

TRMS Digital Multimeter/179A

4 1/2-Digit LED Portable/Bench

DC VOLTS

RANGE	RESOLUTION	ACCURACY (1 YEAR) 18°-28°C ±(%rdg+digits)	MAXIMUM ALLOWABLE INPUT
200mV	10 µV	0.04%+3d	1200V ¹
2 V	100 µV	0.04%+1d	1200V ¹
20 V	1mV	0.04%+1d	1200V ¹
200 V	10mV	0.04%+1d	1200V ¹
1200 V	100mV	0.04%+1d	1200V ¹

¹For 10 seconds. ²Continuous.

TEMPERATURE COEFFICIENT (0°-18°C & 28°-55°C): ±(0.006%+0.2d)/°C except ±(0.006%+0.4d)/°C on 200mV range.
 INPUT RESISTANCE: 10MΩ±0.1%.
 NORMAL MODE REJECTION RATIO: Greater than 60dB at 50Hz and 60Hz.
 COMMON MODE REJECTION RATIO (1kΩ unbalance): Greater than 120dB at DC, 50Hz and 60Hz.
 SETTling TIME: 1 second to within 1 digit of final reading.

AC VOLTS

RANGE	RESOLUTION	ACCURACY (1 YEAR) (ABOVE 2000 COUNTS) 18°-28°C: 100Hz-10kHz ±(%rdg+digits)	TEMPERATURE COEFFICIENT	
			0°-18°C & 28°-55°C ±(%rdg+digits)/°C	45Hz-10kHz 10kHz-20kHz
200mV	10 µV	0.7%+15d	0.07%+2d	0.15%+3d
2 V	100 µV	0.6%+15d	0.07%+2d	0.15%+3d
20 V	1mV	0.5%+15d	0.05%+2d	0.05%+2d
200 V	10mV	0.5%+15d	0.05%+2d	0.05%+2d
1000 V	100mV	0.5%+15d	0.05%+2d	0.05%+2d

EXTENDED FREQUENCY ACCURACY:
 (45Hz-100Hz): ±(0.7%+15d).
 (10kHz-20kHz): ±(0.8%+15d) on 20V and higher ranges;
 ±(1.5%+15d) on 2V range;
 ±(2%+15d) on 200mV range.
 RESPONSE: True root mean square.
 CREST FACTOR (ratio of peak value to rms value): 3:1.
 INPUT IMPEDANCE: 1MΩ shunted by less than 75pF.
 MAXIMUM ALLOWABLE INPUT VOLTAGE: 1000V rms, 1400V peak, 10⁷V/Hz maximum.
 COMMON MODE REJECTION RATIO (1kΩ unbalance): 60dB at DC, 50Hz and 60Hz.
 SETTling TIME: 2 seconds to within 15 digits of final reading.

DC AND TRMS AC AMPS

RANGE	RESOLUTION	DC	ACCURACY (1 YEAR) 18°-28°C ±(%rdg+digits)	MAXIMUM VOLTAGE	SHUNT RESISTANCE
200 µA	10 nA	0.2%+2d	1%+15d	0.2 V	1 kΩ
2mA	100 nA	0.2%+2d	1%+15d	0.2 V	100 Ω
20mA	1 µA	0.2%+2d	1%+15d	0.2 V	10 Ω
200mA	10 µA	0.2%+2d	1%+15d	0.25V	1 Ω
2000mA	100 µA	0.2%+2d	1%+15d	0.6 V	100mΩ
20 A	1mA	0.5%+2d	1%+15d ¹	0.5 V	10mΩ

¹Add 0.1%rdg above 15A for self-heating.
 11kHz max.
 MAXIMUM INPUT: 2A, 250V DC or rms (fuse protected) except for 20A range: 15A continuous, 20A for 1 minute (unfused).
 TEMPERATURE COEFFICIENT (0°-18°C & 28°-55°C):
 DC ±(0.01%+0.2d)/°C.
 AC ±(0.07%+2d)/°C.
 CREST FACTOR (ratio of peak value to rms value): 3:1.
 SETTling TIME: DC: 1 second to within 1 digit of final reading.
 AC: 2 seconds to within 15 digits of final reading.

OHMS

RANGE	RESOLUTION	ACCURACY (1 YEAR) 18°-28°C ±(%rdg+digits)		MAXIMUM VOLTAGE ACROSS UNKNOWN ON RANGE		TEMPERATURE COEFFICIENT 0°-18°C & 28°-55°C ±(%rdg+digits)/°C		NOMINAL APPLIED CURRENT	
		HI Ω	LO Ω	HI Ω	LO Ω	HI Ω	LO Ω	HI Ω	LO Ω
2 kΩ	100mΩ		0.15%+15d	0.2V	0.2V		0.02%+2d		100 µA
20 kΩ	1 Ω	0.04%+1d	0.15%+15d	2V	0.2V	0.003%+0.2d	0.02%+2d	100 µA	10 µA
200 kΩ	10 Ω	0.04%+1d	0.15%+15d	2V	0.2V	0.003%+0.2d	0.02%+2d	10 µA	1 µA
2000 kΩ	100 Ω	0.04%+1d	0.15%+15d	2V	0.2V	0.003%+0.2d	0.03%+2d	1 µA	0.1µA
20MΩ	1 kΩ	0.10%+1d		2V		0.02%+0.2d		0.1µA	

MAXIMUM ALLOWABLE INPUT: 1kV DC or peak AC for 10 seconds, 450V rms continuous.
 MAXIMUM OPEN CIRCUIT VOLTAGE: 5V.

SETTLING TIME: 1 second to within 1 digit of final reading except 2 seconds on 20MΩ range.

*Ohms Settling Time is Specified for On-Scale Readings
 20MΩ Settling Time is 5 Sec. for Over-Range To On-Scale Readings.* B

GENERAL

DISPLAY: Five 0.5" LED digits, appropriate decimal position and polarity indication.
 CONVERSION PERIOD: 400ms.
 OVERRANGE INDICATION: Display blinks all zeroes above 19999 counts.
 MAXIMUM COMMON MODE VOLTAGE: 1400V peak.
 ENVIRONMENT: Operating: 0°-55°C, 0% to 80% relative humidity up to 35°C. Storage: -25°C to +65°C.
 POWER: 105-125V or 210-250V (switch selected), 90-110V available. 50-60 Hz, 5.5W. Optional 6-hour battery pack, Model 1788.
 DIMENSIONS, WEIGHT: 85mm high x 235mm wide x 275mm deep (3 1/4" x 9 1/4" x 10 3/4"). Net weight 1.8kg (4 lbs.).
 ACCESSORIES SUPPLIED: Model 1691 Test Lead Set, operator's manual.

ACCESSORIES AVAILABLE:

- Model 1010: Single Rack Mounting Kit
- Model 1017: Dual Rack Mounting Kit
- Model 1301: Temperature Probe
- Model 1600A: High Voltage Probe (40kV)
- Model 1651: 50-Ampere Current Shunt
- Model 1681: Clip-On Test Lead Set
- Model 1682A: RF Probe
- Model 1683: Universal Test Lead Kit
- Model 1684: Hard Shell Carrying Case
- Model 1685: Clamp-On AC Probe
- Model 1691: General Purpose Test Lead Set
- Model 1788: Rechargeable Battery Pack
- Model 1792: Isolated BCD Output
- Model 1793: Isolated IEEE-488 Output
- Model 7008: IEEE-488 Digital Cable, 1.8m (6 ft.)

LTR	REVISIONS	APP.	DATE	DRN. WZ	DATE
A	RELEASED 8203	B	1-13-82	CKD. R.B.	DATE 1-13-82
B	Added Spec 8279	M/K	4-7-82	APP. MA	DATE 1-14-82



KEITHLEY INSTRUMENTS
 CLEVELAND, OHIO

SPECIFICATIONS

PART NUMBER
SPEC-179A