



TEXMATE

PM-45

4 1/2 DIGIT

PANEL METER

**A DEPENDABLE LOW COST GENERAL PURPOSE
SINGLE-ENDED METER POWERED FROM 5VDC**

DESCRIPTION

The PM-45 is a low cost 4 1/2 digit panel meter. An autozeroing dual slope analog-to-digital converter is utilized to measure single-ended inputs over five programmable ranges from $\pm 199.99\text{mVDC}$ to $\pm 1200.0\text{VDC}$ full scale. Maximum resolution is $10\mu\text{V}$ over ± 19999 counts.

Provision has been made for user selection of many operating modes including ratiometric voltmeter measurements. Leading zero blanking is also available however, it's use prevents the display of the MSD digit ("1"9999) unless external circuitry is used (see Application Notes). Other useful features include the ability to reverse the displayed polarity from that of the input signal. Overrange and underrange outputs are also available to facilitate autoranging applications. The power to the A to D converter and logic circuits is independent to that of the display, which enables the display to be dimmed or blanked and operated in a "press-to-read" mode without affecting the functioning of the meter. The reading is capable of instantaneous display without any settling time.

As an option, the multiplexed BCD information generated by the PM-45 is available for use in driving auxiliary equipment. The signals are brought out from the main PC board by means of a multiconductor ribbon cable. Since the output drive is one TTL load, care must be taken in the cable length and drive currents.

SPECIFICATIONS

| | |
|---------------------------------|---|
| Input Configuration: | Single-ended |
| Full Scale Ranges: | $\pm 199.9\text{mVDC}$; $\pm 1.999\text{VDC}$ (standard); $\pm 19.99\text{VDC}$; $\pm 199.9\text{VDC}$; and $\pm 1200\text{VDC}$ |
| Input Impedance: | Exceeds $1000\text{M}\Omega$ on 2V range; $10\text{M}\Omega$ on all other ranges |
| Input Protection: | $\pm 20\text{V AC/DC}$ max on 200mV range; $\pm 500\text{VDC}$ or 350VAC max. on 2V range; $\pm 1200\text{VDC}$ or 850VAC on all other ranges |
| Normal Mode Rejection: | 30dB at 50/60Hz and up |
| Accuracy: | $\pm (0.015\%$ of reading + 2 digits) |
| Maximum Resolution: | $10\mu\text{V}$ over ± 1999 counts |
| Temperature Coefficient: | 5PPM/ $^{\circ}\text{C}$ ratiometric operation, 50PPM/ $^{\circ}\text{C}$ using internal reference on 2V range |
| Zero Stability: | Autozeroed; $\pm 1\mu\text{V}/^{\circ}\text{C}$ typical |
| Conversion Rate: | 3 readings per second nominal, controllable from 1 to 6 per sec |
| Display: | 0.3" LED |
| Polarity: | Automatic; displays both "+" and "-" signs; polarity signs may be blanked or reversed |
| Decimal: | User selectable to 4 positions |
| Overload Indication: | When input exceeds full scale on any range being used, all digits flash zero at the A to D conversion rate |
| Power Requirements: | +4.5V to +5.5VDC at 200 to 300mA depending on display brightness |
| Operating Temperature: | -10°C to $+60^{\circ}\text{C}$ |

ORDERING INFORMATION

STANDARD 4 1/2 DIGIT PANEL METER (2V Range)

ACCESSORIES: Edge Connector (20 pin solder tabs)

OPTIONS: Factory Installed 200mV Range

Factory Installed 20V Range

Factory Installed 200V Range

Factory Installed 1200V Range

Factory Installed Special Scaling

(Specify input signal, the span, and digital reading required e.g. 0-5V input, to display 0 to 19999; e.g. 0 to 2V input to display 0 to 18000)

Order Part No.

PM-45

CN-L10

VHA-200MVFI

VFA-0020V

VFA-0200V

VFA-1200V

VS-4.5

RANGE CHANGE KITS: (matched resistors for user installation)

20V Range

200V Range

1200V Range

VKA-0020V

VKA-0200V

VKA-1200V

OPTIONAL CASES: (see back page for details)

End Mount Case (for twin mounting)

Center Mount Case (for multiple array mounting)

Slim Bezel Case (supplied as standard)

EM-CASERED

CM-CASERED

SL-CASERED