



TEXMATE

PM-45X Precision Panel Meter

PM-45XU

Low Cost Meter w/Differential Input
Both have 4 1/2 DIGIT with .48" LCD
in a Slim Bezel Case

High Accuracy LCD Meters with 10 μ V Resolution,
True Differential Inputs and Ultra Low Power <25mW at +5VDC.

General Features

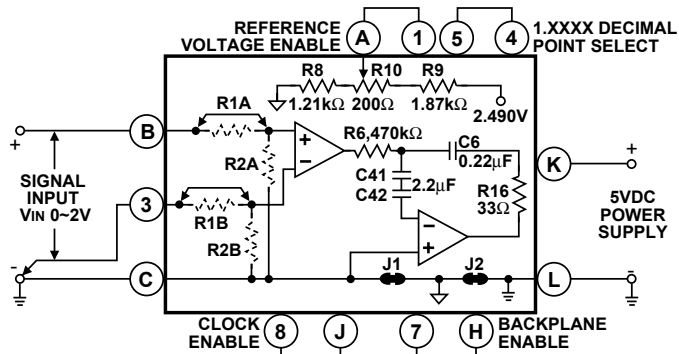
The PM-45X and PM-45XU are truly unique and extremely versatile instruments. Believed to be the world's smallest and most energy efficient 4 1/2 Digit LCD Panel Meters, they nevertheless offer more high performance features than most larger and more expensive DPM's.

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 ± 199.99 mV to ± 1200.0 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 μ 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.

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-45X 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:	± 199.99 mVDC ± 1.9999 VDC (standard) ± 19.999 VDC ± 199.99 VDC ± 1200.0 VDC (maximum Input Signal, higher voltages can be measured if voltage dividing resistors are located externally)
Input Impedance:	Exceeds 1000M Ω on 200mV and 2V ranges; 10M Ω on all other ranges
Input Protection:	± 170 VDC or 120VAC on 200mV and 2V ranges; ± 1200 VDC or 850VAC on all other ranges
Accuracy:	45X: $\pm(0.01\%$ of reading + 1 digit) $\pm(0.015\%$ of reading + 2 digits) for 200mV range. 45XU: $\pm(0.015\%$ of reading + 2 digits) $\pm(0.02\%$ of reading + 3 digits) for 200mV range.
Temperature Coefficient:	45X: 5PPM/ $^{\circ}$ C in ratiometric, 200PPM/ $^{\circ}$ C using internal adjustable T.C. reference. 45XU: 5PPM/ $^{\circ}$ C ratiometric, 50PPM/ $^{\circ}$ C using internal reference.
Warm Up Time:	10 seconds to specified accuracy
Conversion Rate:	2.5 readings per second
Display:	0.48" LCD
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 +5.5VDC at 3-5mA
Operating Temperature:	0° to $+60^{\circ}$ C
Storage Temperature:	-20° to $+70^{\circ}$ C
Relative Humidity:	95% (non-condensing)
Case Dimensions:	Bezel 2.76" x 1.17" (69.75 x 29.7mm) Depth behind Bezel 3.32" (84mm) plus 0.68" (17.27mm) for connector.
Weight:	.88 gms (3.1 oz)

PM-Series, high performance versatility for a wide range of applications

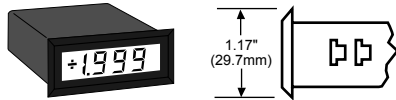
PM-35A.....3.5 digit Red LED, Precision Preference, 2VDC, 5VDC Power
PM-35AR3.5 digit Red LED, Autoranging, 200mV/2VDC, 5VDC Power
PM-35U3.5 digit Red LED, Low Cost, 2VDC, 5VDC Power
PM-35X.....3.5 digit LCD, Low Power Consumption 2VDC, 5VDC Power
PM-35XAR3.5 digit LCD, Low Power Autoranging
PM-35XAC1103.5 digit LCD, 2VDC, 120VAC Power
PM-35XACAR13.5 digit LCD, Autoranging, 120VAC Power
PM-45L.....4.5 digit Red LED, Precision Meter w/Differential Input
PM-45LBCDPM-45L w/Tri-State Parallel BCD Output, 5VDC Power
PM-45LMUXBCDPM-45L w/Multiplexed BCD Output

PM-45LU4.5 digit Red LED, Low Cost Meter w/Differential Input
PM-45LUBCDPM-45LU w/Tri-State Parallel BCD Output
PM-45LUMXBCDPM-45LU w/Multiplexed BCD Output
PM-45X.....4.5 digit LCD, Precision Meter w/Differential Input
PM-45XBCDPM-45X w/Tri-State Parallel BCD Output, 5VDC Power
PM-45XMUXBCDPM-45X w/Multiplexed BCD Output, 5VDC Power
PM-45XU3.5 digit LCD, Low Cost Meter w/Differential Input
PM-45XUBCDPM-45XU w/Tri-State Parallel BCD Output, 5VDC Power
PM-45XUMXBCDPM-45XU w/Multiplexed BCD Output, 5VDC Power

PM Case Dimensions and Panel Cutouts

The Slim Bezel Case is supplied as standard. If specified at time of ordering, any combination of Twin Mounting and Multiple Array Cases may be substituted at no additional cost. Extra cases may be ordered separately.

STANDARD SLIM BEZEL CASE

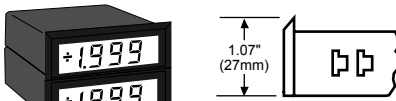


SLIM BEZEL CASE

Standard Black ABS case with matte finish bezel for single unit mounting.

Part No. **SL-CASERED** for LED's
SL-CASECLR for LCD's

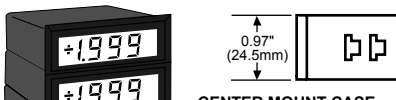
OPTIONAL TWIN MOUNTING OR MULTIPLE ARRAY CASES



END MOUNT CASE

Same styling as Slim Bezel case but with bottom edge of bezel removed. Two End Mount cases can be twin mounted in a single cutout.

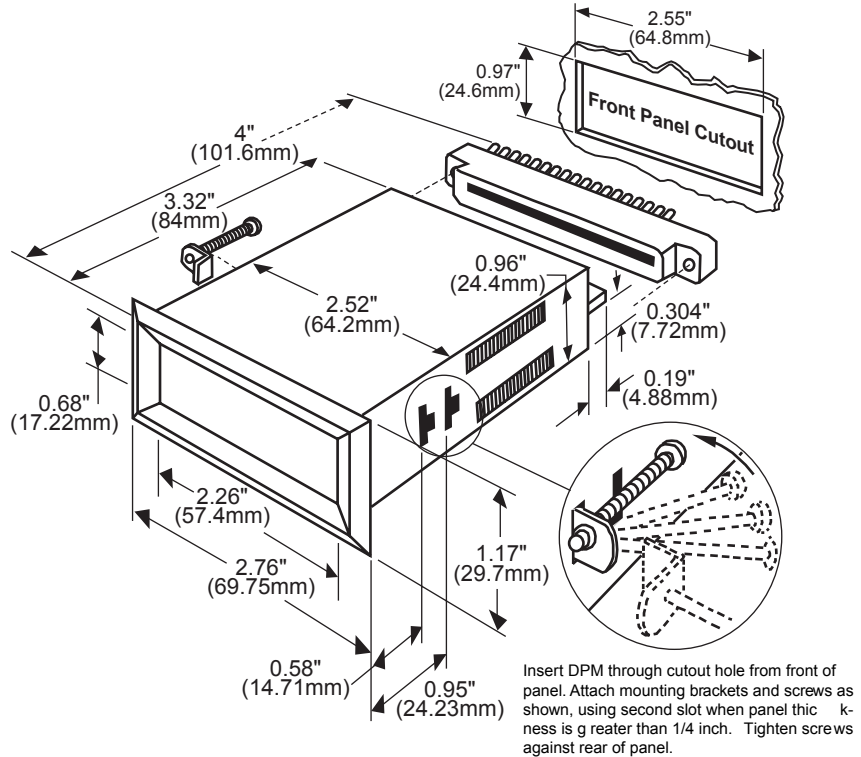
Part No. **EM-CASERED** for LED's
EM-CASECLR for LCD's



CENTER MOUNT CASE

Any number of Center Mount cases may be fitted between two End Mount cases for multiple arrays.

Part No. **CM-CASERED** for LED's
CM-CASECLR for LCD's



Ordering Information

Standard Options for this Model Number

Part Number .Description

► BASIC MODEL NUMBER

PM-45X4.5 digit LCD, Precision Meter w/Differential Input

PM-45XU4.5 digit LCD, Low Cost Meter w/Differential Input

Special Options and Accessories

Part Number .Description

► SPECIAL OPTIONS (Specify Inputs & Req. Reading)

VDA-200MVFI . . .200mVDC Range Change

VFA-0020V20VDC Range Change for 4.5 digit PM Series
VFA-0200V200VDC Range Change for 4.5 digit PM Series
VFA-1200V1200VDC Range Change for 4.5 digit PM Series
VS-4.5Non-Std Range and Scale - 4.5 Digit PM Meters

► ACCESSORIES

CN-L10Dual Row 10 Pin Connector, Solder Type
SL.CASECLR . . .Slim Bezel Case, Clear Faceplate w/Mtg Hardware
CL.CASECLR . . .Center Mount Case, Clear Faceplate w/Mtg Hardware
EM.CASECLR . . .End Mount Case, Clear Faceplate w/Mtg Hardware

Prices subject to change without notice.

WARRANTY

Texmate warrants that its products are free from defects in material and workmanship under normal use and service for a period of one year from date of shipment. Texmate's obligations under this warranty are limited to replacement or repair, at its option, at its factory, of any of the products which shall, within the applicable period after shipment, be returned to Texmate's facility, transportation charges pre-paid, and which are, after examination, disclosed to the satisfaction of Texmate to be thus defective. The warranty shall not apply to any equipment which shall have been repaired or altered, except by Texmate, or which shall have been subjected to misuse, negligence, or accident. In no case shall Texmate's liability exceed the original purchase price. The aforementioned provisions do not extend the original warranty period of any product which has been either repaired or replaced by Texmate.

USER'S RESPONSIBILITY

We are pleased to offer suggestions on the use of our various products either by way of printed matter or through direct contact with our sales/application engineering staff. However, since we have no control over the use of our products once they are shipped, NO WARRANTY WHETHER OF MERCHANTABILITY, FITNESS FOR PURPOSE, OR OTHERWISE is made beyond the repair, replacement, or refund of purchase price at the sole discretion of Texmate. Users shall determine the suitability of the product for the intended application before using, and the users assume all risk and liability whatsoever in connection therewith, regardless of any of our suggestions or statements as to application or construction. In no event shall Texmate's liability, in law or otherwise, be in excess of the purchase price of the product.

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