

PART NUMBER
SPEC. 485N

485N SPECIFICATIONS

| RANGE | | RESOLUTION | ACCURACY (1 YEAR) 18°-28°C ± (%rdg + counts) ¹ | ANALOG RISE TIME (10%-90%) | NORMAL MODE REJECTION RATIO (50 or 60Hz) ⁴ | MAXIMUM CONTINUOUS INPUT ² |
|---------|--------------------|------------|---|----------------------------------|--|---|
| CURRENT | POWER ³ | | | | | |
| 2 nA | 2 nW | .1pW | 0.4 + 40 | 60ms | 70dB | 350Vdc |
| 20 nA | 20 nW | 1pW | 0.4 + 10 | 60ms | 70dB | 350Vdc |
| 200 nA | 200 nW | 10pW | 0.2 + 10 | 6ms | 65dB | 350Vdc |
| 2 μA | 2 μW | 100pW | 0.15 + 10 | 3ms | 65dB | 350Vdc |
| 20 μA | 20 μW | 1nW | 0.1 + 10 | 3ms | 65dB | 50Vdc |
| 200 μA | 200 μW | 10nW | 0.1 + 10 | 1ms | 65dB | 50Vdc |
| 2mA | 2mW | 100nW | 0.1 + 10 | 1ms | 55dB | 50Vdc |

¹ When properly zeroed; 0.1 ≤ responsivity ≤ 1.
² With no limiting resistance: 1000Vdc with external 100kΩ series resistance.
³ Referenced to a wavelength where 1mA of current = 1mW of light.
⁴ Internal Jumper Selected.

INPUT VOLTAGE BURDEN: Less than 200μV.
RANGING: Manual or autoranging.
AUTORANGING TIME: Average 250ms per range.
SETTLING TIME AT DISPLAY: Less than 600ms second to within 2 counts on fixed range.
CONVERSION PERIOD: Less than 170ms.
TEMPERATURE COEFFICIENT (0°-18°C & 28°-50°C): ±(0.1 × applicable accuracy specification) per °C.
MAXIMUM COMMON MODE VOLTAGE: 30V peak, DC to 60Hz sine wave.
ANALOG OUTPUT:
 Output Voltage: +1V = -10,000 counts, except +100mV = -10,000 counts on 2nA range.
 Output Resistance: 1000Ω.

ZERO CHECK: Used to adjust zero on the lowest range.
ZOOM IN: Increases bar graph sensitivity
ZOOM OUT: Decreases bar graph sensitivity
OFFSET: Establishes a new baseline for the bar graph
TIME CONSTANT: Selects SLOW, MED, or FAST response time.

GENERAL

DIGITAL LCD DISPLAY: 4½ digit (0.44 in. height) for power and dBm; 3½ digit including trailing zero (0.28 in. height) for wavelength; polarity, Range, REL, ATTENUATOR, AUTO, dBm, ZERO CHECK, CAL, BAT, PROBE, RMT, and LLO annunciators.
ANALOG LCD DISPLAY: 50 segment bar graph; selectable full scale of 25000, 12500, 5000, 2500, 1250, 500, 250, 125, 50, 25 or 5 digital display counts; TIME CONSTANT, FAST, MED, SLOW, and OFFSET annunciators.
OVERRRANGE INDICATION: "OL" displayed.
CONNECTORS:
 Input: BNC.
 Analog Output: Banana Jacks
OPERATING ENVIRONMENT: 0°-50°C, less than 70% R.H. up to 35°C; linearly derate 3% R.H./°C up to 50°C.
STORAGE ENVIRONMENT: -25° to +60°C.
POWER: 105-125V or 210-250V (switch selected), 90-110V available, 50-60Hz, 12VA. Optional 5-hour battery pack, Model 1758.
LINE FREQUENCY: 50-60Hz (internal jumper selected).
DIMENSIONS:
 Mother Board: 65mm high × 190mm wide × 260mm deep (2½ in. × 7½ in. × 10¼ in.)
 Front Panel: 82mm high × 192mm wide × 38mm deep (3¼ in. × 7⅞ in. × 1½ in.)
4853N IEEE Interface: 29mm high × 190mm wide × 86mm deep (1¼ in. × 7½ in. × 3¼ in.)

FRONT PANEL CONTROLS

POWER: On and off.
UP RANGE: Selects manual range and while held, increments the range to the top range.
DOWN RANGE: Selects manual range and while held, decrements the range to the bottom range.
AUTORANGING: Selects manual or autoranging.
ATTENUATOR: Selects the probe with attenuator correction table to compensate for wavelength.
UP WAVELENGTH: While held, increments the wavelength in 10nm increments to the maximum wavelength. While held at the maximum wavelength, and the ATTENUATOR is off (on); the annunciator PROBE(ATTENUATOR) and the serial number of the PROBE(ATTENUATOR) are displayed.
DOWN WAVELENGTH: While held, decrements the wavelength in 10nm increments to the minimum wavelength. While held at the minimum wavelength, and the ATTENUATOR is off (on); the annunciator PROBE(ATTENUATOR) and the serial number of the PROBE(ATTENUATOR) are displayed.
λ SAVE: With the ATTENUATOR off (on), store the default PROBE(ATTENUATOR) wavelength.
LOG/LIN: Toggles between power and dBm.

$$(dBm = 10 \log \frac{P_{in}}{1mW})$$

REF: When in dBm allows relative dB measurements to be made independent of NULL. Display annunciator is dB. When not in dBm allows ratio measurements to be made.
NULL: Allows zeroing of on range power readings. Allows other readings to be made with respect to a baseline value. Display annunciator is REL.

ACCESSORIES AVAILABLE:
 Model 1758: Rechargeable Battery Pack
 Model 4853N: IEEE-488 Interface
 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

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KEITHLEY Keithley Instruments Inc.
Cleveland, Ohio 44139

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