

TEXMATE



PM-45L Precision Panel Meter

PM-45LU

Low Cost Meter w/Differential Input
Both have 4 1/2 DIGIT with .4" LED
in a Slim Bezel Case

High Accuracy LED Meters with 10mV Resolution, True Differential Inputs and Standard MUX-BCD or Optional Parallel BCD Outputs

General Features

The PM-45L and PM-45LU are truly unique and extremely versatile instruments. They offer more high performance features than most larger and more expensive DPM's.

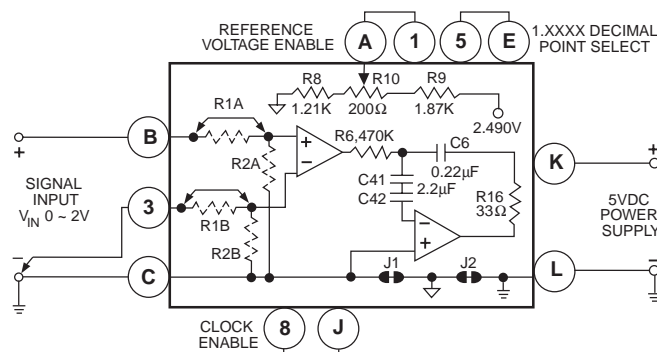
Both meters incorporate a crystal controlled 100KHz clock that provides an exceptionally high normal mode rejection of 120dB at multiples of 50/60Hz. Bipolar differential and single-ended DC voltages from $\pm 199.99\text{mV}$ to $\pm 1200.0\text{V}$ full scale can be measured and scaled in almost any known engineering unit. Provision has been made for signal offsetting and the capability of attenuating both high and low signal inputs. Resolution is $10\mu\text{V}$ over ± 19999 counts, and errors due to zero drift are virtually eliminated by autozeroing. Other modes of operation, selectable by the user, include an ohmmeter mode, current meter mode and ratiometric mode.

Multiplexed BCD data is available internally from a row of auxiliary solder pads. Both meters may be ordered with an internally mounted Tri-state Buffered Parallel BCD Output Board. This option, which is described in detail on a separate data sheet, can also be purchased for field retrofit.

Typical Application Connections

SINGLE-ENDED METER - <2V RANGE

1) Standard 2V Full Scale Range single-ended voltmeter is shown. R1A and R1B are shorted by jumpers and R2A and R2B are not installed. 2) Connect Pin 3 to the nearest end of the signal source ground to avoid possible errors caused by ground loop currents.



View more application connections and connection instructions on page 3.

Compatibility

The PM-45L is shipped in a standard Slim Bezel case. The Slim Bezel case is compatible with the CM, SM, TM, & SP Series of meters. The PM-35U can be ordered in End Mount cases for twin mounting or combinations of multiple center mount cases and two end mount cases for stack mounting.

SLIM



BEZEL

Specifications

Input Configuration: True differential and single-ended
Full Scale Ranges: $\pm 199.99\text{mVDC}$
 $\pm 1.9999\text{VDC}$ (standard)
 $\pm 19.999\text{VDC}$
 $\pm 199.99\text{VDC}$
 $\pm 1200.0\text{VDC}$ (maximum Input Signal, higher voltages can be measured if voltage dividing resistors are located externally)
Input Impedance: Exceeds $1000\text{M}\Omega$ on 200mV and 2V ranges; $10\text{M}\Omega$ on all other ranges
Input Protection: $\pm 170\text{VDC}$ or 120VAC on 200mV and 2V ranges; $\pm 1200\text{VDC}$ or 850VAC on all other ranges
Accuracy: 45L: $\pm(0.01\%$ of reading + 1 digit)
 $\pm(0.015\%$ of reading + 2 digits) for 200mV range.
45LU: $\pm(0.015\%$ of reading + 2 digits)
 $\pm(0.02\%$ of reading + 3 digits) for 200mV range.
Temperature Coefficient: 45L: $5\text{PPM}/^\circ\text{C}$ in ratiometric, $200\text{PPM}/^\circ\text{C}$ using internal adjustable T.C. reference.
45LU: $5\text{PPM}/^\circ\text{C}$ ratiometric, $50\text{PPM}/^\circ\text{C}$ using internal reference.
Warm Up Time: 10 seconds to specified accuracy
Conversion Rate: 2.5 readings per second
Display: 0.4" LED
Overrange Indication: When input exceeds full scale on any range being used, most significant "1" digit & polarity symbol are displayed with all other digits blank
Power Requirements: Low Ripple $+4.5$ to $+5.5\text{VDC}$ at 225mA
Operating Temperature: 0° to $+60^\circ\text{C}$
Storage Temperature: -20° to $+70^\circ\text{C}$
Relative Humidity: 95% (non-condensing)
Case Dimensions: Bezel $2.76" \times 1.17"$ ($69.75 \times 29.7\text{mm}$)
Depth behind Bezel $3.32"$ (84mm) plus $0.68"$ (17.27mm) for connector.
Weight: $.88\text{ gms}$ (3.1 oz)