

TRMS Digital Multimeter/179A

4 1/2-Digit LED Portable/Bench

DC VOLTS

RANGE	RESOLUTION	ACCURACY (1 YEAR) 18°-28°C		MAXIMUM ALLOWABLE INPUT
		±(%rdg + digits)		
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)		TEMPERATURE COEFFICIENT	
		±(%rdg + digits)		0°-18°C & 28°-55°C	45Hz-10kHz
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

DC AND TRMS AC AMPS

RANGE	RESOLUTION	ACCURACY (1 YEAR) 18°-28°C		MAXIMUM VOLTAGE	SHUNT RESISTANCE
		±(%rdg + digits)			
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

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.

*Add 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		MAXIMUM VOLTAGE ACROSS UNKNOWN ON RANGE		TEMPERATURE COEFFICIENT 0°-18°C & 28°-55°C		NOMINAL APPLIED CURRENT	
		±(%rdg + digits)		HI Ω	LO Ω	HI Ω	LO Ω	HI Ω	LO Ω
2 kΩ	100mΩ	0.15% +15d						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	0.2V	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.

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.

*Ohms Settling Time is Specified For On-Scale Readings
 20MΩ Settling Time is 2 Sec For Over-Range To On-Scale Readings.* B

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