DPM 942

4-20mA Loop Powered Indicator

A loop powered indicator giving an accurate, zero corrected indication of 4-20mA loop current. Calibration is by two 20-turn cermet potentiometers which allow sensitive adjustment of the instrument. The meter is housed in a robust carrier, which can be bolted in place or panel mounted using the low profile bezel and clips provided.

- 19mm (0.75“) Digit Height
- Programmable Decimal Points
- Low Volt Drop
- Simple Screw Terminal Connections

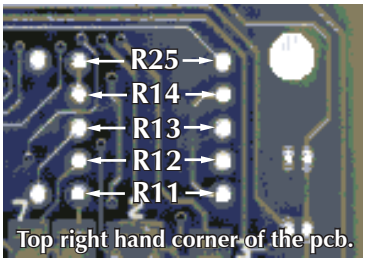


CUSTOM SCALING

For alternative scaling to the standard 0 - 1000, cut Link 8 and short Link 7. Add two resistors R12 and R13 which will set the basic scale of the meter. The highest practical value for the R12 and R13 series combination is 12R. To select your desired scaling, use the following formula:

$$R12 + R13 = \frac{\text{Full Scale reading at 20mA}}{160}$$

Re-calibrate as necessary.



Standard Meter				Stock Number DPM 942
Specification	**Min.**	**Typ.**	**Max.**	**Unit**
Accuracy (overall error) *	0.05		0.1	%(±1 count)
Linearity			±1	count
Sample rate		3		samples/sec
Operating temperature range	0		50	℃
Temperature stability		100		ppm/℃
Loop Volt Drop	3.9	4.3	4.8	V

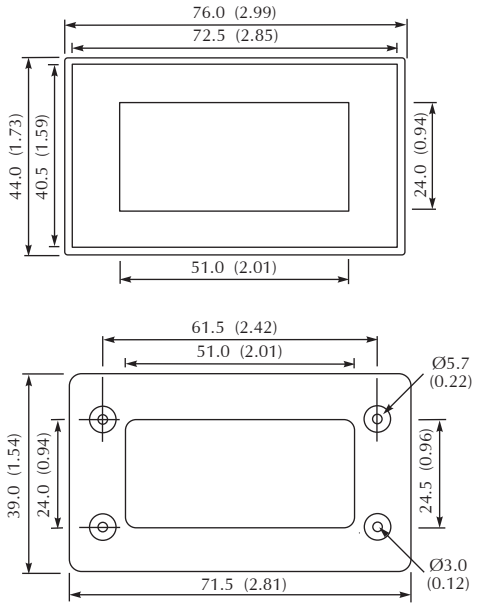
*To ensure maximum accuracy, re-calibrate periodically.

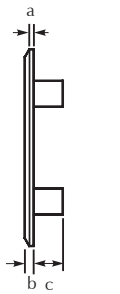
CONNECTOR SOURCING GUIDE

METHOD	Screw Terminals - No Connector Required

DIMENSIONS All dimensions in mm (inches)

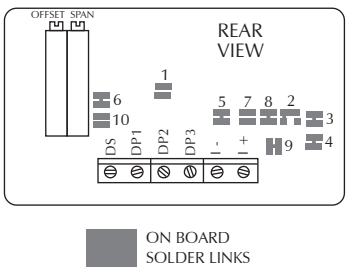
Panel cut-out 72 x 40 (2.83 x 1.57)
Maximum panel thickness 3mm (0.12).





a. 1.0 (0.04)
b. 2.0 (0.08)
c. 6.5 (0.26)
d. 11.5 (0.45)
e. 12.5 (0.49)*

*typical depth of tallest component behind PCB, this dimension is for guidance only.



ON BOARD SOLDER LINKS

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TERMINAL FUNCTIONS

1. I+ Positive current input.
2. I- Negative current input.
3. DP3 1.000
4. DP2 10.00 — Decimal point inputs.
5. DP1 100.0
6. DS Decimal Point select. Connect to required DP input to display decimal point.

CALIBRATION

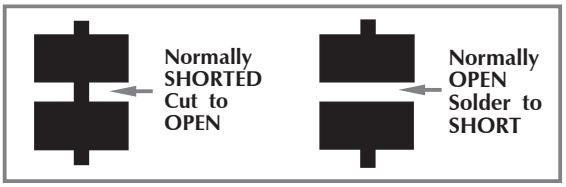
The meter is supplied calibrated to read 000 for 4mA loop current and 1000 for 20mA.
To re-calibrate:
1. Apply 4mA to I+/I- and adjust 'OFFSET' to read 000.
2. Apply 20mA and adjust 'SPAN' to read 1000.
3. Repeat steps 1 and 2 until there is no more adjustment of 'SPAN' and 'OFFSET' required to give desired readings.

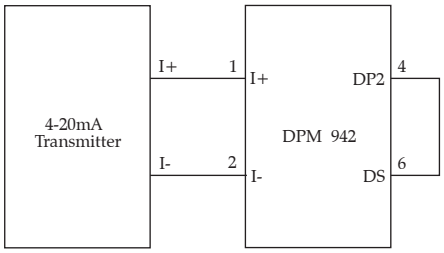
SAFETY

To comply with the Low Voltage Directive (LVD 93/68/EEC), input voltages to the module's pins must not exceed 60Vdc. If voltages to the measuring inputs do exceed 60Vdc, then fit scaling resistors externally to the module. The user must ensure that the incorporation of the DPM into the user's equipment conforms to the relevant sections of BS EN 61010 (Safety Requirements for Electrical Equipment for Measuring, Control and Laboratory Use)

VARIOUS OPERATING MODES

ON-BOARD LINKS: In order to quickly and easily change operating modes for different applications, the meter has several "on-board links". They are designed to be easily opened (cut) or shorted (soldered).
The DPM 942 is powered from the 4-20mA signal loop and needs no other power supply. Ensure correct polarity when connecting.





DP2 selected in this example.

PANEL FITTING

