

# 4½ Digits RS232 Optical Interface Multilogger

Model: 48R

## Features:

- Dual input temperature measurement from -50°C to 1300°C
- Autorange on Frequency range and measurement to 10MHz
- Duty cycle measurement from 10% to 90%
- Pulse width measurement from 0.01ms to 2000.0ms
- Capacitance measurement from 0.1pF to 15mF
- Diode test and Audible continuity check function
- Ohm, Diode, Continuity and Frequency input protection to 500V DC/AC rms
- Multiple signal measurement: 6500 samples with real-time data  
Maximum 32000 records capacity
- ALM Record: 5400 sample with start/stop time
- Single signal measurement: 32000 records capacity
- Programmable Hi-Lo Limits with mini-DIN output port
- Real time clock with calendar
- ADAPTER I/P: 1mV - 1A, 10mA, 100mA, °C, °F
- CURRENT LOOP: 4 to 20mA, displayed as 0-100% for process current measurements
- Windows® 95/98 compatible Data Acquisition software
- DC ADAPTER: 12V

## Specifications:

### DC voltage

Range: 200mV, 2000mV / ADAPTER, 20V, 200V, 600V  
Resolution: 10µV  
Accuracy:  $\pm(0.05\%rdg + 5dgts)$   
Input impedance: 10MΩ

### AC Voltage (50Hz - 500Hz)

Range: 200mV, 2000mV / ADAPTER, 20V, 200V, 600V  
Resolution: 10µV  
Accuracy:  $\pm(0.75\%rdg + 4dgts)$  on 200mV to 200V ranges  
 $\pm(2.0\%rdg + 4dgts)$  on 600V range  
Input impedance: 10MΩ

### DC Current

Range: 200µA, 2mA, 20mA, 200mA/LOOP, 10A  
Resolution: 0.1µA  
Accuracy:  $\pm(0.5\%rdg + 5dgts)$   
Burden voltage: 325mV on all ranges, except  
700mV on 10A range  
Fuse rating: 0.5A/250V, 10A/600V (Fast-acting)

### AC Current (50Hz - 500Hz)

Range: 200µA, 2mA, 20mA, 200mA, 10A  
Accuracy:  $\pm(0.75\%rdg + 4dgts)$   
Burden voltage: 325mV on all ranges, except  
700mV on 10A range

### Resistance

Range: 200Ω, 2KΩ, 20KΩ, 200KΩ, 2000KΩ, 20MΩ  
Resolution: 10mΩ  
Accuracy:  $\pm(0.2\%rdg + 10dgts)$  on 200Ω range  
 $\pm(0.2\%rdg + 4dgts)$  on 2KΩ to 20MΩ range  
Open circuit volts: 0.6VDC

### CONTINUITY (In 200Ω)

Threshold: less than 30Ω

### Diode Test

Range: 2000mV  
Accuracy:  $\pm(3.0\%rdg + 10dgts)$   
Resolution: 0.1mV

### Logic Test

Threshold: Logic 1: 2.8V±0.8V  
Logic 0: 0.8V±0.5V  
Frequency response: 20MHz

### Frequency (Autoranging)

Range: 2Hz, 20Hz, 200Hz, 2KHz, 20KHz, 200KHz, 2000KHz, 10MHz  
Sensitivity: 1.0Vrms (TTL level)  
Accuracy:  $\pm(0.1\%rdg + 1dgt)$   
Minimum frequency: 1.0Hz

### Duty cycle (0.5Hz to 1KHz)

Range: 10.0% to 90.0%  
Accuracy:  $\pm(2\%dgt + 5dgts)$  @ 2Vrms min. (TTL level)

### Pulse width (1Hz to 1KHz)

Range: 20.00ms, 200.00ms, 2000.0ms  
Sensitivity: 2.0Vrms (TTL level)  
Accuracy:  $\pm(3.0\%rdg + 1dgt)$

### Capacitance

#### Cx

Range: 2000pF, 20nF, 200nF, 2µF, 20µF  
Accuracy:  $\pm(2.0\%rdg + 10dgts)$

#### F

Range: 200µF, 2mF, 15mF  
Accuracy:  $\pm(5.0\%rdg + 5dgts)$

### Temperature

Range: -50°C to 1300°C (-58°F to 2000°F)  
Resolution: 0.1 °C / °F  
Accuracy:  $\pm(0.1\%rdg + 1°C)$  on T1, T2 ranges  
 $\pm(0.1\%rdg + 2°F)$  on T1, T2 ranges



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