

SPECIFICATIONS

DC VOLTS

RANGE	RESOLUTION	ACCURACY (1 YEAR)
		18°-28°C ±(%rdg+counts)
200mV	10 µV	0.03+2
2 V	100 µV	0.03+1
20 V	1mV	0.03+1
200 V	10mV	0.03+1
1000 V	100mV	0.03+1

INPUT RESISTANCE: 11MΩ on 200mV, 2V and 20V ranges. 10MΩ on 200V and 1000V ranges. (Greater than 1000MΩ on the 200mV and 2V ranges with all function buttons in the out position).

NORMAL MODE REJECTION RATIO: Greater than 60dB at 50Hz, 60Hz ± 0.15%.

MAXIMUM ALLOWABLE INPUT: 1000V DC or peak AC (less than 10 seconds per minute on the 200mV and 2V ranges; 300V rms continuous).

SETTLING TIME: 1 second to within 1 count of final reading on range.

dB MODE (ref: 600Ω):

Accuracy: ±(0.02dB+1 count) (above -78dBm).

Resolution: 0.01dB above 5% of range.

TRMS AC VOLTS

RANGE	ACCURACY (1 YEAR)*				
	18°-28°C ±(%rdg+counts)				
	20Hz-50Hz	50Hz-10kHz	10kHz-20kHz	20kHz-50kHz	50kHz-100kHz
2V - 750V	1+20	0.5+20	1+40	2.5+75	5+200
200mV	1+20	0.5+20	1.5+40	8+75	—

*Above 1800 counts.

MAXIMUM ALLOWABLE INPUT: 750V rms, 1000V peak (less than 10 seconds per minute on the 200mV range; 300V rms continuous). 10°V•Hz maximum.

3dB BANDWIDTH: 300kHz typical.

INPUT IMPEDANCE: 10MΩ paralleled by less than 75pF on 20V, 200V and 1000V ranges. 11MΩ on 200mV and 2V ranges. Capacitively coupled.

SETTLING TIME: 2 seconds to within 15 counts of final reading on range.

dB MODE (ref: 600Ω):

RANGE	INPUT	ACCURACY (±dBm)			
		20Hz-10kHz	10kHz-20kHz	20kHz-50kHz	50kHz-100kHz
2V-750V	200mV to 750 V (-12 to +59.8dBm)	0.2	0.26	0.56	1.2
200mV	20mV to 200mV (-32 to -12 dBm)	0.2	0.3	1	—
	2mV to 20mV (-52 to -32 dBm)	2	3	—	—
	1mV to 2mV (-58 to -52 dBm)	2*	—	—	—

*Up to 1kHz.

Resolution: 0.01dB above 5% of range.

OHMS

RANGE	RESOLUTION	ACCURACY (1 YEAR)	MAX. VOLTAGE ACROSS UNKNOWN ON RANGE
		18°-28°C ±(%rdg+counts)	
200 Ω	10mΩ	0.05+2**	0.2V
2 kΩ	100mΩ	0.05+1	2.0V
20 kΩ	1 Ω	0.05+2	0.2V
200 kΩ	10 Ω	0.05+1	2.0V
2MΩ	100 Ω	0.05+2	0.2V
20MΩ	1 kΩ	0.2+1	2.0V
200MΩ	100 kΩ	2.0+1	2.0V

*Appropriate range selected automatically. **With zero set by REL function.

MAXIMUM ALLOWABLE INPUT: 450V DC or peak AC.

OPEN-CIRCUIT VOLTAGE: +5V.

DIODE TEST: Display reads junction voltage up to 2V. Test current: 0.7mA nominal.

SETTLING TIME: 2 seconds to within 1 count of final reading on range.

DC AMPS

RANGE	RESOLUTION	MAXIMUM VOLTAGE BURDEN	ACCURACY (1 YEAR)
			18°-28°C ±(%rdg+counts)
200 µA	10 nA	0.3V	0.15+2
2mA	100 nA	0.3V	0.15+2
20mA	1 µA	0.3V	0.15+2
200mA	10 µA	0.3V	0.2+2
2000mA	100 µA	0.8V	0.2+2
10 A	1mA	0.3V	0.75+2*

*Above 5A derate 0.15% rdg per amp for self-heating.

OVERLOAD PROTECTION: mA Input: 2A fuse (250V), externally accessible. 10A Input: 20A for 15s, unfused.

SETTLING TIME: 1 second to within 1 count of final reading.

TRMS AC AMPS

RANGE	MAXIMUM VOLTAGE BURDEN	ACCURACY (1 YEAR)*		
		18°-28°C ±(%rdg+counts)		
		20Hz-50Hz	50Hz-10kHz	10kHz-30kHz
200 µA - 20mA	0.3V	1+20	0.8+20	2+50
200mA	0.3V	1+20	0.8+20	—
2000mA	0.8V	1+20	0.8+20	—
10 A	0.3V	1.5+20**	1+20**	—

*Above 1800 counts. **1kHz max. Above 5A derate 0.15% rdg/amp for self-heating.

SETTLING TIME: 2 seconds to within 15 counts of final reading.

GENERAL

DISPLAY: 4½-digit LCD, 0.5" height; polarity, function, range, and status indication.

RANGING: Auto or manual on DCV, ACV, and ohms; manual on ACA and DCA.

AUTORANGING TIME: 300ms per range.

RELATIVE: Pushbutton allows zeroing of on range readings. Allows readings to be made with respect to baseline value. Front panel annunciator indicates REL mode.

DATA LOGGER and MIN/MAX: 100 reading storage capacity; records data at one of six selectable rates from 3 rdg/s to 1 rdg/hr. Also detects and stores maximum and minimum readings continuously while in the data logger mode.

CONVERSION RATE: 3 readings/second.

OVERRANGE INDICATION: "OL" displayed.

CREST FACTOR (ratio of peak value to rms value), AC FUNCTIONS: 3.

MAXIMUM COMMON MODE VOLTAGE: 500V peak.

COMMON MODE REJECTION RATIO (1kΩ unbalance): Greater than 120dB at DC, 50Hz, 60Hz ±0.15%. Greater than 60dB in AC volts.

TEMPERATURE COEFFICIENT (0°-18°C & 28°-50°C): 0.1 × applicable accuracy specification/°C except ±(0.07%+2)/°C for 50Hz-10kHz on ACV.

ENVIRONMENT: Operating: 0° to 50°C; less than 80% relative humidity up to 35°C; linearly derate 3% RH/°C, 35° to 50°C. Storage: -25° to +60°C.

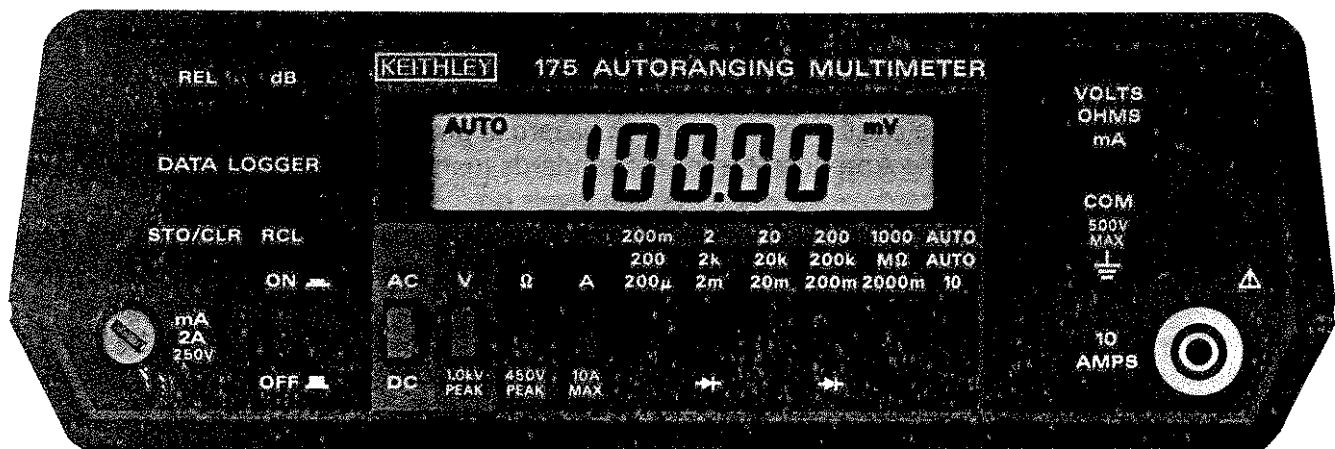
POWER: 105-125V or 210-250V (external switch selected), 90-110V available; 50-60Hz, 12V•A. Optional 6-hour battery pack, Model 1758.

DIMENSIONS, WEIGHT: 89mm high × 235mm wide × 275mm deep (3½" × 9¼" × 10¾"). Net weight: 1.8kg (3lbs., 14 oz.).

ACCESSORIES SUPPLIED: Model 1751 Shrouded Test Leads, instruction manual.

Prices and specifications subject to change without notice.

MODEL 175 AUTORANGING DMM



Features:

- 4½ Digit LCD Display
- Fast Autoranging
- Bench or Portable
- Digital Calibration
- 100 Point Data Logger
- 10μV/10mΩ/10nA Sensitivity
- 0.03% Basic DCV Accuracy
- TRMS AC

- dBm/Relative Functions
- Min/Max Reading Hold
- Safety Input Jacks
- 10A Capability
- 100kHz Specified AC Bandwidth

Options:

- Model 1758 Rechargeable Battery Pack
- Model 1753 IEEE-488 Interface