

TEXMATE

RP-4500D2

Differential Input Panel Meter
4 1/2 Digit 0.56" LED
in a NEMA Style Case

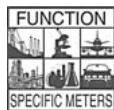
RP-4500D2BCD

Meter with Parallel BCD Output

A High Accuracy Differential Input
AC Powered Meter, and a Tri-State Buffered Parallel BCD Output Option.



RP-Series



General Features

The Texmate Model RP-4500D2 is an ultra stable, super accurate 4 1/2 digit panel meter featuring a 100KHz crystal clock. As a result of this feature, the meter provides an exceptionally high normal mode and common mode rejection. The meter measures bipolar true differential and single-ended DC voltages over four factory calibrated ranges from $\pm 1.9999V$ to $\pm 1200.0V$ full scale. Resolution is $100\mu V$ over ± 19999 counts, and errors due to zero drift are virtually eliminated by means of autozeroing. The meter has a multiplexed BCD output capability and as an option a parallel BCD output can be provided. Other user programmable modes of operation include an ohmmeter, current meter, ratio-metric voltmeter, and special scaling with offset capability.

The differential input capability of the RP-4500D2 has a wide common mode voltage range of $\pm 3VDC$ and a high common mode DC voltage rejection ratio of 80dB. Common mode signals are those which are present equally on both input terminals but do not develop a differential voltage between them. This capability is particularly useful for making accurate measurements of very small signals in the presence of much larger common mode signals. Because of its noise immunity, the RP-4500D2 is ideal for measuring various balanced transducers and bridge inputs.

The 120dB normal mode rejection of the RP-4500D2 at multiples of 50/60Hz means that almost any AC mains noise present on the input signal will be rejected.

In addition to standard run/hold and display blanking options, the RP-4500D2 features specially prepared internal mounting holes and solder pads to enable user designed input signal conditioning and control. These auxiliary pads provide access to all the key operating and control circuitry of the meter including regulated 5VDC and outputs.

Specifications and features of the RP-4500D2BCD meter begin on page 5.

Compatibility

The RP-Series NEMA case style is complementary to Texmate's Classic UM-Series. For economy, each RP model is dedicated to a specific application. RPs are ideal for upgrading or replacing the traditional USA NEMA case panel meters presently in use.

Traditional
NEMA
STYLE USA

CASE

Specifications

Input Configuration:..... True differential and single-ended
Full Scale Ranges: $\pm 199.9mVDC$
 $\pm 1.999VDC$ (standard)
 $\pm 19.99VDC$
 $\pm 199.9VDC$
 $\pm 1200VDC$
Input Impedance: Exceeds $100M\Omega$ on 2V range;
 $10M\Omega$ on all other ranges
Input Protection:..... $\pm 60VDC$ or $40VAC$ on 2V range;
 $\pm 1200VDC$ or $850VAC$ on all other ranges
Accuracy: $\pm(0.01\%$ of reading + 3 digits)
Temperature Coefficient: ..5PPM/ $^{\circ}C$ in ratiometric operation; 50 PPM/ $^{\circ}C$ Typ. using internal reference with 2V range
Warm Up Time:3 minutes to specified accuracy
Conversion Rate:2.5 readings per second controlled by precision 100KHz Quartz Crystal Clock, or user controllable from 1 to 12 readings per second by external clock
Display:0.56" LED
Decimal Selection:User programmable to 4 positions
Overrange Indication: ..When input exceeds full scale on any range being used, display flashes "000"
Power Requirements:.....110V or 220V, $\pm 5\%$ at 50Hz; 117V or 230V, $\pm 5\%$ at 60 and 400Hz
Operating Temperature:-10 $^{\circ}$ to +50 $^{\circ}C$
Storage Temperature:.....-20 $^{\circ}$ to +70 $^{\circ}C$
Relative Humidity95% (non-condensing)
Case Dimensions:Bezel 4.06"Wx1.89"H (102.7Wx47.9Hmm)
Depth behind bezel 3.64" (92.22 mm) Plus 0.5 to .9" (12.7 to 22.8mm) depending on connector used.
Weight:8 oz (227 gms)