



6623A SERIES FEATURES

- ◆ Unique PATENTED Design!
- ◆ Now with DC currents up to 10,000 A!
- ◆ Extended Low End Range down to 0.1 $\mu\Omega$!
- ◆ Output Current Stability < 50 ppm for 1000A and higher, typically < 10 ppm!
- ◆ Programmed from 6622A Series Bridge!
- ◆ Unique USB Programmable Controller (model 66259) allows unit to be used as stand-alone precision DC current source!
- ◆ Modular Design, Expandable Capabilities in 150A increments. Investment Protection!
- ◆ Built-in electronically controlled positive and negative test currents of equal magnitude!
- ◆ No need for external power supplies!
- ◆ Linearity: ± 0.01 ppm of Full Scale!
- ◆ Safety (Fault) Protections in Place!
- ◆ Eliminates need for any mechanical reversing switches and compressed gas!
- ◆ Complete Measurement Systems Available!

GUILDLINE INSTRUMENTS 6623A SERIES of High Current Range Extenders introduces new patented design concepts and the best in modularity of any Range Extender ever produced. The 6623A Series consists of a family of range extenders, with available current outputs from 3 ampere to 10,000 ampere.

Designed to operate with our widely fielded 6622A series of **ONE-BRIDGE** systems, these new Range Extenders provide customers with unique and individualized workload solutions. Real solutions that address not only existing and future workload requirements, but also deal with ever tightening budget constraints!

The 6623A series of high current range extenders increases the measurement range and test current output capability on the 6622A Bridges. The measurement specifications are now provided as a complete and inclusive specification when used with the 6622A Series Bridge.

The 6623A Series Provides Widest Range of Expandable Output Currents without the need for mechanical switching, compressed gas or separate Power Supplies!

As with our 6622A Bridge, the 6623A Series modular design allows you to buy what is required today with existing budgets, and when current requirements change, expand your extender in 150 ampere increments to meet your future needs without any loss of your original investment!

Guildline's newly designed and innovative internal supply used in the 6623A series eliminates the costly requirements for purchasing external power supplies, use of compressed gas, mechanical switches and even the software programming pains associated with implementing these external components. A procedure developed for a Guildline 150 A Model will work the same as on our 300 A, 1000 A or even 10,000 ampere models or any increment in between.

6623A SERIES DCC BRIDGE RANGE EXTENDERS

Range Extenders allow DCC Bridges to measure “lower” resistance values or shunts at higher currents. Using proprietary technologies, Guildline engineers have again provided our customers with the most value and flexibility in expanding their **shunt measurement** capability. Unlike many existing range extender products, the 6623A Series has been designed from the ground up. This has allowed Guildline to dramatically **improve measurement functionality**, size, power handling as well as addressing budget considerations. For example, the 6625A Measurement system shown on the left is capable of measuring from **1 μOhm at 300 ampere** all the way to **1 G Ω at 1000 Volts**; all in a height *less than 36"* (<1 meter) and completely operational on a single standard **120 VAC, 15 A circuit!**



Any 6623A Series Range Extender can be used with any of our 6622A Series **ONE-BRIDGE** solutions. The 6622A Bridge automatically configures the model 6623A you have connected, knows what current ranges are available, and warns you when currents beyond the limits of the attached range extender are requested. How's that for smart integration!

All **6623A Models** are **completely upgradeable** with no loss of your initial investment. For example, if you started with the 300 ampere unit shown on the left, and now require 3000 ampere, don't worry! Simply send back your 300 ampere unit, pay the difference from what you spent on the 300 A unit with respect to the new unit you want, and Guildline will send back a new 3000 ampere unit. **Plug it into your Bridge** and you are ready to go! **No need to rewrite** already developed procedures, **no need to provided additional training**; the 3000 ampere unit operates exactly the same as the 300 ampere unit.

NEW PATENTED DESIGN AND TECHNOLOGY

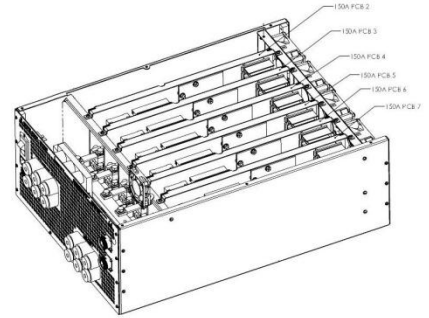
The heart of the **6623A design is our 150 ampere precision current source** pictured below. This is an electronically programmed precision current source that provides both positive and negative test currents of equal magnitude via electronic polarity switching! Guildline's newly designed and innovative internal power source used in the 6623A series **eliminates the costly requirements** for purchasing external power supplies, use of external mechanical switches and compressed gas, and even the software programming difficulties associated with implementing these external components. This means the 6623A can provide the required current with automatic polarity reversal at user selected intervals, without using mechanical switches or specialized external computer controls.



For manual mode of operation, output of current is straight forward. If you require 300 amperes of current, you simply enter 300 A as the required current on the front panel of the connected 6622A Bridge. **No need** to manually set or adjust **external power supplies, mechanical switches, extenders**, and associated wiring. This completely self contained range extender allows you to fully automate calibration procedures.

6623A SERIES DCC BRIDGE RANGE EXTENDERS

The **PATENTED Guildline 6623A 150 ampere board** modularity and integration is best shown using a 1000 ampere extender diagram. This 1000 A Precision Current Source (i.e. CS1000) contains seven (7) 150 A PCBs to provide current outputs of up to 1050 amperes in a 5U high chassis. Each board has **"smart" technology** incorporated into the design that **allows command control** in terms of operation, switching and even board protection. For example, if a board was to fail, your system is not down. You simply operate at a reduced current. If you had a 1000 A unit and a board fails, your system would continue to operate at 900 A. Send the board back for repair and when it is returned, simply insert it back in. The **status of all boards is monitored and displayed visually** via a LED bank.



This **modularity extends to higher currents**. As an example, to build a 3000 A System, we would use 3 CS1000's, add the toroid for matching output to the 6622A DCC Bridge, provide a control cable from the 3000 A Range Extender to the Bridge and you are ready to measure shunts with current control to 3000 ampere. You can either run these Range Extenders manually or fully automated. The 6622A Series Bridge continually monitors the output current and if any abnormality is detected, the 6622A Bridge will shut down the current and measurement.

Guildline's **6623A Models can also operate as independent, highly precise DC Current Sources** and can be controlled via a separate 66259 Programmable Controller. When you use the **66259 Programmable Controller**, you simply disconnect the extender control cable from the Bridge and connect the 66259 to the 6623A Range Extender (works with all models). You now have a **USB Programmable Precision Source** with full control of all measurement parameters via the 66259. Current Polarity, reversal rates and many other parameters are selectable via this controller.



6623A-3 and 6623A-10 Ampere Models

The 6623A Series **starts with the 6623A-3 and 6623A-10 Models** in rack or bench mount configurations. At only 3U in height, these units are perfect for those applications where currents to 10 A are required. These currents allow precision calibration down to the 1 m Ω range. This is **perfect when looking at calibration of milli-ohm standards**; and decade boxes with 1 m Ω , 10 m Ω and 100 m Ω dials. These models can also calibrate shunts up to 10 A. The 6623A-3 provides division of higher currents when working with 6623A models from 1000 A to 3000 A. The 6623A-10 is also used for division of higher currents when working with 6623A models 4000 A up to 10,000 ampere.

6623A-150 and 6623A-300 Ampere Standard Models

Need to go higher in currents? Consider the 6623A-150 or 6623A-300 ampere models. These models are very compact requiring only 3U in height for the 150 A and 4U for the 300 A. That's only **7 inches high for up to 300 A of current output including electronic polarity switching!** When used with any of the 6622A Series bridges, the combined height is still only 8U or 9U (about 15 inches or 1/3 of a meter). In this space, you can have a measurement capability from 300 A at 1 $\mu\Omega$ all the way up to 1 kVdc at 1 G Ω . These models are available in Bench and Rack configurations. **Competitors are still using old technology** that requires two resistance bridges, an external voltage source, two external current sources, two range extenders, mechanical switching, and a 2 meter shielded rack to provide the same functionality and range. Power requirements are only 120VAC, 50/60 Hz.

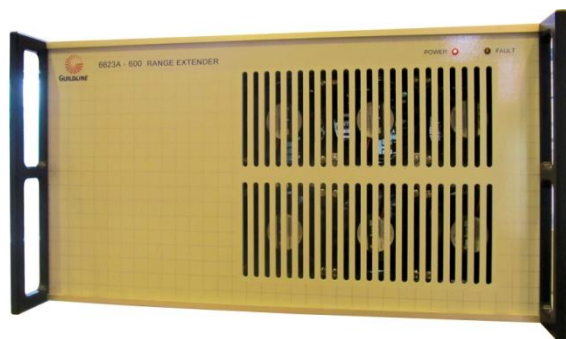


6623A SERIES DCC BRIDGE RANGE EXTENDERS

Like the 6623A-3 and 10 models, the 150 ampere and 300 ampere models can be used with standard dedicated, 120 VAC power. This means you **do not need special power** to operate these models. **There is also no requirement for special heat exhausts.** These features allow for complete flexibility when designing room layouts. As with all 6623A models, the 150 A and 300 ampere models can be expanded all the way to our world class leading 10,000 ampere model. Complete investment protection!

6623A-450 and 6623A-600 Ampere Standard Models

The 450 and 600 ampere models are also available in bench or rack mount configuration and like our lower current series can be expanded all the way to 10,000 ampere. At only 5U (8.75") in height, **these compact models produce more current** in the world's smallest available footprint for range extenders than any other product sold today. Models up to 450 amperes can run on 120 VAC (50/60 Hz) or single phase 208 V, 50 Hz or 60 Hz. Like the 150 and 300 ampere models, these models do not require multiple external cascaded range extenders, **do not require multiple external current sources, and do not require external mechanical switches.** They are self contained with no additional standards required. This one unit shown is ALL you need for current measurements to 600 ampere!



6623A-1000, 6623A-2000 and 6623A-3000 Ampere Standard Models

Need higher currents? Then consider the 6623A Series of 1000, 2000 and yes - even 3000 ampere Standard models. With our **unique 150 A patented design**, we can provide standard models in-between these values (such as 750 ampere, 900 A, 1500 A, 2150 A, 2300 ampere, etc), however we have selected our most popular current ranges and provide them as standard configurations. All these currents are available as standard products or through our unique upgrade paths from smaller current models. Procedures developed for any previous Model will continue to work - just add the extra current capability you need!



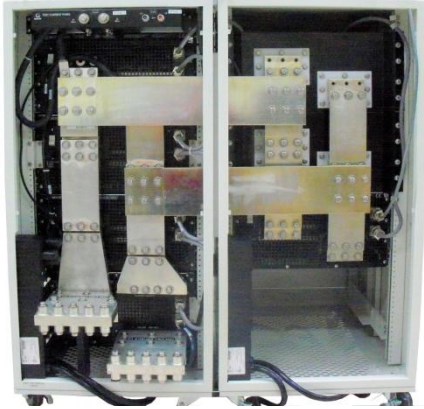
These **are extremely compact models.** The 1000 A model, including the 3 A current division and toroid, is still only 13U (i.e 23 inches or 58 cm) in height.

Better yet, **each additional 1000 ampere (or increment of) only adds 5U** (that's 8.75") to the total height. This means that a 2000 ampere Model is 18U, while our 3000 ampere model is only 23U (i.e. about 40 inches or 1 meter). When installing these models, they **only require single phase 208 VAC**, and all terminals are in the rear for operator safety! Lower current range terminals are located at the top of the cabinet for **convenient cable connection access.**



6623A-4000, 6623A-5000 and 6623A-6000 Ampere Standard Models

When you move to the 4 kA to 6 kA Models, **only a second rack is required**. The Range Extender is still controlled via the Bridge or optional 66259 independent controller. The additional CS1000's are simply mounted in a second cabinet and the buss bar system allows easy access for connecting cables up to the unit.



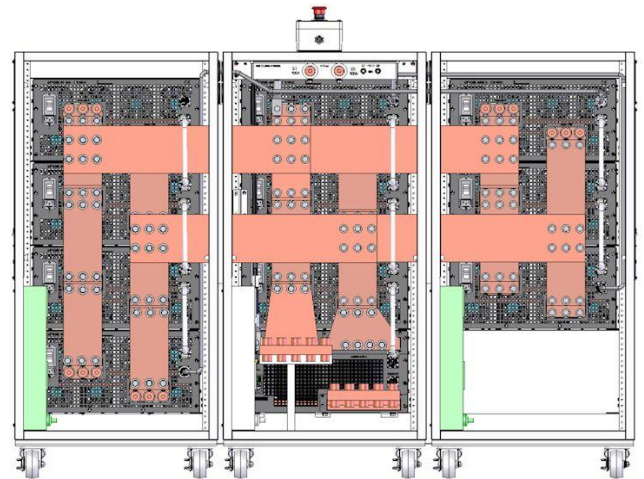
As you move higher in currents you will find that the toroid ratio changes to accommodate the **best possible current outputs**. As an example, you can output current from 300 amperes to 6000 amperes **without ever having to change a cable**. All switching and programming is accomplished from the Bridge and it is as simple as entering the desired current output. All units above 600 A come with an emergency output current cut-off switch for user safety.

Note - Unlike our competition there is no matching of external power supplies, no multiple current switching systems, no cascaded external mechanical switches and the Output Current Stability at 1000 A and higher is typically less than 10 ppm! 1000 x Better than the competition!

6623A-7000, 6623A-8000, 6623A-9000 & 6623A-10000 Ampere Standard Models

All from a single patented 150 Ampere Precision Current Source, Guildline now has the capability to **deliver standard Range Extender Systems all the way to 10,000 amperes** with no special requirements other than a venting system. **No water, no compressed air, no mechanical switches** - nothing else is required.

When we go above 6000 ampere all we have to do is mount the additional power in a third cabinet. **You can visually see how easy it is to go from 6 kA all the way to 10 kA in a modular and upgradeable path that no one else can provide.**



Like all of our 6623A Series Range Extenders, **no special control or programming is required**. The **current outputs are simply entered** as a desired current output from the Bridge or Programmable Controller and the system responds.



Along with the 6623A Series, Guildline has three NEW DC shunt models for precision High Current measurements. The model 9230A-3000 with a 10 $\mu\Omega$ resistance value is designed for currents up to 1500 ampere in ambient air and up to 3000 ampere with the 92310 forced air cooling unit. The model 9230A-5000 has a resistance value of 5 $\mu\Omega$ and can handle currents to 2500 ampere in ambient air and up to 5000 ampere with the 92310. And Guildline's 9230A-10,000 has a resistance value of 1 $\mu\Omega$ to handle currents to 5000 ampere in ambient air and up to 10,000 ampere with the 92310. These shunts are the result of over 58 years of Guildline research and design in building precision shunts and incorporate many unique design features. For more information refer to the 9230A Precision DC Shunt Datasheet.

The Guildline 6623A Series - Built on years of experience and unique engineering design – providing best uncertainties, ease of use and built-in expansion capability for customers!

6623A SERIES DCC BRIDGE RANGE EXTENDERS

General Specifications (All Models)			
Temperature Coefficient ▶		±0.01 ppm/°C	
Ratio Transformation Linearity ▶		±0.01 ppm of Full Scale Ratio	
Test Current Resolution ▶		± 17 bits	
Communications	Via 6622A Bridge - IEEE 488.2 (SCPI Based Instructions)	Via 66259 - USB	
Operating Temperature to Full Specifications▶		23 °C ± 3 °C	73 °F ± 5.4 °F
Maximum Operating Range (<50% RH) ▶		+18 °C to +28 °C	+64.4 °F to +82.4 °F
Temperature Storage Range ▶		-20 °C to +60 °C	-4 °F to +140 °F
Operating Humidity	20% to 70% RH	Storage Humidity	15% to 80% RH

1 Year Test Current Specifications (All Models)

6623A-3 and 6623A-10		3 A ⁽¹⁾	10 A (x20) ⁽²⁾	10 A (x100) ⁽²⁾
Test Current Specifications	Output Range	± 0.1 A to ± 3 A	± 0.1 A to ± 10 A	± 0.1 A to ± 10 A
	Accuracy	±0.1% ± 0.4 mA	±0.1% ± 0.4 mA	±0.1% ± 0.4 mA
	Stability (10 minutes)	±0.01% ± 0.1 mA	±0.01% ± 0.1 mA	±0.01% ± 0.1 mA
	Compliance	± 5 Volts	± 8 Volts	± 8 Volts

6623A-150		3 A	15 A	150 A
Test Current Specifications	Output Range	± 0.1 A to ± 3 A	± 3 A to ± 15 A	± 15 A to ± 150 A
	Accuracy	±0.1% ± 0.4 mA	±0.3% ± 5 mA	± 0.3% ± 30 mA
	Stability (10 minutes)	±0.005% ± 0.1 mA	±0.005% ± 2 mA	±0.005% ± 3 mA
	Compliance	± 5 Volts	± 7.5 Volts	± 1.5 Volts

6623A-300		3 A	15 A	300 A
Test Current Specifications	Output Range	± 0.1 A to ± 3 A	± 3 A to ± 15 A	± 15 A to ± 300 A
	Accuracy	±0.1% ± 0.4 mA	±0.3% ± 5 mA	±0.3% ± 30 mA
	Stability (10 minutes)	±0.005% ± 0.1 mA	±0.005% ± 2 mA	±0.005% ± 3 mA
	Compliance	± 5 Volts	± 7.5 Volts	± 1.5 Volts

6623A-450/600		3 A	30 A	450/600 A
Test Current Specifications	Output Range	± 0.1 A to ± 3 A	± 3 A to ± 30 A	± 30 A to ± 450/600 A
	Accuracy	±0.1% ± 0.4 mA	±0.3% ± 5 mA	±0.3% ± 30 mA
	Stability (10 minutes)	±0.005% ± 0.1 mA	±0.005% ± 2 mA	±0.005% ± 3 mA
	Compliance	± 5 Volts	± 7.5 Volts	± 1.5 Volts

6623A-1000/2000/3000		30 A	150 A	1 kA / 2 kA / 3 kA
Test Current Specifications (Note 1)	Output Range	± 3 A to ± 30 A	± 30 A to ± 150 A	± 150 A to ± 1k/2k/3k A
	Accuracy	±0.3% ± 5 mA	±0.3% ± 30 mA	±0.35% ± 150 mA
	Stability (10 minutes)	±0.005% ± 2 mA	±0.005% ± 3 mA	±0.005% ± 50 mA
	Compliance	± 7.5 Volts	± 1.5 Volts	± 1.5 Volts

1 Year Test Current Specifications - Continued (All Models)

6623A-4000/5000/6000		30 A	300 A	4 kA / 5 kA / 6 kA
Test Current Specifications (Note 2)	Output Range	± 10 A to ± 30 A	± 30 A to ± 300 A	± 300 A to ± 6000A
	Accuracy	±0.3% ± 5 mA	±0.3% ± 30 mA	±0.35% ± 150 mA
	Stability (10 minutes)	±0.005% ± 2 mA	±0.005% ± 3 mA	±0.005% ± 100 mA
	Compliance	± 7.5 Volts	± 1.5 Volts	± 1.5 Volts

6623A-7k/8k/9k/10k		30 A	300 A	7kA / 8kA / 9kA / 10kA
Test Current Specifications (Note 2)	Output Range	± 10 A to ± 30 A	± 30 A to ± 300 A	± 300 A to ± 10000A
	Accuracy	±0.3% ± 5 mA	±0.3% ± 30 mA	±0.35% ± 150 mA
	Stability (10 minutes)	±0.005% ± 2 mA	±0.005% ± 3mA	±0.005% ± 100 mA
	Compliance	± 7.5 Volts	± 1.5 Volts	± 1.5 Volts

1 - For currents <3 amperes refer to 6623A-3 Specifications.
 2 - For Currents <10 amperes, refer to 6623A-10 Specifications

6623A Series 12 Month Ratio Accuracy

Standard Model ¹	Transformation Ratio(s)	Ratio Accuracy	Maximum Ratio Current	Resistance Range
6623A - 3	20 : 1	±0.2 ppm	3 A	1 mΩ to 10 Ω
6623A - 10	20 : 1	±0.2 ppm	3 A	0.1 mΩ to 10 Ω
	100 : 1	±0.3 ppm	10 A	
6623A - 150	20 : 1	±0.3 ppm	3 A	1 μΩ to 10 Ω
	100 : 1	±0.4 ppm	15 A	
	1000 : 1	±0.5 ppm	150 A	
6623A - 300	20 : 1	±0.3 ppm	3 A	1 μΩ to 10 Ω
	200 : 1	±0.4 ppm	15 A	
	2000 : 1	±0.5 ppm	300 A	
6623A - 450 6623A - 600	20 : 1	±0.3 ppm	3 A	1 μΩ to 10 Ω
	400 : 1	±0.4 ppm	30 A	
	4000 : 1	±0.5 ppm	FS	
6623A - 1000 6623A - 2000 6623A - 3000	200:1	±0.4 ppm	30 A	0.1 μΩ to 10 Ω
	2000 : 1	±0.5 ppm	150 A	
	20,000 : 1	±0.6 ppm	Full Scale (FS) Current	
6623A - 4000 6623A - 5000 6623A - 6000	1000:1	±0.5 ppm	30 A	0.1 μΩ to 10 Ω
	10,000 : 1	±0.6 ppm	300 A	
	100,000 : 1	±0.7 ppm	Full Scale (FS) Current	
6623A - 7000 6623A - 8000 6623A - 9000 6623A - 10000	1000:1	±0.5 ppm	30 A	0.1 μΩ to 10 Ω
	10,000 : 1	±0.6 ppm	300 A	
	100,000 : 1	±0.7 ppm	Full Scale (FS) Current	

6623A SERIES DCC BRIDGE RANGE EXTENDERS

6623A Range Extender Complete System Measurement Specifications

One Year Specifications Include Specified Bridge(s) Specifications, Patented Internal Precision Current Source, Internal Switching, System Scanner and Wiring. Coverage Factor $k=2$ (95%) and a Temperature Environment of $23\text{ }^{\circ}\text{C} \pm 3\text{ }^{\circ}\text{C}$. Our Competitors ONLY provide Ratio Uncertainties of the extender although they state 'system' uncertainties!

6623A-3	x20 – 3A 1 m Ω ~ 50m Ω	x20 – 3A 50m Ω ~ 10 Ω				
	6622A Base, 6622- XR	± 0.8 ppm	± 0.7 ppm			
	6622A-XP, XPR. & HV Models	± 0.7 ppm	± 0.6 ppm			
6623A-10	x100 – 10A 0.1m Ω ~ 0.5m Ω	x100 – 10A 0.5m Ω ~ 0.01 Ω	x20 – 3A 1m Ω ~ 50m Ω	x20 – 3A 50m Ω ~ 10 Ω		
	6622A Base, 6622- XR	± 3.5 ppm	± 0.9 ppm	± 0.8 ppm	± 0.7 ppm	
	6622A-XP, XPR. & HV Models	± 3 ppm	± 0.8 ppm	± 0.7 ppm	± 0.6 ppm	
6623A-150	X1000 – 150A 1 $\mu\Omega$ ~ 10 $\mu\Omega$	X1000 – 150A 10 $\mu\Omega$ ~ 0.1m Ω	X1000 – 150A 0.1m Ω ~ 0.5m Ω	x1000 – 150A 0.5m Ω ~ 0.01 Ω	x100 – 15A 1m Ω ~ 50m Ω	x20 – 3A 50m Ω ~ 10 Ω
	6622A Base, 6622- XR	± 20 ppm	± 10 ppm	± 3 ppm	± 0.8 ppm	± 0.7 ppm
	6622A-XP, XPR. & HV Models	± 18 ppm	± 9 ppm	± 2.5 ppm	± 0.7 ppm	± 0.6 ppm
6623A-300	x2000 – 300A 1 $\mu\Omega$ ~ 10 $\mu\Omega$	x2000 – 300A 10 $\mu\Omega$ ~ 0.1m Ω	x2000 – 300A 0.1m Ω ~ 0.5m Ω	x2000 – 300A 0.5m Ω ~ 0.01 Ω	x200 – 15A 1m Ω ~ 50m Ω	x20 – 3A 50m Ω ~ 10 Ω
	6622A Base, 6622- XR	± 15 ppm	± 8 ppm	± 2 ppm	± 0.8 ppm	± 0.7 ppm
	6622A-XP, XPR. & HV Models	± 12 ppm	± 7 ppm	± 1.5 ppm	± 0.7 ppm	± 0.6 ppm
6623A-450A/600	x4000 – 600A 1 $\mu\Omega$ ~ 10 $\mu\Omega$	x4000 – 600A 10 $\mu\Omega$ ~ 0.1m Ω	x4000 – 600A 0.1m Ω ~ 0.5m Ω	x4000 – 600A 0.5m Ω ~ 0.01 Ω	x400 – 30A 1m Ω ~ 50m Ω	x20 – 3A 50m Ω ~ 10 Ω
	6622A Base, 6622- XR	± 15 ppm	± 8 ppm	± 2 ppm	± 0.8 ppm	± 0.7 ppm
	6622A-XP, XPR. & HV Models	± 12 ppm	± 7 ppm	± 1.5 ppm	± 0.7 ppm	± 0.6 ppm
6623A-1k/2k/3k ^(note 1)	x20000 – FSA 0.1 $\mu\Omega$ ~ 1 $\mu\Omega$	x20000 – FSA 1 $\mu\Omega$ ~ 10 $\mu\Omega$	x20000 – FSA 10 $\mu\Omega$ ~ 0.1m Ω	x20000 – FSA 0.1m Ω ~ 0.5m Ω	x2000 – 150A 0.5m Ω ~ 0.01 Ω	x200 – 15A 1m Ω ~ 0.1 Ω
	6622A Base, 6622- XR	± 18 ppm	± 12 ppm	± 8 ppm	± 2 ppm	± 0.8 ppm
	6622A-XP, XPR. & HV Models	± 16 ppm	± 10 ppm	± 7 ppm	± 1.5 ppm	± 0.7 ppm
6623A-4k/5k/6k ^(note 2)	x100 k – FSA 0.1 $\mu\Omega$ ~ 1 $\mu\Omega$	x100 k – FSA 1 $\mu\Omega$ ~ 10 $\mu\Omega$	x100 k – FSA 10 $\mu\Omega$ ~ 0.1m Ω	x100 k – FSA 0.1m Ω ~ 0.5m Ω	x10000 – 300A 0.5m Ω ~ 0.01 Ω	x1000 – 30A 1m Ω ~ 0.1 Ω
	6622A Base, 6622- XR	± 16 ppm	± 10 ppm	± 6 ppm	± 1.8 ppm	± 0.8 ppm
	6622A-XP, XPR. & HV Models	± 14 ppm	± 8 ppm	± 5 ppm	± 1.4 ppm	± 0.7 ppm
6623A-7k/8k/9k/10k ^(note 2)	x100 k – FSA 0.1 $\mu\Omega$ ~ 1 $\mu\Omega$	x100 k – FSA 1 $\mu\Omega$ ~ 10 $\mu\Omega$	x100 k – FSA 10 $\mu\Omega$ ~ 0.1m Ω	x100 k – FSA 0.1m Ω ~ 0.5m Ω	x10000 – 300A 0.5m Ω ~ 0.01 Ω	x1000 – 30A 1m Ω ~ 0.1 Ω
	6622A Base, 6622- XR	± 14 ppm	± 8 ppm	± 5 ppm	± 1.6 ppm	± 0.8 ppm
	6622A-XP, XPR. & HV Models	± 12 ppm	± 6 ppm	± 4 ppm	± 1.2 ppm	± 0.7 ppm

Note 1: FSA is Full Scale Amperes (from 1 kA to 3 kA, depending on model). For x 20 Range - Refer to 6623A-3 Amp Specifications

Note 2: FSA is Full Scale Amperes (from 4 kA to 10 kA, depending on model). For x 20 and x100 Range - Refer to 6623A-10 Amp Specifications

6623A Series Models Dimensions

Standard Models ¹	6623A Dimensions (Height x Width x Depth)			
	Rack		Bench	
6623A-3/10	5.2" x 20.7" x 20.3"	132 x 526 x 516 mm	5.7" x 17.3" x 20.3"	145 x 440 x 516 mm
6623A-150	5.2" x 20.7" x 27.1"	132 x 526 x 693 mm	5.7" x 17.5" x 27.1"	145 x 445 x 693 mm
6623A-300	7.0" x 19.0" x 27.6"	178 x 483 x 701 mm	7.7" x 17.5" x 27.6"	196 x 445 x 701 mm
6623A-450/600	8.75" x 20.7" x 29.1"	222 x 526 x 739 mm	10" x 17.5" x 29.4"	254 x 445 x 747 mm
6623A-1k/2k/3k	44.7" x 21.8" x 36.7"	1135 x 552 x 932 mm		
6623A-4k/5k/6k	44.7" x 44.1" x 36.7"	1135 x 1120 x 932 mm		
6623A-7k/8k/9k/10k	44.7" x 66.2" x 36.7"	1135 x 1682 x 932 mm		

6623A Series Models Power and Weight Requirements

Standard Models ¹	6623A Power Requirements and Weight						
	Power			Rack Model Weight		Bench Unit Weight	
	Voltage	Frequency	VA (max) **	lbs	kg	lbs	kg
6623A-3	100 VAC to 240 VAC ± 10 %	50/60 Hz ± 5 %	100	23	10.5	28	12.7
6623A-10			200	25	11.4	30	13.7
6623A-150			800	46	21	50	22.7
6623A-300			1000	62	28.2	70	31.8
6623A-450			1250	67	30.5	86	39.1
6623A-600	208 VAC to 240 VAC ± 10 %	50/60 Hz ± 5 %	1900	76	34.5	95	43.2
6623A-1000			2600	360	164		
6623A-2000			4700	490	223		
6623A-3000			6800	620	282		
6623A-4000	208 VAC to 240 VAC ± 10 %	50/60 Hz ± 5 %	9200	930	423		
6623A-5000			11400	1070	486		
6623A-6000			13600	1210	550		
6623A-7000			16100	2030	923		
6623A-8000			18400	2170	986		
6623A-9000			20700	2310	1050		
6623A-10000			23000	2450	1114		

1 - Any model in increments of 150 A from 150 A to 10,000 A is available. Please contact Guildline for specifications. As a general rule, the specifications are typically close to the next higher model (eg a 1100 A to 1850 A models would have the same specifications as the 2000 A model).

6623A SERIES DCC BRIDGE RANGE EXTENDERS

BRIDGEWORKS SOFTWARE™

Not only does Guildline provide **unique Current Range Extender and DCC Bridge hardware**, but we offer a complete software solution. The **Bridgeworks™** software program provides setup, control, measurements, and reporting using both the 6622A Bridge and the 6623A Range Extender, or the 66259 Controller and the 6623A Range Extender. This allows full automation of measurements using any model of the 6623A Series. The control is provided via the 6622A Series Bridge, or 66259 Controller, and IEEE 488.2 control.

COMPLETE - RIGHT DOWN TO THE CABLES AND LEAD SETS!

All 6623A Models come with full buss bars and one set of output Cables covering the current range for each model. These are some of the best High Current Cables available today to work with your 6623A Series. Incorporating a **unique, high compression** connection that **eliminates thermals** at the terminals, these cables are available in current ratings of 3A, 30A, 100A, 300A, and 500A values. For higher current cables the compression used to connect **cable lugs is greater than 30,000 psi** making them the best high current cables that are commercially available. Standard length is 1.5 meters and Guildline can make them in any length and with many different terminations. Guildline also provides precision low thermal leads for the voltage measurement.

SERVICE AND SUPPORT

Guildline is pleased to announce that we are **ISO 17025 Accredited**. We have the widest range of resistance accreditation with a range of **1 μΩ all the way to 10 PΩ**. Whether you own a Guildline product and have other manufacturer's standards, **call today** and see what we can do for you.

ORDERING INFORMATION	
3 Amp to 600 Amp Models Available in Bench Configuration.	
6623A-3	3 A Range Extender / Precision Current Source
6623A-10	10 A Range Extender / Precision Current Source
6623A-150	150 A Range Extender / Precision Current Source
6623A-300	300 A Range Extender / Precision Current Source
6623A-450	450 A Range Extender / Precision Current Source
6623A-600	600 A Range Extender / Precision Current Source
6623A-1000	1000 A Range Extender / Precision Current Source
6623A-2000	2000 A Range Extender / Precision Current Source
6623A-3000	3000 A Range Extender / Precision Current Source
6623A-4000	4000 A Range Extender / Precision Current Source
6623A-5000	5000 A Range Extender / Precision Current Source
6623A-6000	6000 A Range Extender / Precision Current Source
6623A-7000	7000 A Range Extender / Precision Current Source
6623A-8000	8000 A Range Extender / Precision Current Source
6623A-9000	9000 A Range Extender / Precision Current Source
6623A-10000	10000 A Range Extender / Precision Current Source
6623A-XXX	Other Value - Specify Maximum Current in 150 A Increments
SM6623A	Service Manual (Extra Charge)
66259	Programmable Extender Controller
Many other types of test and communication leads and accessories are available	

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