

SPECIFICATIONS

DC VOLTS

RANGE	RESOLUTION	INPUT RESISTANCE	ACCURACY**	
			±(%rdg+counts)	
			24 Hr.,* 22°-24°C	1 Yr., 18°-28°C
200mV	1 μV	>1GΩ	0.007+2	0.016+3
2 V	10 μV	>1GΩ	0.005+2	0.011+2
20 V	100 μV	11MΩ	0.006+2	0.015+2
200 V	1mV	10MΩ	0.006+2	0.015+2
1000 V	10mV	10MΩ	0.007+2	0.015+2

*Relative to calibration accuracy. **When properly zeroed.

NMRR: Greater than 60dB at 50Hz, 60Hz ±0.1%.

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 3 counts of final reading on range.

dB MODE (ref: 600Ω): Accuracy: ±(0.02dB+1 count) above -78dBm. Resolution: 0.01dB above 0.5% of range.

TRMS AC VOLTS

RANGE	ACCURACY (1 Yr.) 18°-28°C				
	20Hz - 50Hz*	50Hz - 10kHz*	10kHz - 20kHz*	20kHz - 50kHz**	50kHz - 100kHz**
200mV	1.00+1.00	0.35+1.00	0.6+2.00	1.5+2.50	5+4.00
2V - 200V	1.00+1.00	0.35+1.00	0.6+2.00	1.5+2.50	3+4.00
750V	1.25+1.00	0.75+1.00	1.0+2.00	1.8+2.50	3+4.00

*Above 1800 counts. **Above 18000 counts.

MAXIMUM ALLOWABLE INPUT: 750V rms, 1000V peak (less than 10 seconds per minute on 200mV and 2V ranges; 300V rms continuous), 10°V•Hz maximum.

3dB BANDWIDTH: 300kHz typical.

INPUT IMPEDANCE: 1MΩ paralleled by less than 75pF on 200V and 750V ranges. 1.1MΩ paralleled by 75pF on 200mV, 2V and 20V ranges. Capacitively coupled.

SETTLING TIME: 1 second to within 0.1% 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)	0.18	0.18	0.28	0.50
200mV	20mV to 200mV (-32 to -12dBm)	0.18	0.18	0.28	0.65
	2mV to 20mV (-52 to -32dBm)	0.85	1.10	2.00	—
	1mV to 2mV (-58 to -52dBm)	2.00	3.00	—	—

RESOLUTION: 0.01dB above 0.5% of range.

DC AMPS

RANGE	RESOLUTION	MAXIMUM VOLTAGE BURDEN	ACCURACY (1 Yr.) 18°-28°C ±(%rdg+counts)
200 μA	1nA	0.3V	0.1+15**
2mA	10nA	0.3V	0.1+15
20mA	100nA	0.3V	0.1+15
200mA	1 μA	0.3V	0.2+15
2000mA	10 μA	0.8V	0.2+15
10 A	100 μA	0.3V	0.75+15*

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

**When properly zeroed.

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

SETTLING TIME: 1 second to within 3 counts of final reading.

TRMS AC AMPS

RANGE	MAXIMUM VOLTAGE BURDEN	ACCURACY (1 Yr.)*		
		20Hz - 50Hz	50Hz - 10kHz	10kHz - 30kHz
200μA - 20mA	0.3V	1.0+100	0.8+100	2+250
200mA	0.3V	1.0+100	0.8+100	—
2000mA	0.8V	1.0+100	0.8+100	—
10 A	0.3V	1.5+100**	1.0+100**	—

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

SETTLING TIME: 1 second to within 0.1% of final reading.

Specifications subject to change without notice.

OHMS

RANGE	RESOLUTION	OUTPUT		ACCURACY	
		NOMINAL I-SHORT	MAX V ACROSS UNKNOWN	±(%rdg+counts)	
				24 Hr., 22°-24°C	1 Yr., 18°-28°C
200 Ω	1mΩ	2mA	0.5V	0.01+2*	0.02+3*
2 kΩ →	10mΩ	2mA	4.0 V	0.01+2	0.018+2
20 kΩ	100mΩ	400 μA	4.0V	0.014+2	0.026+2
200 kΩ →	1 Ω	40 μA	4.0V	0.014+2	0.026+2
2MΩ**	10 Ω	4 μA	4.0V	0.02+2	0.035+2
20MΩ**	100 Ω	400 nA	4.0V	0.10+2	0.12+2
200MΩ**	10 kΩ	400 nA	5.0V	2.00+1	2.00+1

*When properly zeroed. **Appropriate range selected automatically in MΩ.

CONFIGURATION: Automatic 2- or 4-terminal.

MAXIMUM ALLOWABLE INPUT: 450V dc or peak ac 10 seconds per minute. 350V rms continuous.

OPEN-CIRCUIT VOLTAGE: +5V.

DIODE TEST: Display reads junction voltage up to 2.2V. Test Current: 1.6mA nominal.

SETTLING TIME: 2 seconds to within 3 counts of final reading on range.

GENERAL

DISPLAY: ±220,000 count LCD. 0.45 in. height; polarity, function, range, and status indication.

RANGING: Auto or manual on dc volts, ac volts, and ohms; manual on ac amps and dc amps.

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 readings/second to 1 reading/hour or by manual triggering. Also detects and stores maximum and minimum readings continuously while in 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 ±0.1%. Greater than 60dB in ac volts.

TEMPERATURE COEFFICIENT (0°-18°C & 28°-50°C): ±(0.1×applicable one year accuracy specification)/°C.

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

WARMUP: 1 hour to rated accuracy.

POWER: 105-125V or 210-250V (external switch selected), 90-110V available; 50-60Hz, 12V•A. Optional 5-hour battery pack. Model 1978.

DIMENSIONS, WEIGHT: 89mm high × 235mm wide × 275mm deep (3 1/2 in. × 9 1/4 in. × 10 3/4 in.). Net weight 1.8kg (3 lbs., 14 oz.).

ACCESSORIES SUPPLIED: Model 1751 safety test leads, instruction manual.

ACCESSORIES AVAILABLE:

- Model 1010: Single Rack Mounting Kit
- Model 1017: Dual Rack Mounting Kit
- Model 1301: Temperature Probe
- Model 1600A: High Voltage Probe
- Model 1641: Kelvin Test Lead Set
- Model 1651: 50-Ampere Current Shunt
- Model 1681: Clip-On Test Lead Set
- Model 1682A: RF Probe
- Model 1684: Hard Shell Carrying Case
- Model 1685: Clamp-On Ac Probe
- Model 1751: Safety Test Leads
- Model 1754: Universal Test Lead Kit
- Model 1972: IEEE-488 with Analog Output
- Model 1973: IEEE-488 interface
- Model 1978: Rechargeable Battery Pack
- Model 7008-3: IEEE-488 Digital Cable (3 ft.)
- Model 7008-6: IEEE-488 Digital Cable (6 ft.)
- Model 8573: IEEE-488 Interface for IBM PC (use with 1972/3)