm | 61cm | 30.5cm | 61cm | 122cm | n/a |
| Output level(s) | 10 mV/A 1 mV/A 0.1 mV/A | 10 mV/A 1 mV/A | 0.085 mV/A @50 Hz | 400 mV/A | 2 mV/A | n/a | n/a | n/a | n/a |
| Output cable (m) | 2,1 | 2,5 | 2,5 | 2,5 | 3 | 2 | 2 | 2 | 2 |
| Safety rating | CAT III 600 V | CAT III 1000 V CAT IV 600 V | CAT III 1000 V CAT IV 600 V | CAT III 600 V | CAT III 1000 V CAT IV 600 V | CAT III 1000 V CAT IV 600 V | CAT III 1000 V CAT IV 600 V | CAT III 1000 V CAT IV 600 V | CAT III 1000 V CAT IV 600 V |
| Connection | 4 x BNC | 4 x BNC | 4 x BNC | 3 x BNC | One connector | One connector | One connector | One connector | One connector |
| BNC to banana adapters included | • | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |

¹⁾ Basic accuracy: % reading plus floorspec.
n/a = not applicable

| Fluke Model Number | i1A/10A CLAMP PQ3 | i1A/10A CLAMP PQ4 | i5A/50A CLAMP PQ3 | i5A/50A CLAMP PQ4 | i20A/200A CLAMP PQ3 | i20A/200A CLAMP PQ4 | 3000/6000A-TF-4 | FS17K5-TF-II | FS17Kx IP65-TF |
|---|---|---|---|---|---|---|-------------------------------|--|--|
| Description | 3 ... phase 1A/10A Mini current clamp set | 4 ... phase 1A/10A Mini current clamp set | 3 ... phase 5A/50A Mini current clamp set | 4 ... phase 5A/50A Mini current clamp set | 3 ... phase 20A/200A Mini current clamp set | 4 ... phase 20A/200A Mini current clamp set | 4 Phase flexiset | 4 Phase flexiset, IP41 | 4 Phase flexiset, IP65 |
| Old Fluke model # | CURRENT CLAMPS 1A (EPO450A) | MBX CLAMP 1A/10A+N (EPO451A) | MBX CLAMP 5A/50A (EPO452A) | MBX CLAMP 5A/50A+N (EPO453A) | MBX CLAMP 20A/200A (EPO455A) | MBX CLAMP 20/2000A+N (EPO456A) | | MBX Lem Flex (15/150/3000) (EPO404A) | MBX Lem Flex (15/150/3000) (EPO404A) |
| Fluke 1735 | • | • | • | • | • | • | • | • | • |
| Fluke 174X | • | • | • | • | • | • | • | • | • |
| Nominal current range(s) | 1 A 10 A AC | 1 A 10 A AC | 5 A 50 A AC | 5 A 50 A AC | 20 A 200 A AC | 20 A 200 A AC | 30A 300A 3000A 6000A AC | 15A 150A 1500A 3000A AC | 15A 150A 1500A 3000A AC |
| Cont. AC current range | 10 mA ... 1 A 100 mA ... 10 A | 10 mA ... 1 A 100 mA ... 10 A | 50 mA ... 5 A 500 mA ... 50 A | 50 mA ... 5 A 500 mA ... 50 A | 200 mA ... 20 A 2 A ... 200 A | 200 mA ... 20 A 2 A ... 200 A | 0.8 ... 6.000 A AC | 450mA ... 15A 600mA ... 150A 6A ... 1500A 12A ... 3000A | 450mA ... 15A 600mA ... 150A 6A ... 1500A 12A ... 3000A |
| Highest current | 20 A | 20 A | 100 A | 100 A | 300 A | 300 A | 0.8 A | 3300 A | 3300 A |
| Lowest measurable current | 10 mA | 10 mA | 50 mA | 50 mA | 200 mA | 200 mA | | 450 mA | 450 mA |
| Basic accuracy (48 ... 65 Hz) ¹⁾ | 0,50% | 0,50% | 0,50% | 0,50% | 0,50% | 0,50% | | 2%+2% position influence | 2%+2% position influence |
| Usable frequency | 40 Hz ... 10 kHz | 40 Hz ... 10 kHz | 40 Hz ... 10 kHz | 40 Hz ... 10 kHz | 40 Hz ... 10 kHz | 40 Hz ... 10 kHz | | 40Hz ... 5kHz | 40Hz ... 5kHz |
| Flex head length | | | | | | | 92 cm | 61 cm | 61 cm |
| Output level(s) | 75 mV/A | 75 mV/A | 15 mV/A | 15 mV/A | 3.75 mV/A | 3.75 mV/A | | 0.1 mV/A | 0.1 mV/A |
| Output cable (m) | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 2 | 2 |
| Safety rating | CAT III 600 V | CAT III 600 V | CAT III 600 V | CAT III 600 V | CAT III 600 V | CAT III 600 V+ | CAT III 1000 V CAT IV 600V | CAT III 1000 V CAT IV 600V | CAT III 1000 V CAT IV 600V |
| Connection | One connector | One connector | One connector | One connector | One connector | One connector | One connector | One connector | One connector |
| BNC to banana adapters included | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |

¹⁾ Basic accuracy: % reading plus floorspec.
n/a = not applicable



SCOPEMETERS

Fluke ScopeMeter® Portable Oscilloscopes 190 Series II



The toughest Portable Scopes ever built

With four electrically isolated channels, up to a 2.5gs/s sample rate, IP-51 dust-proof and drip-proof rating and a CAT III 1000V / CAT IV 600 V safety rating, Fluke's 190 Series II Portable Scopes stand up against the rest.

Rated all the way to CAT IV

ScopeMeter test tools are rugged solutions built for industrial troubleshooting. The Fluke 190 Series II are double-insulated floating oscilloscopes safety rated for measurements up to CAT III 1000 V /CAT IV 600 V environments.

What could you do with four channels?

The 190-504 opens up a new generation of applications where a four channel ScopeMeter can prove its functionality. You can hook on voltage probes and current clamps in combination with a temperature probe to get the best information out of your signals without sacrificing a probe input. In a Motor and Drive environment you need at least three inputs to get a good insight in the quality of the signal coming from the VFD. You can switch over to a DMM reading without swapping probes.

Measure from mV to kV safely

Independently isolated inputs allow you to make measurements in mixed circuits having different ground references reducing the risk of accidental short circuits. Conventional bench oscilloscopes without special differential probes and isolation transformers can only reference measurements to line power earth ground. The 190 Series II are ready for the most challenging tasks. With standard probes that cover a wide application range from mV to kV, you are ready for anything from micro-electronics to heavy-duty higher voltage electrical applications.

IP-51 rated for harsh environments

Rugged and shock-proof, ScopeMeter portable oscilloscopes are built for dirty, hazardous environments. With its sealed case, it can endure dust, drips, humidity and airborne pollutants. Every time you reach for your ScopeMeter you can be confident it will work reliably wherever your work takes you.

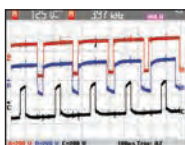
USB connectivity makes it easy to capture and share waveforms

The Fluke 190 Series II offers two USB ports, electrically isolated from measurement input circuits. Easily transfer data to a PC. Archive and share waveforms with OEMs, colleagues and support staff. Store waveforms, screen captures and instrument setups onto USB memory devices.



Connect-and-View™ triggering for an instant, stable display

If you've used other scopes, you know how tricky triggering can be. If settings are incorrect, results can be unstable or incorrect. Connect-and-View™ automatically sets up correct triggering by recognising signal patterns. Without touching a button, you get a stable, reliable and repeatable display of virtually any signal including motor drive and control signals. It's especially fast and convenient when you're measuring a number of test points in rapid succession.



Connect-and-View™ captures even the most complex motor drive signals.

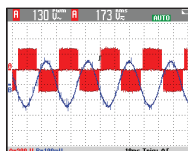
Automatic capture and replay of 100 screens

Scope users know how frustrating it is to see a one-time anomaly flash by, never to be seen again. Not with the ScopeMeter 190-III! Now you can look back in time with the touch of a button. In normal use, the instrument continuously memorises the most recent 100 screens. At any moment in time, you can 'freeze' these latest screens and scroll through them picture-by-picture or replay them as a 'live' animation. Cursors and zoom can be used for further analysis. You can even use the advanced trigger capabilities to capture up to 100 specific events. Ten sets of 100 screens with individual time stamps can be stored for later recall or download to a PC.



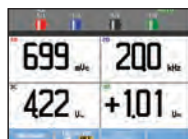
See dynamic signal behaviour instantly

The digital Persistence mode helps to find anomalies and to analyse complex dynamic signals by showing the waveforms amplitude distribution over time using multiple intensity levels and user selectable decay time – it's as if you're looking at the display of an analog, real time oscilloscope! A fast display update rate reveals signal changes instantaneously, useful for instance when making adjustments to a system under test.



Built-in 5000 count digital multimeter (2 channel models)

Conveniently switch from waveform analysis to precise multimeter measurements using the built in 5000 count digital multimeter. Measurement functions include VDC, VAC, VAC+DC, resistance, continuity and diode test. Measure current and temperature using suitable shunt, probe or adapter with wide range of scaling factors.



The built in multimeter provides convenient precision measurements.

S Version Kit Package

SCC290 FlukeView ScopeMeter Software Package (full version) and C290 Carrying Case Kit available to order with Fluke 190-Series II ScopeMeter models.



Fluke ScopeMeter® Portable Oscilloscopes 190 Series II



Fluke 190-504



Fluke 190-204

Fluke 190-202



Fluke 190 Series II ScopeMeter Portable Oscilloscopes are the first high-performance scopes built for harsh industrial environments. Introducing the first high-performance portable oscilloscopes with 2 or 4 independently insulated input channels, an IP51 dust- and drip water proof rating and a CAT III 1000 V/CAT IV 600 V safety rating.

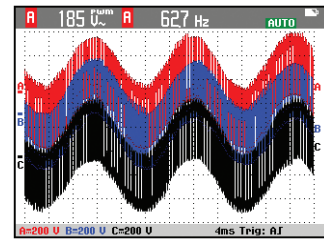
Choose from 500 MHz, 200 MHz, 100 MHz or 60 MHz bandwidth models. Now plant maintenance engineers can take a 2- or 4-channel scope into the harsh world of industrial electronics.

- Up to four independent floating isolated inputs, up to 1000V
- Up to 5 GS/s real time sampling (depending on model and channels used)
- Deep memory: 10,000 points per trace waveform capture (scope mode)
- CAT III 1000 V/CAT IV 600 V safety rated instrument for industrial environments
- Up to seven hours of battery operation using BP291
- Isolated USB host port for direct data storage to a USB memory device;
- USB device port for easy PC communication
- Compact and only 2.2 kg
- Security slot: lock down oscilloscope with Kensington® lock while unattended
- IP51 rating, dust- and drip-proof
- Connect-and-View™ triggering for intelligent, automatic triggering on fast, slow and even complex signals
- Frequency spectrum using FFT-analysis
- Automatic capture and REPLAY of 100 screens
- ScopeRecord™ Roll mode gives 30,000 points per input channel for low frequency signal analysis
- TrendPlot™ paperless recorder mode with deep memory for long-term automatic measurements
- 5,000 count DMM included in the 2-channel models

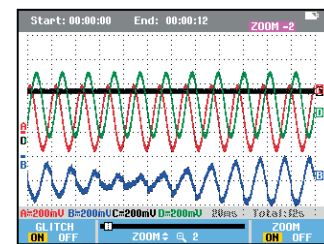
Specifications

| | 190-062 | 190-102 | 190-202 | 190-502 | 190-104 | 190-204 | 190-504 |
|---------------------------------|------------------------|------------------------|-------------|-------------|-------------|-------------|-------------|
| Bandwidth (MHz) | 60 | 100 | 200 | 500 | 100 | 200 | 500 |
| Scope Inputs | 2 | 2 | 2 | 2 | 4 | 4 | 4 |
| Dedicated DMM | 1 | 1 | 1 | 1 | - | - | - |
| Dual Input Trendplot™ | ● | ● | ● | ● | - | - | - |
| Four Input Trendplot™ | - | - | - | - | ● | ● | ● |
| ScopeRecord Mode | ● | ● | ● | ● | ● | ● | ● |
| Automatic Capture & Replay Mode | ● | ● | ● | ● | ● | ● | ● |
| Cursors | ● | ● | ● | ● | ● | ● | ● |
| Zoom | ● | ● | ● | ● | ● | ● | ● |
| Bus Health Test Mode | - | - | - | - | - | - | - |
| Advanced Power Measurements | ● | ● | ● | ● | ● | ● | ● |
| EN61010-1 CAT III Safety Rating | 1000 V | 1000 V | 1000 V | 1000 V | 1000 V | 1000 V | 1000 V |
| EN61010-1 CAT IV Safety Rating | 600 V | 600 V | 600 V | 600 V | 600 V | 600 V | 600 V |
| Battery | 4 hr Li-Ion (8 hr Opt) | 4 hr Li-Ion (8 hr Opt) | 7 hr Li-Ion | 7 hr Li-Ion | 7 hr Li-Ion | 7 hr Li-Ion | 7 hr Li-Ion |
| Optical RS-232 | - | - | - | - | - | - | - |
| Isolated USB | ● | ● | ● | ● | ● | ● | ● |
| Isolated USB Memory | ● | ● | ● | ● | ● | ● | ● |

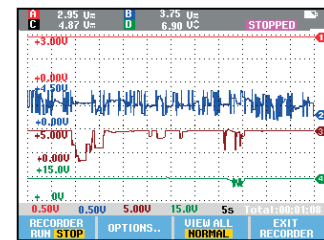
Sample Screens



Connect-and-View™ captures even the most complex motor drive signals.



Use the 27,000 points memory of ScopeRecord and zoom in for maximum detail.

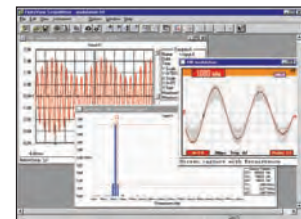


Cursors and zoom features of the Fluke 190 Series II help you to analyse the captured TrendPlot.

FlukeView ScopeMeter Software for documenting, archiving and analysis

Get more out of your ScopeMeter with FlukeView® ScopeMeter® SW90W Software for Windows.

- Documentation—transfer waveforms, screens and data to your PC for printing or importing data into a report
- Add text to ScopeMeter settings—give operators guidance when recalling settings
- Analysis—use cursors, perform spectrum analysis or export data to an other analysis program



Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke 190 Series II ScopeMeter® Portable Oscilloscopes Accessories



TRM50



VPS410-II-R



VPS410-X



VPS210-X

| 190 Series-II | | | |
|-----------------------|---------------|-------------------|---------------|
| | VPS410-II-R | VPS410-X | VPS210-X |
| Description | Voltage Probe | Voltage Probe | Voltage Probe |
| Colours available | Red | Grey, Blue, Green | Red and Grey |
| Attenuation | 100:1 | 10:1 | 10:1 |
| Bandwidth | 150MHz | 500MHz | 200MHz |
| Length | 1.2m | 1.2m | 1.2m |
| Safety Rating CAT II | -- | -- | -- |
| Safety Rating CAT III | 1000V | 1000V* | 300V |
| Safety Rating CAT IV | 600V | 600V* | -- |

* High working Voltage Probe is specified for working voltages (between probe tip and reference lead) up to 2000V in CATII or 1200V in CAT IV environment. Reference lead voltage (between reference lead and earth ground): 1000V in CATIII, 600V in CATIV. These specifications apply only when used with Fluke 190 Series-II Test Tool.



PM9091 / PM9092



PM9081



PM9082



PM9093

| | PM9091 | PM9092 | PM9081 | PM9082 | PM9093 |
|-----------------------|---|------------|-------------------------------------|-------------------------------------|---------------------------------------|
| Description | Safety designed 50Ω, BNC cable Set (1 Red, 1 Black, 1 Grey) | | Dual banana plug male to female BNC | Dual banana jack female to male BNC | Male BNC to dual female BNC (T-piece) |
| Length | 1.5 m each | 0.5 m each | -- | -- | -- |
| Safety Rating CAT III | 600 V | 600 V | 600 V | 600 V | 600 V |



RS400



AS400



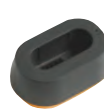
BP290



BP291



OC4USB



EBC290

| 190 Series II Optional Accessories | |
|------------------------------------|--|
| AS400 | Probe Accessory Extension Set for VPS400 Series Voltage Probes |
| BC190/807 | Battery charger Australia |
| BC190/808 | Battery charger Universal |
| BP290 | Single Capacity, Rechargeable Li-Ion Battery Pack, 2400 mAh |
| BP291 | Double Capacity, Rechargeable Li-Ion Battery Pack, 4800 mAh |
| C195 | Protective Carrying Case |
| C290 | Hard Shell Protective Carrying Case |
| C437-II | Hard Shell, Protective Carrying Case with rollers |
| EBC290 | External Battery Charger |
| HC120 | 2 Hook Clip Replacement Set |
| HH290 | Hanging Hook |
| OC4USB | Optically-Isolated USB Interface Cable |
| RS400 | Probe Accessory Replacement Set for VPS400 Series Voltage Probes |
| RS500 | Probe Accessory Replacement Set for VPS510 Series Voltage Probes |
| SCC290 | Software and Carrying Case Kit |
| SW90W | FlukeView® ScopeMeter® software for Windows® |
| TL175 | TwistGuard™ Test Lead Set |
| TRM50 | Coaxial Feed-through BNC male to BNC female Cable terminator, 50 ohm |
| VPS210-X | Voltage Probe Set, 10:1, 200MHz. X= Red or Grey colour |
| VPS410-X | High Working Voltage Probe 100:1, 150MHz. X= B(Blue) or G(Grey) or V(Green) colour |
| VPS410-II-R | Industrial type Voltage Probe, 10:1, 500MHz. R(Red) |

Included Accessories

Fluke 190 4-Channel Models: Set of Four Probes, Hanging Strap, Handstrap, USB Cable with mini-B Connector, Double Capacity Li-ion Battery: BP291, Battery Charger/Power Adapter: BC190, FlukeView Demo Package and User Manuals on CD-ROM.

Fluke 190 2-Channel Models: Set of Two Probes, TL175 Test Leads and a Single Capacity Battery BP290.

Fluke 190-504: Includes 4 pcs TRM50 coaxial feedthrough terminator.

Ordering Information

FLUKE-190-504/UN/S Colour ScopeMeter 500MHz, 4 Channel with SCC-290 Kit

FLUKE-190-504/UN Colour ScopeMeter 500MHz, 4 Channel

FLUKE-190-502/UN/S Colour ScopeMeter 500MHz, 2 Channel with SCC-290 Kit

FLUKE-190-502/UN Colour ScopeMeter 500MHz, 2 Channel

FLUKE-190-204/UN/S Colour ScopeMeter 200MHz, 4 Channel with SCC-290 Kit

FLUKE-190-204/UN Colour ScopeMeter 200MHz, 4 Channel with SCC-290 Kit

FLUKE-190-202/UN/S Colour ScopeMeter 200MHz, 2 Channel with SCC-290 Kit

FLUKE-190-202/UN Colour ScopeMeter 200MHz, 2 Channel

FLUKE-190-104/UN/S Colour ScopeMeter 100MHz, 4 Channel with SCC-290 Kit

FLUKE-190-104/UN Colour ScopeMeter 100MHz, 4 Channel with SCC-290 Kit

FLUKE-190-102/UN/S Colour ScopeMeter 100MHz, 2 Channel with SCC-290 Kit

FLUKE-190-102/UN Colour ScopeMeter 100MHz, 2 Channel

FLUKE-190-062/UN/S Colour ScopeMeter 60MHz, 2 Channel with SCC-290 Kit

FLUKE-190-062/UN Colour ScopeMeter 60MHz, 2 Channel

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Fluke 120B Series Industrial ScopeMeter® Hand-Held Oscilloscopes



Fluke 125B

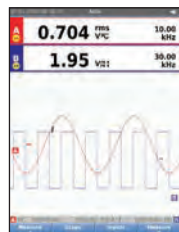


Simplified testing, more insight and faster electro-mechanical troubleshooting

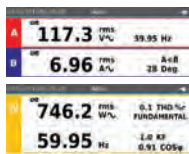
The compact ScopeMeter® 120B Series, is the rugged oscilloscope solution for industrial electrical and electro-mechanical equipment troubleshooting and maintenance applications. It's a truly integrated test tool, with oscilloscope, multimeter and high-speed recorder in one easy-to-use instrument. The ScopeMeter 120B Series also integrates with Fluke Connect® mobile app and FlukeView® for ScopeMeter software to enable further collaboration, data analysis and archiving of critical test information.

The 120B Series Industrial ScopeMeter Test Tools include innovative functions designed to help technicians troubleshoot faster and get the answers they need to keep their systems up and running. Colour Display Waveforms with Connect and View™ trigger and setup technology and automatically view related numerical measurements using Fluke IntellaSet™ technology, all without making manual measurement adjustments.

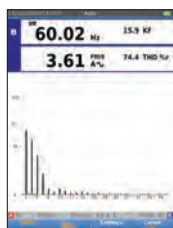
- Dual-input digital oscilloscope and multimeter
- 40 MHz or 20 MHz oscilloscope bandwidth
- Two 5,000-count true-RMS digital multimeters
- Connect-and-View™ trigger simplicity for hands-off operation
- IntellaSet™ technology automatically and intelligently adjusts numerical readout based on the measured signal
- Dual-input waveform and meter reading recorder for trending data over extended periods
- With Recorder Event Detect capabilities and expandable micro SD memory, recording sessions can be done for up to 14 days.
- The ScopeMeter 125B Bus Health Test analyses the electrical signals on the Industrial Network Bus and gives a clear "Good", "Weak" or "Bad" indication mark for each of the relevant parameters used in CAN-bus, Profi-bus, Foundation Field, RS2-232 and more.



Fluke Connect-and-View™ triggering with Auto Reading function using Fluke IntellaSet™ technology.



Easily obtain key power characteristics to validate a system power.



Harmonic spectrum overview with cursors to measure the distortion as a percentage of the fundamental.

Connect-and-View™ triggering for an instant, stable display

Fluke's unique Connect-and-View™ triggering technology recognises signal patterns, and automatically sets up the correct triggering to provide a stable, reliable and repeatable display. Connect-and-View™ triggering is designed to work with virtually any signal, including motor drives and control signals—without adjusting parameters, or even touching a button.

IntellaSet™/AutoReading

The Auto Readings function with Fluke IntellaSet™ technology uses proprietary algorithms to intelligently analyse the measured waveform and automatically displays the most appropriate numerical measurements on screen, so you can get the data you need easier than ever before.

Dual input to obtain key power measurements

For single phase or 3-phase balanced systems, the dual inputs of the Industrial ScopeMeter® 120B Series can measure AC+DC RMS voltage on channel A and AC+DC RMS current on channel B. The Fluke 125B can then calculate; frequency, phase angle, active power (kW), reactive power (VA or var), power factor (PF) or displacement power factor (DPF) and can also calculate the power values for a 3-phase system where all phases have equal voltage and currents.

Harmonics measurements

In the Harmonics function, the Test Tool measures harmonics to the 51st. Related data such as DC components, THD (Total Harmonic Distortion), and K factor are measured to provide a complete insight into the electrical state of health of your loads.

One test lead to measure multiple electrical parameters

High frequency waveform, meter, capacitance and resistance measurements as well as continuity checks are all covered by single set of shielded test leads. No time is wasted finding or swapping leads.

Recommended Accessories



STL120-IV
Shielded Test Lead Set
600V CAT IV



HC120-II
Set of 2 Hook Clips



BB120-II
Set of 2 Banana to
BNC Adapter



VPS410
Voltage Probe Set
40MHz 600V CAT IV



801-110S
AC/DC Current Clamp
See page 142



I1010
AC/DC Current Clamp
See page 142



I1000S
Large AC Current Probe
See page 141



I3000S
Very High
AC Current Clamp
See page 141



I3000S FLEX
Flexible Current Clamp
3000A AC, 24 and 36in.
See page 141



I200S
Small Sized
AC Current Clamp
See page 141



I30S
AC/DC Current Clamp
See page 142



I310S
AC/DC Current Clamp
See page 142



I400S
AC/DC Current Clamp
See page 141



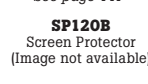
I410
AC/DC Current Clamp
See page 142



Fluke 155
AC Current Clamp
See page 141



C120B
Soft Carrying Case
(Image not available)



SP120B
Screen Protector
(Image not available)



SCC120B
Accessory Kit
(Image not available)

Fluke 120B Application



Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

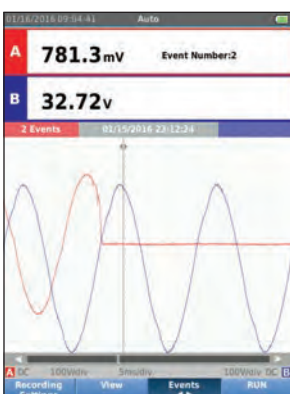


- Shielded test leads for oscilloscope, resistance and continuity measurements
- Resistance, continuity, diode and capacitance meter measurements
- Power measurements (W, VA, VAR, PF, DPF, Hz)
- Voltage, current and power harmonics
- Check Industrial networks with BusHealth physical layer tests against defined reference levels
- Save or recall data and instrument setups
- Store instrument setups defined by a test sequence for routine maintenance or most often used test procedures.
- External optically isolated USB interface to transfer, archive and analyse scope or meter data
- Optional WiFi adapter connected to internal USB port to wirelessly transfer information to the PC, laptop or Fluke Connect® mobile app
- FlukeView® ScopeMeter® Software for Windows®
- Rugged design to withstand 3g Vibration, 30g shock, and rated IP51 according to EN/IEC60529
- Highest safety rating in the industry: safety rated for CAT IV 600 V
- Li-Ion rechargeable battery, seven-hours operation (with four-hour charge time)

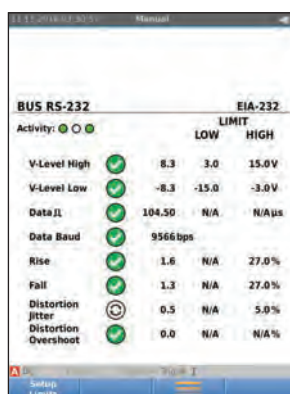
Specifications

| | 123B | 124B | 125B |
|--|------|------|------|
| Full function dual input scope and meter | ● | ● | ● |
| Oscilloscope bandwidth MHz | 20 | 40 | 40 |
| Meter and Scope Recorder | ● | ● | ● |
| Scope cursor measurements | - | ● | ● |
| Power and harmonics measurements | - | - | ● |
| Bus health | - | - | ● |
| 10:1 Voltage Probe | - | ● | ● |
| i400S AC Current Clamp | - | - | ● |

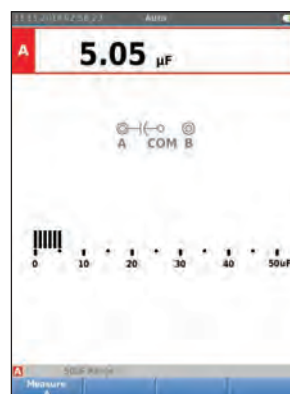
Sample Screens



Quickly step through recorded events to identify and troubleshoot intermittent faults.



Quickly understand industrial field bus signal physical layer analogue characteristics.



A single test tool measures volts, ohms, amps or capacitance, in addition to displaying waveforms.

Included Accessories

Fluke 120B: Li-Ion Battery Pack, Charger/Power Adapter, 2 Shielded Test Leads with Ground Leads, Black Test Lead, Red and Blue Hook Clips, Banana to BNC Adapter, and WiFi USB adapter.

Fluke 120B/S versions also include Soft Carry Case, FlukeView™ for Windows® Software, Magnetic Hanger and Screen Protector.

Ordering Information

| | |
|-------------------------|---------------------------------|
| FLUKE-125B/INT/S | Industrial 40MHz ScopeMeter Kit |
| FLUKE-125B/INT | Industrial 40MHz ScopeMeter Kit |
| FLUKE-124B/INT/S | Industrial 40MHz ScopeMeter Kit |
| FLUKE-124B/INT | Industrial 40MHz ScopeMeter Kit |
| FLUKE-123B/INT/S | Industrial 20MHz ScopeMeter Kit |
| FLUKE-123B/INT | Industrial 20MHz ScopeMeter Kit |

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Fluke ScopeMeter® Portable Oscilloscopes

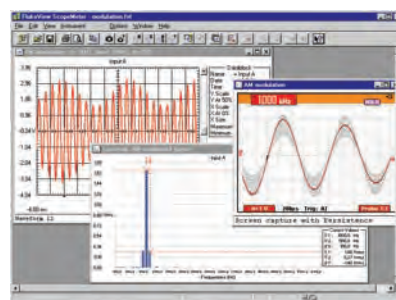


ScopeMeter® Portable Oscilloscopes

FlukeView® ScopeMeter® Software for documenting, archiving and analysis of waveforms

Get more out of your ScopeMeter with FlukeView® ScopeMeter® SW90W software for Windows®

- Documentation of waveforms, screens and data by storing them to your PC for printing or importing data into a report
- Add text to ScopeMeter settings to give operators guidance when recalling settings
- Archive to create a library of waveforms for easy reference, waveform comparison, or pass/fail testing
- Analyse the waveform by using cursors
- Export data to another analysis program
- Zoom-in functionality to see more details of the waveform
- FlukeView® offers remote control of the ScopeMeter
- On-line recording of your current waveform
- Take a snapshot of the actual waveform and archive it as a BMP
- Convert the waveform into an FFT read-out to see the presence of harmonics



Specifications

| | 190-504 | 190-502 | 190-204 | 190-202 | 190-104 | 190-102 | 190-062 | 125B | 124B | 123B |
|--|--|---------|-------------|---------|-------------|---------|------------------|------------------------------------|--|-------------------|
| Bandwidth | 500 MHz | | 200 MHz | | 100 MHz | | 60 MHz | 40 MHz | | 20 MHz |
| Max. real time sample rate | 5 GS/s | | 2.5 GS/s | | 1.25 GS/s | | 625 MS/s | 40 MS/s + equivalent time sampling | | |
| Input sensitivity | 2mV/div to 100V/div, plus variable attenuation | | | | | | | | 5 mV to 200 V/div. | |
| Max. time base speed | 1 ns/div. | | 2 ns/div. | | 4 ns/div. | | 10 ns/div. | 10 ns to 500 V/div. | | 20 ns to 500/div. |
| Number of Channels | 4 | 2 | 4 | 2 | 4 | 2 | 2 | 2 | | |
| External trigger | No | Yes | No | Yes | No | Yes | Yes | No | | |
| Independently floating isolated inputs (CAT Rating) | 1000 V CAT III, 600 V CAT IV | | | | | | | | - | |
| Max.record length: ... in Scope Mode | 10000 samples per channel | | | | | | | | 512 min/max samples per channel | |
| ... in Scoperecord Mode | 30000 min/max pairs per channel | | | | | | | | | |
| Glitch capture | 8 ns peak detect at full timebase range | | | | | | | | 25 ns | |
| True RMS multimeter built-in | 5000 counts | | 5000 counts | | 5000 counts | | Dual 5000 counts | | | |
| Dedicated test capabilities | V/Hz ratio, mAs, Wh, FFT | | | | | | | | Harmonics, Recorder Event Detect | |
| General Specifications | | | | | | | | | | |
| Mains adapter/battery charger included (type number) | BC190 Line Voltage Adapter / Battery Charger BC190/820 Universal Switch Mode Power supply / Battery Charger | | | | | | | | BC430 Line Voltage Adapter / Battery Charger | |
| Battery included | BP291 | BP290 | BP291 | BP290 | BP291 | BP290 | BP290 | BP290 | | |
| Size (mm) | 265 x 190 x 70 | | | | | | | | 259 x 132 x 55 | |
| Weight (kg) | 2.2 | 2.1 | 2.2 | 2.1 | 2.2 | 2.1 | 1.4 | | | |
| Safety certified | 1000V CATIII / 600V CAT IV | | | | | | | | 750V CAT III / 600V CAT IV | |



PROCESS CALIBRATION TOOLS

Process Tools Selection Guide

Pick the right process tool for you

| | Documenting Process Calibrators | | Multifunction Process Calibrator | | Temperature Calibrators | | | Pressure Calibrators | | | | Loop Calibrators | | | | | Process Meters | |
|--|---------------------------------|----------------|----------------------------------|--------|-------------------------|--------|----------------------------------|---|-------|--|---|------------------|-------|-------------|------------|--------|----------------|------------|
| | 754 / 753 | 725 / 725Ex | 726 | 724 | 714B | 712B | 718 / 718Ex | 717 | 719 | 719Pro | 721 | 715 | 705 | 707 / 707Ex | 709 / 709H | 771 | | 772 / 773 |
| Voltage DC | 300 V | 30 V | 30V | 30 V | 75 mV | | | | | 30 V | 30 V | 10 V | 28 V | 28 V | 30 V | | - / 30 V | 1000 V |
| Voltage AC (true RMS) | 300 V | | | | | | | | | | | | | | | | | 1000 V |
| Resistance | 10 kΩ | 3200 Ω | 4000 Ω | 3200 Ω | | 4000 Ω | | | | | | | | | | | | 40 MΩ |
| Current DC | 110 mA | 24 mA | 24 mA | 24 mA | 24 mA | 24 mA | 24 mA | 24 mA | 24 mA | 24 mA | 24 mA | 24 mA | 24 mA | 24 mA | 24 mA | 100 mA | 100 mA | 30 mA, 1 A |
| Current AC | | | | | | | | | | | | | | | | | | ● |
| Frequency | 50 kHz | 10 kHz | 15 kHz | | | | | | | | | | | | | | | 20 kHz |
| Pressure | ● ¹ | ● ¹ | ● ¹ | | | | -0.85 bar to 700 bar (10 ranges) | 0.85 bar to 700 bar (2 ranges) / up to 700 bar ² | | -0.8 to 20 bar (3 ranges) / up to 700 bar ² | input 1: -0.97 bar to 2.48 bar input 2: -0.83 bar to 3.45 bar ³ | | | | | | | |
| Temperature | | | | | | | | | | | | | | | | | | |
| Temperature: RTD types | 8 | 7 | 8 | 7 | | 13 | | | | | | | | | | | | |
| TC types | 13 | 12 | 12 | 12 | 17 | | | | | | | | | | | | | |
| Source/Simulate | | | | | | | | | | | | | | | | | | |
| Voltage DC | 15 V | 10 V | 20 V | 10 V | 75 mV | | | | | | 10 V | | | | | | - / 10 V | |
| Resistance | 10 kΩ | 3200 Ω | 4000 Ω | 3200 Ω | | 4000 Ω | | | | | | | | | | | | |
| mA DC/ % scale | 22 mA | 24 mA | 24 mA | 24 mA | | | | ● | ● | ● | 24 mA | 24 mA | 24 mA | ● | ● | ● | 24 mA | 24 mA |
| mA source: auto step, auto ramp | ● | ● | ● | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● |
| Frequency | 50 kHz | 10 kHz | 15 kHz | | | | | | | | | | | | | | | |
| Temperature: RTD types | 8 | 7 | 8 | 7 | | 13 | | | | | | | | | | | | |
| Temperature: TC types | 13 | 10 | 10 | 10 | 17 | | | | | | | | | | | | | |
| Record | | | | | | | | | | | | | | | | | | |
| Min/Max | ● | | | | | | ● | ● | ● | ● | | | | | | | | ● |
| Hold | | | | | | | ● | ● | ● | | | | | | | | ● | ● |
| As Found/ As Left results | ● | | | | | | | | | | | | | | | | | |
| Log data | ● | | | | | | | | | | | | | | | | | |
| Upload data to PC | ● | | | | | | | | | | | | | | | | | |
| Remote operation | | ●/- | ● | | | | | | | | | | | | | | | ●/- |
| Features | | | | | | | | | | | | | | | | | | |
| Loop supply | 26 V | 24 V/12 V | 24 V | 24 V | | | 24 V/- | 24 V | 24 V | 24 V | 24 V | 24 V | 24 V | 24 V | 24 V | 24 V | 24 V | 24 V/- |
| Hart communication | ●/- | | | | | | | | | | | | | | | | | |
| Integrated hand pressure pump | | | | | | | ● | | | | | | | | | | | |
| Electric Pump | | | | | | | | ● | ● | ● | | | | | | | | |
| Intrinsically safe (ATEX) | | 725Ex | | | | | 718 Ex | | | | | | | 707 Ex | | | | |
| MIST traceable certification | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Warranty in years | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |

¹ Fluke 750 pressure modules required
² Ranges for the internal sensor
³ Ranges depending on version
⁴ by using optional 720 RTD probe accessory
⁵ Fluke 769 now Fluke Connect compatible with Fluke 43000 FC Connector
 Ranges for use of Fluke 700 pressure modules, see page 132.

Maintenance Manager

Focus: Maintaining plant uptime and maintenance efficiency.

What issues do you face?

- Ensuring continuous uptime
- Maintaining good ROI for equipment
- Compliance
- Process improvement
- Increase efficiency

Fluke solutions:

- Temperature
- ⤴ Pressure
- ◆ Standards
- ▲ Process tools

Quality Manager

Focus: Maintaining and documenting product quality

What issues do you face?

- Complying with quality regulations
- Maintaining documentation of processes

Fluke solutions:

- Temperature
- ⤴ Pressure
- ◆ Standards
- ▲ Process tools
- Software

Field Calibration Technician

Focus: Calibrating and verifying measurement devices

What issues do you face?

- Making accurate measurements
- Documenting procedures
- Increasing throughput

Fluke solutions:

- Temperature
- ⤴ Pressure
- ◆ Standards
- ▲ Process tools
- Software
- ◆ Field Metrology Wells

Instrumentation Technician

Focus: Maintaining and verifying instrumentation throughout the plant

What issues do you face?







- Monitor and maintain sensors and transmissions
- Accurate measurements

Fluke solutions:

- Temperature
- ⤴ Pressure
- ◆ Standards
- ▲ Process tools
- Software
- ◆ Field Metrology Wells



* Diagram is not intended to be an exact

| Bench Pressure Controller | Bench Temperature Sources | Deadweight Testers | Handheld Pressure Calibrators | Infrared Calibrator | mA Loop Calibrator |
|--|---|---|---|---|---|
|  |  |  |  |  |  |
| 6241 | 9100S 9144 | 6532 3120 | 750P 719 | 4181 | 773 |



Process Calibration Solutions

Learn more information on Fluke process calibration solutions at sg.fluke.com/PCT

Based on you. Built by Fluke.

representation. Diagram components are not to scale and are for illustration purposes only.

| Precision Multimeter | Pressure Gauge | Temperature Readouts and Probes | Process Calibrators | Software Solutions |
|---|---|---|--|---|
|  |  |  |     |  |
| 8846A | 700G | 1524 PROBES | 725 754 789 FC 7526A | DPC/TRACK 2 |

Fluke 771, 772 and 773 mA Process Clamp Meters



Fluke 772

Fluke 773

Fluke 771



Don't break the loop on 4-20 mA signal measurements and save time with the Fluke 771, 772 and 773 milliamp Process Clamp Meters.

Use the Fluke 772 and 773 to:

- Source 4-20 mA signals for testing control system I/O or I/Ps
- Simulate 4-20 mA signals for testing control system I/O
- Measure 4-20 mA signals with in-circuit measurement
- Power a transmitter with the 24 V loop power supply
- Automatically ramp and step change the 4-20 mA output for remote testing

Use the Fluke 773 to:

- Measure DC voltage to verify 24 V power supplies or voltage I/O signals
- Source DC voltage to test voltage input devices
- Scaled mA output signal enables a logging DMM (289) to record 4-20 mA signal without breaking the loop
- mA in/out: simultaneously source a mA signal while measuring a mA signal with the clamp

Recommended Accessories



TL220
SureGrip™ Industrial
Test Lead Set
See page 139



C550
Tool Bag
See page 144

Fluke 771, 772 and 773 mA Process Clamp Meters pay for themselves

- The more you use them the more money you save
- Measuring 4-20 mA signals (five) times without operator intervention can pay for the 771
- Saving a trip back to shop to get a loop calibrator can pay for the price difference of the 772
- Saving a trip back to the shop for a voltage test source can pay for the price difference of the 773



Features

| | mA measure w/jaw | mA measure In circuit | mA source | mA sim | Loop power 24 V | DCV source 0-10 V | DCV measure 0-30 V | Scaled mA output to mA input | mA in/out |
|-----|------------------|-----------------------|-----------|--------|-----------------|-------------------|--------------------|------------------------------|-----------|
| 771 | ● | — | — | — | — | — | — | — | — |
| 772 | ● | ● | ● | ● | — | — | — | — | — |
| 773 | ● | ● | ● | ● | ● | ● | ● | ● | ● |

Specifications

| | Function | Resolution and range | Accuracy | Notes |
|---------------|-----------------|----------------------|------------------|---|
| 771, 772, 773 | mA measurement | 0 to 20.99 mA | 0.2 % + 5 counts | Measured by clamp |
| | | 21.0 mA to 100.0 mA | 1 % + 5 counts | — |
| 772 and 773 | mA measurement | 0 to 24.00 mA | 0.2 % + 2 counts | Measured in series with test jacks |
| 772 and 773 | mA source | 0 to 24.00 mA | 0.2 % + 2 counts | Maximum mA drive: 24 mA into 1,000 ohms |
| 772 and 773 | mA simulate | 0 to 24.00 mA | 0.2 % + 2 counts | Maximum voltage 50 V DC |
| 773 | Voltage source | 0 to 10.00 V DC | 0.2 % + 2 counts | 2 mA maximum drive current |
| 773 | Voltage measure | 0 to 30.00 V DC | 0.2 % + 2 counts | — |

| | 771 | 772 | 773 |
|-----------------------|---|---------------------------------------|-----|
| Battery | Two 1.5 V, Alkaline, IEC LR6 | Four 1.5 V, Alkaline, IEC LR6 | |
| Working hours | 40 hours typical | 12 hours @ 12 mA source into 500 ohms | |
| Size (HxWxL) | 59 mm x 38 mm x 212 mm | 43.7 mm x 70 mm x 246.2 mm | |
| Weight | 260g | 410g | |
| Operating temperature | -10 °C to 50 °C | | |
| IP rating | IP 40 | | |
| Warranty | Three-year, one-year on mA clamp assembly and cable | | |

Included Accessories

Fluke 771: Soft Carrying Case, User Manual.

Fluke 772/773: Four AA Alkaline Batteries (installed), Soft Carrying Case, TL75 Test Leads, AC 72 Detachable Clip, TL940 Mini-hook Test Leads, Instruction Sheet, Hanging Tool with Hook and Loop Strap.

Ordering Information

| | |
|------------------|------------------------------|
| FLUKE-771 | Milliamp Process Clamp Meter |
| FLUKE-772 | Milliamp Process Clamp Meter |
| FLUKE-773 | Milliamp Process Clamp Meter |

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Fluke 787 and 789 FC ProcessMeter™



Fluke 789



The Fluke 787 and 789 ProcessMeters combine a Digital Multimeter and a Loop Calibrator in one rugged handheld tool, giving process technicians double the power.

Fluke 789 ProcessMeter Now compatible with Fluke Connect® App

The Fluke 789 ProcessMeter is the ultimate troubleshooting tool for electricians and instrumentation professionals, combining the functionality of a loop calibrator with the power of a digital multimeter. By equipping the 789 with a temperature measurement module and the wireless data logging capabilities of Fluke Connect® with ShareLive™ video call (sold separately), process technicians can now do a lot more while carrying a lot less. Also with its built-in, selectable 250 ohm HART® resistor, it eliminates the need to carry a separate resistor with you.

- 24 V loop power supply
- CAT IV 600V rating
- Double-sized, dual display
- 20 mA drive into 1200 ohms
- 0 % to 100 % mA Span Check buttons to toggle between 4-20 mA
- Infrared I/O serial port compatible with FlukeView® Forms Software



Fluke 787



Fluke 787 ProcessMeter

- Simultaneous mA and % of scale readout on mA output
- 25 % Manual Step plus Auto Step and Auto Ramp on mA output
- Min/Max/Avg/Hold/Relative modes
- Externally accessible battery for easy changes

Specifications

| | 787 | 789 |
|---|---|------------------------------|
| Voltage measurements | | |
| Range | 0-1000 V AC or DC | 0-1000 V AC (true-RMS) or DC |
| Resolution | 0.1 mV to 1.0 V | 0.1 mV to 1.0 V |
| Accuracy | 0.1% Rdg+1 LSD (V DC) | 0.1% Rdg+1 LSD (V DC) |
| Current Measurement | | |
| Range | 0-1 A 0-30 mA | 0-1 A 0-30 mA |
| Resolution | 1 mA 0.001 mA | 1 mA 0.001 mA |
| Accuracy | 0.2%+2 LSD 0.05%+2 LSD | 0.2%+2 LSD 0.05%+2 LSD |
| Current Sourcing | | |
| Range | 0-20 mA or 4-24 mA | 0-20 mA or 4-24 mA |
| Accuracy | 0.05% of span | 0.05% of span |
| Other Specifications | | |
| Max drive capability | 500 Ω | 1200 Ω |
| Loop power | N/A | 24 V |
| Resistance measurement | To 40 MΩ, 0.2%+1 LSD | To 40 MΩ, 0.2%+1 LSD |
| Frequency | To 19.999 kHz, 0.005%+1 LSD | To 19.999 kHz, 0.005%+1 LSD |
| Continuity | Beeps for resistance < 100 Ω | Beeps for resistance < 100 Ω |
| Span Check | No | Yes |
| General Specifications | | |
| Temperature range | 18 °C to 28 °C, for one year after calibration | |
| Maximum voltage applied between any jack and earth ground | 1000 V RMS | |
| Storage temperature | -40 °C to 60 °C | |
| Operating temperature | -20 °C to 55 °C | |
| Relative humidity | 95 % up to 30 °C; 75 % up to 40 °C; 45 % up to 50 °C; 35 % up to 55 °C | |
| Size (HxWxL) and Weight | Fluke 787: 32 mm x 87 mm x 187 mm, 369 grams Fluke 789: 50 mm x 100 mm x 203 mm, 600 grams | |
| Safety | Designed in accordance with EN61010, ANSI/ISA S82.01-1994 and CAN/CSA C22.2 No. 61010.1-92 Over-voltage CAT III | |
| Warranty | 3 years | |
| Continuity | Beeps for resistance < approx. 100 ohms | |

Recommended Accessories



IR3000 FC
Fluke Connect®
ir3000 Connector
(Fluke 789 only)
See page 145



TL220
SureGrip™ Industrial
Test Lead Set
See page 139



80T-150UA
Universal
Temperature Probe
See page 143



80PK-8
Pipe Clamp
Temperature Probe
See page 143

Recommended Kits

Buy more, Save more



Fluke Connect® 789 ProcessMeter™ and Temperature Kit

For more details see page 136

Included Accessories

Fluke 787: AC70A Alligator Clips, C81Y Protective Yellow Holster with Flex-Stand™, One 9V Alkaline Battery, TL75 Safety-Designed Test Lead Set, Quick Reference Guide.

Fluke 789: TL71 Test Lead Set plus AC175 Alligator Clips, 4 AA 1.5V Alkaline Batteries, User Manual and Quick Reference Guide.

Ordering Information

| | |
|-------------------------------|---|
| FLUKE-787 | ProcessMeter™ |
| FLUKE-789 | ProcessMeter™ |
| FLUKE-789/ T3000FC | Fluke Connect 789 ProcessMeter™ & Temperature Kit |
| FLUKE-IR3000 FC | Fluke Connect Infrared Connector |
| FVF-SC2 | FlukeView Forms Software (incl. Interface Cable) |

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke 715, 707, 707Ex and 705 Loop Calibrators

Complete family of Volt/mA calibrators



Fluke 715

Fluke 705



Fluke 715 Volt/mA Calibrator

- Source voltage to 200 mV or 20 V
- Measure loop current (0 to 20 mA, 4-20 mA) signals with 0.01 % accuracy and 1 μ A resolution
- Measure voltage output process signals from PLCs, transmitters
- Source or simulate 4-20 mA loop current
- 24 V loop supply with simultaneous current measurement
- Ramp and Step Ramp output functions

Fluke 707 and 705

- Innovative output adjustment dial on 707 provides 1 μ A and 100 μ A resolution and one-hand operation
- Large display and simple interface for ease of use
- Simultaneous mA and % readout for quick, easy interpretation of readings
- mA accuracy of 0.015 % on the Fluke 707 and 0.02 % on the 705
- HART™ mode on 707 connects 250 ohm resistor in series with 24 V loop for compatibility with HART communicators
- Push button 25 % steps for fast, easy linearity checks
- “Span Check” for fast confirmation of zero and span
- Selectable slow and fast linear step ramp provide ramping outputs for valve slewing, remote testing and loop functional tests
- 24 V internal loop supply, so you can power and read a transmitter at the same time without carrying a DMM
- 0 to 20 mA or 4-20 mA default start up modes



Fluke 707

Specialty Models

Fluke 707Ex Intrinsically Safe Loop Calibrator



The fast one-handed tool for mA loop checks in Ex zones.

The 707Ex is an intrinsically safe loop calibrator for use in explosion endangered areas. The Fluke 707Ex is certified in accordance with the ATEX directive (Ex II 2 G Ex ia IIC T4) in Zones 1 and 2.

- Simultaneous mA and % readout for quick, easy, interpretation of readings.
- mA accuracy of 0.015%, superior to other loop calibrators

See page 132 for more information.

Recommended Accessories



TL28A
Heavy Duty Test Lead Set
See page 146



TL220
SureGrip™ Industrial Test Lead Set
See page 139



C550
Tool Bag
See page 144



PV350
Pressure Vacuum Module
See page 146

Included Accessories

Fluke 705/707: C10 Yellow Holster, Test Leads, AC175 Alligator Clips, Single 9V Alkaline Battery, Instruction Sheet.

Fluke 707Ex: Red Ex-holster, Test Leads, AC175 Alligator Clips, Single 9V Alkaline Battery, Instruction Sheet.

Fluke 715: Yellow Holster (H80M excl. TPAK), Test Leads and AC175 Alligator Clips, Single 9V Alkaline Battery, Instruction Sheet.

Ordering Information

| | |
|--------------------|------------------------------------|
| FLUKE-705 | Loop Calibrator |
| FLUKE-707 | Loop Calibrator |
| FLUKE-707EX | Intrinsically Safe Loop Calibrator |
| FLUKE-715 | Volt/mA Calibrator |

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Specifications

| | 705/707 | 715 |
|-------------------------------|---|--------------------------------|
| Voltage measurement | | |
| Range | 0 V to 28 V | 0 mV to 200 mV / 0 V to 25 V |
| Resolution | 1 mV | 10 μ V / 1 mV |
| Accuracy | 705: 0.025 % Rdg + 1 LSD 707, 707Ex: 0.015 % Rdg + 2 LSD | 0.01 % Rdg + 2 LSD |
| Current measurement | | |
| Range | 0 mA to 24 mA | 0 mA to 24 mA |
| Resolution | 0.001 mA | 0.001 mA |
| Accuracy | 705: 0.02 % Rdg + 2 LSD 707, 707Ex: 0.015 % Rdg + 2 LSD | 0.01 % + 2 LSD |
| Current sourcing | | |
| Range | 0 mA to 20 mA or 4 mA to 20 mA | 0 mA to 20 mA or 4 mA to 20 mA |
| Accuracy | 705: 0.025 % Rdg + 2 LSD 707, 707Ex: 0.015 % Rdg + 2 LSD | 0.01 % Rdg + 2 LSD |
| Drive capability | 705: 1000 Ω @ 24 mA 707: 1200 Ω @ 24 mA 707Ex: 700 Ω @ 20 mA | 1000 Ω @ 24 mA |
| Loop power while measuring mA | 24 V | |
| Voltage sourcing | 0 mV to 200 mV or 0 V to 20 V | |
| Display current and % of span | Yes | mA or % |
| Auto step, auto ramp | Yes | |
| Span Check | Yes | |
| Battery life | 18 hours typical, at 12 mA | |
| Warranty | Three-year | |

Fluke 709 and 709H Precision Loop Calibrators



Fluke 709H



HART is a registered trade mark of the HART Communications Foundation.

The Fluke 709 and 709H mA loop calibrators are designed to save time and produce high-quality results. These calibrators are built around a user friendly interface with a Quick-Set rotary encoder knob. This tool reduces the time it takes to measure, or source, current and power up a loop. The protective holster easily fits into a technician's hand and the large backlit display is easy to read, even in dark, cramped worked areas.

- Best-in-class accuracy at 0.01 % reading
- HART Communication (709H only) communicate with and test HART smart instruments
- Compact rugged design
- Intuitive user interface with quick-set knob for fast setup, easy to use
- 24 V DC loop power with mA measure mode
- Resolution of 1 μ A on mA ranges
- Built in selectable 250 Ω resistor for HART communications
- Simple two wire connection for all measurements
- Valve test (source and simulate defined mA values with % keys)
- Upload logged mA measurements and HART device data using the 709H with optional 709H/TRACK software

HART Communication

The Fluke 709H offers a built-in HART modem for communication capability to perform the following commands:

- Read message, tag, descriptor and calibration date
- Read sensor PV information and PV output information
- Read long tag
- Write PV ranges (upper and lower)
- Enter/exit fixed current mode and set zero offset
- Trim DAC zero (mA output 4 mA) and trim DAC gain (mA output 20 mA)

The Fluke 709H also offers the ability to store up to twenty HART device configuration files for uploading via 709H/TRACK software, via the 709H/TRACK software. Configurations can be stored as .csv or .txt files. This allows the end user to document plant HART easily and it gives them direct access to key device parameters, allowing better troubleshooting, calibrating and maintaining of plant assets.

Specifications

| | |
|-----------------------------|--|
| Functions | mA source, mA simulate, mA read, mA read/loop power and volts read |
| Ranges | mA (0 to 24 mA) and Volts (0 to 30 V DC) |
| Resolution | 1 μ A on mA ranges and 1 mV on voltage range |
| Accuracy | 0.01% +/- 2 counts all ranges (@23°C +/- 5°C) |
| Operating temperature Range | -10 °C to 55 °C |
| Humidity range | 10 to 95% non-condensing |
| Stability | 20ppm of F.S. /°C from -10°C to 18°C and 28°C to 55°C |
| Display | 128 x 64 pixels, LCD Graphic w/backlight, .34" high digits |
| Loop Compliance Voltage | 24 V DC @ 20 mA |
| Over-Voltage Protection | 240 V AC |
| Overload Current Protection | 28 mA DC |
| EMC | EN61326 Annex A (Portable Instruments) |
| Power | 6 AAA alkaline |
| Size (HxWxD) | 150 x 90 x 30 mm |
| Battery life | ≥ 40 hours continuous use (measure mode using alkaline) |
| Weight | 0.3 kg |
| Warranty | Three years |

Recommended Accessories



709H TRACK
Software/Cable



C195
Case
See page 144



CAMO-C25
Camouflage
Carrying Case
See page 144



AC285
SureGrip™
Alligator Clips
See page 140



TP220
Industrial Test Probes
See page 139



TL220
SureGrip™ Industrial
Test Lead Set
See page 139



TL80A
Basic Electronic
Test Lead Set
See page 138



PV350
Pressure-Vacuum
Module
See page 146



80T-150UA
Universal
Temperature Probe
See page 143



80TK
Thermocouple Module
See page 143

Included Accessories

Fluke 709: AC175 Alligator Clip Set, TL75 420I Test Leads, Soft Case, 6 AAA Batteries (installed), Product Manual CD-ROM, Quick Reference Guide, Safety Information.

Fluke 709H: 754-8016 Alligator Clip Set, 75X-8014 Stackable Lead Set, TP220-420I Test Probes, AC280-500I SureGrip Hook Clips, Soft Case, 6 AAA Batteries (installed), Product Manual CD, Quick Reference Guide, Safety Information.

Ordering Information

| | |
|-------------------------|---|
| FLUKE-709 | Precision Loop Calibrator |
| FLUKE-709H | Precision Loop Calibrator with HART |
| FLUKE-709H/TRACK | HART Data-Logging Communications Software |

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Fluke 750 Series Documenting Process Calibrators

Calibrate/troubleshoot process control instrumentation



Fluke 753

Fluke 754



Whether you're calibrating instruments, troubleshooting a problem or running routine maintenance, Fluke's 750 Series Process Calibrators can help you get the job done faster. They do so many different tasks, so quickly and so well and they are the only process calibrators you need to carry.

- Measure volts, mA, RTDs, thermocouples, frequency, and ohms to test sensors, transmitters etc
- Source/simulate volts, mA, thermocouples, RTDs, frequency, ohms, and pressure to calibrate transmitters
- Power transmitters during test using loop supply with simultaneous mA measurement
- Measure/source pressure using any of Fluke's 48 Pressure Modules
- Measure and source simultaneously with one compact, rugged, reliable tool
- Create and run automated as-found/as-left procedures to satisfy quality programs or regulations and record and document results.
- Advanced features like autostep, custom units, user entered values during test, one-point and two-point switch testing, square root DP flow testing, programmable measurement delay and more
- Control the temperature of selected Hart Scientific Dry Blocks
- Handle fast pulsed RTD transmitters and PLCs in RTD source mode with 1 ms response time
- Three-year warranty

Fluke 753: A complete Documenting Calibrator

The 753 is a complete multifunction documenting calibrator and includes a PC interface that lets you load procedures, lists and instructions created with software—or unload data for printing, archiving, and analysis. The 753 can hold a full week of calibrations and procedures.

Fluke 754: Get HART-ability™

The Fluke 754 offers all of the capabilities of the 753, plus the ability to calibrate, maintain and troubleshoot HART instrumentation. Integrated HART communication functions permit you to monitor, control and calibrate HART instrumentation. It handles fast pulsed instruments such as RTD transmitters and PLCs responding to pulses within 1 ms.

Instrumentation Management Software

The Fluke 753 and 754 are compatible with Fluke 750SW DPC/TRACK2 software and with software from Cornerstone, Emerson, Honeywell, On Time Support, Prime Technologies, Yokogawa, Intools, Meridium and Beamex.

For more information, visit www.fluke.com.au

Recommended Accessories



750PXX
Pressure Modules
See page 119



750SW
DPC/TRACK2 Software



700PTP-1
Pneumatic
Test Pump
See page 146



C799
Field Soft Case
See page 144

Bundle Package



Fluke 754/750SW 754DPC and 750SW DPCTRACK2 Bundle Package

Purchase the Fluke 754 with the Fluke DPC/TRACK2™ software at a special bundle package price.

For more information, go to www.fluke.com/au/754

Included Accessories

Stackable Test Leads (3 sets), TP220 Test Probes (3 sets) with extended Tooth Alligator Clips (3 sets), AC280 Hook Clips (2 sets), BP7240 Li-ion Battery Pack, BC7240 Battery Charger, C799 Field Soft Case, USB Communication Cable, Getting Started Guide, Instruction Manual on CDROM, NIST Traceable Certificate of Calibration, DPCTrack™ 2 Sample Software that enables upload and printing of calibration records. HART Communication Cable (754 only).

Ordering Information

| | |
|-------------------------|---|
| FLUKE-753 | Documenting Process Calibrator |
| FLUKE-754 | Documenting Process Calibrator HART |
| FLUKE-754 /750SW | 754DPC and 750SW DPCTRACK2 Bundle Package |
| FLUKE-750SW | DPC/TRACK2 Software |

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Specifications

| Functions | Measure | Sourcing |
|---------------|--|------------------------------------|
| DC voltage | 0.020 % reading + 0.005 % full scale | 0.01 % output + 0.005 % full scale |
| DC current | 0.01 % reading + 5 µA | 0.01 % output + 0.003 mA |
| Resistance | 0.05 % reading + 50 mΩ | 0.01 % output + 240 mΩ |
| Frequency | 0 to 50 KHz, ± 0.5 Hz to 1100 Hz | 0 to 50 KHz, ± 0.1 Hz to 1099.9 Hz |
| Thermocouples | 0.3 °C | 0.2 °C |
| RTDs | 0.3 °C | 0.1 °C |
| Pressure | To 0.025 % of full scale, per pressure module specifications | |

General Specifications

| | |
|-----------------------|---|
| Battery life | Typically over eight hours |
| Internal battery pack | Li ion 4400 mAh |
| Battery replacement | Via twist lock fastener without opening calibrator; no tools required |
| Weight | 1.2 kg |
| Size (HxWxD) | 245 mm x 136 mm x 63 mm |
| RTDs | 0.3 °C |
| Pressure | To 0.025 % of full scale, per pressure module specifications |

Fluke 725/Ex and 726 Multifunction Process Calibrators



Fluke 726

Fluke 725



More calibration power!

- Two separate channels; measure, source and view process signals simultaneously
- Measure volts, mA, RTDs, thermocouples, frequency, and resistance to test sensors and transmitters
- Source/simulate volts, mA, thermocouples, RTDs, frequency, and pressure to calibrate transmitters
- Measure or source pressure using any of 29 Fluke 750Pxx Pressure Modules
- Source mA with simultaneous pressure measurement to conduct valve and I/P tests
- Perform fast linearity tests with auto step and auto ramp
- Power transmitters during test using 24 V loop supply and simultaneous mA measurement
- Store frequently-used test setups for later use
- Three year warranty

726 Additional features:

- More precise measurement and calibration source performance, accuracies of 0.01%
- Transmitter error% calculation
- Memory storage for up to 8 calibration results
- Frequency totaliser and frequency pulse train source mode
- HART mode inserts 250 ohm resistor in mA measure and source for compatibility with HART instrumentation
- Integrated pressure switch test
- Custom RTD curves, add calibration constants for certified RTD probes for enhanced temperature measurement

Specialty Model

Fluke 725Ex Intrinsically Safe Multifunction Process Calibrator



The Fluke 725Ex Intrinsically Safe Multifunction Process Calibrator is powerful yet easy-to-use. Combined with the Fluke 700Pxx Pressure Modules, the 725Ex is able to calibrate almost any process instrument likely to need service in any area where explosive gases may be present.

- ATEX safety rating II IG Ex ia IIB 171°C

See page 132 for more information.

Recommended Accessories



Specifications

| Function or Source | Range or Type | Resolution | Accuracy | Notes |
|--------------------|--|--|---|---|
| Voltage | 0 to 100 mV 725: 0 to 10V (source) 0 to 20V (source) 725/726: 0 to 30V (measure) | 0.01 mV 0.001 V 0.001 V 0.001 V | 0.01% 0.02% Rdg + 2 LSD | Max load, 1 mA |
| mA | 0 to 24 | 0.001 mA | 0.01%; 0.02% Rdg + 2 LSD | Max load, 725/726: 1000Ω 725Ex: 250Ω |
| mV (TC terminals) | -10.00 mV to +75.00 mV | 0.01 mV | 0.01% 0.025% of range + 1 LSD | |
| Ohms | 15Ω to 3200Ω 5Ω to 4000Ω | 0.01Ω to 0.1Ω | 0.10% to 1.0% 0.015% | |
| Hz - CPM | 2.0 to 1000 CPM 1 to 1000 Hz 1.0 to 10.0 kHz 10.0 to 15.0 kHz | 0.1 CPM 1 Hz 0.1 kHz 0.1 kHz | ±0.05% ±0.05% ±0.25% ±0.05% | Source; 5V p-p 1V - 20 V p-p squarewave, -0.1 V offset |
| Loop Supply | 725/726: 24 V DC 725Ex: 12 V DC | N/A | 10% | |
| T/C | J, K, T, E, L, N, U, XK | 0.1 °C, 0.1 °F | to 0.7 °C to 0.2 °C | |
| T/C | B, R, S, BP | 1 °C, 1 °F | to 1.7 °C to 1.2 °C | |
| RTDs | Cu (10) , Ni 120 (672) Pt 100, 200, 500, 1000 (385) Pt 100 (3916), Pt 100 (3926) | 0.01 °C 0.01 °F | to 0.15 °C | |
| | | 0.1 °C, 0.1 °F | to 0.2 °C | |

| Simultaneous function capability | Channel A | Channel B |
|--|-----------|-------------|
| 24.000 mA DC | M | M or S |
| 24.000 mA DC with 24 V loop supply | M | — |
| 100.00 mV DC | — | M or S |
| 30.000 V DC measure | M | — |
| 20.000 V DC measure; 10.000 V DC source; 20.000 V DC source | — | M or S |
| 15 to 3200 Ohms (725); 5 to 4000 Ohms (726) | — | M or S |
| Thermocouple J, K, T, E, R, S, B, M, L, U, N, XK, BP | — | M or S |
| RTD Cu 10 , Ni120; Pt100 (392); Pt100 (JIS); Pt100, 200, 500, 1000 (385), XK and BP | — | M or S |
| Pressure (requires Fluke 750PXX Modules) | M | M used as S |
| Frequency; 10 kHz; (15 kHz) | — | M or S |

M = Measure, S = Source/Simulate

Unique 726 features are in bold

Included Accessories

Test Leads, AC175 Test Clips, Stackable Test Leads (1 pair), User Manuals on CD (725Ex also includes CCD Control Drawing, Statement of Quality Assurance Practices, NIST Traceable Calibration Certificate)

Ordering Information

| | |
|--------------------|---|
| FLUKE-725 | Multifunction Process Calibrator |
| FLUKE-725EX | Intrinsically Safe Multifunction Process Calibrator |
| FLUKE-726 | Precision Multifunction Process Calibrator |

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke 712B, 714B and 724 Temperature Calibrators



Fluke 714B

Fluke 712B



Accuracy and simplicity

The Fluke 712B and 714B are designed for both simplicity, ease of use and high accuracy. They are a powerful combination of temperature and loop calibration.

Fluke 714B Thermocouple Calibrator

- Measure and simulate 17 different thermocouple types and millivolts
- Measure 4-20mA signals while simultaneously sourcing a temperature signal
- Hanging tool designed in and included with every unit
- Configurable 0% and 100% source settings for quick 25% linearity checks
- Linear ramp and 25% step auto ramp based on 0% and 100% settings
- Dual inputs and backlit display for easy interpretation of measurements
- Power down settings remembered at power up for easy restart of tests
- 1 and 2 year specifications and traceable certificate of calibration

Fluke 712B RTD Calibrator

- Measure and simulate 13 different RTD types and resistance
- Measure 4-20mA signals while simultaneously sourcing a temperature signal
- Configurable 0% and 100% source settings for quick 25% linearity checks
- Linear ramp and 25% step auto ramp based on 0% and 100% settings
- Dual inputs and backlit display for easy interpretation of measurements
- 1-year and 2-year specifications and traceable certificate of calibration

Specialty Model

Fluke 724 Temperature Calibrator

- Easy to read dual display allows for input and output simultaneous view
- Source/measure TCs, RTDs, volts and ohms
- Measure mA while supplying loop power
- 25 % and 100 % stepping, auto-step and auto ramp



Recommended Accessories



TPAK
Magnetic Meter Hanger
See page 147



AC220
SureGrip Alligator Clips
See page 140



TL175 (712/724)
TwistGuard™
Test Leads
See page 140



TL220 (712/724)
SureGrip™ Industrial
Test Lead Set
See page 139



80PK-24 (714/724)
SureGrip Air
Temperature Probe
See page 143



80PK-3A (712/724)
Surface Probe
See page 143



C101 (724)
Meter Hard Case
See page 145



C25 (712/714)
Large Soft Case
See page 144

Specifications

| General specifications | 712B | 714B |
|--|--|------|
| Operating temperature | -10 °C to 50 °C | |
| Operating altitude | 2,000 metres | |
| Relative humidity (% RH operating without condensation) | Non condensing 90 % (10 °C to 30 °C), 75 % (30 °C to 40 °C), 45 % (40 °C to 50 °C) (Without condensation) | |
| Vibration requirements | MIL-T-28800E, Class 2 | |
| Drop test requirements | 1 metre | |
| IP Rating | IEC 60529: IP52 | |
| Safety | IEC 61010-1, Max 30 V to earth, Pollution Degree 2 | |
| Power supply | 4 AA NEDA 1.5A IEC LR6 batteries | |
| DC mA measurement | | |
| Resolution | 0-24 mA | |
| Range | 0.001 mA | |
| Accuracy (% of reading + counts) | 0.010 % + 2 µA | |
| Ohms measurement | | |
| Ohms range | 0.00 Ω to 400.00 Ω, 400.0 Ω to 4000.0 Ω | |
| Accuracy (% of reading + counts) | 0.015 % + 0.05 Ω, 0.015 % + 0.5 Ω | |
| Ohms source | | |
| Ohms range | 1.0 Ω to 400.0 Ω, 1.00 Ω to 400.00 Ω, 400.0 Ω to 1500.0 Ω, 1500.0 Ω to 4000.0 Ω | |
| Accuracy (% of reading + counts) | 0.015 % + 0.1 Ω, 0.015 % + 0.05 Ω, 0.015 % + 0.5 Ω, 0.015 % + 0.5 Ω | |
| Resolution | | |
| 0.00 Ω to 400.00 Ω | 0.01 Ω | |
| 400.0 Ω to 4000.0 Ω | 0.1 Ω | |
| Millivolt measurement & source | | |
| Resolution | -10 mV to 75 mV | |
| Range | 0.01 mV | |
| Accuracy (% of reading + counts) | 0.015 % + 10 µA | |

Included Accessories

Fluke 714B/712B: Magnetic Hanging Tool, Batteries, Manual, Traceable Calibration Certificate, and Test Leads.

Fluke 724: Test Leads, AC175 Test Clips, Stackable Test Leads (1 pair).

Ordering Information

FLUKE-714B Thermocouple Temperature Calibrator

FLUKE-712B RTD Calibrator

FLUKE-724 Temperature Calibrator

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Fluke Calibration 9142, 9143 and 9144 Field Metrology Wells



Fluke 9144



Field temperature calibration with precision and speed

Whether you need to calibrate 4-20 mA transmitters or a simple thermostatic switch, a Field Metrology Well is the right tool for the job. With three models covering the range of -25 °C to 660 °C, this family of Metrology Wells calibrates a wide range of sensor types. The optional process version (models 914X-X-P) provides a built-in two-channel thermometer readout that measures PRTs, RTDs, thermocouples, and 4-20 mA transmitters which includes the 24 V loop supply to power the transmitter.

- Lightweight, portable, and fast
- Cool to -25 °C in 15 minutes and heat to 660 °C in 15 minutes
- Built-in two-channel readout for PRT, RTD, thermocouple, 4-20 mA current
- True reference thermometry with accuracy to ±0.01 °C
- Automate calibration with the Fluke 754 or Fluke 1586A or use on-board automation with process version
- **9142** -25 °C to 150 °C ± 0.2 °C Full Range
- **9143** 33 °C to 350 °C ± 0.2 °C Full Range
- **9144** 50 °C to 660 °C ± 0.35 °C to 420 °C ± 0.5 °C at 660 °C

Fluke Calibration 9103 and 9140 Field Dry-Well Calibrators



Fluke 9141



These two units beat every other comparable dry-well in the industry in performance, size, weight, convenience, ease of calibration, software, and price. In addition, the heating and cooling rate of each of these dry-wells is adjustable from the front panel, thermal switches can be checked for actuation testing, and multiple-hole inserts are available for a variety of probe sizes.

- Lightweight and very portable
- Two models ranging from -25 °C to 350 °C
- Accuracy to ± 0.25 °C
- Stability to ± 0.02 °C
- RS-232 and Interface-it software included
- Easy to recalibrate

Recommended Accessories



9142-CASE
Carrying Case
(914X only)



9308
Carrying Case
(9103/9140 only)



9936A LogWare III
Temperature Data
Logging Software

Complete Solution

Fluke 754 with 914X Series Field Metrology Well

By combining the automating and documenting capabilities of the Fluke 754 Documenting Process Calibrator (see page 108) with Fluke Calibration's intelligent and stable family of field drywells and micro-baths, you have the capability to test the entire loop.

This combination of equipment allows you to easily verify the characteristics of the temperature sensor and measurement electronics. Using this information, the entire loop can be adjusted to optimise system measurement performance.



| Models | Well inserts |
|--|--|
| | X in the model number to be replaced with A, B, C, D, E, or F as appropriate for the desired insert. |
| 9142-X Field Metrology Well, -25 °C to 150 °C | 9142-INSA Insert A, 9142, misc holes |
| 9142-X-P Field Metrology Well, -25 °C to 150 °C, process version | 9142-INSB Insert B, 9142, comp holes |
| | 9142-INSC Insert C, 9142, 6 x 0.25 in holes |
| 9143-X Field Metrology Well, 33 °C to 350 °C | 9143-INSA Insert A, 9143, misc holes |
| 9143-X-P Field Metrology Well, 33 °C to 350 °C, process version | 9143-INSB Insert B, 9143, comp holes |
| | 9143-INSC Insert C, 9143, 6 x 0.25 in holes |
| 9144-X Field Metrology Well, 50 °C to 660 °C | 9144-INSA Insert A, 9144, misc holes |
| 9144-X-P Field Metrology Well, 50 °C to 660 °C, process version | 9144-INSB Insert B, 9144, comp holes |
| | 9144-INSC Insert C, 9144, 6 x 0.25 in holes |

| Models | Specify X, X = A, B, C, or D included insert |
|--|---|
| 9103-X Field Dry-Well Calibrator, -25 °C to 140 °C | Insert A: 1/16" (1.6 mm), 1/8" (3.2 mm), 3/16" (4.8 mm), 1/4" (6.35 mm), 3/8" (9.5 mm) & 1/2" (12.7 mm) |
| 9140-X Field Dry-Well Calibrator, 35 °C to 350 °C | |
| | Insert B: 2 at 3/16" (4.8 mm), 2 at 1/4" (6.35 mm) & 2 at 3/8" (9.5 mm) |
| | Insert C: 6 at 1/4" (6.35 mm) |
| | Insert D: 2 at 3mm, 2 at 4 mm & 2 at 6 mm |

For more information, go to <http://as.flukecal.com>

Fluke Calibration 9100S and 9102S Handheld Dry-Well Temperature Calibrators



Fluke 9102S



Fluke 9100S



N10140

The Fluke Calibration 9100S and 9102S are the world's smallest, lightest and most portable dry-wells. With an easy-to-use interface and temperature range to 375 °C the 9100S is ideal for checking RTDs, thermocouple, and small bimetal thermometers in the field. For work in the temperature range of -10 °C to 122 °C the 9102S is ideal for dial gauges, digital thermometers, bulb switches, and other sensors that need calibration below ambient.

- Smallest dry-wells in the world
- Interchangeable and customisable inserts available
- Ranges from -10 °C to 375 °C
- Accuracy to ±0.25° C
- Stability of ±0.05 °C at 0 °C

| Models | | Optional accessories: |
|-----------------------------|--------------------------------------|---|
| 9102S | Handheld dry-well (-10 °C to 122 °C) | 3102-0: Insert, blank 3102-1: Insert, 1/16 in (1.6 mm) 3102-2: Insert, 1/8 in (3.2 mm) 3102-3: Insert, 3/16 in (4.8 mm) 3102-4: Insert, 1/4 in (6.4 mm) 3102-5: Insert, 5/16 in (7.9 mm) 3102-6: Insert, 3/8 in (9.5 mm) 3102-7: Insert, 7/16 in (11.1 mm) 3102-8: Insert, 5/32 in (4 mm) 9308: Rugged Carrying Case |
| Included inserts: | | |
| 1/4" (6.4 mm), 3/16 (4.8mm) | | |

Recommended Accessories



9308 Rugged Carrying Case



9300 Rugged Carrying Case

| Models | | Specify X, X = A, B, C, or D Fixed-Block Options |
|----------------------------|-------------------------------|---|
| 9100S-X | Handheld dry-well (to 375 °C) | Block A: 1/4" (6.4 mm), 5/32" (4 mm) 1/16" (1.6 mm), 1/8" (3.2 mm) 2 at 3/16" (4.8 mm) Block B: 3/16" (4.8 mm), 1/8" (3.2 mm) 3/8" (9.5 mm), 1/4" (6.4 mm) Block C: 1/2" (12.7 mm), 3/16" (4.8 mm) Block D: 2 at 3 mm, 2 at 4 mm, 2 at 6 mm |
| Optional accessories: | | |
| 9300: Rugged Carrying Case | | |

Fluke Calibration 1586A Super-DAQ Precision Temperature Scanner



Fluke 1586A

The 1586A Super DAQ automates calibration when connected to a Fluke Calibration temperature source. It is a powerful thermometer readout and the most accurate and flexible temperature data acquisition system on the market

- Measure thermocouples, PRTs, thermistors, DC voltage, DC current, and resistance
- Best-in-class temperature measurement accuracy
- Fluke DAQ 6.0 software incl. to visualise & handle data
- PRTs: ±0.005 °C
- Thermocouples: ±0.3 °C (Type K,T,J w/ internal CJC)
- Thermistors: ±0.002 °C

| Models | | Accessories: |
|--|---|--|
| Super-DAQ and DAQ-STAQ Multiplexer | | |
| 1586A/1DS | Super-DAQ, 1 DAQ-STAQ Multiplexer | 1586-2586: High-Capacity Module without Relay Card |
| 1586A/1DS/C | Super-DAQ, 1 DAQ-STAQ Multiplexer, Accredited Calibration | 1586-2586-KIT: High-Capacity Module with Relay Card |
| 1586A/2DS | Super-DAQ, 2 DAQ-STAQ Multiplexers | 1586-2588: DAQ-STAQ Multiplexer without Adapter Card |
| 1586A/2DS/C | Super-DAQ, 2 DAQ-STAQ Multiplexers, Accredited Calibration | 1586-2588-KIT: DAQ-STAQ Multiplexer, Adapter Card, Interface Cable |
| Super-DAQ and High-Capacity Module | | |
| 1586A/1HC | Super-DAQ, 1 High-Capacity Module | 1586-2588-CBL: DAQ-STAQ Multiplexer Interface Cable |
| 1586A/1HC/C | Super-DAQ, 1 High-Capacity Module, Accredited Calibration | Y1586S: Rack Mount Kit, Single (half rack) |
| 1586A/2HC | Super-DAQ, 2 High-Capacity Modules | Y1586D: Rack Mount Kit, Dual (full rack) |
| 1586A/2HC/C | Super-DAQ, 2 High-Capacity Modules, Accredited Calibration | 1586-CASE: Super-DAQ Carrying Case (mainframe and internal modules) |
| Super-DAQ, High-Capacity Module and DAQ-STAQ Multiplexer | | |
| 1586A/DS-HC | Super-DAQ, 1 High-Capacity Module, 1 DAQ-STAQ Multiplexer | 1586/DS-CASE: Super-DAQ/DAQ-STAQ Carrying Case (main frame and module) |
| 1586A/DSHC/C | Super-DAQ, 1 High-Capacity Module, 1 DAQ-STAQ Multiplexer, Accredited Calibration | |

Ordering Information

- 9100S-A-256 HDRC Handheld Dry-Well, BLOCK A, HIGH-TEMP
- 9100S-B-256 HDRC Handheld Dry-Well, BLOCK B, HIGH-TEMP
- 9100S-C-256 HDRC Handheld Dry-Well, BLOCK C, HIGH-TEMP
- 9100S-D-256 HDRC Handheld Dry-Well, BLOCK D, HIGH-TEMP
- 9102S-256 HDRC Handheld Dry-Well, LOW-TEMP
- 1586A Super-DAQ Precision Temperature Scanner
- 1586A/1DS Super-DAQ Precision Temperature Scanner, 1 DAQ-STAQ Multiplexer
- 1586A/2DS Super-DAQ Precision Temperature Scanner, 2 DAQ-STAQ Multiplexers
- 1586A/DS-HC Super-DAQ Precision Temperature Scanner, 1 High-Capacity Module, 1 DAQ-STAQ Multiplexer
- 1586A/1HC Super-DAQ Precision Temperature Scanner, 1 High-Capacity Module
- 1586A/2HC Super-DAQ Precision Temperature Scanner, 2 High-Capacity Modules

Optional: Accredited Calibration available (add "/C" to the above model numbers).

For more information, go to <http://as.flukecal.com>

Fluke Calibration 1523 and 1524 Reference Thermometers



Fluke 1524

Fluke 1523

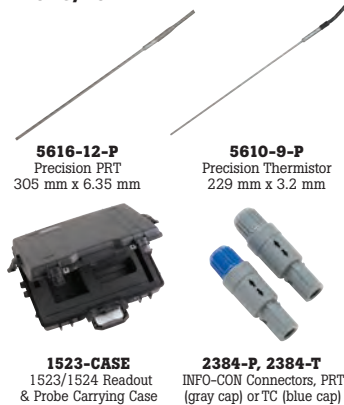


The 1523/1524 Reference Thermometers from Fluke Calibration measure, graph and record PRTs, thermocouples and thermistors. You can measure up to 0.3 seconds per sample and plot and scale trends in real time. Both thermometers have memory for up to 25 readings with statistics. The 1524 has two inputs with data logging memory for 15,000 measurements with date and time stamps.

- High accuracy PRTs: ± 0.011 °C; Thermocouples: ± 0.24 °C; Thermistors: ± 0.002 °C
- A simple user interface to see trends quickly
- Smart connectors to load probe information automatically
- Use a PC and optional LogWare II software to monitor and log more data over time

| Models | Included accessories |
|---------|--|
| | <i>Fluke 1523 Bundled with:</i> |
| 1523-P1 | 5616 PRT (-200 °C to 420 °C, 100 ohm (1/4 x 12 inch)), Universal TC INFO-CON Connector, TPAK and Case |
| 1523-P2 | 5628 PRT (-200 °C to 660 °C, 25 ohm (1/4 x 12 inch)), Universal TC INFO-CON Connector, TPAK and Case |
| 1523-P3 | 5627A PRT (-200 °C to 420 °C, 100 ohm (1/4 x 12 inch)), Universal TC INFO-CON Connector, TPAK and Case |
| | <i>Fluke 1524 Bundled with:</i> |
| 1524-P1 | 5616 PRT, Universal TC INFO-CON Connector, TPAK and Case |
| 1524-P2 | 5628 PRT, Universal TC INFO-CON Connector, TPAK and Case |
| 1524-P3 | 5627A PRT, Universal TC INFO-CON Connector, TPAK and Case |

Recommended Accessories 1523/1524



Recommended Accessories 1551A/1552A



Fluke Calibration 7526A Precision Process Calibrator



The Fluke Calibration 7526A Precision Process Calibrator offers the best balance of economy and accuracy for benchtop calibration of temperature and pressure process instrumentation.

Easily calibrate RTD and thermocouple readouts, pressure gauges, temperature transmitters, digital process simulators, data loggers, multimeters and more.

- Sources and measures DC voltage, current, resistance, RTDs and thermocouples
- Precision pressure measurement using Fluke 750P Series Pressure Modules
- Measures 4-20 mA loop current
- Includes certificate of calibration traceable to national standards
- Thermocouple output/input: -10 mV to 75 mV \pm (30 ppm of reading + 2 μ V)
- Transmitter output: 0 mA to 24 mA (input with loop power) \pm (100 ppm + 1 μ A)
- Resistance output: 5 Ω to 400 Ω \pm 0.015 Ω

Fluke Calibration 1551A and 1552A Stik Thermometers



Fluke 1552A



Best substitute for precision mercury-filled glass thermometers

The Fluke 1551A and 1552A Stik Thermometers are an accurate and repeatable substitute to mercury-in-glass thermometers. Whether working outdoors in environments where potentially explosive gases may be present or on the floor of a processing plant, these intrinsically-safe, battery operated, portable reference thermometer are designed to go where you work.

- User-configurable temperature Trend/Stability indicator
- Optional data logging to internal memory
- 300-hour battery life
- NVLAP-accredited, NIST-traceable calibration included
- Accuracy of ± 0.05 °C (± 0.09 °F) over full range
- Intrinsically safe (ATEX and IECEx compliant)
- Two models to choose from (-50 °C to 160 °C or -80 °C to 300 °C)

Specifications

| Models | Included accessories |
|-----------|---|
| 1551A-9* | 1551A Ex Thermometer, Fixed RTD, -50 °C to 160 °C, 4.8 mm x 229 mm |
| 1551A-12* | 1551A Ex Thermometer, Fixed RTD, -50 °C to 160 °C, 6.35 mm x 305 mm |
| 1551A-20* | 1551A Ex Thermometer, Fixed RTD, -50 °C to 160 °C, 6.35 mm x 508 mm |
| 1552A-12* | Thermometer, Fixed PRT, -80 °C to 300 °C, 6.35 mm x 305 mm |

*Datalogging option models also available as -DL

For more information, go to <http://as.flukecal.com>

Fluke 717, 718, 718Ex and 719 Pressure Calibrators

Accurate and rugged, temperature calibration tools



Fluke 719



Fluke 717 Pressure Calibrators

- Measure up to 10,000 psi/690 bar sensor (10000G model)
- Compatible with non-corrosive gases and liquids

Fluke 718 Pressure Calibrators

- 1, 30, 100 and 300 psi ranges available
- Pump to 300 psi, 20 bar with internal pump (718-300G)
- 718-1G includes special low volume pump and high measurement resolution for low pressure calibration

Fluke 719 Electric Pressure Calibrators

- Electric pump enables one-handed pressure pumping and makes pressure calibration quicker and easier
- Best in class 0.025 % pressure measurement accuracy
- Programmable pump limit settings can eliminate over-pressurisation—set 'pump to' pressure values
- Two ranges, 30 psi and 100 psi



Fluke 718



Fluke 717

Fluke 717, 718 and 719 common features

- Pressure switch test makes a difficult task easy, captures set, reset and deadband values of a pressure switch
- 717 and 718 measure pressure to 0.025 % of full scale with internal sensor
- Measure mA with 0.015 % accuracy and 0.001 mA resolution, while sourcing 24 V loop power

Specialty Model

Fluke 718Ex Intrinsically Safe Pressure Calibrator

The Fluke 718Ex offers a convenient, self contained solution for pressure measurements and calibration.



- ATEX II 1 G Ex ia IIC T4
- 30, 100, and 300 psi ranges (2, 7, and 20 bar)
- Pressure measurement to 0.05% of full span, using an internal pressure sensor.
- Pressure measurement to 200 bar using any of eight intrinsically safe Fluke 700PEX Pressure Modules

For more information, see page 132

Recommended Accessories



700LFP
In-Line Filter
See page 146



700LTP-1
Low Pressure Test Pump
See page 146



700HTP-2
Hydraulic Test Pump
See page 146



C116
Large Soft Case
See page 144

Included Accessories

Fluke 717/718/719: Protective Yellow Holster with Test Lead Storage, Instructions Sheet, 9V Alkaline Battery (1X 717, 2X 718 & 719), Test Leads and Alligator Clips, Hose Kit (719 only), NIST-Traceable Calibration Report & Data.

Fluke 718Ex: Protective Red Holster, TL75 Test Leads, AC72 Test Clips, CD User Manual, Fluke 718Ex CCD, NIST-Traceable Calibration Report & Data.

Ordering Information

FLUKE-717 Pressure Calibrator, 10,000G - 1G 10,000 PSI - 1PSI (10 models)

FLUKE-718 Pressure Calibrator 300G, 100G, 30G

FLUKE-718Ex Intrinsically Safe Pressure Calibrator 300G, 100G, 30G

FLUKE-719 Electric Pressure Calibrator 100PSI, 30 PSI 100G, 30G

Specifications

| Models | Range | Resolution | Comment |
|------------------------|---|---|---|
| 717-1G | +/- 1 psi, 27.5 in H ₂ O, (-7 - +7 kPa) | +0.0001 psi, 0.0001 kPa, 0.0001 in H ₂ O | Fluke 718 dry air only and includes on board pump |
| 718-1G | | | |
| 717-15G | -12 to 15 psi, -83 to 103 kPa | 0.001 ps1, 0.01 kPa, 0.01 in H ₂ O | — |
| 717-30G | -12 to + 30 psi, (-83 to 207 kPa) | 0.001 psi, 0.001 kPa, 0.001 in H ₂ O | Fluke 718 and Fluke 719 dry air only and includes on board pump |
| 718-30G* and 719-30G | | | |
| 717-100G | | | |
| 718-100G* | -12 to + 100 psi, (-83 to 690 kPa) | 0.01 psi, 0.01 kPa, 0.01 in H ₂ O | Fluke 718 and Fluke 719 dry air only and includes on board pump |
| 717-300G | -12 to +300 psi, (-83 to +2070 kPa) | 0.01 psi, 0.01 kPa, 0.01 in H ₂ O | Fluke 718 dry air only and includes on board pump |
| 718-300G* and 719-100G | | | |
| 717-500G | 0-500 psi, 0-3450 kPa | 0.01 psi, 0.1 kPa | Compatible with non-corrosive gases and fluids |
| 717-1000G | 0-1000 psi, 0-6900 kPa | 0.01 psi, 0.1 kPa | Compatible with non-corrosive gases and fluids |
| 717-1500G | 0-1500 psi, 0-10342 kPa | 0.1 psi, 1 kPa | Compatible with non-corrosive gases and fluids |
| 717-3000G | 0-3000 psi, 0-20700 kPa | 0.1 psi, 1 kPa | Compatible with non-corrosive gases and fluids |
| 717-5000G | 0-5000 psi, 0-34500 kPa | 0.1 psi, 1 kPa | Compatible with non-corrosive gases and fluids |
| 717-10000G | 0-10000 psi, 0-69000 kPa | 1 psi, 1 kPa | Compatible with non-corrosive gases and fluids |
| Pressure accuracy | 0.035 % of range, 1 year. 0.025 % for 6 months, 717 and 718-1G: 0.05 % 6 months, 1 year, 718 and 717-300G 0.035 % 6 months, 0.05 % 1 year | | |
| mA measurement | 0-24 mA range | 0.001 mA resolution | Accuracy: ± 0.015 % + 1 count |
| Loop power | 24 V DC | | Accuracy: ± 10 % |
| Warranty | Three-year on calibrator, one-year on pump. | | |

*Intrinsically safe models available, see page 132.

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Fluke 719Pro Pressure Calibrators



Fluke 719Pro



Eliminate the hassle of hand pumping!

The Fluke 719Pro is an exciting enhancement of the popular original 719 pressure calibrators. Notable improvements include expanding the pressure measurement range of the 100 PSI model up to 150 PSI and the addition of a 300 PSI range. The 719Pro adds a backlit display and precision temperature measurement with the addition of an accessory RTD probe available as a new accessory.

- Electric pump for one handed pressure calibration
- Best in class pressure measurement uncertainty of 0.025%
- Variable release rate bleed valve for easy pressure adjustment
- 30 PSI, 150 PSI and the long requested 300 PSI (2,10 and 20 bar) pressure ranges
- Programmable pressure calibrator pump limit eliminates over-pressurisation and allows the user to program target pressures for pumping
- Extended pressure measurement range with any of 48 750PXX Pressure Modules
- Source mA with simultaneous pressure measurement to test valves and I/Ps
- Simulate mA signals to troubleshoot 4-20 mA loops
- Test pressure switches with built in switch test function
- Power transmitters during test using 24 V loop supply with simultaneous mA measurement

Pressure Modules

Fluke 750 Series Pressure Modules



- 48 Pressure Modules
- 0.025 % reference uncertainty
- Ranges from 1.000 in H₂O (0.2491 kPa) to 10,000 psi (68.948 MPa)
- Gage, differential, dual range, absolute and vacuum measurement models
- Rugged cases protect the modules from harsh environments
- Temperature compensated 0 °C to 50 °C

For more information see page 119



Fluke Process Calibrators in this catalogue displaying the Pressure Enabled symbol display readings from the 750 Series Pressure Modules.

Specifications

| Pressure measurement | Range | Resolution | Accuracy |
|----------------------|---------------------------------|-----------------------|-----------------------------------|
| Fluke-719Pro-30G | -12 to 30 PSI / -0.8 to 2 bar | 0.001 PSI, 0.0001 bar | ± 0.025 % of full scale, 6 months |
| Fluke-719Pro-150G | -12 to 150 PSI / -0.8 to 10 bar | 0.01 PSI, 0.001 bar | |
| Fluke-719Pro-300G | -12 to 300 PSI / -0.8 to 20 bar | 0.01 PSI, 0.001 bar | |

| Function | Range | Resolution | Accuracy (1 year) |
|---|---------------|------------|---|
| mA DC (simulation & measurement) | 0-24 mA DC | 0.001 mA | ± 0.015 % of reading ± 2 counts |
| Volts DC (measurement only) | 30 V DC | 0.001 V | ± 0.015 % of reading ± 2 counts |
| Temperature (measurement only, Pt100 RTD) | -50 to 150 °C | 0.01 °C | Temperature ± 0.1 °C |
| Loop power supply | 24 V DC | N/A | 24 mA at 24 V |
| Temperature effect (all functions) | | | Add ± 0.002 % F.S./°C for temps outside of 15 °C to 35 °C |

| Environmental | |
|---|------------------|
| Operating temperature | -10 °C to +50 °C |
| Storage temperature (without batteries) | -20 °C to +60 °C |

| Power requirements | |
|--------------------|--|
| Battery | 8 standard Alkaline AA batteries |
| Battery life | 300 pump cycles to 150 PSI minimum; 1000 pump cycles to 30 PSI; 100 pump cycles to 300 PSI minimum |

| Physical | |
|--------------|----------------------------|
| Size (HxWxD) | 24.13 cm x 11.18 cm x 7 cm |
| Weight | With holster 1.2 kg |

| Connections | |
|-----------------|--------------------------|
| Pressure | 1/8 inch female NPT |
| Electrical | Standard banana jacks |
| RTD | 4 pin miniature circular |
| External module | 6 pin miniature circular |

Included Accessories

Fluke 719Pro: Test Leads with Alligator Clips, Printed User Manual and User Manual on CD-ROM, Fluid Trap, Carrying Case, 1/4 inch NPT to 1/4 inch ISO Adapter, Accessory Hose Kit with (2) 1/8 inch Quick Fit Adapters and 1 metre of hose, Traceable Certificate of Calibration.

Ordering Information

| | |
|--------------------------|--|
| FLUKE-719PRO-30G | Electric Pressure Calibrator, 30PSIG |
| FLUKE-719PRO-150G | Electric Pressure Calibrator, 150PSIG |
| FLUKE-719PRO-300G | Electric Pressure Calibrator, 300PSIG |
| FLUKE-71X-TRAP | Liquid & Dirt Trap for Fluke 718, 719 and 719Pro |

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke 721 and 721Ex Precision Pressure Calibrators



Fluke 721



Pressure calibration and temperature measurement for custody transfer applications

The Fluke 721 and 721Ex Precision Pressure Calibrators with dual isolated pressure sensors are the ideal tool for gas custody transfer applications allowing you to take simultaneous static and differential pressure measurements with a single tool.

The 721 and 721Ex can be configured by selecting either a 16 PSI (1.1 bar) or 36 psi (2.48 bar) low pressure sensor then add any of 7 high pressure ranges including 100, 300, 500, 1000, 1500, 3000 or 5000 psi (6.9, 20, 24.5, 69, 103.4, 200, 345 bar).

- Intrinsically Safe (721Ex version only) – IECEx and Atex Ex ia IIB T3 Gb (Zone 1)
- Ideal for gas flow calibration (custody transfer) applications
- Two isolated, stainless steel, pressure sensors with 0.025% accuracy
- Switch test on both pressure inputs
- Pt100 RTD input for temperature measurement, (probe optional)
- Measures 4–20 mA signals
- Internal 24 V loop power supply can power a transmitter under test (721 models only)

Speciality Model

Fluke 721Ex Precision Pressure Calibrator

The ideal tool for gas custody transfer applications in potentially explosive atmospheres.



For more information, see page 132

Recommended Accessories



720RTD
RTD Probe for
721 & 791Pro



720RTDA
Universal RTD Adapter
for 721 and 719Pro

Included Accessories

Fluke 721/Ex: Soft Case, 4 AA Batteries, Manual, Traceable Calibration Certificate, Test Leads.

Ordering Information

| | |
|---|--|
| FLUKE-721-3650 | Dual Sensor Pressure Calibrator |
| FLUKE-721-3630 | Dual Sensor Pressure Calibrator |
| FLUKE-721-3615 | Dual Sensor Pressure Calibrator |
| FLUKE-721-3610 | Dual Sensor Pressure Calibrator |
| FLUKE-721-3605 | Dual Sensor Pressure Calibrator |
| FLUKE-721-3603 | Dual Sensor Pressure Calibrator |
| FLUKE-721-3601 | Dual Sensor Pressure Calibrator |
| FLUKE-721-1650 | Dual Sensor Pressure Calibrator |
| FLUKE-721-1630 | Dual Sensor Pressure Calibrator |
| FLUKE-721-1615 | Dual Sensor Pressure Calibrator |
| FLUKE-721-1610 | Dual Sensor Pressure Calibrator |
| FLUKE-721-1605 | Dual Sensor Pressure Calibrator |
| FLUKE-721-1603 | Dual Sensor Pressure Calibrator |
| FLUKE-721-1601 | Dual Sensor Pressure Calibrator |
| <i>Intrinsically Safe models available (add Ex to the above model numbers).</i> | |
| FLUKE-720RTD | RTD Probe for Fluke 721 and 719Pro |
| FLUKE-720RTDA | Universal RTD Adapter for Fluke 721 and 719Pro |

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Specifications 1 year

| Model | Low Pressure Sensor | | | High Pressure Sensor | | | | | | |
|--|---|------------------------|----------------------------|---|------------------------|----------------------------|----------------------------|--|----------------------|----------------------------|
| | Range 1 | Resolution | Accuracy | Range 2 | Resolution | Accuracy | | | | |
| Fluke-721-1601 Fluke-721Ex-1601 16PSIG, 100PSIG | -14psi to +16psi -0.97bar to 1.1bar | 0.001psi, 0.0001bar | 0.025% of full scale | -12psi to +100psi -0.83bar to 6.9bar | 0.01psi 0.0001bar | 0.025% of full scale | | | | |
| Fluke-721-1603 Fluke-721Ex-1603 16PSIG, 300PSIG | | | | -12psi to +300psi -0.83bar to 20bar | 0.01psi 0.001bar | | | | | |
| Fluke-721-1605 Fluke-721Ex-1605 16PSIG, 500PSIG | | | | -12psi to +500psi -0.83bar to 34.5bar | 0.01psi 0.001bar | | | | | |
| Fluke-721-1610 Fluke-721Ex-1610 16PSIG, 1000PSIG | | | | Opsi to +1000psi 0.00bar to 69bar | 0.1psi 0.001bar | | | | | |
| Fluke-721-1615 Fluke-721Ex-1615 16PSIG, 1500PSIG | | | | Opsi to +1500psi 0.00bar to 103.4bar | 0.1psi 0.001bar | | | | | |
| Fluke-721-1630 Fluke-721Ex-1630 16PSIG, 3000PSIG | | | | Opsi to +3000psi 0.00bar to 200bar | 0.1psi 0.01bar | | | | | |
| Fluke-721-1650 Fluke-721Ex-1650 16PSIG, 5000PSIG | | | | 0 psi to +5000 psi 0.00 bar to 345 bar | 0.1psi 0.01bar | | 0.035% of full scale | | | |
| Fluke-721-3601 Fluke-721Ex-3601 36PSIG, 100PSIG | | | | -14psi to +36psi -0.97bar to 2.48bar | 0.001psi, 0.0001bar | | 0.025% of full scale | -12psi to +100psi -0.83bar to 6.9bar | 0.01psi 0.0001bar | 0.025% of full scale |
| Fluke-721-3603 Fluke-721Ex-3603 36PSIG, 300PSIG | | | | | | | | -12psi to +300psi -0.83bar to 20bar | 0.01psi 0.001bar | |
| Fluke-721-3605 Fluke-721Ex-3605 36PSIG, 500PSIG | | | | | | | | -12psi to +500psi -0.83bar to 34.5bar | 0.01psi 0.001bar | |
| Fluke-721-3610 Fluke-721Ex-3610 36PSIG, 1000PSIG | Opsi to +1000psi 0.00bar to 69bar | 0.1psi 0.001bar | | | | | | | | |
| Fluke-721-3615 Fluke-721Ex-3615 36PSIG, 1500PSIG | Opsi to +1500psi 0.00bar to 103.4bar | 0.1psi 0.01bar | | | | | | | | |
| Fluke-721-3630 Fluke-721Ex-3630 36PSIG, 3000PSIG | Opsi to +3000psi 0.00bar to 200bar | 0.1psi 0.01bar | | | | | | | | |
| Fluke-721-3650 Fluke-721Ex-3650 36PSIG, 5000PSIG | Opsi to +5000psi 0.00bar to 345bar | 0.1psi 0.01bar | 0.035% of full scale | | | | | | | |

Fluke 700G Precision Pressure Test Gauges



Fluke 700G



Pressure Gauges designed to handle all your Pressure Calibration needs

With best-in-class accuracy and measurements, the Fluke 700G Series Precision Pressure Test Gauges were designed to handle all of your pressure calibration needs. The 700G series pressure test gauges are rugged and easy to use, with twenty three models ranging from ± 10 inH₂O/20 mbar to 10,000 psi/690 bar including absolute pressure ranges.

When combined with the Fluke 700PTPK or 700HTPK you've got a complete pressure testing solution for up to 600 psi (40 bar) with the PTP-1 pneumatic pump and up to 10,000 psi (690 bar) with the HTP-2 hydraulic pump.

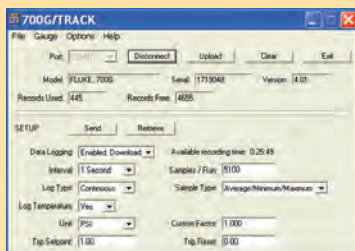
- Precision pressure measurement from ± 10 inH₂O/20 mbar to 10,000 psi/690 bar
- Absolute pressure measurement ranges 15, 30, 100, 300 psia
- Accuracy to 0.05 % of full scale
- Reference class gauge accuracies to 0.04 % of reading
- Easy to use, rugged construction for reliable performance
- CSA; Class 1, Div 2, Groups A-D rating
- ATEX rating: II 3 G Ex nA IIB T6
- Combine the Pneumatic Test Pump Kits and Hydraulic Test Pump Kits with any Fluke-700G Series Gauge, 1,000 psi (69 bar) or less, to make a complete pressure testing
- Log up to 8,493 pressure measurements to memory (requires 700G/TRACK software)



Specifications

| | |
|---------------------|--|
| Size (HxWxD) | 12.7 cm x 11.4 cm x 3.7 cm |
| Pressure connection | 1/4 in NPT Male |
| Housing/Weight | Cast ZNAl 0.56 kg with holster |
| Display | 5.5 digits, 16.53 mm high 20-segment bar graph, 0 to 100% |
| Power | Three AA alkaline batteries |
| Battery life | 1,500 hours without backlight (continuous on), 2,000 hours at slow sample rate |
| Warranty | Three years |

700G/TRACK Logging Software



- Use with Fluke 700G Series Gauges to perform real time data logging to a PC
- Download logging configurations to the 700G Series Gauges for a remote logging event
- Configure logging event reading rate, duration and measurement units
- Upload measurements logged remotely and display or export measurements
- Includes communication cable for connection to a PC

Recommended Kits

Buy more, Save more



Fluke-700PTPK Pneumatic Test Kit

- Combine with any Fluke-700G Series Gauge, 1,000 psi (69 bar) or less, to make a complete pressure testing kit
- Connect the 700G Series gauge directly to the included PTP-1 hand pump



Fluke 700HTPK Hydraulic Test Kit

- Combine with any Fluke-700G Series Gauge, 1,000 psi (69 bar) range or greater, to make a complete pressure testing kit
- Generate pressure up to 10,000 psi, 690 bar with the included 700HTP-2 test pump
- Hard case protects pump and gauge and allows gauge to remain connected to the pump



Fluke-700PTPK2 Premium Pneumatic Test Pump Kit

- Pneumatic Hand Pump
- Premium, no tools required gauge connector
- 1 premium transmitter test hose kit and adapters



Fluke-700HTPK2 Premium Hydraulic Test Pump Kit

- Hydraulic Hand Pump
- Premium, no tools required gauge connector
- 1 premium transmitter test hose kit and adapters

For more details see page 136

Specifications

| Model | Range | Resolution | Accuracy | Burst Pressure |
|---------------|---|---------------------------|--|-----------------------|
| Fluke-700G01 | -10 to +10 inH2O -20 mbar to 20 mbar | 0.001 inH2O 0.001 mbar | Positive Pressure \pm 0.1% of range Vacuum \pm 0.1% of range | 3 psi 210 mbar |
| Fluke-700G02 | -1 to +1 psi -70 mbar to 70 mbar | 0.0001 psi 0.001 mbar | | 5 psi 350 mbar |
| Fluke-700G04 | -14 psi to 15 psi -.97 bar to 1 bar | 0.001 psi 0.0001 bar | Positive Pressure \pm 0.05% of range Vacuum \pm 0.1% of range | 60 psi 4 bar |
| Fluke-700G05 | -14 psi to 30 psi -.97 bar to 2 bar | 0.001 psi 0.0001 bar | | 120 psi 8 bar |
| Fluke-700G06 | -12 psi to 100 psi -.83 bar to 6.9 bar | 0.01 psi 0.0001 bar | | 400 psi 26 bar |
| Fluke-700G27 | -12 psi to 300 psi -.83 bar to 20 bar | 0.01 psi 0.001 bar | | 1200 psi 80 bar |
| Fluke-700G07 | -12 psi to 500 psi -.83 bar to 34 bar | 0.01 psi 0.001 bar | | 2000 psi 138 bar |
| Fluke-700G08 | -14 psi to 1000 psi -.97 bar to 69 bar | 0.1 psi 0.001 bar | | 4000 psi 266 bar |
| Fluke-700G10 | -14 to 2000 psi -.97 bar to 140 bar | 0.1 psi 0.01 bar | | 8000 psi 550 bar |
| Fluke-700G29 | -14 psi to 3000 psi -.97 bar to 200 bar | 0.1 psi 0.01 bar | | 10000 psi 690 bar |
| Fluke-700G30 | -14 psi to 5000 psi -.97 bar to 340 bar | 0.1 psi 0.01 bar | | 10000 psi 690 bar |
| Fluke-700G31 | -14 psi to 10000 psi -.97 bar to 690 bar | 1 psi 0.01 bar | | 20000 psi 1035 bar |
| Fluke-700GA4 | 0 to 15 psia 0 to 1 bar absolute | 0.001 psi 0.0001 bar | 0.05% of range | 60 psi 4 bar |
| Fluke-700GA5 | 0 to 30 psia 0 to 2 bar absolute | 0.001 psi 0.0001 bar | | 120 psi 8 bar |
| Fluke-700GA6 | 0 to 100 psia 0 to 6.9 bar absolute | 0.01 psi 0.0001 bar | | 400 psi 27 bar |
| Fluke-700GA27 | 0 to 300 psia 0 to 20 bar absolute | 0.01 psi 0.001 bar | | 1200 psi 80 bar |
| Fluke-700RG05 | -14 to +30 psi -0.97 to +2 bar | 0.001 psi 0.0001 bar | Positive Pressure \pm 0.04% of reading \pm 0.01% of range, Vacuum \pm 0.1% of range | 90 psi 6 bar |
| Fluke-700RG06 | -12 to 100 psi -0.83 to 6.9 bar | 0.01 psi 0.0001 bar | | 400 psi 27 bar |
| Fluke-700RG07 | -12 to 500 psi -0.83 to 34 | 0.01 psi 0.001 bar | | 2000 psi 138 bar |
| Fluke-700RG08 | -14 to 1000 psi -0.97 to 69 bar | 0.1 psi 0.001 bar | | 4000 psi 275 bar |
| Fluke-700RG29 | -14 to 3000 psi -0.97 to 200 bar | 0.1 psi 0.01 bar | | 10000 psi 690 bar |
| Fluke-700RG30 | -14 to 5000 psi -0.97 to 340 bar | 0.1 psi 0.01 bar | | 15000 psi 1035 bar |
| Fluke-700RG31 | -14 to 10000 psi -0.97 to 690 bar | 1 psi 0.01 bar | | 20000 psi 1380 bar |

700R Ranges: Temperature Compensation 0 e°C to 50°C to rated accuracy.
For temperatures from -10 °C to 0 °C and 50 °C to 55 °C, add .005 % FS/°C.

Media compatibility:

- 10 inH²O, 1, 15, 30 psi: any clean dry non-corrosive gas
- 100, 300, 500, 1000 psi: any liquids or gases compatible with 316 stainless steel and above
- 10000 psi: any non-flammable, non-toxic, non-explosive, non-oxidising liquid or gas compatible with 316 stainless steel.

Included Accessories

Manual on CD-ROM, Traceable Certificate of Calibration, 1/4" NPT to 1/4" ISO Adapter.

Ordering Information

| | |
|-----------------------|---|
| FLUKE-700G01 | Pressure Gauge, \pm 10 inH2O WC (0.4 PSIG) |
| FLUKE-700G02 | Pressure Gauge, \pm 30 inH2O WC (1 PSIG) |
| FLUKE-700G04 | Pressure Gauge, \pm 15 PSIG |
| FLUKE-700G05 | Pressure Gauge, 30 PSIG |
| FLUKE-700G06 | Pressure Gauge, 100 PSIG |
| FLUKE-700G27 | Pressure Gauge, 300 PSIG |
| FLUKE-700G07 | Pressure Gauge, 500 PSIG |
| FLUKE-700G08 | Pressure Gauge, 1,000 PSIG |
| FLUKE-700G10 | Pressure Gauge, 2,000 PSIG |
| FLUKE-700G29 | Pressure Gauge, 3,000 PSIG |
| FLUKE-700G30 | Pressure Gauge, 5,000 PSIG |
| FLUKE-700G31 | Pressure Gauge, 10,000PSIG |
| FLUKE-700GA4 | Pressure Gauge, 15PSIA |
| FLUKE-700GA5 | Pressure Gauge, 30 PSIA |
| FLUKE-700GA6 | Pressure Gauge, 100PSIA |
| FLUKE-700GA27 | Pressure Gauge, 300PSIA |
| FLUKE-700RG05 | Pressure Gauge, Reference, 30PSIG |
| FLUKE-700RG06 | Pressure Gauge, Reference, 100PSIG |
| FLUKE-700RG07 | Pressure Gauge, Reference, 500PSIG |
| FLUKE-700RG08 | Pressure Gauge, Reference, 1000PSIG |
| FLUKE-700RG29 | Pressure Gauge, Reference, 3000PSIG |
| FLUKE-700RG30 | Pressure Gauge, Reference, 5000PSIG |
| FLUKE-700RG31 | Pressure Gauge, Reference, 10000PSIG |
| 700G-TRACK | Data Logging Software and Cable |
| FLUKE-700HTPK | Hydraulic Test Pump Kit, 0 to 10000 PSI/690 BAR |
| FLUKE-700PTPK | Pneumatic Test Pump Kit, 0 to 600PSI/40BAR |
| FLUKE-700HTPK2 | Premium Hydraulic Test Pump Kit |
| FLUKE-700PTPK2 | Premium Pneumatic Test Pump Kit |

BEST UNDER PRESSURE

Fluke Pressure Gauges and Calibrators.

Accurate. Easy to use. Tough.

www.fluke.com/sg/pressure

Fluke 750P and 700PEx Series Pressure Modules



Fluke 750P



Precision pressure measurement for 750 and 720 Series Calibrators

The Fluke 750P Series Pressure Modules are the ideal pressure modules to enable gage, differential and absolute pressure measurement with Fluke 750 and 740 Series DPCs and 725, 726 MPCs to measure pressure.

A family of 48 Pressure Modules covers pressure calibrations from 0 to 1 in H₂O to 10000 psi (2.5 mBar to 690 bar).

- 0.025 % reference uncertainty
- 6-month and 1-year specifications
- Intrinsically safe models are Class I Div 1 Groups A-D T4, Ta = 0 °C to +50 °C, ATEX II 1G Ex ia IIC T4 compliant

Specifications

| Model | Parameter/Range | Burst Rating ⁶ | Hi Side Media ² | Lo Side Media ² | Reference Uncertainty ⁴ |
|---------------------|--|---------------------------|----------------------------|----------------------------|------------------------------------|
| Differential | | | | | |
| 750P00 | 0 to 1 in H ₂ O (0 to 2.5 mBar) | 30X | Dry Air | Dry Air | ± 0.15 % |
| 750P01 ⁴ | 0 to 10 in H ₂ O (0 to 25 mBar) | 3X | Dry Air | Dry Air | ± 0.1 % |
| 750P02 | 0 to 1 psi (0 to 70 mBar) | 3X | Dry Air | Dry Air | ± 0.050 % |
| 750P22 | 0 to 1 psi (0 to 70 mBar) | 3X | 316 SS | Dry Air | ± 0.050 % |
| 750P03 | 0 to 5 psi (0 to 350 mBar) | 3X | Dry Air | Dry Air | ± 0.02 % |
| 750P23 | 0 to 5 psi (0 to 350 mBar) | 4X | 316 SS | Dry Air | ± 0.02 % |
| 750P04 | 0 to 15 psi (0 to 1 bar) | 3X | Dry Air | Dry Air | ± 0.0175 % |
| 750P24 ⁴ | 0 to 15 psi (0 to 1 bar) | 4X | 316 SS | Dry Air | ± 0.0175 % |
| Gage | | | | | |
| 750P05 ⁴ | 0 to 30 psi (0 to 2 bar) | 4X | 316 SS | N/A | ± 0.0175 % |
| 750P06 ⁴ | 0 to 100 psi (0 to 7 bar) | 4X | 316 SS | N/A | ± 0.0175 % |
| 750P27 ⁴ | 0 to 300 psi (0 to 20 bar) | 4X | 316 SS | N/A | ± 0.0175 % |
| 750P07 | 0 to 500 psi (0 to 35 bar) | 4X | 316 SS | N/A | ± 0.0175 % |
| 750P08 | 0 to 1000 psi (0 to 70 bar) | 3X | 316 SS | N/A | ± 0.0175 % |
| 750P09 ⁴ | 0 to 1500 psi (0 to 100 bar) | 3X | 316 SS | N/A | ± 0.0175 % |
| 750P2000 | 0 to 2000 psi (0 to 140 bar) | 3X | 316 SS | N/A | ± 0.0175 % |
| High | | | | | |
| 750P29 ⁴ | 0 to 3000 psi (0 to 200 bar) | 3X | 316 SS | N/A | ± 0.0175 % |
| 750P30 | 0 to 5000 psi (0 to 340 bar) | 3X | 316 SS | N/A | ± 0.0175 % |
| 750P31 | 0 to 10000 psi (0 to 700 bar) | 2X | 316 SS | N/A | ± 0.0175 % |
| Absolute | | | | | |
| 750PA3 | 0 to 5 psia (0 to 350 mBar) | 4X | 316 SS | N/A | ± 0.03 % |
| 750PA4 ⁴ | 0 to 15 psia (0 to 1 bar) | 4X | 316 SS | N/A | ± 0.03 % |
| 750PA5 | 0 to 30 psia (0 to 2 bar) | 4X | 316 SS | N/A | ± 0.03 % |
| 750PA6 | 0 to 100 psia (0 to 7 bar) | 4X | 316 SS | N/A | ± 0.03 % |
| 750PA27 | 0 to 300 psia (0 to 20 bar) | 4X | 316 SS | N/A | ± 0.03 % |
| 750PA7 | 0 to 500 psia (0 to 35 bar) | 4X | 316 SS | N/A | ± 0.03 % |
| 750PA8 | 0 to 1000 psia (0 to 70 bar) | 3X | 316 SS | N/A | ± 0.03 % |
| 750PA9 | 0 to 1500 psia (0 to 100 bar) | 3X | 316 SS | N/A | ± 0.03 % |
| Vacuum | | | | | |
| 750PV3 | -5 psi (-350 mBar) | 4X | 316 SS | Dry Air | ± 0.03 % |
| 750PV4 | -15 psi (-1 bar) | 4X | 316 SS | Dry Air | ± 0.03 % |
| Dual | | | | | |
| 750PD2 | -1 to 1 psi (-70 to 70 mBar) | 4X | 316 SS | Dry Air | ± 0.05 % |
| 750PD3 | -5 to 5 psi (-350 to 350 mBar) | 4X | 316 SS | Dry Air | ± 0.03 % |
| 750PD10 | -10 to 10 psi (-700 to 700 mBar) | 4X | 316 SS | Dry Air | ± 0.025 % |
| 750PD4 | -15 to 15 psi (-1 to 1 bar) | 4X | 316 SS | Dry Air | ± 0.0175 % |
| 750PD5 | -15 to 30 psi (-1 to 2 bar) | 4X | 316 SS | N/A | ± 0.0175 % |
| 750PD50 | -15 to 50 psi (-1 to 3.5 bar) | 4X | 316 SS | N/A | ± 0.0175 % |
| 750PD6 | -15 to 100 psi (-1 to 7 bar) | 4X | 316 SS | N/A | ± 0.0175 % |
| 750PD7 | -15 to 200 psi (-1 to 14 bar) | 4X | 316 SS | N/A | ± 0.0175 % |
| 750PD27 | -15 to 300 psi (-1 to 20 bar) | 4X | 316 SS | N/A | ± 0.0175 % |

For a complete list of Fluke Pressure Modules, go to sg.fluke.com/pressure

1. Total uncertainty, % of full span for temperature range 0 °C to +50 °C, one year interval. Total uncertainty, 1.0 % of full span for temperature range -10 °C to 0 °C, one year interval. No 6 month specification available for range -10 °C to 0 °C.
2. "NONCORROSIVE GASSES" indicates dry air or non-corrosive gas as compatible media. "Stainless Steel 316-SS" indicates media compatible with Type 316 Stainless Steel.
3. Specifications % of Full Span unless otherwise noted.
4. Intrinsically Safe pressure module available in this pressure range

For more information, go to sg.fluke.com/pressure

Specialty Model

Fluke 700PEx Pressure Modules

The Fluke 700PEx Pressure Modules extend the measurement capabilities of the Fluke 725Ex Multifunction Process Calibrator. Pressure readings can be displayed in any of 10 different pressure units specified in the calibrator setup.



II 1 G Ex ia IIC T4

For more information, see page 132

Recommended Accessories



Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Fluke Calibration 2700G Series Reference Pressure Gauges



N10140 Fluke 2700G

The Fluke Calibration 2700G Reference Pressure Gauges provide best-in-class measurement performance in a rugged, easy-to-use, economical package. Improved measurement accuracy allows it to be used for a wide variety of applications. It is ideal for calibrating pressure measurement devices such as pressure gauges, transmitters, transducers, and switches. In addition, it can be used as a check standard or to provide process measurements with data logging.

- Precision pressure measurement from 100 kPa (15 psi) to 70 MPa (10,000 psi)
- Accuracy to 0.02 % of full scale
- Easy-to-use, rugged construction for reliable performance
- Combine with a Fluke PTP or HTP pump kit or P551X comparison test pump for a complete pressure testing solution

Fluke Calibration P5510 Pneumatic Comparison Test Pump



N10140 Fluke P5510

The P5510 Pneumatic Comparison Test Pump is designed for testing pressure measuring instruments against master test instruments. This cost effective instrument provides precise control for important calibration requirements and include many features found in our popular line of pneumatic deadweight testers.

Higher pressure ranges available:

Fluke P5513 Gas Comparison Test Pump

Pressure range 0 to 20 MPa (3k psi);
Vacuum -80 kPa (-12 psi)

Fluke P5514 Gas Comparison Test Pump

Pressure range 0 to 70 MPa (10k psi)

Fluke P5515 Gas Comparison Test Pump

Pressure range 0 to 140 MPa (20k psi)

P5531 Dirt/Moisture Trap

Designed to mount directly on the deadweight tester and featuring an acrylic chamber for visibility of contaminates this unit utilises the standard test port adapters for easy instrument connections.

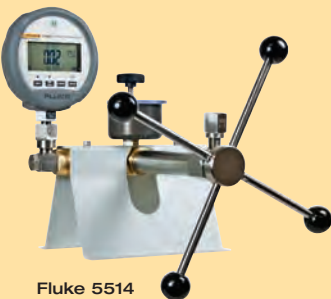


P5532 Dirt/Moisture Trap

This high pressure version is provided with an aluminium central chamber for safety and utilises the standard test port adapters.



Complete Bench Top Pressure Calibration Solution



Fluke 5514

Combine P5500 Comparison Test Pumps with one or more 2700G Reference Pressure Gauges for a complete 0.02% accuracy calibration system

The 2700G has an easy-to-use interface that allows you to configure the sampling rate, tare value, damping and auto off time interval as well as reset the min/max pressure.

The unique test port design of the P5500 series allows for hand tight connection of the 2700G without the use of PTFE tape.

- **P5510:** integrated pneumatic hand pump with pressure generation to 300 psi (2 MPa), vacuum to -12 psi (-80 kPa)
- **P5513:** pneumatic pressure adjustment to 3,000 psi (21 MPa) with fine adjust inlet and outlet valves and precise screw press
- **P5514:** hydraulic pressure generation and adjustment to 10 k psi (70 MPa) with fine screw press and reservoir
- **P5515:** integrated hydraulic pressure generation and adjustment to 20 k psi (140 MPa) with high volume priming pump and fine screw press

Included Accessories

2700G Gauges: 1/4 NPT Female to 1/4 BSP Male Adapter, 1/4 NPT Female to M20X1.5 Adapter, Universal AC Power Supply, USB Communication Cable, Manual on CD, Calibration Certificate showing traceability.

Optional: ISO 17025 Accredited Calibration available for 2700G and P551X/2700G models (add "C" to the below model number).

Ordering Information

| | |
|---------------------|---|
| 2700G-BG100K | Reference Pressure Gauge, -15 to 15 PSI |
| 2700G-BG200K | Reference Pressure Gauge, -15 to 30 PSI |
| 2700G-BG700K | Reference Pressure Gauge, -12 to 100 PSI |
| 2700G-BG2M | Reference Pressure Gauge, -12 to 300 PSI |
| 2700G-BG3.5M | Reference Pressure Gauge, -12 to 500 PSI |
| 2700G-BG7M | Reference Pressure Gauge, -12 to 1000 PSI |
| 2700G-G20M | Reference Pressure Gauge, 0 to 3,000 PSI |
| 2700G-G35M | Reference Pressure Gauge, 0 to 5,000 PSI |
| 2700G-G70M | Reference Pressure Gauge, 0 to 10,000 PSI |
| P5510-2M | Pneumatic Comparison Test Pump |
| P5513-20M | Pneumatic Comparison Test Pump |
| P5514-70M* | Hydraulic Comparison Test Pump, Viton Seals 0-10 000 PSI (70 MPa) |
| P5515-140M* | Hydraulic Comparison Test Pump, Viton Seals 0 to 20 000 PSI (140 MPa) |

Ethylene Propylene Seals option also available, add -EP to the above model.

| | |
|----------------------|--|
| P5510-2700G-1 | P5510 Pneumatic Calibrator, 2 MPA (300 PSI), 1 Gauge |
| P5513-2700G-1 | P5513 Pneumatic Calibrator, 20 MPA (3000 PSI), 1 Gauge |
| P5514-2700G-1 | P5514 Pneumatic Calibrator, 70 MPA (10,000 PSI), 1 Gauge |
| P5515-2700G-1 | P5515 Pneumatic Calibrator, 70 MPA (10,000 PSI), 1 Gauge |

P551X-2700G Kits available with 3 gauge option, add -3 to the above model numbers.

| | |
|--------------|---|
| P5531 | Dirt/Moisture Trap 0 to 500 PSI (35 bar) |
| P5532 | Dirt/Moisture Trap 0 to 3,000 PSI (210 bar) |

For more information, go to <http://as.flukecal.com>

Fluke Calibration P3000 Deadweight Testers



 Fluke P3000
N10140

The P3000 Series is the culmination of over 50 years of experience in the production and design of high performance pressure standards. With features designed to improve accuracy and performance, increase reliability and simplify operation these deadweight testers can be used to calibrate virtually any pressure sensing device, including transducers, transmitters, gauges or pressure switches. All units provided with accredited calibration.

P3000 Pneumatic Deadweight Tester

High performance gas deadweight testers with unique suspended piston design for vacuum calibration.

- 0.015% of reading accuracy standard (0.008% optional)
- 3 to 500 psi (0.2 to 35 bar) pressure
- Optional low range 0.03 to 1 bar vacuum (1 to 30 inHg)
- Integrated vacuum and pressure pump available to 2 MPa (300 psi)

P3100 Hydraulic Deadweight Tester

Highly accurate oil deadweight tester with quick and easy-to use single and dual piston deadweight models

- Pressure ranges to 140MPa (20 k psi, 1400 bar)
- 0.015% of reading accuracy standard (0.008% optional)
- Built in pressure generation and adjustment
- Single or dual piston formats

P3200 Hydraulic Deadweight Tester

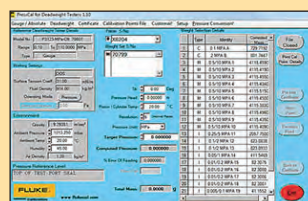
Hydraulic deadweight tester specially designed to use water as a test medium.

- Pressure ranges to 70MPa (10 k psi, 700 bar)
- 0.015% of reading accuracy standard (0.008% optional)
- Built in pressure generation and adjustment is standard
- Single or dual piston formats
- Water media

| Accuracy* | |
|---|--|
| ±0.015% of reading (±0.008% optional) | |
| *Accuracy based on % of reading from 10% to 100% of the piston range when used in accordance with the corrections found on the calibration certificate. Below 10% ± (accuracy class) x 10% of the piston range. | |
| Mass and PCU Materials of Construction | |
| Standard weight material | Series 3 non-magnetic austenitic stainless steel |
| Weight density | 7.8 g/cm ³ |
| Optional fractional weights | Solution heat treated aluminum |
| Weight density | 2.7 g/cm ³ |
| Models P3011, P3012, P3013, P3022, P3023, P3025 (V) | Piston Material: Ceramic Cylinder Material: Martensitic steel Coefficient of Expansion: 11 ppm/°C |
| Models P3014, P3015, P3025 (P) P3031, P3032 (P & V) | Piston Material: Tungsten carbide Cylinder Material: Martensitic steel Coefficient of Expansion: 16.5 ppm/°C |

PressCal Software

PressCal software provides a quick and effective solution to enhance the pressure measurement uncertainty of Deadweight Testers. PressCal features an easy-to-use user interface that allows you to enter all the necessary corrections and parameters to accurately determine the pressure generated by the DWT.



PressCal also provides:

- Automatic certificate generation
- Real-time auditing
- Customer details management
- Choice of 12 pressure units

Included Accessories

ISO 17025 Accredited Calibration Certificate, Operating Fluid (where applicable), Spare Seals, Adaptors for 1/8, 1/4, 3/8, 1/2 NPT and BSP, and Metric Adaptors (M20 and M14).

Ordering Information

* -P indicates built-in pump optional.

- P3011-KPA-P*** Vacuum Deadweight Tester (-100 KPA)
- P3011-INHG-P*** Vacuum Deadweight Tester (-30 INHG)
- P3011-MBAR-P*** Vacuum Deadweight Tester (-1000 MBAR)
- P3011-MMHG-P*** Vacuum Deadweight Tester (-760 MMHG)
- P3012-KPA-P** Gas Deadweight Tester, 100 KPA, with Pump
- P3012-MBAR-P** Gas Deadweight Tester, 1000 MBAR, with Pump
- P3012-INH20-P** Gas Deadweight Tester, 400 INH20, with Pump
- P3013-KPA-P** Gas Deadweight Tester, 200 KPA, with Pump
- P3013-MBAR-P** Gas Deadweight Tester, 2000 MBAR, with Pump
- P3013-INH20-P** Gas Deadweight Tester, 800 INH20, with Pump
- P3014-KGCM2-P** Gas Deadweight Tester, 10 KGF/CM2, with Pump
- P3014-PSI-P** Gas Deadweight Tester, 150 PSI, with Pump
- P3014-KPA-P** Gas Deadweight Tester, 1000 KPA, with Pump
- P3014-MPA-P** Gas Deadweight Tester, 1 MPA, with Pump
- P3015-BAR-P*** Gas Deadweight Tester, 35 BAR
- P3015-KGCM2-P*** Gas Deadweight Tester, 35 KGF/CM2
- P3015-PSI-P*** Gas Deadweight Tester, 500 PSI
- P3015-KPA-P*** Gas Deadweight Tester, 3500 KPA
- P3015-MPA-P** Gas Deadweight Tester, 3.5 MPA

Fluke Calibration 6531 and 6532 E-DWT Electronic Deadweight Tester Kits



Fluke 6532



Fluke 6531



N10140

A powerful, complete hydraulic pressure calibration system to cover a wide workload.

- Pressure ranges available to 200 MPa (30,000 psi)
- $\pm 0.02\%$ of reading total one-year accuracy, 0.025 % for two years
- Low torque variable volume allows for pressure generation and control up to 200 MPa (30,000 psi) with minimal physical effort
- Built-in priming system to fill system with test fluid and purge unwanted air to assure smooth operation
- Unique test port design eliminates the need for PTFE tape or wrenches. Adapters included for 1/8 in, 1/4 in, 3/8 in and 1/2 in NPT, 1/8 in, 1/4 in, 3/8 in and 1/2 in BSP, M20 x 1.5 and M14 x 1.5 6531 6532
- Compatible with a wide range of liquids, including water. Vacuum fill kit included to fill the E-DWT with any compatible test medium
- AutoTest™, AutoRange, ready/not ready indicator, on-board data capture and storage, overpressure alarm, RS-232 remote interface and other advanced features to simplify testing, improve safety and prevent calibration errors and damage to equipment
- Optional foot switch accessory allows hands-free data collection when running AutoTests
- Rechargeable battery pack and transport case options for field operation

COMPASS® for Pressure Calibration Software

COMPASS® Software for Pressure is a universal platform for all of your pressure calibration software needs. From piston gauges calibrating individual devices in the cal lab to transfer standards characterising racks of sensors in production, COMPASS® maximises the automation of your calibration and testing processes.

- Runs complete, automated calibration sequences on single or multiple units under test (UUTs), including leak testing and pre-test exercising
- Compatible with transfer standards, piston gauges and data acquisition hardware from all manufacturers



Specifications

| | |
|--|---|
| Power Requirements | To RPM4-E-DWT: 12 V DC 1.2 A To AC to DC Power Supply: 100 V AC to 240 V AC, 50/60 Hz |
| Operating Temperature Range | 10 °C to 40 °C |
| Storage Temperature Range | - 20 °C to 70 °C |
| Relative Operating Humidity | 0 % to 70 % |
| Relative Storage Humidity | 0 % to 100 % |
| Weight | 1 Q-RPT: 12 kg approximate 2 Q-RPT: 14 kg approximate |
| Dimensions | E-DWT Footprint: 41.4 cm W x 37.1 cm D E-DWT Height: 26.9 cm, 33.6 cm to max variable volume handle height |
| Pressure Range (Dependent on Q-RPT(s) included in RPM4-E-DWT). | 200 MPa (30 000 psi) with standard variable volume 100 MPa (15 000 psi) with high volume variable volume |
| Operating Medium | All 6531 and 6532 E-DWT Kits are shipped dry, standard preparation. Can be filled with di-ethyl-hexyl sebacate, silicon oils, propylene glycol, fully fluorinated liquids, partially fluorinated liquids, isopropyl alcohol and distilled water or mineral oil. |
| Pressure Limits | Maximum Working Pressure: Range of RPM4-E-DWT monitor's Hi Q-RPT 200 MPa (30 000 psi) with standard variable volume 100 MPa (15 000 psi) with high volume variable volume Maximum Priming Pump Pressure: 700 kPa (100 psi) Maximum Working Pressure: With Lo Q-RPT selected: Range of RPM4-E-DWT monitor's Lo Q-RPT Communication Ports: RS-232 (COM1, COM2) |
| Pressure Measurement | |
| Normal operating temperature range | 10 °C to 40 °C |
| Resolution | Default: 0.01 % of active range User adjustable to 1 ppm of Q-RPT maximum or 10 ppm of active AutoRange, whichever is greater |
| Precision ¹ | $\pm 0.018\%$ of reading or 0.0018 % of Q-RPT span, whichever is greater |
| Predicted Stability ² | One Year: $\pm 0.0075\%$ of reading Two Year: $\pm 0.015\%$ of reading |
| Measurement Uncertainty ³ | One Year: $\pm 0.02\%$ of reading or 0.002 % of Q-RPT span, whichever is greater Two Year: $\pm 0.025\%$ of reading or 0.0025 % of Q-RPT span, whichever is greater |

¹ Combined linearity, hysteresis, and repeatability. Precision does not include stability or calibration reference uncertainty.

² Predicted Q-RPT measurement stability limit (k=2) assuming regular use of AutoZero function and short term stability between rezeroing.

³ Maximum deviation of the Q-RPT indication from the true value of applied pressure including precision, predicted stability with rezeroing, temperature effect from 10 °C to 40 °C and calibration uncertainty (assumes calibration reference uncertainty of $\pm 0.005\%$ of reading, k=2), combined and expanded (k=2) following the ISO "Guide to the Expression of Uncertainty in Measurement".

Included Accessories

Power Supply, Operating Manual
Vacuum Liquid Fill Kit, Test Station
Quick-Mount Fitting NPT Adapters:
(1/8 in, 1/4 in, 3/8 in and 1/2 in)
BSP Adapters: (1/8 in, 1/4 in, 3/8 in and 1/2 in)
Metric Adapters: (M20 x 1.5 and M14 x 1.5)

Ordering Information

| | |
|------------------|--|
| 6531-7M | Electronic Deadweight E-DWT, 7 MPA (1K PSI) |
| 6531-14M | Electronic Deadweight E-DWT, 14 MPA (2K PSI) |
| 6531-20M | Electronic Deadweight E-DWT, 20 MPA (3K PSI) |
| 6531-40M | Electronic Deadweight E-DWT, 40 MPA (6K PSI) |
| 6531-70M | Electronic Deadweight E-DWT, 70 MPA (10K PSI) |
| 6531-140M | Electronic Deadweight E-DWT, 140 MPA (20K PSI) |
| 6532-70M | Electronic Deadweight E-DWT, 70 MPA (10K PSI) |
| 6532-140M | Electronic Deadweight E-DWT, 140 MPA (20K PSI) |

For more information, go to <http://as.flukecal.com>

Fluke Calibration 3130 Portable Pressure Calibrator



Fluke P3130
N10140

The Fluke 3130 Portable Pneumatic Pressure Calibrator is ideal for calibrating pressure transmitters, transducers, gauges and similar devices. The Fluke 3130 contains everything you need to generate, control and measure pressure, as well as read the output of the device under test.

- Measure and generate pressures from vacuum to 2 MPa (300psi, 20bar)
- Internal pump can generate vacuum to -80 kPa (-12 psi, -0.8 bar) or pressure to 2 MPa (300psi, 20bar)
- Supply pressure connection allowing the use of external gas supply up to 2 MPa (300psi, 20bar)
- Measure or generate 4-20 mA
- Measure 0 to 30 V DC
- Compatible with Fluke 750P Pressure Modules
- Variable volume for fine adjustment of pressures

- Pressure measurement accuracy of $\pm 0.025\%$ reading + 0.01% FS
- Electrical measurement and 24 volt supply for close looped calibrations

Specifications

| Environmental | |
|--------------------------------------|--|
| Temperature | Operating: -10 °C to +50 °C; Storage: -20 °C to +60 °C |
| Physical | |
| Size in cm (LxWxD) and Weight | 38.7 x 30.5 x 17.8, 7.7 kg |
| EMI/RFI Conformance | EN61326:2006 Annex A |
| Connectors/Ports | 1/8 in NPT (External supply port and test port) |
| Ranges | |
| Pressure (internal pump) | -80 kPa to 2 MPa (-12 to 300 psi, -0.8 to 20 bar) |
| Pressure (external air) | 0 to 2 MPa (0 to 300 psi, 0 to 20 bar) |
| mA | 0 to 24.000 mA |
| Volts | 0 to 30.000 VDC |
| Instrumental Measurement Uncertainty | |
| Pressure | 0.025 % of reading \pm 0.01 % FS |
| mA | 0.015 % of reading \pm 0.002 mA |
| Volts | 0.015 % of reading \pm 0.002 V |

Fluke Calibration 6241 and 6242 PPC4E Gas Pressure Controllers



Fluke 6241
N10140

Fluke Calibration's 6241 and 6242 PPC4E Gas Pressure Controller Kits feature PPC4E models to cover a very wide workload combined with the accessories needed for a complete calibration system.

Included is the Fluke Calibration SPLT self-purging liquid trap to capture moisture in the test line and automatically purge to prevent contamination of the PPC4E, the interconnect hardware and a test station with a quick connect fitting to mount your pressure device to be tested. The 6241 and 6242 Kits provide the hardware for a complete gas calibration system.

- Precise pressure measurement and automated control, with ranges available from ± 15 kPa to 14 MPa (± 2.2 psi to 2,000 psi)
- Switch between absolute, gauge and bidirectional gauge modes and meet easy-to-understand full-year measurement specifications without added hardware or special calibration or maintenance operations
- ± 0.02 % one-year accuracy of any selected Auto-range span, with Auto-range span as low as 1 % of device full scale. Up to 100:1 accurate ± 0.02 %.
- AutoTest™, AutoRange, ready/not ready indicator, set point jog feature, real-time measurement uncertainty display, RS-232 and IEEE-488.2
- Each device comes with an Accredited Calibration Certificate

Included Accessories

3130: Ruggedised Case, Rechargeable, NiMH Battery, Test Leads, Operating Manual.

6241/6242 PPC4E: Power Line Cords, SPLT Self-Purging Liquid Trap with Connector to PPC4E, Mountable Test Stand, Interconnect and Quick Connect Fitting and Adapters, Operating Manual.

Ordering Information

| | |
|------------|---|
| 3130-G2M | Portable Gas Pressure Calibrator |
| 3130-G2M/C | Portable Gas Pressure Calibrator with ACC Calibration |
| 6241-15K | PPC4E Gas Pressure Controller, +/-15 KPA (+/-2.2 PSI) |
| 6241-100K | PPC4E Gas Pressure Controller, +/-100 KPA (+/-15 PSI) |
| 6241-1.4M | PPC4EX Gas Pressure Controller, 1.4 MPA (200 PSI) |
| 6241-7M | PPC4EX Gas Pressure Controller, 7 MPA (1,000 PSI) |
| 6241-14M | PPC4EX Gas Pressure Controller, 14 MPA (2,000 PSI) |
| 6242-100K | PPC4E Gas Pressure Controller, +/-100 KPA (+/-15 PSI), Extended Range |
| 6242-1.4M | PPC4EX Gas Pressure Controller, 1.4 MPA (200 PSI), Extended Range |
| 6242-7M | PPC4EX Gas Pressure Controller, 7 MPA (1000 PSI) Extended Range |
| 6242-14M | PPC4EX Gas Pressure Controller, 14 MPA (200 PSI), Extended Range |

For more information, go to <http://as.flukecal.com>



VIBRATION & ALIGNMENT

Fluke 810 Vibration Tester

Take a vibration expert along



Fluke 810



N10140

Get answers now!

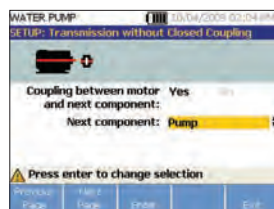
The Fluke 810 Vibration Tester is the most advanced troubleshooting tool for mechanical maintenance teams who need an answer now. It is a unique new kind of troubleshooting tool, engineered to detect and evaluate the most common mechanical problems.

The Fluke 810 Vibration Tester uses a simple step-by-step process to report on machine faults the first time measurements are taken, without prior machine history.

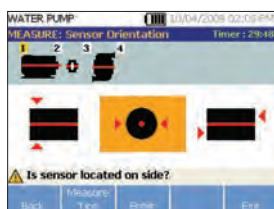
- Easily determine the root cause, location and severity of common mechanical faults
- Efficiently prioritise and plan equipment repair or replacement
- Effectively deploy maintenance resources at the point of greatest impact

Simple 3 Step Process

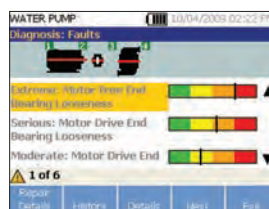
The Fluke 810 helps you locate and diagnose common mechanical problems and prioritise repair actions in three simple steps:



1. Setup: Vibration testing has never been easier. The Fluke 810 asks for basic machine information you already know, like RPM and horsepower. Its onboard info feature gives you field tips for setting up and taking measurements like a professional.



2. Measure: The Fluke 810 easily fits into your maintenance routine. Use it to quickly troubleshoot problems or monitor machine condition.



3. Diagnose: Fix it right the first time with the press of a button, the Fluke 810 identifies the root cause, its location, and the problem's severity.

Breakthrough Diagnostic Technology

The Fluke 810's diagnostic technology combines powerful algorithms with a database of real-world measurement experience, making this Vibration Tester the most advanced troubleshooting tool for mechanical maintenance teams.

Analyse most common equipment:

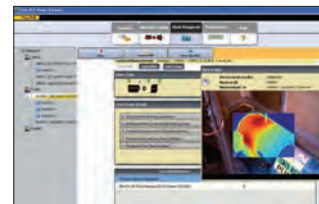
Motors, Fans and blowers, Belt and Chain Drives, Gearboxes, Pumps, Compressors, Spindles

Detect the most common causes of mechanical failure:

Bearing problems, Misalignment, Unbalance, Looseness

Viewer PC Software

- Store and track your data
- Generate diagnostic reports and track the severity of your machine's condition
- Import and store JPEG images



Interactive, self-paced training on DVD

Learn more about the basics of vibration and how to fully utilise the features and functionality of the Fluke 810. Fluke has partnered with Mobius Institute, an industry leader in vibration training, to develop an interactive training DVD included with each Fluke 810.

Specifications

| Diagnostic specifications | |
|------------------------------|--|
| Analysis for | Motors, fans, blowers, belts and chain drives, gearboxes, couplings, centrifugal pumps, piston pumps, sliding vane pumps, propeller pumps, screw pumps, rotary thread/gear/lobe pumps, piston compressors, centrifugal compressors, screw compressors, closed coupled machines, spindles |
| Standard faults | Unbalance, looseness, misalignment and bearing failures |
| Motor rotational speed range | 200 rpm to 12000 rpm |
| Diagnosis details | Plain-text diagnosis, fault severity (slight, moderate, serious, extreme), repair details, cited peaks, spectra |
| Tester specifications | |
| IP rating | IP 54 |
| A/D converter | 4 channel, 24 bit |
| Dynamic range | 128 dB |
| FFT resolution | 800 lines |
| Battery | Lithium-ion, rechargeable, 8 hours operating life |
| Onboard storage capacity | 2 GB internal + user accessible slot for additional storage |
| Warranty | Three-years (tester), One-year (sensor and tachometer) |
| Sensor specifications | |
| Sensor type | Tri-axial accelerometer, 100 mV/g ($\pm 5\%$, 25 °C) |
| Tachometer specifications | |
| Tachometer type | Laser Diode Class 2 |

Included Accessories

Tri-axial TEDS Accelerometer, Accelerometer Magnet Mount, Accelerometer Mounting Pad Kit with Adhesive, Accelerometer Quick Disconnect Cable, Laser Tachometer and Storage Pouch, Smart Battery Pack with Cable and Adapters, Shoulder Strap, Adjustable Hand Strap, Viewer PC Application Software, Mini-USB to USB Cable, Getting Started Guide, Illustrated Quick Reference Guide, User Manual CD, Instructional Training DVD, Hard Carrying Case.

Ordering Information

FLUKE-810 Vibration Tester

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke 805 FC Vibration Meter

Forget the pens. Think METER.



Fluke 805 FC



The Fluke 805 FC is not a vibration pen; it's a meter. A Fluke meter that eliminates the confusion of vibration screening and provides reliable measurements you can trust to make critical go or no-go maintenance decisions. With the Fluke 805 FC, you can identify the strength and severity of vibration and easily track the data over time to monitor an asset's condition.

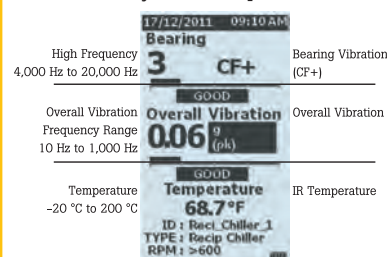
- Innovative sensor design minimises measurement variations caused by device angle or contact pressure
- Consistent data quality at both low and high frequency ranges
- Four-level severity scale assesses urgency of problems for overall vibration and bearing condition
- Exportable data via USB
- Trending in Microsoft® Excel using pre-built templates
- Overall vibration measurement (10 Hz to 1,000 Hz) for acceleration, velocity and displacement units of measurement for a wide variety of machines
- Crest Factor+ technology provides reliable bearing assessment using direct sensor tip measurements between 4,000 Hz and 20,000 Hz
- Compare vibration levels with ISO-10816 severity scales and store results to the Fluke Connect Cloud
- Get authorisation to take next steps in an instant if machine health is at risk via Fluke Connect™ Share-Live™ video call
- Coloured lighting system (green, red) and on-screen comments indicate how much pressure needs to be applied to take measurements
- Temperature measurement with Spot Infrared Sensor increases diagnostic capabilities
- On-board memory holds and saves up to 3,500 measurements
- Flashlight for viewing measurement locations in dark areas

What is Crest Factor+?

Crest Factor (CF) is used to identify bearing faults and is the ratio of the peak value/RMS value of a time domain vibration signal. A key limitation of using Crest Factor is that it does not increase linearly as the bearing degrades. In fact, it can actually decrease as a bearing nears failure due to large RMS values.

To overcome this limitation, Fluke uses a proprietary algorithm known as Crest Factor + (CF+). CF+ values range from 1 to 16. As the bearing condition worsens, the CF+ value increases.

Fluke has also included a four-level severity scale that identifies the bearing health as Good, Satisfactory, Unsatisfactory or Unacceptable.

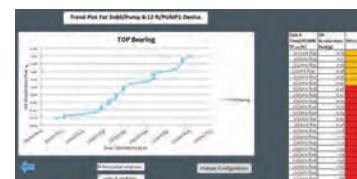


Exporting and trending in Excel

Trending, or repeated vibration measurements kept in a spreadsheet overtime, is the best method to track machine health. With the Fluke 805 FC you can easily:

- Export your results to Excel
- Trend the readings with the pre-built Excel templates and plot graphs
- Compare the overall vibration readings to ISO Standards (10816-1, 10816-3, 10816-7)

Import measurements from the 805 FC to Excel on your PC in order to trend the bearing parameters: overall vibration, CF+, and temperature. The user can now see a clear picture of the changing bearing condition and deteriorating health of the machine.



Sample trend plot using the Fluke 805 FC trending template.

Included Accessories

USB Cable, Storage Case, Belt Holster, Quick Reference Guide, CD-ROM (includes MS Excel Template and Documentation) and two AA Batteries.

Ordering Information

FLUKE-805FC Fluke Connect® Vibration Meter

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Specifications

| | | |
|---|---|--|
| Vibration meter | Low frequency range (overall measurement) | 10 Hz to 1,000 Hz |
| | High frequency range (CF+ measurement) | 4,000 Hz to 20,000 Hz |
| | Severity levels | Good, Satisfactory, Unsatisfactory, Unacceptable |
| | Vibration limit | 50 g peak (100 g peak-peak) |
| | A/D converter | 16-bit |
| | Signal to noise ratio | 80 dB |
| | Sampling rate | Low frequency: 20,000 Hz; high frequency: 80,000 Hz |
| | Real time clock backup | Coin battery |
| Sensor | Sensitivity | 100 mV / g ± 10% |
| | Measurement range | 0.01 g to 50 g |
| | Low frequency range (overall measurement) | 10 Hz to 1,000 Hz |
| | High frequency range (CF+ measurement) | 4,000 Hz to 20,000 Hz |
| | Resolution | 0.01 g |
| Amplitude units | Acceleration | g, m/sec ² |
| | Velocity | in/sec, mm/sec |
| | Displacement | mils, mm |
| Infrared thermometer (temperature measurement) | Range | -20 °C to 200 °C |
| | Accuracy | ±2 °C |
| | Focal length | Fixed, at ~3.8 cm |
| External sensor (Fluke supports, but doesn't provide, external sensors) | Frequency range | 10 Hz to 1,000 Hz |
| | Bias voltage (to supply power) | 20 V DC to 22 V DC |
| | Bias Current (to supply power) | Maximum 5 mA |
| Firmware | External interfaces | USB 2.0 (full speed) communication |
| | Data capacity | Database on internal flash memory |
| | Memory | Up to 3,500 measurements |
| Environmental | IP rating | IP54 |
| | Drop test | 1 metre |
| General specifications | Battery type | AA (2) Alkaline or Lithium-ion 2 V DC |
| | Battery life | 250 measurements |
| | Size (LxWxH) and Weight | 25.72 cm x 16.19 cm x 9.84 cm, 1.16 kg |
| | Connectors | USB mini-B 7-pin, stereo audio output jack (3.5 mm Audio Plug), external sensor jack (SMB connector) |

Fluke 820-2 LED Stroboscope



Fluke 820-2



Rugged, easy-to-use, high intensity LED Stroboscope for stop motion diagnostics

The Fluke 820-2 LED Stroboscope is a simple, easy to use tool to stop motion for measurement and diagnostic purposes.

Investigate and observe potential mechanism failure with confidence on a variety of machinery, in a wide range of industries, without making physical contact with the machine. The Fluke 820-2 LED Stroboscope is a rugged, compact, portable strobe with high intensity LED head, ideal for stop motion diagnostics, mechanical troubleshooting, and process or product research and development.

- High intensity 7-LED array—4,800 Lux @ 6,000 FPM/30cm
- High efficiency LED solid-state light source with uniform flash characteristics allow for higher flash rates—30-300,000 FPM (flashes per minute)
- Digital pulse width modulation for exceptionally sharp images at high speeds
- Rugged, durable design utilises solid-state LEDs with no filaments, gases, hollow cavities, or glass
- Quartz-accuracy control system provides high accuracy—0.02% (± 1 digit)
- Multi-line LCD display
- Check the rotating speed of machinery without physical contact or need for reflective tape
- Advance or retard flash timing for viewing gear teeth, cutting surfaces, repeats, or “drifting” equipment.
- Simple push button operation with 2x and ÷2 buttons for easy adjustment

Use the 820-2 LED Stroboscope for:

- Turbines that vary in speed and change speed frequently
- Variable Frequency Drive motors that vary in speed, but do not change frequently
- Find belt rotation speed and look for belt slippage
- Find machine element components – fan blades, pump vanes, compressor screws and gear teeth
- RPM measurement and frequency investigation
- Slip measurement



Specifications

| | |
|--|---|
| Size (HxWxL) | 5.71 cm x 6.09 cm x 19.05 cm |
| Weight | 0.24 kg |
| Temperature | Operating: 0 °C to +45 °C, Storage:-10 °C to +50 °C |
| Operating humidity (without ondensation) | Non-condensing (<10 °C) 90 % RH (10 °C to 30 °C) 75 % RH (30 °C to 40 °C) 45 % RH (40 °C to 50 °C) |
| Absorption/corrosion | 30 °C, 95 % RH, 5 day Product functions normally |
| Operating altitude | Operating: 2,000 m, Storage: 12,000 m |
| Vibration | MIL-PRF-28800F Class 2 |
| Impact resistance | 1 metre drop |

Miscellaneous Specifications

Flash Frequency

| | |
|-------------------|--|
| Range | 30 to 300,000 FPM 0.5 to 5000 Hz |
| Accuracy | 0.02 % |
| Resolution | 30 to 999 FPM = 0.1 1000 to 300,000 = 1 0.5 Hz to 999 Hz = 0.1 1000 Hz to 5000 Hz = 1 |
| Frequency setting | FPM or Hz |

Light

| | |
|-----------------|------------------------------|
| Colour | Approx 6500 K |
| Emission output | 4,800 lx @ 6000 FPM at 30 cm |

Method

| | |
|------------------|---|
| External trigger | Connector to externally control trigger |
| High level | 3 V to 32 V |
| Low level | <1 V |

Included Accessories

Protective Case, External Trigger Connector

Ordering Information

FLK-820-2 LED Stroboscope

Contact your local distributor for price and availability.
www.fluke.com/sg/wtb

Fluke 830 Laser Shaft Alignment Tool



Fluke 830



The ideal test tool to precision-align rotating shafts in your facility.

The Fluke 830 Laser Shaft Alignment tool is easy-to-use, giving you fast, accurate and actionable answers that will keep your plant up and running. When it comes to laser shaft alignment, data is good but answers are better. Unlike using the straightedge method or dial indicators the Fluke 830 performs the complicated alignment calculations for you, meaning you'll have the answers you need to quickly align your machine and get your plant up and running fast.

An enhanced user interface provides easy to understand results that don't require extensive alignment knowledge and the unique "All-in-One" result screen that shows you both coupling results and feet corrections (vertical and horizontal) in real terms making it easy to take corrective action. Since machine downtime is costly, test repeatability is critical.

- **Single laser measurement technology** means reduced errors from backlash resulting in better data accuracy
- **Intuitive guided user interface** quickly and easily complete machine alignments
- **Compass measurement mode** enables flexible, reliable and repeatable measurements using an activated electronic inclinometer
- **Dynamic machine tolerance** check provides continuous evaluation of alignment adjustments so you know when your machine in acceptable range
- **Unique extend mode** handles gross misalignment by virtually increasing laser detector size
- **Data protection** ensures your data is there when you need it with auto save and resume capability

Recommended Accessories



FLUKE-830/MAGNET
Compact magnetic sensor/
prism mounting bracket

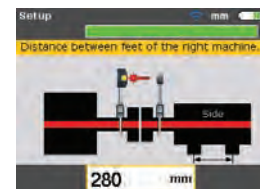
Recommended Kits

Buy more, Save more

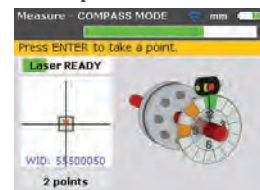


Fluke 830/SHIMS Precision Alignment Kit

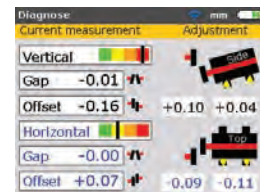
Evaluate Alignment in 3 Simple Steps



1. Set-up



2. Measure



3. Diagnose

Included Accessories

Laser Sensor, Laser Prism, Chain-type Mounting Bracket with 150 mm Support Posts (2x), 300 mm Support Post (4x), Micro-fiber Cleaning Cloth, Sensor Cable, PC Cable, USB Drive, USB Cable, Tape Measure, Wireless Bluetooth Module, Power Adapter, Instruction Kit and Carrying Case.

Ordering Information

FLK-830 Laser Shaft Alignment Tool
FLUKE-830 /SHIMS Laser Alignment Tool Kit

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Specifications

Computer

| | |
|--------------------------|--|
| CPU | Intel XScale PXA270 running at 312 MHz |
| Memory | 64 MB RAM, 64 MB flash |
| Display | Type: TFT, transmissive (sunlight-readable), 65,535 colours, backlit LED Integrated light sensor for automated adjustment of the brightness to the display according to the lighting conditions which extends battery life Resolution: 320 x 240 pixel; Dimensions: 89 mm diagonal Keyboard elements: Setup, measure, diagnose, menu, clear, enter, back keys, navigation cursor cross, alphanumeric keyboard and on/off button |
| LED indicators | Multicolour LED for laser status and alignment condition |
| External interface | USB host and USB device (slave) Integrated wireless communication, transmitting power 100 mW RS232 (serial) for sensor AC adapter/charger socket |
| Environmental protection | IP 65 (dustproof and water spray resistant), shockproof Relative humidity 10 % to 90 % |
| Temperature | Operating temp: -10 °C to 50 °C, Storage temp: -20 °C to 60 °C |
| Dimensions and Weight | 220 mm x 165 mm x 45 mm, 742g |

Sensor

| | |
|--------------------------|--|
| Measurement principle | Coaxial, reflected laser beam |
| Environmental protection | IP 67 (submersible, dustproof) |
| Ambient light protection | Yes |
| Temperature | Storage: -20 °C to 80 °C, Operating: 0 °C to 55 °C |
| Dimensions | 107 mm x 70 mm x 49 mm |
| Weight | 177 g |
| Laser | Type: Ga-Al-As semiconductor laser Wavelength (typical) 675 nm (red, visible) Safety class: Class 2, FDA 21 CFR 1000 and 1040 Beam power: < 1 mW Safety precautions: Do not look into laser beam |



RADIATION

Fluke 481 Radiation Detection Meter



Fluke 481-DESI



The Fluke 481 Radiation Detection Meter is a portable and practical means for discovering irradiated goods, and for helping remediate contaminant and safety issues while minimally affecting performances. Ideal for detecting irradiated goods, equipment, surfaces or environments in industrial settings, the 481 Radiation Meter helps ascertain worker safety and compliance to national regulations.

- Detects skin-dose (beta particle) and deep-dose (gamma) and X-ray radioactivity
- Requires no adjustments; simple two button process
- Provides promptly read, correct value through autoranging capability
- Easily visible inside truck trailers and other low-light situations with automated backlight
- Works dependably inside or outside thanks to sealed case
- 30 % more precise than other available meters
- Delivers more than one week of uninterrupted functioning with two 9-volt alkaline batteries
- Proven in use by state and local governmental emergency response professionals, state inspectors, HAZMAT teams and nuclear power workers
- Measures both dose and dose-rate
- Valuable for contamination-detection, general radiation area metering, radiation-level monitoring, and hazardous materials assessment
- Rugged Fluke design

Recommended Accessories



190HPS
Single Unit
Carrying Case

Fluke 481 Applications



Specifications

| | |
|---|--|
| Radiation detected | Beta > 100 keV, Gamma > 7 keV |
| Operating ranges | 0 μ Sv/h to 50 μ Sv/h (8 sec), 0 μ Sv/h to 500 μ Sv/h (2,5 sec) 0 mSv/h to 5 mSv/h (2 sec), 0 mSv/h to 50 mSv/h (2 sec) 0 mSv/h to 500 mSv/h (2 sec) |
| Accuracy | Within 10 % of readings between 10 % and 100 % of full scale indication on any range, exclusive of energy response |
| Detector | Chamber (cc volume air ionisation) 349 cc, Chamber wall (phenolic) 246 mg/cm ² , Chamber window (mylar) 6.6 mg/cm ² , Beta slide 440 mg/cm ² |
| Automatic features | Auto-zeroing, auto-ranging, and auto-backlight |
| Power requirements | Two 9 V alkaline, 200 hours operation |
| Warm-up time | One minute |
| Battery life | 4+ hours continuous use per battery pack, (assumes 50 % brightness of LCD) |
| Dimensions (W x D x H) | 10 cm x 20 cm x 15 cm |
| Weight | 1.11 kg |
| Display LCD analogue/digital with backlight | |
| Analogue | 100 element bar graph 6.4 cm long. Bar graph is divided into 5 major segments, each labeled with the appropriate value for the range of the instrument |
| Digital | 2.5 digit display is followed by a significant zero digit depending on the operating range of the instrument. The units of measurement are indicated on the display at all times. Digits are 6.4 mm high. Low battery and freeze indicators are also provided on the display |
| Modes | |
| Integrate mode | Operates continuously 30 seconds after the instrument has been turned on. Integration is performed even if the instrument is displaying in mR/h or R/h |
| Freeze mode | Will place a tick mark on the bar graph display to hold on the peak displayed value. The unit will continue to read and display current radiation values |
| Environmental | |
| Temperature range | -20 °C to 50 °C |
| Relative humidity | 0 % to 100 % (at 50 °C) |
| Geotropism | < 1 % |

Ordering Information

FLK-481-DESI DESI Radiation
Detection Survey
Meter

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb



INTRINSICALLY SAFE

Intrinsically Safe Test Tools for Hazardous Areas

Calibrators, Thermometers and Multimeters designed to intrinsic safety standards.

Intrinsically Safe is a protection method employed in potentially explosive atmospheres. Certificate IS tools are designed to prevent the release of sufficient energy to cause ignition of flammable material. IS standards apply to all equipment that can create one or more of a range of defined potential explosion sources.

ATEX – The primary intrinsically safe standard, which has been set in the European Union with the Directive 94/9/EC, commonly called ATEX (ATmosphères EXplosibles).



Fluke 28 IIEx Intrinsic Safe True-RMS Digital Multimeter

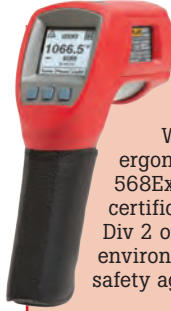
Now there's one intrinsically safe digital multimeter (DMM) you can use in IIC (gas) Zone 1 and 2 and IIC (dust) Zone 21 and 22 areas.

- CAT III 1000V/CAT IV 600V electrical safety rating



ANZEX
12.2008x Ex ia I Ma

II 2 G Ex ia IIC T4



Fluke 568Ex Intrinsic Safe Infrared Thermometer

With a rugged, easy-to-use, ergonomic design, the Fluke 568Ex meets intrinsically safe certifications in Class I Div 1 and Div 2 or Zone 1 and 2 hazardous environments from recognised safety agencies around the world.



N10140

II 2 G Ex ia IIC T4



Fluke 707Ex Intrinsic Safe Loop Calibrator

The Fluke 707Ex is the ideal, stand alone tool for calibration and maintenance of 4-20 mA control loops. It provides 24V loop power while measuring mA, and lets you measure and source/stimulate mA with 1 µA resolution.



N10140

II 2 G Ex ia IIC T4



Fluke 718Ex Intrinsic Safe Pressure Calibrator

The Fluke 718Ex offers a convenient, self contained solution for pressure measurements and calibration. With its internal pressure sensor and pump, it's ready for immediate, stand alone use.



N10140

II 1 G Ex ia IIC T4



Fluke 721Ex Intrinsic Safe Precision Pressure Calibrator

The 721Ex Precision Pressure Calibrator with dual isolated pressure sensors is the ideal tool for gas custody transfer applications allowing you to take simultaneous static and differential pressure measurements with a single tool.



N10140

Ex ia IIB T3 Gb



Fluke 725Ex Intrinsic Safe Multifunction Process Calibrator

The Fluke 725Ex when combined with the Fluke 700PEX Pressure Modules, the 725Ex is able to calibrate almost any process instrument likely to need service in any area where explosive gases may be present.



N10140

II 1 G Ex ia IIB 171 °C



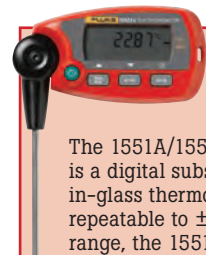
Fluke 700PEX Intrinsic Safe Pressure Modules

These intrinsically safe pressure modules for use with the Fluke 725Ex and Fluke 718Ex cover the most commonly used pressure calibration ranges from 0-25 mbar and 0-200 bar. There's a choice of 8 gage, differential and absolute modules.



N10140

II 1 G Ex ia IIC T4



Fluke Calibration 155X Stik Thermometer

The 1551A/1552A "Stik" Thermometer is a digital substitute for your mercury-in-glass thermometers. Accurate and repeatable to ± 0.05 °C over its full range, the 1551A/1552A is the new gold standard of industrial temperature calibration.



N10140

ATEX/IECEX Zone 1 and 2

Fluke-700G Series Pressure Gauges

- Precision pressure measurement from ±10 inH2O/20 mbar to 10,000 psi/690 bar
- Absolute pressure measurement ranges 15, 30, 100, 300 psia
- Accuracy to 0.05 % of full scale
- Reference class gauge accuracies to 0.04 % of reading
- CSA; Class 1, Div 2, Groups A-D rating
- Log up to 8,493 pressure measurements to memory (requires 700G/TRACK software)
- Three-year warranty



II 3 G Ex IIB T6

For more information, see page 117.

Ordering Information

| | |
|---------------------------------------|---|
| FLUKE-28IIEX/AU | Intrinsically Safe True-RMS Digital Multimeter |
| FLUKE-568EX | Intrinsically Safe Infrared Thermometer |
| FLUKE-707EX | Intrinsically Safe Loop Calibrator |
| FLUKE-718EX | Intrinsically Safe Pressure Calibrator |
| FLUKE-721EX | Intrinsically Safe Pressure Calibrator |
| FLUKE-725EX | Intrinsically Safe Multifunction Process Calibrator |
| FLUKE-700PEX | Intrinsically Safe Pressure Modules |
| (700P: 01, 5, 6, 9, 24, 27, 29, A2Ex) | |
| FLUKE-1551/2A | "Stik" Thermometer |
| 1551A: -50 to 160C | |
| 1552A: -80 to 300C | |
| FLUKE-700G | Pressure Test Gauges (23 ranges) |
| 0 to 10 in H2O up to 10,000psi | |

Contact your local distributor for price and availability.

www.fluke.com/sg/wtb

Fluke Connect® Module Kits

Buy a
Combo Pack
and Save



Fluke 3000 FC General Maintenance System

- Fluke 3000 FC Series Wireless Multimeter
- Fluke v3000 Voltage Module
- Fluke v3001 Voltage Module
- Fluke a3001 FC Wireless iFlex AC Current Module
- TL224, TL222, TL175 Test Leads
- AC285, AC220, AC175 Alligator Clips
- iFlex i2500-10 Flexible Current Probe
- Magnetic Hanging Strap
- Fluke Connect® Wireless PC Adapter
- Modular 3-Compartment Soft Carry Case



Fluke 3000 FC Industrial System

- Fluke 3000 FC Series Wireless Multimeter
- Fluke a3001 FC Wireless iFlex AC Current Module (3)
- Fluke v3000 Voltage Module
- TL224 Test Leads
- TL175 Test Leads
- AC285 Alligator Clips
- AC175 Alligator Clips
- iFlex i2500-10 Flexible Current Probe (3)
- Magnetic Hanging Strap
- Fluke Connect® Wireless PC Adapter
- Modular 3-Compartment Soft Carry Case



Fluke 3000 FC HVAC System

- Fluke 3000 FC Series Wireless Multimeter
- Fluke a3000 FC Wireless AC Current Clamp Module
- Fluke t3000 Thermocouple Thermometer
- TL175 Test Leads
- AC175 Alligator Clips
- 80PK-1 K-Type Bead Thermocouple
- Magnetic Hanging Strap
- Fluke Connect® Wireless PC Adapter
- Modular 3-Compartment Soft Carry Case



Fluke FC Wireless a3000 Current Kit

- Fluke 3000 FC Series Wireless Multimeter
- Fluke a3000 FC Wireless AC Current Clamp Module
- TL175 Test Leads
- AC175 Alligator Clips
- Modular 3-Compartment Soft Carry Case



Fluke FC Wireless a3001 Current Kit

- Fluke 3000 FC Series Wireless Multimeter
- Fluke a3001 FC Wireless iFlex AC Current Module
- TL175 Test Leads
- AC175 Alligator Clips
- iFlex i2500-10 Flexible Current Probe
- Modular 3-Compartment Soft Carry Case



Fluke Wireless t3000 FC Temperature Kit

- Fluke 3000 FC Series Wireless Multimeter
- Fluke t3000 K-Type Thermocouple Thermometer
- TL175 Test Leads
- AC175 Alligator Clips
- 80PK-1 K-Type Bead Thermocouple
- Other K-Type Temperature Probes also available
- Magnetic Hanging Strap
- Modular 3-Compartment Soft Carry Case



Fluke Wireless v3000 FC AC Voltage Kit

- Fluke 3000 FC Series Wireless Multimeter
- Fluke v3000 AC Voltage Module
- TL175 Test Leads
- TL224 Test Leads
- AC175 Alligator Clips
- AC285 Alligator Clips
- Magnetic Hanging Strap
- Modular 3-Compartment Soft Carry Case



Fluke Wireless v3001 FC DC Voltage Kit

- Fluke 3000 FC Series Wireless Multimeter
- Fluke v3001 DC Voltage Module
- TL175 Test Leads
- TL222 Test Leads
- AC175 Alligator Clips
- AC220 Alligator Clips
- Magnetic Hanging Strap
- Modular 3-Compartment Soft Carry Case



Fluke Wireless v3003 FC AC-DC Voltage Measurement Kit

- Fluke 3000 FC Series Wireless Multimeter
- Fluke v3000 AC Voltage Module
- Fluke v3001 DC Voltage Module
- TL175 Test Leads
- TL222 Test Leads
- TL224 Test Leads
- AC175 Alligator Clips
- AC285 Alligator Clips
- AC220 Alligator Clips
- Magnetic Hanging Straps
- Modular 3-Compartment Soft Carry Case



Fluke 287 FlukeView® Forms Combo Kit

- Fluke 287 True-RMS Electronics Logging Multimeter
- FlukeView® Forms Software and Cable
- 80BK-A Thermocouple Probe
- TL224 Test Leads with Model 175 Modular Probe Tips
- AC175 Alligator Clips
- TL71 Probe Caps
- C280 Soft Case



Fluke 287 FlukeView® Forms Combo Kit with ir3000FC Connector

- Fluke 287 True-RMS Electronics Logging Multimeter
- Fluke ir3000 FC Connector
- FlukeView® Forms Software and Cable
- 80BK-A Thermocouple Probe
- TL224 Test Leads with 175 Modular Probe Tips
- AC175 Alligator Clips
- TL71 Probe Caps
- C280 Soft Case
- Amp Jack Plug Set



Fluke 289 FlukeView® Forms Combo Kit

- Fluke 289 True-RMS Industrial Logging Multimeter
- FlukeView® Forms Software with Cable
- 80BK-A Thermocouple Probe
- TL71 Silicone Test Lead Set
- AC175 Alligator Clips
- TPAK Magnetic Hanging Kit
- C280 Soft Case



Fluke 289 FlukeView® Forms Combo Kit with ir3000FC Connector

- Fluke 289 True-RMS Industrial Logging Multimeter
- Fluke ir3000 FC Connector
- FlukeView® Forms Software with Cable
- 80BK-A Thermocouple Probe
- TL71 Silicone Test Lead Set
- AC175 Alligator Clips
- TL71 Probe Caps
- C280 Soft Case
- Amp Jack Plug Set



Fluke 3000 FC/1AC-II Wireless Multimeter and Non-Contact Voltage Detector Kit

- Fluke 3000 FC Series Wireless Multimeter
- Fluke 1AC-II VoltAlert™
- TL224 Test Leads
- TP175 Industrial Test Probes
- AC220 Alligator Clips
- C35 Lightweight Soft Carrying Case
- TPAK Magnetic Hanging Kit



Fluke 3000 FC/TPAK Wireless Multimeter and Magnetic Hanger Combo Kit

- Fluke 3000 FC Series Wireless Multimeter
- TL75 Test Leads
- C35 Lightweight Soft Carrying Case
- TPAK Magnetic Hanging Kit



Fluke 87V/E2 Industrial Electrician Combo Kit

- Fluke 87V True-RMS Industrial Multimeter
- TL224 Silicone Test Leads
- AC220 Alligator Clips
- TP238 Test Probes
- TPAK Magnetic Hanging Kit
- 80BK-A Thermocouple Probe
- C35 Soft Meter Case



Fluke 88V/A Automotive Multimeter Combo Kit

- Fluke 88V Deluxe Automotive Multimeter
- TL224 Test Leads
- AC285 Alligator Clips
- TP220 Test Probes
- RPM 80 Inductive RPM
- TPAK Magnetic Hanging Kit
- 80BK-A Thermocouple Probe
- C800 Carrying Case
- Holster
- CD With Detailed Manual
- 2 Automotive Back Probe Pins
- Insulation Piercing Probe



Fluke 116/323 HVAC Combo Kit

- Fluke 116 HVAC Multimeter
- Fluke 323 Clamp Meter
- TL175 Test Lead Set
- TPAK Magnetic Hanging Kit
- 80BK-A Thermocouple Probe
- 80AK-A Thermocouple Adapter
- Flexible Cuff Pipe Clamp Thermocouple
- C115 Deluxe Soft Carrying Case with Shoulder Strap



Fluke 116/62 MAX+ HVAC Technician's Combo Kit

- Fluke 116 HVAC Multimeter
- Fluke 62 MAX+ Infrared Thermometer
- TL175 Test Lead Set
- TPAK Magnetic Hanging Kit
- 80BK-A Thermocouple Probe
- 80AK-A Thermocouple Adapter
- Flexible Cuff Pipe Clamp Thermocouple
- C115 Soft Carrying Case



Fluke 117/323 Electricians' Multimeter Combo Kit

- Fluke 117 True-RMS Multimeter
- Fluke 323 Clamp Meter
- TL175 Test Lead Set
- TPAK Magnetic Hanging Kit
- C115 Deluxe Carrying Case

Insulation Testers/Earth Ground Testers Kits



Fluke 1587/i400 Current Clamp FC Kit

- Fluke 1587 FC 2-in-1 Insulation Digital Multimeter
- Fluke i400 Current Clamp
- Remote probe
- Test leads
- Alligator clips
- K-type thermocouple
- Hard Case



Fluke 1587 FC Advanced Electrical Troubleshooting Kit

- Fluke 1587 FC 2-in-1 Insulation Digital Multimeter
- Fluke i400 Current Clamp
- Fluke 62 MAX+ Infrared Thermometer
- Remote probe
- Test leads
- Alligator clips
- K-type thermocouple
- Hard Case



Fluke 1587/MDT FC Advanced Motor and Drive Troubleshooting Kit

- Fluke 1587 FC 2-in-1 Insulation Digital Multimeter
- Fluke i400 Current Clamp
- Fluke 9040 Phase Rotation Indicator
- Remote probe
- Test leads
- Alligator clips
- K-type thermocouple
- Hard Case



Fluke 1550C 5 kV Insulation Tester Kit

- Fluke 1550C Insulation Resistance Tester
- Fluke IP67 Hard Case
- Test Leads with Alligator Clips (red, black, green)
- Heavy Duty Alligator Clips
- FlukeView® Forms Basic CD
- Infrared Adapter with Interface Cable
- AC Power Cord



Fluke 1555 10 kV Insulation Tester Kit

- Fluke 1555 Insulation Resistance Tester
- Fluke IP67 Hard Case
- Test Leads with Alligator Clips (red, black, green)
- Heavy Duty Alligator Clips
- FlukeView® Forms Basic CD
- Infrared Adapter with Interface Cable
- AC Power Cord



Fluke 1621 Basic Earth Ground Tester Kit

- Fluke 1621 Earth Ground Tester
- Two Cable Reels with wire (1-50 m, 1-25 m)
- 3 Earth Ground Stakes
- 1 Test Lead (red and black 2 m)
- 2 Alligator Clips
- Hard Carrying Case



Fluke 1623-2 GEO Earth Ground Tester Kit

- Fluke 1623-2 GEO Earth Ground Tester
- User Manual
- Batteries
- Quick Reference Guide
- USB Cable
- 2 Clamps
- C1620 Carrying Case
- 4 Earth Ground Stakes
- 3 Cable Reels



Fluke 1625-2 GEO Earth Ground Tester Kit

- Fluke 1625-2 GEO Earth Ground Tester
- User Manual
- Batteries
- Quick Reference Guide
- USB Cable
- 2 Clamps
- C1620 Carrying Case
- 4 Earth Ground Stakes
- 3 Cable Reels

Electrical Tester Kits



Fluke T5-600/62 MAX+/1AC-II Infrared Thermometer and Electrical Tester Kit

- Fluke T5-600 Electrical Tester
- Fluke 62 MAX+ Infrared Thermometer
- Fluke 1AC-II VoltAlert™ Non Contact Voltage Tester
- C115 Soft Meter Case



Fluke T5-H5-1AC-II Electrical Tester Kit

- Fluke T5-1000 Electrical Tester
- Fluke 1AC-II VoltAlert™ Non Contact Voltage Tester
- H5 Holster

Process Calibration Tool Kits

Buy a
Combo Pack
and Save



Fluke-700PTPK Pneumatic Test Pump Kit

- Pneumatic Hand Pump
- Hose Kit (1) and Adapters
- Hard Case



Fluke-700HTPK Hydraulic Test Pump Kit

- Hydraulic Hand Pump
- Hose Kit (1) and Adapters
- Hard Case



Fluke-700PTPK2 Premium Pneumatic Test Pump Kit

- Pneumatic Hand Pump
- Premium, no tools required Gauge Connector
- Premium Transmitter Test Hose Kit (1) and Adapters
- Hard Case



Fluke-700HTPK2 Premium Hydraulic Test Pump Kit

- Hydraulic Hand Pump
- Premium, no tools required Gauge Connector
- Premium Transmitter Test Hose Kit (1) and Adapters
- Hard Case

Infrared Thermometer Kits



Fluke Connect® 789 ProcessMeter™ and Temperature Kit

- Fluke 789 ProcessMeter™
- Fluke t3000 FC Wireless K-Type Temperature Module
- Fluke ir3000 FC Connector
- TL71 Premium Test Lead Set
- AC72 Alligator Clips
- 4 AA Alkaline Batteries (installed)
- User Manual
- Quick Reference Guide



Fluke 62 MAX+/323/1AC Infrared Thermometer, Clamp Meter & Voltage Kit

- Fluke 116 HVAC Multimeter
- Fluke 62 MAX+ Infrared Thermometer
- Fluke 323 Clamp Meter
- 80BK-A Thermocouple Probe
- 80AK-A Thermocouple Adapter
- Flexible Cuff Pipe Clamp Thermocouple
- TPAK Magnetic Hanging Kit
- C115 Soft Meter Case



Fluke 414D/62MAX+ Laser Distance Meter/Infrared Thermometer Combo Kit

- Fluke 414D Laser Distance Meter
- Fluke 62 MAX+ Infrared Thermometer
- Soft Case for each model



Fluke VT04 Visual Infrared Thermometer Maintenance Combo Kit

- Fluke VT04 Visual Infrared Thermometer
- Fluke 1507 Insulation Resistance Tester



Fluke VT04 Visual Infrared Thermometer HVAC Combo Kit

- Fluke VT04 Visual Infrared Thermometer
- Fluke 902 True-RMS HVAC Clamp Meter
- Fluke 116 HVAC Multimeter



Fluke VT04 Visual Infrared Thermometer Electrical Combo Kit

- Fluke VT04 Visual Infrared Thermometer
- Fluke 376 AC/DC True-RMS Clamp Meter with 18-inch iFlex™
- Fluke 117 Electricians' Multimeter

Indoor Air Quality Kits



Fluke 922 Airflow Meter/Micromanometer Kit

- Fluke 922 Airflow Meter
- 12 inch Pitot Tube
- Two Rubber Hoses
- TPAK Magnetic Strip
- TPAK Strap, 9 inches
- TPAK Latch Tab
- User Manual
- Hard Carrying Case



Fluke 975V AirMeter™ Calibration Kit with Velocity Probe

- Fluke 975 AirMeter™
- Calibration Cap
- Air Velocity Probe
- FlukeView® Forms Software
- Power Adapter
- International Power Plugs
- Hard Carrying Case



ACCESSORIES

Fluke Test Leads, Probes & Clips



Electronic Test Leads

TL910 Electronic Test Lead Set

- Very small 1 mm tips to access hard to reach test points
- Probe tip length up to 100 mm, test lead length: 1 m
- Included: 3 sets of spring loaded gold tips and 2 sets of stainless steel tips
- CAT II 1000 V, 3 A rating



TP912 Replacement Tips for TL910

- Replacement tips for TL910
- Five sets of gold plated and stainless steel tips



Fluke TL26a 5-Way Test Lead Set

1.5m, silicone-insulated leads. Rated for 30V, 8A. One red, one black.

5 ways to connect:

1. U-shaped nose for blade-shaped terminals
2. Notched jaw for gripping screw heads, bare wire or terminals
3. Serrated teeth for gripping threaded or wire-wrapped terminals
4. Cluster of sharp needles for piercing small gauge (#22-#28 AWG) wires
5. Large piercing needle for penetrating larger gauge wires



TL40 Retractable Tip Test Lead Set

- One pair (red, black) of test leads with sharp needle point tips adjustable to desired length from 0 to 76mm
- Flexible silicone insulated test leads
- CAT II 600 V, 3 A rating



TL960 Micro-Hook Test Lead Set

- 1 pair (red, black) of test leads with multi-stacking 4mm banana plugs and micro-hooks
- 90cm long PVC insulated leads
- 30 V RMS or 60 V DC, 15 A



TL950 Mini-Pincer Test Lead Set

- 1 pair (red, black) of test leads with multi-stacking 4 mm banana plugs and mini-pincers
- Mini-pincers open to 2.3mm
- 90cm long PVC insulated leads
- 30 V RMS or 60 V DC, 5 A



TL940 Mini-Hook Test Lead Set

- 1 pair (red, black) of test leads with multi-stacking 4 mm banana plugs and mini-hooks
- 90 cm long PVC insulated leads
- 30 V RMS or 60 V DC, 5 A



Patch Cords

TL930 Patch Cord Set (60 cm)

- 1 pair (red, black) multi-stacking 4 mm banana plug patch cords
- Nickel-plated banana plugs
- 60 cm long PVC insulated leads
- 30 V RMS or 60 V DC, 15 A



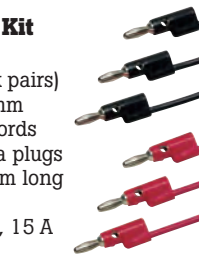
TL932 Patch Cord Set (90 cm)

- 1 pair (red, black) multi-stacking 4 mm banana plug patch cords
- Nickel-plated banana plugs
- 90 cm long PVC insulated leads
- 30 V RMS or 60 V DC, 15 A



TL935 Patch Cord Kit (60, 90, 120 cm)

- 3 sets (red and black pairs) of multi-stacking 4 mm banana plug patch cords
- Nickel-plated banana plugs
- 60 cm, 90 cm, 120 cm long PVC insulated leads
- 30 V RMS or 60 V DC, 15 A



Electronic Kits

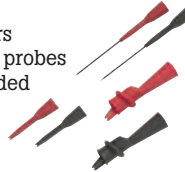
TL80A-1 Basic Electronic Test Lead Kit

- One pair (red, black) each 1 metre long silicone test lead set, alligator clip and probe tip extender.
- C75 soft carrying case



TP920 Test Probe Adapter Kit

- Set of push-on adapters for TL71 and TL75 test probes
- IC test adapters, extended probe tips, medium alligator clips (max. opening 7.6 mm)
- CAT III 300 V, 5 A rating



TL970 Hook and Pincer Kit

- TL940 Mini-Hook Test Lead Set
- TL950 Mini-Pincer Test Lead Set
- TL960 Micro-Hook Test Lead Set



TL81A Deluxe Electronic Test Lead Kit

- Includes components of TL80A-1, plus one pair (red, black) each modular 1 metre long silicone test lead, test probe, hook-style and pinch style clip, alligator clip, IC probe tip adapter and spade plugs
- Quadfold soft carrying case



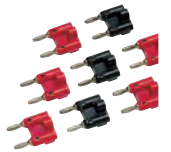
TLK287 Electronic Master Test Lead Kit

- Includes modular leads, probes (black and red), minigrabber/jack set, medium alligator clips (black and red), spade lug/banana jack plated (set), couplers IEC1010 (black and red), micrograbbers and -leads (black and red)
- TL910 Electronic Test Lead Set
- CAT III 1000 V (probes only)



BP980 Double Banana Plug Kit

- 5 pair (red, black) of double 4 mm banana plugs
- Each plug has 3.1 mm holes for mounting wires and components
- Brass plugs/jack, beryllium copper springs
- 30 V RMS or 60 V DC, 15 A



Industrial Test Leads

TL71 Premium Test Lead Set

- One pair (red, black) comfort grip probes with silicone insulated, right-angle test leads
- Recommended for μV measurements
- CAT II 1000 V, 10 A rating
- CAT III 1000 V, CAT IV 600 V with protective cap



TL75 Hard Point™ Test Lead Set

- One pair (red, black) comfort grip probes with 48 inches PVC insulated, test leads with right-angle shrouded banana plugs
- Recommended for general purpose measurements
- CAT II 1000 V, 10 A rating
- CAT III 1000 V, CAT IV 600 V only with protective cap



TL76 All-in-one Test Lead Set

- One pair (red, black) 1.5 metre long silicone test leads with right angle shrouded banana plug
- Lantern tip (removable) for use with European wall sockets (4 mm \varnothing)
- Lantern tip can be removed for easy access to terminal blocks (2 mm \varnothing)
- Removable, insulated IC caps allow robing on closely spaced leads and compliance with GS38
- CAT II 1000 V, 10 A rating
- CAT III 1000 V, CAT IV 600 V only with protective cap





Fluke Test Leads, Probes & Clips

Modular Test Leads

TL221 SureGrip™ Extension Lead Set

- One pair (red, black) of silicone insulated leads with straight connectors on both ends
- Reinforced strain relief
- Includes one pair (red, black) of female couplers
- Extends test leads by 1.5 m
- 600 V CAT IV, 1000 V CAT III, 10 A rating.



TL222 SureGrip™ Silicone Test Lead Set

- DMM test leads (red, black) with safety shrouded, standard diameter banana plugs
- Right angle connector on both ends
- Reinforced strain relief
- 1.5 metre silicone-insulated wire resists heat & cold
- CAT IV 600 V, CAT III 1000 V, 10 A rating.



TL224 SureGrip™ Silicone Test Lead Set

- DMM test leads (red, black) with safety shrouded, standard diameter banana plugs
- Right angle connector on one end and straight connector on the other
- Reinforced strain relief
- 1.5 metre silicone-insulated wire resists heat & cold
- CAT IV 600 V, CAT III 1000 V, 10 A rating.



TL27 Heavy Duty Test Lead Set

- DMM test leads (red, black) with safety shrouded, standard diameter banana plugs
- Heavy duty EPDM insulation
- Length 1.5 metre
- CAT III 1000V, 10A rating.



H900 Test Lead Holder

- Heavy duty construction with mounting holes
- Holder has 10 slots for wires up to 8 mm in diameter
- Over-all dimensions: 27.9 cm L x 8.9 cm W x 3.2 cm H



Industrial Kits

TL220 SureGrip™ Industrial Test Lead Kit

- AC220 SureGrip™ Alligator Clip Set
- TP220 SureGrip™ Industrial Test Probe Set
- TL224 SureGrip™ Silicone Test Lead Set (straight to right)
- CAT II 1000 V, 10 A (TP220 only)
- CAT III 1000 V, CAT IV 600 V with protective cap



TL223-1 SureGrip™ Electrical Test Lead Kit

- AC220 SureGrip™ Alligator Clip Set
- TP238 SureGrip™ Insulated Test Probe Set
- TL224 SureGrip™ Silicone Test Lead Set (straight to right)



TL238 SureGrip™ High Energy Test Lead Kit

- TP238 SureGrip™ Insulated Tip Test Probes with less than 4 mm of exposed metal (GS38) with flexible removable finger banner
- TP280 20 cm Test Probe Extenders
- TL224 SureGrip™ Silicone Test Lead Set



TLK-220 SureGrip™ Accessory Kit

- AC220 SureGrip Alligator Clip Set
- AC285 SureGrip Large Jaw Alligator Clip Set
- TP220 SureGrip Industrial Test Probes
- TL224 SureGrip Silicone Test Lead Set
- Large zippered soft case with moveable divider



TLK-225-1 SureGrip™ Master Accessory Kit

- AC220 SureGrip™ Alligator Clip Set
- AC280 SureGrip Hook Clip Set
- AC283 SureGrip Pincer Clip Set
- AC285 SureGrip Large Jaw Alligator Clip Set
- TP238 SureGrip Insulated Test Probe Set
- TL224 SureGrip Silicone Test Lead Set
- 6-Pocket Storage Pouch



TLK289 Industrial Master Test Lead Kit

- C116, Soft Case
- AC220 Alligator Clip Set
- AC280 Hook Clip Set
- AC285 Large Jaw Alligator Clip Set
- TP220 SureGrip Industrial Test Probes
- TL224 Test Lead Set
- TPAK Hanging Kit
- 80BK-A Temperature Thermocouple



T5-KIT-1 Accessory Kit (for use with T5)

- Add-on probes and carrying case.
- TP238 SureGrip™ Insulated Test Probe Set
- AC285 SureGrip™ Large Jaw Alligator Clip Set
- C33 Soft Meter Case



L215 SureGrip™ Kit with Probe Light and Extender

- L200 Probe Light
- TP280 20 cm Test Probe Extenders
- TP220 SureGrip Test Probes
- TL224 SureGrip Silicone Test Lead Set
- Foldable soft pouch with six pockets and hook-and-loop



Modular Test Probes (for use with Modular Test Leads)

TP220 SureGrip™ Test Probe Set

- One pair (red, black) of Industrial test probes
- Sharp, 12 mm stainless steel tip provides reliable contact
- Flexible finger barrier improves grip
- Recommended for use with TL222 and TL224 test leads
- CAT II 1000 V, 10 A rating



TP74 Lantern Tip Test Probe Set

- One pair (red, black)
- Tips include banana-style spring contacts with nickel-plated brass ends
- CAT II 1000 V, 10 A rating
- CAT III 1000 V rating only with protective cap



TLK290 Flexible Socket Probe Set

- Kit includes three flexible socket probes and a large alligator clip
- To be used on three phase sockets.
- Probes have flexible width test points that fit securely in 4 to 8 mm sockets.
- Test probe set to be used on motor and three phase sockets
- Safe contact e.g. in CEE 16 A and CEE 32 A plugs
- CAT III 1000 V / CAT IV 600 V, 8 A



TP1, TP2, TP4, TP38, SlimReach Test Probe Sets

- One pair (red, black) of slender probes for closely spaced or recessed terminals
- TP1: has a flat blade
- TP2: has 2mm diameter tip
- TP4: has 4mm diameter tip
- TP38: has stainless steel Insulated probe tip
- TP1/TP2/TP4: CAT II 1000V
- TP38: CAT IV 600V / CAT II 1000V 10A rating



Fluke Test Leads, Probes & Clips



Modular Test Probes

(for use with Modular Test Leads)

TP80 Electronic Test Probe Set

Recommended for use with TL222 and TL224

- One pair (red, black)
- IC insulated cap prevents shortening of IC legs for probing high density components or boards
- CAT III 1000 V, 10 A rating.



TLK291 Fused Test Probe Set

- One pair (red, black) fused test probes
- Designed to meet GS38 specs for United Kingdom
- CAT III 1000V, 0.5A
- Fuse rating: 500 mA/1000 V/FF/50 kA



FTP-1 SureGrip™ Fused Test Probes

- Built-in fuses for added protection
- 2 mm threaded probe tips include removable 4 mm lantern-style spring contacts
- Removable GS38 insulated IC caps for probing closely spaced leads
- CAT III 1000 V, CAT IV 600 V, 10A



FTPL-1 SureGrip™ Fused Test Probes with Leads

- FTP Fused Test Probes with built-in fuses for added protection
- Includes TL224 Silicone Insulated Test Leads
- CAT III 1000 V, CAT IV 600 V, 10 A



85 High Frequency Probe

- Converts a DC Voltmeter into a high frequency RF Voltmeter.
- Conversion from AC to DC is accomplished on a one-to-one basis includes a range of 0.25 to 30V rms



Modular Clips

(for use with Modular Test Leads)

AC220 SureGrip™ Alligator Clip Set

- One pair (red, black) of small, insulated, nickel plated jaws
- Blunt tip grabs round screw heads up to 9.5 mm
- Recommended for use with TL222 and TL224 test leads
- CAT IV 600 V, CAT III 1000 V, 10 A rating.



AC280 SureGrip™ Hook Clip Set

- One pair (red, black) of nickel plated clips
- Profile narrows to 5.6 mm at tip, hook opening 6.4 mm at front, 2 mm at base
- Recommended for use with TL222 and TL224 test leads
- CAT IV 600 V, CAT III 1000 V, 3 A rating.



AC283 SureGrip™ Pincer Clip Set

- One pair (red, black) of nickel plated pincers open to 5 mm
- 11.4 cm flexible insulated shaft
- Recommended for use with TL222 and TL224 test leads
- CAT IV 600 V, CAT III 1000 V, 1 A rating.



AC285-FTP Alligator Clips and Adapters for FTP-1 or FTPL-1

- Large alligator clip set.
- This accessory enables the use of AC285 alligator clips with FTP-1 fused probes.
- CAT III 1000 V, CAT IV 600 V, 10 A



AC285 SureGrip™ Large Jaw Alligator Clip Set

- One pair (red, black) of large alligator clips with nickel-plated steel jaws
- Multi-purpose tooth pattern grips anything from fine gauge wire to a 20 mm bolt
- Recommended for use with TL222 and TL224 test leads
- CAT IV 600 V, CAT III 1000 V, 10 A rating.



AC288 SureGrip™ Terminal Block Probe

- Retractable probe tip for safe and secure connections
- Recommended for use with TL224, TL222 or TL221 test leads
- 1 mm diameter probe tip extends out to 8.4 mm length
- CAT III 1000V, CAT IV 600V



AC87 Heavy Duty Bus Bar Clip Set

- One pair (red, black) of flat, right angle design for connecting to bus bars
- Adjustable collar provides 2 ranges of jaw openings up to 30 mm
- CAT III 600 V, 5 A rating.



AC89 Heavy Duty Insulation Piercing Test Clip

- Single probe pierces 0.25 to 1.5 mm insulated wire
- Small pin allows self-healing of the insulation
- CAT IV 600V, CAT III 1000 V, 5 A rating.



Push-on Clip

(for use with TL71 and TL75 Test Lead Sets)

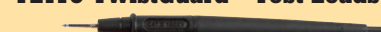
AC175 Alligator Clip Set

- Slide-on alligator clips (red, black) for TL175/TP175/TL71/TL75
- Jaws provide 8 mm opening
- CAT IV 600 V, CAT III 1000 V, 10 A rating

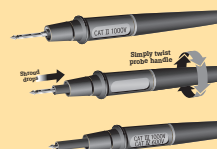


The new standard for safety

TL175 TwistGuard™ Test Leads



- Probes meet new IEC 61010-031 requirements for safety
- Patented extendable tip guard meets new CAT III 1000 V, CAT IV 600 V requirements while providing the flexibility you need for CAT II measurements
- **New WearGuard™** test lead wear indicator that changes colour when leads are damaged and in need of replacement
- Probes always show correct category rating for tip being used
- Advanced strain relief exceeds 5,000 bend life
- TP175 probes fit modular test leads
- TL175E and TP175E includes removable 4mm lantern tips for versatility.



LeadWrap Test Lead Wraps

- Eliminate tangled leads in your tool box
- Keeps test leads organised, ready for use
- Hook and loop fasteners for quick, easy use
- Three 8-inch (20 cm) test lead wraps per package



Fluke Current Clamps



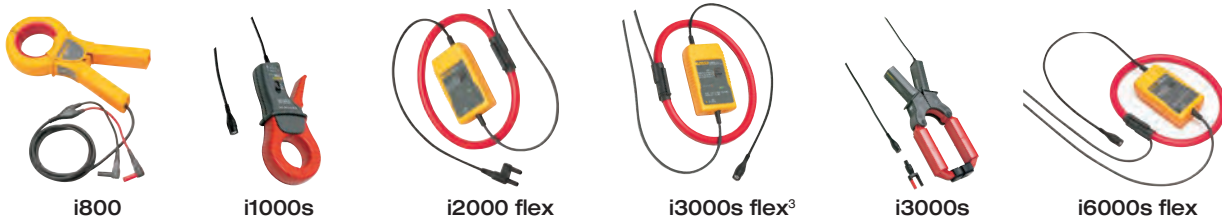
FLUKE®



Accessories

Specifications AC Models

| | i5s | i200 | i200s | i400 | i400s |
|--|----------------|----------------|-----------------------------|----------------------------------|----------------------------------|
| Nominal current range(s) | 5 A | 200 A | 20 A 200 A | 400 A | 40 A 400 A |
| Continuous AC current range | 0.01 A - 6 A | 0.5 A - 200 A | 0.1 - 24 A 0.5 A - 200 A | 5 A - 400 A | 0.5 - 40 A 5 A - 400 A |
| Highest current | 70 A | 240 A | 240 A | 1000 A | 1000 A |
| Lowest measurable current | 10 mA | 0.5 A | 0.5 A | 1 A | 0.5 A |
| Basic accuracy (48-65 Hz) ¹ | 1% | 1% + 0.5 A | 1.5% + 0.5 A | 2% + 0.15 | 2% + 0.15 |
| Useable frequency | 40 Hz - 5kHz | 40 Hz - 10 kHz | 40 Hz - 10 kHz | 45 Hz - 3 kHz | 45 Hz - 3 kHz |
| Max. working voltage | 600 V AC | 600 V AC | 600 V AC | 1000 V | 1000 V |
| Maximum conductor diameter | 15 mm | 20 mm | 20 mm | 32 mm | 32 mm |
| Output level(s) | 400 mV/A | 1 mA/A | 100 mV/A 10 mV/A | 1 mA /A | 10 mV/A 1 mV/A |
| Battery, battery life | - | - | - | - | - |
| Output cable (m) | 2.5 | 1.5 | 2.0 | 1.5 | 2.5 |
| Shrouded banana plugs | - | ● | - | ● | - |
| BNC connector | ● | - | ● | - | ● |
| BNC to banana adapter included | - | - | ● | - | - |
| Safety | CAT III, 600 V | CAT III, 600 V | CAT III, 600 V | CAT III 1000 V / CAT IV 600 V | CAT III 1000 V / CAT IV 600 V |



| | i800 | i1000s | i2000 flex | i3000s flex-24 i3000s flex-36 | i3000s | i6000s flex-24 i6000s flex-36 |
|--|-----------------------|---|--|--|---|----------------------------------|
| Nominal current range(s) | 800 A RMS | 10 A 100 A 1000 A | 20 A 200 A 2000 A | 30 A 300 A 3000 A | 30 A 300 A 3000 A | 60 A 600 A 6000 A AC |
| Continuous AC current range | 0.1 A - 800 A RMS | 0.1 A - 10 A 0.1 A - 100 A 1 A - 1000 A | 1 A - 20 A 2 A - 200 A AC RMS 30 A - 2000 A | 1 A - 30 A 2 A - 300 A AC RMS 30 A - 3000 A | 1 A - 30 A 1 A - 300 A 1 A - 2400 A | 1 A - 6000 A AC RMS |
| Highest current | 1500 A | 2000 A | 2500 A AC RMS | 3500 A AC RMS | 4000 A | 6000 A |
| Lowest measurable current | 0.1 A | 0.1 A | 1 A | 1 A | 1 A | 1 A |
| Basic accuracy (48-65 Hz) ¹ | 0.10% | 1% + 1 A | 1% | 1% | 2% + 2 A | ± 1% of range |
| Useable frequency | 30 Hz - 10 kHz | 5 Hz - 100 kHz | 10 Hz - 20 kHz (-3dB) | 10 Hz - 50 kHz (-3dB) | 10 Hz - 100 kHz | 10 Hz to 50 kHz |
| Max. working voltage | 600 V AC RMS or DC | 600 V AC | 600 V AC RMS | 600 V AC RMS | 600 V AC | 600 V AC RMS or DC |
| Maximum conductor diameter | 54 mm | 54 mm | 178 mm | Flex-24 178 mm Flex-36 275 mm | 64 mm | Flex-24 170 mm Flex-36 275 mm |
| Output level(s) | 1 mA/A | 100 mV/A 10 mV/A 1 mV/A | 100 mV/A 10 mV/A 1 mV/A | 100 mV/A 10 mV/A 1 mV/A | 10 mV/A 1 mV/A 0.1 mV/A | 50 mV/A 5 mV/A 0.5 mV/A |
| Battery, battery life | - | - | 200 hours | 400 hours | - | 400 hours |
| Output cable (m) | 1.6 | 1.6 | 0.5 | 0.5 | 2.1 | 0.5 |
| Shrouded banana plugs | ● | - | ● | n/a | - | - |
| BNC connector | - | ● | n/a | ● | ● | ● |
| BNC to banana adapter included | - | - | n/a | ● | ● | ● |
| Safety | CAT III, 600 V | CAT III, 600 V | CAT III, 600 V | CAT III, 600 V | CAT III, 600 V | CAT III, 600 V |

¹ Basic Accuracy: % reading + floorspec

² i5s also comes in a 3 pack as i5sPQ3

³ i3000s flex also comes in a 4 pack as i3000 Flex-4 pack

Fluke Current Clamps



Specifications AC/DC Models

| | 80i-110s | i30 | i30s | i310s | i410 | i1010 |
|--------------------------------|---|---------------------------------|---------------------------------|--------------------------------------|--------------------|-------------------------------------|
| Measurement type | Hall sensor | Hall sensor | Hall sensor | AC/DC | Hall sensor | Hall sensor |
| Nominal current range(s) | 10 A, AC/DC 100 A, AC/DC | 20 A AC RMS or DC | 20 A AC RMS or DC | 30/300 A AC RMS or 45/450 A DC | 400 A, AC/DC | 600 A, AC 1000 A, DC |
| Continuous current range | 0.1 A - 10 A AC/DC 1 A - 100 A AC/DC | 30 A AC Peak | 30 A AC Peak | 100 mA - 300 A AC RMS or 450 A DC | 1 A - 400 A AC/DC | 1 A - 600 A, AC 1 A - 1000 A, DC |
| Highest current | 140 A - 2 kHz | 30 A AC Peak | 30 A AC Peak | 300 A AC RMS or 450 A DC | 400 A | 1000 A |
| Lowest measurable current | 0.1 A | 50 mA | 50 mA | 100 mA | 0.5 A | 0.5 A |
| Basic accuracy ¹ | 3% + 50 mA (@ 10 A) | ± 1% of reading ± 2 mA | ± 1% of reading ± 2 mA | ± 1% of reading | 3.5% + 0.5 A | 2% + 0.5 A |
| Useable frequency | DC - 100 kHz | DC to 20 kHz (-0.5dB) | DC to 100 kHz (-0.5dB) | DC to 20 kHz | DC - 3 kHz | DC - 10 kHz |
| Zero error adjustment | ● | manual adjust via thumbwheel | manual adjust via thumbwheel | Manual | ● | ● |
| Max. working voltage | 600 V | 300 V AC RMS | 300 V AC RMS | 300 V AC RMS or DC | 600 V | 600 V |
| Maximum conductor diameter | 11.8 mm | 19 mm | 19 mm | 19 mm | 30 mm 2 x 25 mm | 30 mm 2 x 25 mm |
| Output level(s) | 100 mV/A 10 mV/A | 100 mV/A | 100 mV/A | 10/1 mV/A | 1 mV/A | 1 mV/A |
| Battery, battery life | 9 V, 55 h | 30 hours typical | 30 hours typical | 30 hours | 9 V, 60 h | 9 V, 60 h |
| Output cable length (m) | 1.6 | 1.5 | 2 | 2 | 1.6 | 1.6 |
| Shrouded banana Plugs | - | ● | n/a | - | ● | ● |
| BNC connector | ● | n/a | ● | ● | - | - |
| BNC to banana adapter included | - | n/a | ● | ● | - | - |
| Safety | CAT II, 600 V CAT III, 300 V | CAT III, 300 V | CAT III, 300 V | CAT III 300 V | CAT III, 600 V | CAT III, 600 V |

¹ Basic Accuracy: % reading + floorspec

Current Clamp Compatibility Chart

| | 113/114/115/116/117 | 175/177/179 | 233 | 287/289 | 27II / 28II | 3000FC | 8845A/8846/8808A | 77 IV | 83V/87V/88V | 43B | 430 Series II | 123/124/125 | 190 Series II | 1577/1587 | 715/724/725 | 753/754 | 787/789 |
|--------------------------|---------------------|-------------|-----|---------|-------------|--------|------------------|-------|-------------|-----|---------------|-------------|---------------|-----------|-------------|---------|---------|
| AC Models | | | | | | | | | | | | | | | | | |
| i5s | | | | | | | | | | ● | | | ● | | | | |
| i200 | 4 | ● | ● | ● | ● | ● | ● | ● | ● | | | | | ● | | | ● |
| i200s | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | ● | ● | ● | | ● | ● |
| i400 | | ● | ● | ● | ● | ● | ● | ● | ● | | | | | ● | | | ● |
| i400s | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | ● | ● | ● | ● | 2 | | 2 | 2 |
| i430 flexi-TF-II 4 Pack | | | | | | | | | | | ● | | | | | | |
| i800 | 4 | ● | ● | ● | ● | ● | ● | ● | ● | | | | | ● | | | ● |
| i1000s | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | 2 | | 2 | 2 |
| i2000 flex (new version) | ● | ● | ● | ● | ● | ● | ● | ● | ● | 3 | 3 | 3 | 3 | ● | | | ● |
| i3000s | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● |
| i3000s flex | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● |
| i6000s flex | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● |
| AC/DC Models | | | | | | | | | | | | | | | | | |
| i30 | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | ● | | | ● |
| i30s | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | |
| 80i-110s | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | ● | ● | ● | ● | ● | | 2 | 2 |
| i310s | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● |
| i410 / i410 kit | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | 3 | 3 | ● | 1 | ● | ● |
| i1010 / i1010 kit | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | 3 | 3 | ● | 1 | ● | ● |
| Other | | | | | | | | | | | | | | | | | |
| 90i-610s | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | ● | ● | 2 | | 2 | 2 | 2 |



Contact Probes

80PK-22 SureGrip™ Immersion Probe

- Type-K thermocouple for use in liquids and gels
- Measurement range: -40 to 1090°C
- Probe length: 21.3 cm



80PK-24 SureGrip™ Air Probe

- Type-K thermocouple for use in air and non-caustic gas measurements
- Bead protected by perforated baffle
- Measurement range: -40 to 816°C
- Probe length: 21.6 cm



80PK-25 and 80PT-25 SureGrip™ Piercing Probe

- 80PK-25: Type-K thermocouple suitable for food industry, liquids and gels
- 80PT-25 operates with T-type thermometers
- Measurement range: 80PK-25: -40 to 350°C
80PT-25: -196 to 350°C
- Probe length: 10.2 cm



80PK-26 SureGrip™ General Purpose Probe

- Type-K thermocouple with tapered tip for use in air, non-caustic gas and surface applications
- Measurement range: -40 to 816°C
- Probe length: 21.2 cm



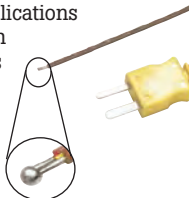
80PK-27 SureGrip™ Industrial Surface Probe

- Type-K thermocouple for surfaces in rugged environment
- Durable ribbon sensor
- Measurement range: -127 to 600°C
- Probe length: 20.3 cm



80PK-1 and 80PJ-1 Bead Probe

- 80PK-1: Type-K thermocouple for general purpose applications
- 80PJ-1 operates with J-type thermometers
- Measurement range: -40 to 260°C
- Probe length: 1 m lead wire



80PK-3A Surface Probe

- Type-K thermocouple for flat or curved surfaces
- Measurement range: 0 to 260°C
- Probe length: 9.5 cm



80PK-8 / 80PK-10 Pipe Clamp Temperature Probe

- Measurement range: -29 to 149°C for pipe diameters from 6.4 to 34.9mm (80PK-8) and 32 mm to 64 mm (80PK-10)



80PK-9 and 80PJ-9 General Purpose Probe

- 80PK-9: Type-K thermocouple surface, air and non-caustic gases
- 80PJ-9 operates with J-type thermometers
- Measurement range: -40°C to 260°C
- Probe length: 15.3 cm



80PK-11 Velcro Temperature Probe

- Type-K thermocouple for hands free measurement of HVAC temperature measuring applications
- Total length of cable: 1m (0.5m in cable, 0.5m in Velcro cuff insulation material; Hytrel)
- Measurement range: -30°C to 150°C



DMM Probes

80AK-A Thermocouple Adapter

- Adapts Type-K thermocouple mini-connector to dual banana plug inputs
- Measurement range and accuracy: probe dependent
- Suitable for low voltage applications (below 30 V AC, 60 V DC)



80BK-A Integrated DMM Probe

- Type-K thermocouple with standard banana jack
- Convenient one piece construction
- Compatible with DMMs with temperature measurement functions
- Measurement range: -40 to 260°C



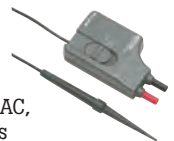
80TK Thermocouple Module

- Converts a DMM to a thermometer
- For use with type-K thermocouples in low voltage applications (below 24 V AC, 60 V DC)
- Measurement range: -50 to 1000°C (probe dependent)



80T-150UA Universal Temperature Probe

- Compatible with Fluke DMM
- High accuracy, fast reading for low voltage (below 24 V AC, 60 V DC) applications
- Measurement range: -50 to 150°C
- Output: 1 mV/°C or 1 mV/°F (switchable)



Other Temp Accessories

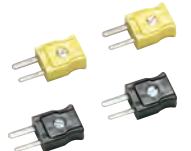
80PK-18 Pipe Clamp Temperature Probe Kit

- 80PK-8 Pipe Clamp Temperature Probe
- 80PK-10 Pipe Clamp Temperature Probe
- Soft Case



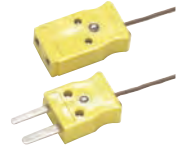
80CK-M & 80CJ-M type K & J Male Mini-Connectors

- Isothermal screw terminal for K or J wire
- Suitable for up to 20 gauge thermocouple wire
- Color coded to industry standards (K-yellow, J-black)
- Two per package



80PK-EXT, 80PJ-EXT and 80PT-EXT Extension Wire Kits

- Extending and repairing J, K or T-type thermocouple wires
- Kit includes 3 metres of thermocouple wire and 1 pair of male/female mini-connectors
- Maximum continuous exposure temperature: 260°C
- 80PK-EXT is compatible with K-type thermometers, 80PJ-EXT is designed for J-type thermometers and PT-EXT for T-type thermometers



Thermocouple Plug Kits 700TC1

- A kit of 10 mini-plug connectors
- Type J (black), one
- Type K (yellow), one
- Type T (blue), one
- Type E (purple), one
- Type R/S (green), one
- Type B or Cu (white), one
- Type L (J-DIN) (blue), one
- Type U (T-DIN) (brown), one
- Type C (red), one
- Type N (orange), one



700TC2

- A kit of 7 mini-plug connectors
- Type J (black), two
- Type K (yellow), two
- Type E (purple), one
- Type T (blue), one
- Type R/S (green), one



Fluke Cases and Holsters



Soft Cases

Zipped carrying cases protect your meter; most cases come with belt loops so your meter is stored conveniently on your tool belt.



C195

- Zipped carrying case with storage compartments
- Allows hand or shoulder use



C789

- Large fabric carrying case with 3 compartments, removable handle and shoulder strap



C550 Tool Bag

- Steel reinforced frame
- Rugged ballistic cloth with heavy duty hardware
- Large zippered storage compartment with 25 pockets
- Weather resistant
- Carry all your tools to the job



¹ Also available in camouflage print

Cases & Holsters Compatibility Chart

| | | 113/114/115/116/117 | 175/177/179 | 233 | 3000FC DMM | 287/289 | 27II / 28II | 77 IV | 83V/87V/88V | T5 | T90 | T100 Series | 323/324/325 | 333/334/335/336/337/902 | 353/355 | 1503/1507/1577/1587 | 9040/9062 | 1735/1740 Series | 430 Series II | 438/420 Series | 190 Series II | 922 | 971 | 51/52/53/54 II | 561/566/568/572-2 | 705/707 | 712/714/715/717 | 718/719 | 724/725/726 | 753/754 | 787 | 789 | | | |
|-----------------------------------|------------------------|---|-------------|-----|------------|---------|-------------|-------|-------------|----|-----|-------------|-------------|-------------------------|---------|---------------------|-----------|------------------|---------------|----------------|---------------|-----|-----|----------------|-------------------|---------|-----------------|---------|-------------|---------|-----|-----|--|--|--|
| Soft Cases | Size (HxWxD) mm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C12A | 172 x 128 x 38 | • | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C23 | 225 x 95 x 58 | • | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C25 | 218 x 128 x 64 | • | • | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C33 | 280 x 115 x 55 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C35 | 220 x 140 x 65 | • | • | • | • | | • | • | • | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C43 | 318 x 230 x 90 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C50 | 192 x 90 x 38 | • | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C75 | 179 x 103 x 26 | For multiple test leads and accessories | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C90 | 205 x 90 x 72 | | • | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C115 | 240 x 205 x 75 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C116 | 240 x 230 x 65 | • | • | • | • | • | • | • | • | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C125 | 192 x 141 x 58 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C150 | 298 x 114 x 56 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C195 | 231 x 513 x 231 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C280 | 230 x 185 x 65 | • | • | • | • | • | • | • | • | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C345 | 240 x 360 x 200 | For multiple test leads and accessories | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C550 | 333 x 513 x 231 | For multiple test leads and accessories | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C781 | 269 x 141 x 90 | | | • | • | • | • | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C789 | 308 x 256 x 77 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C799 | 305 x 229 x 165 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hard cases | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C20 | 256 x 154 x 106 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C100 | 397 x 346 x 122 | | • | • | | | • | • | • | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C101 | 305 x 360 x 105 | | • | • | • | | • | • | • | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C120 | 346 x 397 x 128 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C290 | 410 x 474 x 135 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C437-II | 565 x 476 x 305 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C800 | 230 x 385 x 115 | | • | • | • | | • | • | • | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C1600 | 260 x 390 x 200 | For multiple test leads and accessories | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CXT80 | 28 x 32 x 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CXT170 | 28 x 32 x 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CXT280 | 28 x 32 x 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leather Cases | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CS10 | 287 x 179 x 106 | | • | | • | | • | • | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CS20A | 256 x 154 x 106 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Holsters | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C10 | 154 x 77 x 45 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H80M | 190 x 95 x 43 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H3 | 231 x 90 x 64 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H5 | 192 x 90 x 38 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H6 | 302 x 178 x 57 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hanging Kit (see page 147) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ToolPak | | • | • | • | • | • | • | • | • | | | | | | | | | | | | | | | | | | | | | | | | | | |

Fluke Cases and Holsters



Hard Cases

C20 Meter Case

- Heavy duty case with carrying handle and accessories storage compartment
- Top cover snaps onto back to serve as tilt stand



C100 Meter and Accessory Case

- Tough polypropylene case



C101 Hard Case

- Configure the diced foam interior to store and protect what you need to carry with you.
- Tough polypropylene exterior shell
- Interior cavity measures



C120 and C290 Cases

- Heavy duty cases with accessory storage compartments



C437-II Hard Rolling Case

- Watertight hard case with rollers for 430 Series, 1735 and 1740 Series Power Quality products and accessories. The configurable foam securely holds any of these instruments during transit.



C1600 Meter and Accessories Case

- Rugged molded plastic case
- Deep interior large enough to hold and protect your tools
- Lift out tray keeps everything organised
- Snap open compartment on top of lid



CXT80, CXT170, CXT280, CXT1000 Rugged Pelican Hard Case

- Unbreakable, watertight, airtight, dustproof, chemical resistant and corrosion proof cases



Leather Cases

C510 Leather Meter Case

- Oiled genuine top grain cowhide
- Rugged construction with heavy duty stitching and reinforced rivets
- Large tool belt loop and top flap to secure meter



C520A Leather Tester Case

- Oil tanned for long life
- Large tool belt loop and top flap to secure tester



Holsters

C10 Meter Holster

- Snap-on yellow holster absorbs shocks and protects meter from rough handling
- Includes built-in stand and hanger loop



H80M Holster + Magnetic Hanger

- Snap-on yellow holster absorbs shocks and protects meter from rough handling
- Magnet, hook and loop straps



H3 Clamp Meter Holster

- Fabric holster absorbs shocks and protects meter from rough handling.
- Built-in pocket for lead storage



H5 Electrical Tester Holster

- Rugged fabric holster includes flap for lead storage



H6 IR Thermometer Holster

- Durable nylon holster
- For Fluke 63 Infrared Thermometer



Software

Logging software



FlukeView® Forms

Harness the power of the data logging function on your Fluke Digital Multimeter, Thermometer or ProcessMeter. Log live readings while connected to a PC, or leave your Fluke 289, 789 or 54-II in place to capture up to 1,000 readings for download to a PC.

Choose the model that's right for you:

- **FVF-SC2:** Includes software and cable used with 280 Series DMMs and 789 ProcessMeters, and the 1653B Multifunction Installation Tester
- **FVF-SC3:** Includes software and cable used with 45 Bench Meters
- **FVF-SC4:** Includes software and cable used with 8845A and 8846A Multimeters

Go to www.fluke.com.au to download the demo.

FlukeView® Forms Basic

An abridged version of FlukeView Forms.

- Compatible for use with 280 Series DMMs and 789 ProcessMeters only
- Upgrade to the full FlukeView Forms with FVF-UG

FLUKE CONNECT™ Accessories

Fluke Connect ir3000FC Connector

Fluke Connect ir3000 FC Connector allows you to wirelessly transfer data from your existing Fluke Tools to your smart phone.

- Wirelessly share measurements with your team—anywhere, anytime
- Connect the Fluke 289/287 True-rms Logging Multimeter and the 789 ProcessMeter with the ir3000FC Connector



Fluke Connect Wireless PC Adapter PC3000FC

The Fluke 3000 FC Wireless Test Tools are a team and the modules are team players. You connect any of the Fluke Connect™ Modules to your test point and then view the results through Windows® software on your PC - up to 20 metres away. Save time and conduct more tests with less trips. The pc3000 FC Adapter and Software wirelessly collects up to 65,000 sets of time stamped min/max/avg readings from FC remote modules.



Fluke Connect Wireless SD Card

Wirelessly enable your Fluke infrared camera with the Fluke Connect™ wireless SD card and you can instantly upload, share and analyse data from anywhere, with anyone on your team, at any time.



Fluke Process Tools & Automotive Accessories



Process Tools

BP7240

- Li-ion rechargeable battery; nominal 7.2 volt, 4400 mA hr
- Use with 750 Series Calibrators



BP7235

- NiMH rechargeable battery; nominal 7.2 volt, 3500 mA hr
- Use in 700 and 740 Series Calibrators



700LTP-1 Low Pressure Test Pump

Hand operated pressure pump designed to generate either vacuum to -13 psi/-0.90 bar or pressures to 100 psi/6.9 bar.



700ILF In-line Filter

The Fluke 700ILF can be used to isolate the calibrator from incidental contact with fluids.



700PTP-1 Pneumatic Test Pump

The Fluke 700PTP is a handheld pressure pump designed to generate either vacuum to -11.6 psi/-0.8 bar or pressure to 600 psi/40 bar.



700HTP-2 Hydraulic Test Pump

The Fluke 700HTP is designed to generate pressures up to 10,000 psi/690 bar. Use the Fluke 700PRV adjustable relief valves to limit pressures from 1360 psi to 5450 psi.



700HTH-1 Hydraulic Test Hose

The 700HTH is a 10,000 psi, 690 bar test hose that connects to a calibration unit under test from a Fluke 700HTP hydraulic test pump.



700PMP Pressure Pump

The 700PMP is a hand-operated pressure pump to provide pressures up to 150 psi/1000 kPa. Output fitting is 1/8 FNPT.



Fluke 700-IV Current Shunt

Conversion factor: 10 mV = 1 mA
Accuracy (% of input, one-year): 0.025 %
Input current: 0 mA to 55 mA
Input resistance: nominal
Output resistance: 10 Ω nominal



Automotive

Piercing Clips

TP81 and TP82 Insulation Piercing Clip Set

- Banana jack accepts all DMM and banana jack leads
- Available for 4 mm input, modular connection with TP81 or available as a 2 mm input to slip onto probe tips with the TP82
- Tested to 60 V DC



Probe Pins

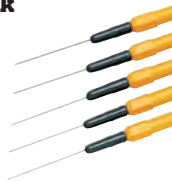
TP88 Rigid Back Probe Pin Set

- Slides onto test probes measuring 2 mm
- Tested to 60 V DC



TP40 Automotive Back Probe Pins (five)

- Banana jack accepts all DMM and banana jack leads (4 mm)
- Tested to 60 V DC



Banana Plugs

BP880 BNC to Female Double Stacking Banana Plug BP881 BNC to Male Double Stacking Banana Plug

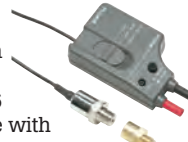
- Allows for hands-free testing in controlled voltage environments 500 VRMS maximum
- Banana plug is nickel-plated, beryllium copper for low contact resistance
- The BNC shell is plated for tarnish resistance
- Operating temperature +50°C maximum



Pressure Module

PV350 Pressure Vacuum Module

- Compatible with all Fluke and most popular DMMs
- Digital pressure and vacuum measurements in a single module
- Transducer sealed in 316 stainless steel compatible with variety of liquids and gases
- Measures vacuum to 76 cm Hg
- Display results in English (psig or Hg) or metric (kPa or cm Hg) units
- Measures pressure to 500 psig (3447 kPa)



Inductive Pick-up

RPM80 Inductive Pick-up

- Provides RPM readings



Test Leads

TL28A Automotive Test Lead Set

- Flexible silicone insulated leads are heat and cold resistant
- CAT I 30 V, 10 A



TLK281 SureGrip™ Automotive Test Lead Kit

Kit contains:

- TP81 Insulation Piercing Clip Set
- TL224 Suregrip™ Silicone Test Lead Set
- TP220 Suregrip™ Test Probe Set
- AC220 Suregrip™ Alligator Clip Set
- AC285 Suregrip™ Large Jaw Alligator Clip Set
- Soft Case



TLK282 SureGrip™ Deluxe Automotive Test Lead Kit

Kit contains:

- TP81 Insulation Piercing Clip Set
- TP40 Automotive Back Probe Pins (five)
- TL224 Suregrip™ Silicone Test Lead Set
- TP220 Suregrip™ Industrial Test Probe Set
- AC220 Suregrip™ Alligator Clip Set
- AC285 Suregrip™ Large Jaw Alligator Clip Set
- AC280 Suregrip™ Hook Clip Set
- Soft Case



TL 82 Automotive Pin & Socket Adapter Kit

This set of male and female adapters allows you to make firm connection to pin and socket connectors.

Kit contains:

- Retractable shrouded test lead set
- Complete set of 8 pin-and-socket adapters with flexible tips
- One red and black in different sizes
- Rated to 60 V DC



Current Probe

90i-610s AC/DC Current Probe (600 A)

- Current Range: to 600A DC or AC Peak
- Basic Accuracy (DC to 400Hz): ± (2% of reading + 1A)
- Output Signal: 100A range: 10mV/A 600A range: 1mV/A
- Frequency Range: 40Hz to 400Hz
- Working Voltage: 600V AC RMS
- Maximum Conductor Diameter: 34 mm





Other Accessories

Free your hands and shed light on the contact point

Lights

L200 Probe Light

- Attaches to any Fluke test probe
- Bright white LED
- 120 hours of battery life



L205 Mini Hat Light

Rugged high-intensity Xenon worklight

- Attaches to a baseball cap
- Includes a hat clip
- Includes two AAA batteries
- Waterproof



L206 Deluxe LED Hat Light (hard hat not included)

Attach it to a hard hat, a baseball cap, or even a panel door for all the light you need.

- 3 super bright white LEDs – never burn out
- Special hard-hat attachment included
- 40-hour battery life
- Includes three AAA batteries



L207 High Intensity Light with Collector's Cap

Powerful, lightweight, mini-Xenon worklight shines right where you're working.

- Light attaches to bill of baseball cap
- Electrically and thermally nonconductive



L210 Probe Light + Probe Extender

Includes L200 Probe Light and TP280 Test Probe Extenders

- 20 cm probe extenders keep hands away from live circuits
- Extender fits between modular test probe and test lead (total reach 30 cm)



L211 Probe Light Kit

Includes L200 Probe Light, TL71 Premium DMM Test Lead Set and C75 Case

- Small, rugged light easily attaches to any Fluke test probe
- Flexible silicone test leads are heat and cold resistant
- 120 hours of battery life



High Voltage Probes

80K-6 and 80K-40

A high voltage probe that allows a multimeter to measure up to 6,000V or 40,000V respectively.

Intended for low energy applications only



Stray Voltage Adapter

SV225 Stray Voltage Adapter

Stray voltage can appear in electrical installations, due to the capacity between wires. This may result in erroneous readings on high impedance meters.



The SV225 solves this without compromising safety.

- On energised wires, the meter will indicate the real voltage.
- On non-energised circuits the meter will read close to zero (even if there are stray voltages).
- It can be used with all modern meters with standard input spacing.
- Rated CAT III 1000 V, CAT IV 600 V

TL225-1 SureGrip™ Stray Voltage Adapter Test Lead Kit

Kit includes:

- SV225 Stray Voltage Eliminator
- TL224 SureGrip™ Silicone Test Lead Set (right to straight)
- TP238 SureGrip™ Insulated Test Probe Set
- C75 Accessory Case



IR189USB

IR to USB interface cable (included with FVF-SC2 and FVF-Basic)

- For customers who want to upgrade from their existing RS232 cable
- Small adapter to connect the cable to the 189, 287, 289, 1653B or the 1550B is included.



Meter Cleaners

MC6 MeterCleaner™ Wipes (6-pack)

MC50 MeterCleaner™ Wipes (50-pack)

- Pre-moistened wipe removes dirt, oil and grease
- One wipe easily cleans one meter
- Safe on rubber, plastic and for environment (non-toxic)



Hangers



TPAK ToolPak™ Magnetic Meter Hanger

- Free both hands to make measurements
- Hang your meter from metallic surfaces like panels and pipes
- Kit includes universal hanger clips (two), hook and loop straps (two lengths), adapter and strong magnet
- Attaches to back of many Fluke meters, including 110, 170, 280 Series, 87V and 83V DMMs, 724, 725 and 789 Process Calibrators, 1503, 1507, 1577 and 1587 Insulation Multimeters and 50 Series II Digital Thermometers

Fluke Seminars and Workshops

Fluke offers a variety of tools including hands-on and online training, videos and demos to help increase your skills. Fluke seminars and workshops cover a range of topics to help you learn the latest troubleshooting techniques and best practices. Most of Fluke's seminars and workshops combine instructor lead training with the opportunity to use the tools and try the techniques presented.

MOTORS & DRIVES

The Fluke Hands-on Motors and Drives workshop will assist attendees to troubleshoot faster and avoid downtime using the latest measurement technology and test tools.

WHAT YOU WILL LEARN?

- Understand a range of measurements and tools that can be used to isolate possible causes of failure in a three-phase motor drive system
- Understand specific measurement techniques and test tool applications to isolate fault conditions
- Reduce downtime by improving troubleshooting practices



POWER QUALITY

The Fluke Power Quality Hands-On Seminar will help attendees discover how to detect and prevent power quality problems with the right tools and knowledge from Fluke. This course will educate attendees to reduce expensive plant downtime by using planned maintenance techniques to improve power quality, and reduce costly electrical utility penalties for poor power quality.

WHAT YOU WILL LEARN?

- Fundamentals of Power Quality
- How to troubleshoot power quality with Fluke's Power Quality Analysers
- How to save money by improving power quality

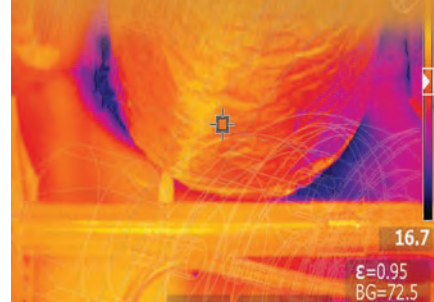


THERMOGRAPHY

The Fluke Thermal Imaging Hands-on Workshop will help attendees learn how to troubleshoot faster and avoid downtime using the latest infrared technology and create extensive reports on IR thermography surveys.

WHAT YOU WILL LEARN?

- Fundamentals of thermal imaging
- Understand the factors which affect the temperature readings
- How to troubleshoot using the infrared cameras in various applications:
 - Electrical
 - Mechanical / Electromechanical
 - Heating, Ventilation and Air-conditioning
 - Building inspection



PREDICTIVE MAINTENANCE

The Fluke Predictive Maintenance Workshop provides, Thermal Imaging, Vibration Testing and Analysing hands-on training that will help learners to troubleshoot faster and avoid downtime using the latest infrared technology and vibration technology.

WHAT YOU WILL LEARN?

- Proactive Maintenance 101
- Fundamentals of thermal imaging
- How to troubleshoot using the infrared cameras in various applications
- How to prepare thermography inspection reports and quantify cost savings
- How to operate the Fluke 810 Vibration tester on rotating machineries to identify the following mechanical faults:
 - Unbalance
 - Bearings
 - Misalignment
 - Looseness



PROCESS TOOLS

The Fluke Process Tools Hands-on training teaches attendees how to test and verify 4-20 mA signal and devices as well as various pressure and temperature transmitters which will assist to troubleshoot faster and avoid costly downtime.

WHAT YOU WILL LEARN?

- Testing, troubleshooting, calibrating, process temperature devices
- Testing and troubleshooting 4-20 mA control loops
- Measuring loop power supplies and troubleshooting suspect power supplies
- Using a HART transmitter as a mA source
- Testing a I/P with 4-20 mA sourcing
- Testing a control valve with a 4-20 mA source



ENERGY MEASUREMENT

Discover how to reduce energy consumption and increase savings by learning where and how to quantify energy consumption, and identify energy waste.

WHAT YOU WILL LEARN?

- Strategies to lower your energy bill
- Tools to identify and quantify waste
- Measure and log power consumption
- Identify and measure common production process system wastes
- Detect energy waste with vibration detection and analysis
- Calculate the dollar cost of compressed air
- Measure voltage unbalance to calculate waste
- Quantify electrical cost of ventilation
- How to reduce HVAC costs



Want to learn more about the different appreciation areas in the Fluke series or to view the New Year Calendar for a workshop near you go to sg.fluke.com/trainingcentre

100 % Focused

Every object. Near and far.

MultiSharp™ Focus.



Manual focus.
(without MultiSharp™ Focus)



ALL pipes in focus.
(with MultiSharp™ Focus)

Introducing the Fluke Ti450 Infrared Camera with MultiSharp™ Focus

Simply point and shoot – the camera automatically processes a stack of images focused near and far to give you clear, accurate focus throughout the field of view.

Download the latest IR Guide
Fluke.com/Ti450-SEA

FLUKE®

Fluke Product Index

Accessories Pages 137 - 146

| | |
|-----------|-----|
| 700HTH-1 | 146 |
| 700HTP-2 | 146 |
| 700ILF | 146 |
| 700-IV | 146 |
| 700LTP-1 | 146 |
| 700PMP | 146 |
| 700PTP-1 | 146 |
| 700TC1 | 143 |
| 700TC2 | 143 |
| 80AK-A | 143 |
| 80BK-A | 143 |
| 80CJ-M | 143 |
| 80CK-M | 143 |
| 80I-110S | 142 |
| 80PJ-1 | 143 |
| 80PJ-9 | 143 |
| 80PJ-EXT | 143 |
| 80PK-1 | 143 |
| 80PK-3A | 143 |
| 80PK-8 | 143 |
| 80PK-9 | 143 |
| 80PK-10 | 143 |
| 80PK-11 | 143 |
| 80PK-18 | 143 |
| 80PK-22 | 143 |
| 80PK-24 | 143 |
| 80PK-25 | 143 |
| 80PK-26 | 143 |
| 80PK-27 | 143 |
| 80PK-EXT | 143 |
| 80PT-EXT | 143 |
| 80T-150UA | 143 |
| 80TK | 143 |
| 90I-610S | 146 |
| AC87 | 140 |
| AC89 | 140 |
| AC175 | 140 |
| AC220 | 140 |
| AC280 | 140 |
| AC283 | 140 |
| AC285 | 140 |
| AC285-FTP | 140 |
| AC288 | 140 |
| BP880 | 146 |
| BP881 | 146 |
| BP980 | 138 |
| BP7235 | 146 |
| BP7240 | 146 |
| C10 | 145 |
| C12A | 144 |
| C100 | 145 |
| C101 | 145 |
| C115 | 144 |
| C116 | 144 |
| C120 | 145 |
| C125 | 144 |
| C150 | 144 |
| C195 | 144 |
| C20 | 145 |
| C23 | 144 |
| C25 | 144 |
| C280 | 144 |
| C290 | 145 |
| C33 | 144 |
| C345 | 144 |
| C35 | 144 |
| C43 | 144 |
| C437-II | 145 |
| C50 | 144 |
| C510 | 145 |
| C520A | 145 |
| C550 | 144 |
| C75 | 144 |
| C781 | 144 |
| C789 | 144 |
| C799 | 144 |
| C800 | 144 |
| C90 | 144 |
| CXT80 | 145 |
| CXT170 | 145 |
| CXT280 | 145 |

| | |
|----------------|--------|
| CXT1000 | 145 |
| ES165X | 77 |
| FC SD CARD | 9, 145 |
| FTP-1 | 140 |
| FTPL-1 | 140 |
| FVF-SC2 | 145 |
| FVF-SC3 | 145 |
| FVF-SC4 | 145 |
| H3 | 145 |
| H5 | 145 |
| H6 | 145 |
| H80M | 144 |
| H900 | 139 |
| HC120-II | 97 |
| HH290 | 96 |
| I1000S | 141 |
| I1010 | 142 |
| I200 | 141 |
| I2000 FLEX | 141 |
| I200S | 141 |
| I2500-10 FLEX | 29 |
| I2500-18 IFLEX | 29 |
| I30 | 142 |
| I30S | 142 |
| I3000S | 141 |
| I3000S FLEX | 141 |
| I310S | 142 |
| I400 | 141 |
| I400S | 141 |
| I410 | 142 |
| I5S | 141 |
| I6000S FLEX | 141 |
| I800 | 141 |
| IR189USB | 147 |
| IR3000FC | 9, 145 |
| L200 | 147 |
| L205 | 147 |
| L206 | 147 |
| L207 | 147 |
| L210 | 147 |
| L211 | 147 |
| L215 | 139 |
| MC50 | 147 |
| PC3000FC | 9, 145 |
| PV350 | 146 |
| RPM80 | 146 |
| SCC120B | 97 |
| SCC290 | 96 |
| SV225 | 147 |
| SW90W | 96 |
| T5-KIT | 139 |
| TL175 | 140 |
| TL175E | 140 |
| TL220 | 139 |
| TL221 | 139 |
| TL222 | 139 |
| TL223-1 | 139 |
| TL224 | 139 |
| TL225 | 139 |
| TL238 | 139 |
| TL26A | 138 |
| TL27 | 139 |
| TL28A | 146 |
| TL40 | 138 |
| TL71 | 138 |
| TL75 | 138 |
| TL76 | 138 |
| TL80A | 138 |
| TL81A | 138 |
| TL82 | 146 |
| TL910 | 138 |
| TL930 | 138 |
| TL932 | 138 |
| TL935 | 138 |
| TL940 | 138 |
| TL950 | 138 |
| TL960 | 138 |
| TL970 | 138 |
| TLK-220 | 139 |
| TLK-225 | 139 |
| TLK281 | 146 |
| TLK282 | 146 |
| TLK287 | 138 |
| TLK289 | 139 |

| | |
|-------------|-----|
| TLK290 | 139 |
| TLK291 | 140 |
| TPAK | 147 |
| TP1 | 139 |
| TP175 | 140 |
| TP2 | 139 |
| TP220 | 139 |
| TP38 | 139 |
| TP4 | 139 |
| TP40 | 146 |
| TP74 | 139 |
| TP80 | 140 |
| TP81 | 146 |
| TP82 | 146 |
| TP88 | 146 |
| TP912 | 138 |
| TP920 | 138 |
| TRM50 | 96 |
| VPS410-II-R | 96 |

Battery Testers Pages 33 - 34

| | |
|-------|----|
| BT510 | 34 |
| BT520 | 34 |
| BT521 | 34 |

Bench Meters Page 25

| | |
|----------|----|
| 8808A | 25 |
| 8808A/SU | 25 |
| 8845A | 25 |
| 8845A/SU | 25 |
| 8846A | 25 |
| 8846A/SU | 25 |

Clamp Meters Page 26 - 32

| | |
|-------|----|
| 323 | 31 |
| 324 | 31 |
| 325 | 31 |
| 353 | 32 |
| 355 | 32 |
| 360 | 30 |
| 365 | 28 |
| 373 | 29 |
| 374FC | 29 |
| 375FC | 29 |
| 376FC | 29 |
| 381 | 28 |
| 902 | 30 |

Connect Page 2 - 11

| | |
|-------------|--------|
| A3000FC | 5 |
| A3000FC KIT | 5 |
| A3001FC | 5 |
| A3001FC KIT | 5 |
| A3002FC | 5 |
| A3003FC | 6 |
| A3004FC | 6 |
| IR3000FC | 9, 145 |
| PC3000FC | 7 |
| T3000FC | 8 |
| T3000FC KIT | 8 |
| V3000FC | 7 |
| V3000FC KIT | 7 |
| V3001FC | 7 |
| V3001FC KIT | 7 |
| V3003FC KIT | 7 |

Digital Multimeters Pages 12 - 24

| | |
|----------------|---------|
| 113 | 20 |
| 114 | 21 |
| 115 | 20 |
| 116 | 21 |
| 116/62MAX+ KIT | 21, 134 |
| 116/323 KIT | 21, 134 |
| 117 | 20 |

| | |
|--------------------|---------|
| 117/323 KIT | 20, 134 |
| 175 | 18 |
| 177 | 18 |
| 179 | 18 |
| 233 | 19 |
| 27 II | 17 |
| 28 II | 17 |
| 28 II EX/AU | 17, 132 |
| 287 | 15 |
| 287/FVF KIT | 15, 134 |
| 287/FVF/IR3000 KIT | 15, 134 |
| 289 | 15 |
| 289/FVF KIT | 15, 134 |
| 289/FVF/IR3000 KIT | 15, 134 |
| 3000FC | 14 |
| 3000FC/1AC-II KIT | 14, 134 |
| 3000FC GM KIT | 14, 133 |
| 3000FC HVAC KIT | 14, 133 |
| 3000FC IND KIT | 14, 133 |
| 3000FC/TPAK KIT | 14, 134 |
| 771V | 22 |
| 83V | 16 |
| 87V | 16 |
| 87V/E2 KIT | 16, 134 |
| 88-5/A | 23 |
| 88-5/A KIT | 23, 134 |
| PRV240 | 24 |

Earth Ground Testers Pages 73 - 75

| | |
|------------|---------|
| 1621 | 74 |
| 1623-2 | 73 |
| 1623-2 KIT | 73, 135 |
| 1625-2/KIT | 73, 135 |
| 1630 | 75 |

Electrical Testers Pages 35 - 40

| | |
|--------------------|---------|
| 1AC-II | 37 |
| 1000FLT | 40 |
| 2042 | 38 |
| 2042 T | 38 |
| 9040 | 36 |
| 9062 | 36 |
| LVD1A | 37 |
| LVD2 | 37 |
| T5-1000 | 37 |
| T5-600 | 37 |
| T5-600/62+/1AC KIT | 135 |
| T5-H5-1AC KIT | 37, 135 |
| T90 | 39 |
| T110 | 39 |
| T130 | 39 |
| T150 | 39 |

Indoor Air Quality Pages 63 - 67

| | |
|---------|---------|
| 922 | 65 |
| 922/KIT | 65, 136 |
| 971 | 66 |
| 975 | 64 |
| 975V/VP | 64 |
| 985 | 67 |
| CO-205 | 67 |
| CO-220 | 67 |
| RLD2 | 66 |

Infrared Cameras Pages 51 - 62

| | |
|--------------|--------|
| CV200 | 62 |
| CV201 | 62 |
| CV300 | 62 |
| CV301 | 62 |
| CV400 | 62 |
| CV401 | 62 |
| LENS/25MAC2 | 59 |
| LENS/4XTELE2 | 59 |
| LENS/TELE2 | 57, 59 |
| LENS/WIDE2 | 57, 59 |
| TI300 | 57 |

Fluke Product Index

| | |
|---------|----|
| TI400 | 57 |
| TI450 | 57 |
| TIS10 | 55 |
| TIS20 | 55 |
| TIS40 | 55 |
| TIS45 | 55 |
| TIS50 | 55 |
| TIS55 | 55 |
| TIS60 | 55 |
| TIS65 | 55 |
| TIS75 | 55 |
| TIX1000 | 61 |
| TIX500 | 59 |
| TIX520 | 59 |
| TIX560 | 59 |
| TIX640 | 61 |
| TIX660 | 61 |

Infrared Thermometers Pages 43 - 50

| | |
|--------------------|---------|
| 51 II | 48 |
| 52 II | 48 |
| 53 II | 48 |
| 54 II | 48 |
| 572-2 | 46 |
| 561 | 45 |
| 566 | 45 |
| 568 | 45 |
| 568EX | 45, 132 |
| 61 | 47 |
| 62MAX | 47 |
| 62MAX+ | 47 |
| 62MAX+/323/1AC KIT | 136 |
| 63 | 47 |
| FP | 48 |
| FP PLUS | 48 |
| VT04 | 49-50 |
| VT04A | 49-50 |
| VT04-ELEC-KIT | 49, 136 |
| VT04-HVAC-KIT | 49, 136 |
| VT04-MAINT-KIT | 49, 136 |

Insulation Testers Pages 68 - 72

| | |
|------------------|---------|
| 1503 | 71 |
| 1507 | 71 |
| 1550C | 72 |
| 1550C/KIT | 72, 135 |
| 1555 | 72 |
| 1555/KIT | 72, 135 |
| 1577 | 70 |
| 1587FC | 70 |
| 1587/62+ FC KIT | 70, 136 |
| 1587/1400 FC KIT | 70, 136 |
| 1587/MDT FC KIT | 70, 136 |
| 1587T | 70 |

Intrinsically Safe Pages 131 - 132

| | |
|---------|----------|
| 1551A | 113, 132 |
| 1552A | 113, 132 |
| 28-IIEX | 17, 132 |
| 568EX | 45, 132 |
| 700PEX | 119, 132 |
| 707EX | 106, 132 |
| 718EX | 114, 132 |
| 721EX | 116, 132 |
| 725EX | 109, 132 |

Laser Distance Meters Pages 41 - 42

| | |
|-----------------|---------|
| 414D | 42 |
| 414D/62MAX+ KIT | 42, 136 |
| 419D | 42 |
| 424D | 42 |

Multifunction Installation Testers Pages 76 - 78

| | |
|-------|-------|
| 1652C | 77-78 |
| 1653B | 77-78 |
| 1654B | 77-78 |

Portable Appliance Testers Pages 79 - 80

| | |
|--------|-------|
| 6200-2 | 79-80 |
| 6500-2 | 79-80 |

Power Quality Analysers Pages 81 - 92

| | |
|--------------|----|
| 1730 | 87 |
| 1736/B | 88 |
| 1736/INTL | 88 |
| 1738/B | 88 |
| 1738/INTL | 88 |
| 1743 | 89 |
| 1744 | 89 |
| 1745 | 89 |
| 1750 | 90 |
| 1760 BASIC | 91 |
| 1760 INTL | 91 |
| 1760TR BASIC | 91 |
| 1760TR INTL | 91 |
| 345 | 83 |
| 43B | 84 |
| 434-II | 86 |
| 434-II/BASIC | 86 |
| 435-II | 86 |
| 435-II/BASIC | 86 |
| 437-II | 86 |
| 437-II/BASIC | 86 |
| VR1710 | 85 |

Process Calibration Tools Pages 100 - 123

| | |
|--------------|----------|
| 1523 | 113 |
| 1524 | 113 |
| 1551A | 113 |
| 1552A | 113 |
| 1586A | 112 |
| 2700G-BG | 120 |
| 2700G-G | 120 |
| 3130-G2M | 123 |
| 6241 | 123 |
| 6242 | 123 |
| 6531 | 122 |
| 6532 | 122 |
| 700G | 117-118 |
| 700HTPK KIT | 117, 136 |
| 700HTPK2 KIT | 117, 136 |
| 700PTPK KIT | 117, 136 |
| 700PTPK2 KIT | 117, 136 |
| 700PEX | 119, 132 |
| 700RG | 117-118 |
| 705 | 106 |
| 707 | 106 |
| 707EX | 106, 132 |
| 709 | 107 |
| 709H | 107 |
| 709H/TRACK | 107 |
| 712B | 110 |
| 714B | 110 |
| 715 | 106 |
| 717 | 114 |
| 718 | 114 |
| 718EX | 114, 132 |
| 719 | 114 |
| 719PRO | 115 |
| 71X-TRAP | 115 |
| 720RTD | 116 |
| 720RTDUA | 116 |
| 721 | 116 |
| 721EX | 116, 132 |
| 724 | 110 |
| 725 | 109 |
| 725EX | 109, 132 |
| 726 | 109 |
| 750P | 119 |
| 750PA | 119 |

| | |
|-----------------|----------|
| 750PD | 119 |
| 750PV | 119 |
| 750SW | 108 |
| 753 | 108 |
| 754 | 108 |
| 754/SW | 108 |
| 771 | 104 |
| 772 | 104 |
| 773 | 104 |
| 787 | 105 |
| 789 | 105 |
| 789/T3000FC KIT | 105, 136 |
| 9100S | 112 |
| 9102S | 112 |
| 9103 | 111 |
| 9140 | 111 |
| 9142 | 111 |
| 9143 | 111 |
| 9144 | 111 |
| P3011 | 121 |
| P3012 | 121 |
| P3013 | 121 |
| P3014 | 121 |
| P5510-2M | 120 |
| P5513-20M | 120 |
| P5514-70M | 120 |
| P5515-140M | 120 |
| P5531 | 120 |
| P5532 | 120 |

Radiation Pages 129 - 130

| | |
|----------|-----|
| 481-DESI | 130 |
|----------|-----|

ScopeMeters Pages 93 - 99

| | |
|--------------|-------|
| 123B/INT | 97-98 |
| 123B/INT/S | 97-98 |
| 124B/INT | 97-98 |
| 124B/INT/S | 97-98 |
| 125B/INT | 97-98 |
| 125B/INT/S | 97-98 |
| 190-062/UN | 94-95 |
| 190-062/UN/S | 94-95 |
| 190-102/UN | 94-95 |
| 190-102/UN/S | 94-95 |
| 190-104/UN | 94-95 |
| 190-104/UN/S | 94-95 |
| 190-202/UN | 94-95 |
| 190-202/UN/S | 94-95 |
| 190-204/UN | 94-95 |
| 190-204/UN/S | 94-95 |
| 190-502/UN | 94-95 |
| 190-502/UN/S | 94-95 |
| 190-504/UN | 94-95 |
| 190-504/UN/S | 94-95 |

Vibration and Alignment Pages 124 - 128

| | |
|-----------|-----|
| 805FC | 126 |
| 810 | 125 |
| 820-2 | 127 |
| 830 | 128 |
| 830/SHIMS | 128 |

WHY PROFESSIONALS CHOOSE FLUKE

FLUKE®

Through connecting with you; Fluke knows exactly the condition of your product, this ensures your product will work anywhere you go and can connect with anything you want.

www.fluke.com.sg

DISCOVER WHY WITH FLUKE

- Safe. Accurate. Reliable.
- Designed by you
- Increase your Efficiency
- Dedicated Training



PREVENTIVE MAINTENANCE

Constant Condition Monitoring reduces downtime by identifying problems before they occur. Fluke tools are all you need to cut plant energy costs and minimise downtime and production stops.

Do you know how much unexpected downtime is costing your facility? Determine how much of that unexpected downtime you can prevent.

<http://sg.fluke.com/pdm>



HOW FLUKE CAN SUPPORT

- Extend Machinery Lifetime
- Motor and Drive Troubleshooting
 - Process Calibration
 - Dedicated Training

ENERGY EFFICIENCY

Undiscovered and uncorrected energy waste represents tremendous savings for any facility. Our Energy Efficiency Solution Centre will help you use measurement data to support the decisions and actions that reduce energy consumption, while increasing energy efficiency.

<http://sg.fluke.com/energy>

HOW FLUKE CAN SUPPORT

- Types of Energy Waste Measurement
- How to find waste with Fluke
- See what your system may be hiding
- Dedicated Training



New products from Fluke

FLUKE



Fluke 1736 and 1738 Three-Phase Power Loggers

More visibility, reduced uncertainty and better power quality and energy consumption decisions.

The Fluke 1736 and 1738 Three-Phase Power Loggers built with the Fluke Connect® mobile app and desktop software compatibility gives you the data you need to make critical power quality and energy decisions in real-time. The best test tool for conducting energy studies and basic power quality logging, the 1736/1738 and automatically captures and logs over 500 power quality parameters so you have more visibility into the data you need to optimise system reliability and savings.

For information on the new Fluke 1736 and 1738 Three-Phase Power Loggers, see page 88.

Fluke 120B Series Industrial ScopeMeter® Hand-Held Oscilloscopes

The compact ScopeMeter® 120B Series, is an integrated test tool, with oscilloscope, multimeter and high-speed recorder in one easy-to-use instrument. The ScopeMeter 120B Series consisting of the 123B, 124B and 125B also integrates with the Fluke Connect® mobile app and FlukeView® for ScopeMeter software to enable further collaboration data analysis and archiving of critical test information.

For information on the Fluke 120B Series Industrial ScopeMeters, see pages 97-98.



Fluke 721Ex Electric Pressure Calibrator

The ideal tool for gas custody transfer applications in potentially explosive atmospheres is the Fluke 721Ex Precision Pressure Calibrator. With dual isolated pressure sensors, it allows you to take simultaneous static and differential pressure measurements with a single tool.

For information on the new Fluke 721Ex Electric Pressure Calibrator, see pages 116 and 132.

Fluke 830 Laser Shaft Alignment Tool The ideal test tool to precision-align rotating shafts in your facility.

The Fluke 830 Laser Shaft Alignment Tool is easy-to-use, giving you fast, accurate and actionable answers that will keep your plant up and running. When it comes to laser shaft alignment, data is good but answers are better.

Unlike using the straightedge method or dial indicators the Fluke 830 performs the complicated alignment calculations for you, meaning you'll have the answers you need to quickly align your machine and get your plant up and running fast.

For information on the new Fluke 830 Laser Shaft Alignment Tool, see page 128.



Be in the know-how with Fluke's latest Contests and Promotions
www.fluke.com/sg/promotions

Your authorised Fluke distributor

Join the conversation

Fluke has always listened to our customers and built the tools you want. Our ideas and the things that drive our intense development process, come straight from the job site and pros like you. Help us keep innovating, share your thoughts with us and with your peers. Visit our social media sites, tell us your ideas, tell us your stories, tell us what you think.



[Fluke.com/SEA-FB](https://www.facebook.com/Fluke.com/SEA-FB)



[Twitter.com/FlukeCorp](https://twitter.com/FlukeCorp)



[Youtube.com/user/
FlukeCorporation](https://www.youtube.com/user/FlukeCorporation)



More Fluke Resources Online

- Complete Digital Catalogue
- Extended Specifications
- Complete Literature Library
- Application Notes and Case Studies
- Latest Promotions and Offers
- Where to Buy

www.fluke.com.sg

© 2016, Fluke South East Asia Pte Ltd.

While all care has been taken to ensure accuracy of all descriptions; information within this catalogue is not legally binding and Fluke South East Asia Pte Ltd reserves the right to correct errors or misprints or other statutory charges that are out of our control and deemed necessary at anytime without further notice; hence responsibility for the accuracy and completeness is excluded. (Changes or variations are not to affect quality or performance).

Contact Us

Fluke South East Asia Pte Ltd

1 Clementi Loop, #06-02/03/04,
Singapore 129808

General product and sales information

☎ +65-6799-5566
📠 +65-6799-5577
✉ info.asean@fluke.com

Service, parts and calibration

☎ +65-6799-5588
📠 +65-6799-5589
✉ service.asean@fluke.com

Web access

Singapore and other Southeast Asia countries:
www.fluke.com.sg

Indonesia: www.fluke.com/id
Malaysia: www.fluke.com/my
Philippines: www.fluke.com/ph
Thailand: www.fluke.com/th
Vietnam: www.fluke.com/vn

Indonesia office

BUT. Fluke South East Asia Pte Ltd

Menara Satu Sentra Kelapa Gading #06-05
Jl. Bulevar Kelapa Gading Kav.
LA3 No. 1, Summarecon Kelapa Gading
Kelapa Gading, Jakarta Utara 14240

☎ +62-21-2938-5922
📠 +62-21-2937-5682

Malaysia office

Fluke Electronics (M) Sdn Bhd

Suite D-3A-4, Level 3A, Block D
SouthGate Commercial Centre, No. 2, Jalan Dua
Off Jln Chan Sow Lin, 55200 Kuala Lumpur,
Malaysia

☎ +60-3-9223-1216
📠 +60-3-9223-1218

Vietnam office

Representative Office of Fluke South East Asia Pte Ltd c/o Danaher Vietnam

Green Power Tower, 11th Floor Unit 2
35 Ton Duc Thang Street, District 1
Ho Chi Minh City, Vietnam

☎ +84-8-2220-5371 (ext 103)
📠 +84-8-2220-5370