

# RP-35A

## A Precision Autozeroing AC-Powered Differential Panel Meter for DIN/NEMA Cutouts

3 1/2 Digit 0.56" LED  
In a NEMA Style Case



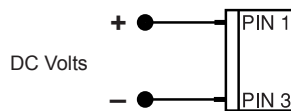
### General Features

The Texmate Model RP-35A is a precision, autozeroing 3<sup>1/2</sup> digit meter designed to fit most other manufacturers' panel cutouts, including DIN/NEMA standard. It measures bipolar differential and single-ended DC voltages over three user-programmable ranges from  $\pm 1.999$  to  $\pm 199.9$ VDC full-scale. For other 4-20 mA, ACV, ACA and DCA applications, the suggested meter in the same case size is the UM-35-CL, UM-35-DCA, UM-35-ACV and UM-35-ACA.

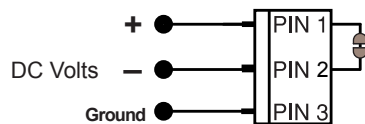
The UM-Series also has temperature and pressure meters that are in the same case size as the RP-35A.

### Typical Application Connections

DC Volts Single-Ended measurement with a resolution of 100 mV.



DC Volts Differential measurement with a resolution of 100 mV.



On the back side of PCB, cut track of pin 1 and pin 2 for differential function

### Specifications

**Input Configuration:**.....True differential and single-ended

**Full Scale Ranges:** ..... $\pm 1.999$ VDC (standard)  
 $\pm 19.99$ VDC  
 $\pm 199.9$ VDC

**Input Impedance:**.....Exceeds 1000M $\Omega$  on 2V range;  
 $>1$ M $\Omega$  on all other ranges

**Input Protection:**.....Do not exceed  $\pm 400$ VDC

**Accuracy:** ..... $\pm(0.05\%$  of reading = 1 digit)

**Temperature Coefficient:** ..5PPM/ $^{\circ}$ C in ratiometric operation;  
 60PPM/ $^{\circ}$ C Typ. using internal reference on 2V range.

**Warm Up Time:**.....10 minutes to specified accuracy

**Conversion Rate:**.....3 readings per second nominal,  
 controllable from 1 to 20 readings per second

**Display:**.....0.56" LED

**Decimal Selection:** .....User programmable to 4 positions

**Overrange Indication:** ...When input exceeds full scale on any range being used, most significant "1" digit & "-" symbol (for negative inputs) is displayed with all other digits blanked

**Power Requirements:** ...85-265 VAC / 60Hz

**Operating Temperature:**.....-10 $^{\circ}$  to +50 $^{\circ}$ C

**Storage Temperature:** ...-20 $^{\circ}$  to +70 $^{\circ}$ C

**Relative Humidity** .....95% (non-condensing)

**Case Dimensions:** .....Bezel 3.78" Wx1.89" H (96mm x 48mm)  
 Depth behind bezel 3.36" (83.5mm)  
 Plus 0.66" (17 mm) connectors

**Weight:**.....5.6 oz (0.16 kg)

8 oz (0.23 kg). when packed.

## Calibration Procedure

Apply power to the meter. Then with a precision DC reference source apply +1.900 VDC between the Signal High Input Pin 1 and Signal Low Input Pin 3. Adjust SPAN potentiometer until the display reads +1.900 V. **Note:** The voltage applied in this case is for a +2.000 V full-scale meter. For other ranges, the voltage applied should be similarly proportional to the particular full-scale voltage.



To open meter, insert a flat head screwdriver or similar instrument in both slots on the side of the cover and pry open. The RP-Series meters slide out from the front of the case as a complete assembly.

## Optional Face Plate Descriptors

AC	L2	KV	kVAR	m/hr	Hz	RPM
V	mV	min	PF	F	C	Cost
DC	x10kN	µA	PSIG	mS	g/cm	psi
KW	W	KWH	pH	%	K	KPa
A	mbar	mA	MW	kA	RPS	MWH
mWs	µm	kW/s	l	l/sec	ml	cm
ORP	mm/s	l/min	mm	kg/sec	lbs	kg/hr
FT	bars	min	m/min	Mars	pV	dB

To customize the face plate, clear adhesive label containing various popular descriptors may be ordered. Choose the descriptor desired, peel off the adhesive backing and align the descriptor in the center right of the faceplate.

P.N.: DU-CASEDES

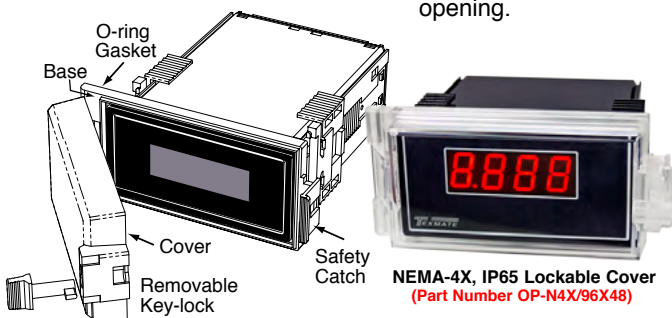
## Custom Face Plates

Texmate Produces Thousands of Custom OEM Face Plates. Have Texmate Design and produce a Custom Face Plate for your next project!

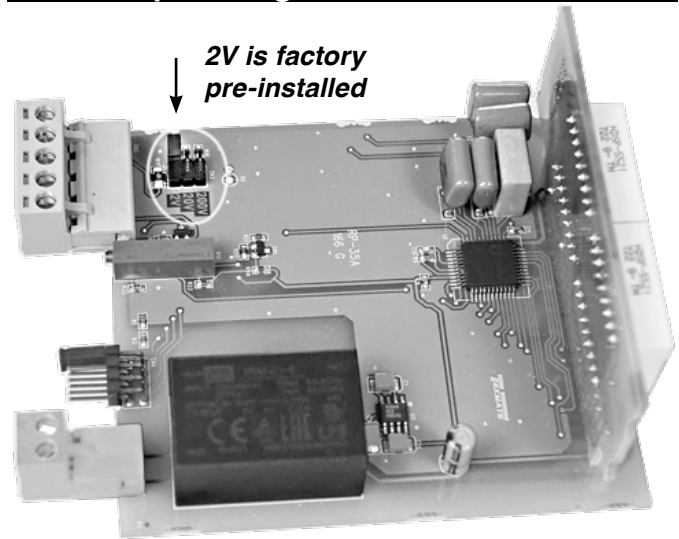
• Custom face plates have a non-recurring artwork charge. A serial number is then assigned to each artwork to facilitate reordering.

## Clear Lockable Water-proof Cover

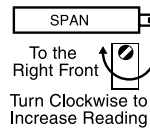
The clear lockable cover is designed to be dust and waterproof to NEMA-4X, IP65 standards. The assembly consists of a base and a cover with a cam hinge and key-lock fastening mechanism. An O-ring, or neoprene gasket forms a seal between the base and the panel. The cam hinge prevents the cover from closing when opened until pushed closed. The cover has a tapered recess that, when closed, forms a seal with a tapered spigot on the base. A key-lock employs a cam locking device to force the spigot into the recess, ensuring seal integrity. A safety catch keeps the cover closed even when the key is removed, and the keyhole can be used to attach a safety seal clip, preventing unauthorized opening.



## Select Input Range



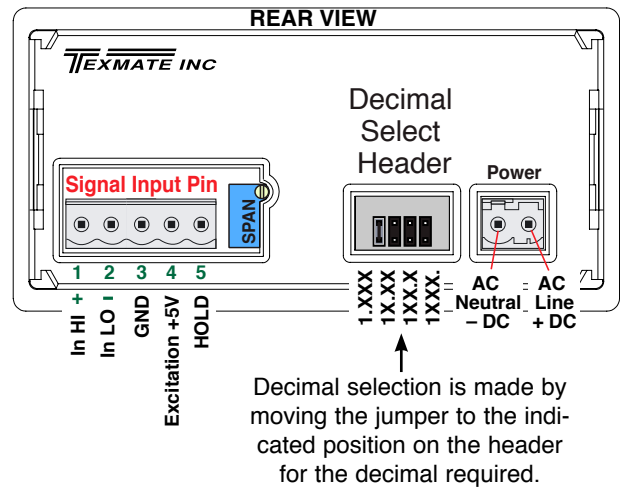
## Signal Conditioning Components



### SPAN Potentiometer (Pot)

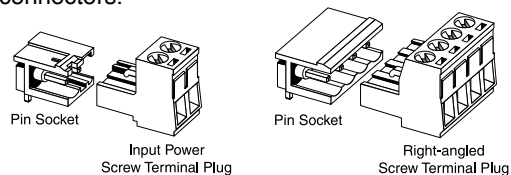
The SPAN pot is on the right side of the signal input. Typical adjustment is 20% of the input signal range.

## Connector Pinouts



## Connectors

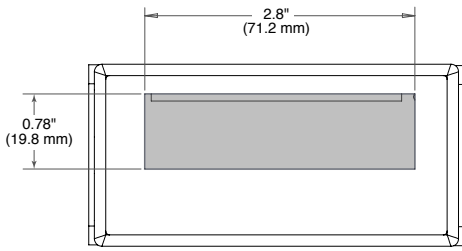
This meter uses plug-in type screw terminal connectors for all input and output connections. The power supply connections (pins 14 and 15) have a unique plug and socket outline to prevent cross connection. The main board uses standard right-angled connectors.



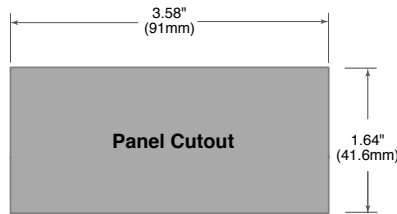
**WARNING:** AC and DC input signals and power supply voltages can be hazardous. Do Not connect live wires to screw terminal plugs, and do not insert, remove or handle screw terminal plugs with live wires connected.



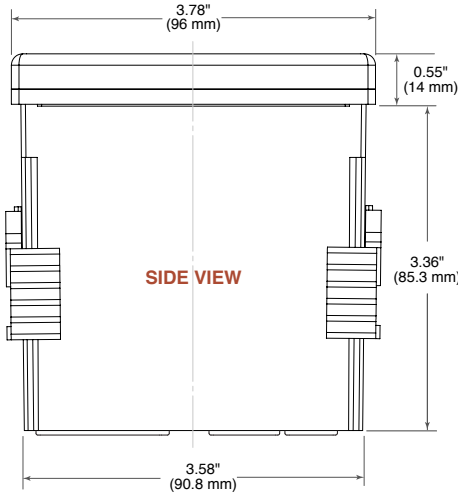
# RP Case Dimensions and Panel Cutouts



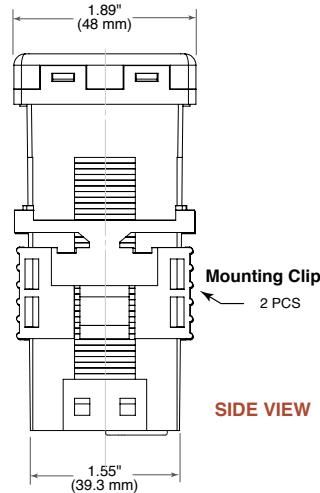
FRONT VIEW



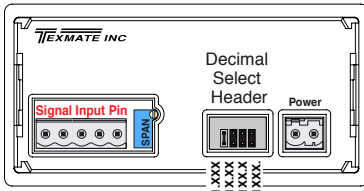
Panel Cutout



SIDE VIEW



SIDE VIEW



REAR VIEW

## Ordering Information

### Standard Options for this Model Number

Part Number Description . . . . .

#### ► BASIC MODEL NUMBER

RP-35A . . . . . 3.5 digit Red LED, w/Differential Inputs, 2VDC std. .

### Special Options and Accessories

#### ► SPECIAL OPTIONS (Specify Inputs & Req. Reading)

ZR-20V . . . . . 20VDC Range Change . . . . .  
 ZR-200V . . . . . 200VDC Range Change . . . . .  
 ZRS-PMRP . . . . . Non-Std Range and Scale . . . . .

## Warranty

### 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

### 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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