

## ***3-1/2D LCD Digital Panel Meter PM228***

### **1. FEATURES**

200mV full scale input sensitivity

Can be used as A version (9v Independent power supply application) or as B version (5V common ground power supply application)

Decimal point selectable

13mm figure height

Automatic zero reading for 0 volt input

High input impedance(>100M  $\Omega$ )

Easy Bezel fixing Method

### **2. APPLICATIONS**

Voltmeter

Current Meter

Thermometer

Capacitance Meter

PH Meter

Lux Meter

dB Meter

LCR Meter

Watt Meter

Other industrial & domestic uses.

### **3. SPECIFICATIONS**

Maximum Input:

199.9mV DC

Maximum Display:

1999 counts(3-1/2 Digits)with  
Automatic polarity indication

Indication Method:

LCD Display

Measuring Method:

Dual-Slope Integration A-D  
Converter system

Overrange Indication:

"1" shown in the display

Reading rate time:

2-3 readings per second.

Input Impedance:

>100M  $\Omega$

Accuracy:

$\pm 0.5\%$ (23°  $\pm 5^\circ\text{C}$ , <80%RH)

Power Dissipation:

1mA DC

Decimal Points:

Selectable with wire jumper

Short circuit Points:

Refer to point 4

Supply Voltage:

9V (independent, in A version), or  
5V (common ground, in B version)

Size:

68mmx44mm

#### 4. SELECTION FOR A/B VERSIONS:

- For A version (9V independent power application), shortcircuit J2, leave the J1, J3 open
- For B version (5V independent power application), shortcircuit J1 & J3, leave J2 open

#### 5. OPERATION:

Make the A/B version selection (as point 4 above) **first**.

- If needed, add proper voltage dividers(not included)

And decimal point wire jumper

Max. Voltage to be measured	Proper Voltage Divider	Decimal Point Fixing Method
200mV		Shortcircuit P1 on And P2,P3 off
20V	Disconnect wire Jumper in RB RA=100K $\Omega$ RB=9.9M $\Omega$	Shortcircuit P2 on And P1,P3 off
200V	Disconnect wire Jumper in RB RA=10K $\Omega$ RB=9.99M $\Omega$	Shortcircuit P1 on And P2,P3 off
500V	Disconnect wire Jumper in RB RA=1K $\Omega$ RB=9.999M $\Omega$	

RA and RB are 1/2W 0.5% Metal Film Resistors.

- Connect 9V independent DC power supply (in A version), Or 5V common ground power supply (in B version) to panel meter, pay attention to the proper polarity.
- For range other than 200mV, input accurate  $1/2 \times$  Max. Voltage generated by calibrator (e.g.100.0Vfor 200.0V range) and carefully adjust the semi-fixed resistor R4 to have same reading in LCD.
- Connect the input voltage to be measured to Vin and GD. The input voltage should be DC only.