

# DPM 45

4½ Digit LED Module

With its unique combination of high performance, versatility and low cost, this meter is suitable for many high volume applications in portable or other measuring instruments. Supplied complete with bezel and mounting kit.

- 🕒 10mm (0.4") Digit Height
- 🕒 Programmable Decimal Points
- 🕒 Auto-zero
- 🕒 Auto-polarity
- 🕒 2V d.c. Full Scale Reading (F.S.R.)
- 🕒 Digital Hold
- 🕒 Bandgap Reference



## SCALING

Two resistors Ra and Rb may be fitted in order to alter the full scale reading (F.S.R.) of the meter - see table.

The meter will need re-calibration.

Required F.S.R.		Ra	Rb
20V	Note	910k	100k
200V	Note	1M	10k
2kV	Note	1M	1k
2mA		0R	1k
20mA		0R	100R
200mA		0R	10R

## NOTE

Ensure that link across Ra is OPEN.

## Stock Number

Standard Meter

DPM 45

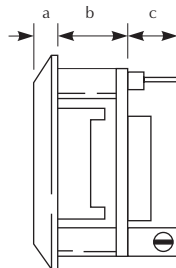
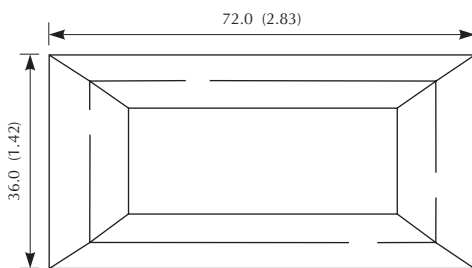
Specification	Min.	Typ.	Max.	Unit
Accuracy (overall error) *		0.005	0.01	% (±1 count)
Linearity			±1	count
Sample rate		2.5		samples/sec
Operating temperature range	0		50	°C
Temperature stability		30		ppm/°C
Supply voltage (V+ to V-)		5	5.5	V
Supply current		120	200	mA

\* To ensure maximum accuracy, re-calibrate periodically.

## CONNECTOR SOURCING GUIDE

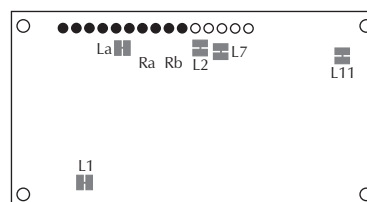
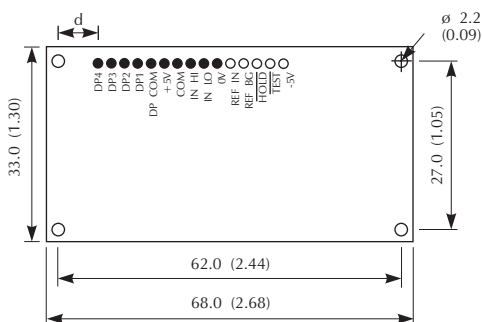
METHOD	FARNELL	MOLEX	PANDUIT	RS	SAMTEC
IDC	429-491	22-50-310S	CE 100 F28-10	473-458	HCSS Series
PCB socket	Supplied With Product				

## DIMENSIONS All dimensions in mm (inches)



Viewing Area  
(showing display in TEST mode).

Panel cut-out  
68.0 x 33.0 (2.68 x 1.30)



ON-BOARD SOLDER LINKS

SCALING RESISTORS

## PIN FUNCTIONS

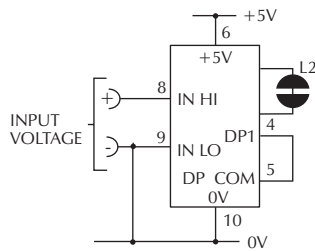
1. DP4 1999.9
2. DP3 199.99
3. DP2 19.999
4. DP1 1.9999
5. DP COM Connect to one of pins 1, 2, 3 or 4 to select required DP.
6. +5V Positive power supply input.
7. COM Analogue Common. The ground for the analogue section of the A/D converter, internally connected via link 7 to 0V.
8. IN HI Positive measuring input.
9. IN LO Negative measuring input, internally connected via Link 2 to COM (Analogue inputs must be no closer than 1V to the positive supply or lower than 1.5V below 0V).
10. 0V Negative power supply input.  
The following pins are available with an optional 5-way connector.
11. REF IN Positive input for reference voltage. Open link 1 if external reference is used.
12. REF BG Output of bandgap reference (1.22V nom).
13. HOLD When taken to V+ or left floating the converter operates in normal free run mode. Take to 0V to hold last displayed reading.
14. TEST Connect to 0V to turn on all segments except DPs. Display will read 18888.
15. -5V Internally generated negative supply, can be used for external circuitry up to 1.5mA.

## SAFETY

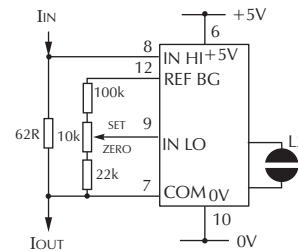
To comply with the Low Voltage Directive (LVD 93/68/EEC), input voltages to the module's pins must not exceed 60Vdc. If voltages to the measuring inputs do exceed 60Vdc, then fit scaling resistors externally to the module. The user must ensure that the incorporation of the DPM into the user's equipment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

## VARIOUS OPERATING MODES

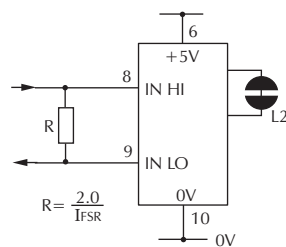
**ON-BOARD LINKS:** In order to quickly and easily change operating modes for different applications the meter has several on-board links. They are designed to be easily opened (cut) or shorted (soldered).  
 Do not connect more than one meter to the same power supply if the meters cannot use the same signal ground.



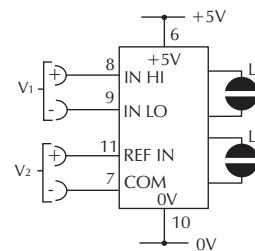
Operation with the input referenced to the power supply.



Measuring 4-20mA to read 0-9999.



Measuring current.



Measuring the ratio of two voltages  
 Reading = 10000 V<sub>1</sub>/V<sub>2</sub>  
 2 > V<sub>2</sub> > 0.5V.