

A high performance LED module with high efficiency LED displays behind a red filter giving an excellent high contrast display under all lighting conditions. A range of useful controls are available, making the DPM 443 suitable for microprocessor interfacing.

- 🔊 14.2mm (0.56") Digit Height
- 🔊 Auto-zero
- 🔊 Auto-polarity
- 🔊 2V d.c Full Scale Reading (F.S.R.)
- 🔊 Bandgap Reference
- 🔊 Multiplexed BCD Outputs
- 🔊 DIN Cased
- 🔊 Digital Hold



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 by adjusting R9.

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.

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).

Stock Number

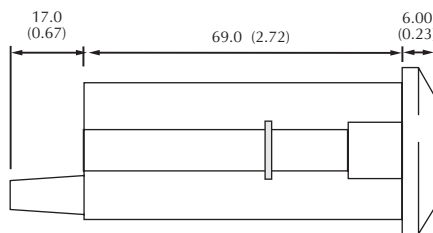
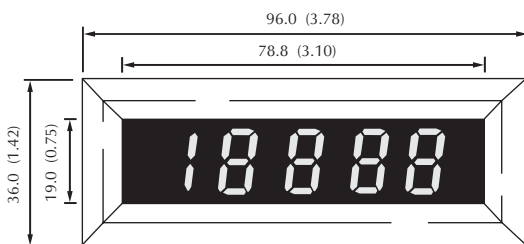
Specification	Min.	Typ.	Max.	Unit
Accuracy (overall error) *		0.005	0.01	% (±1 count)
Linearity			±1	count
Sample rate		3		samples/sec
Operating temperature range	0		50	°C
Temperature stability		15		ppm/°C
Supply voltage		5	5.5	V
Supply current		120		mA
Input leakage current (Vin = 0V)		1	10	pA

* To ensure maximum accuracy, re-calibrate periodically.

CONNECTOR SOURCING GUIDE

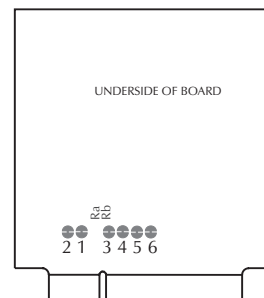
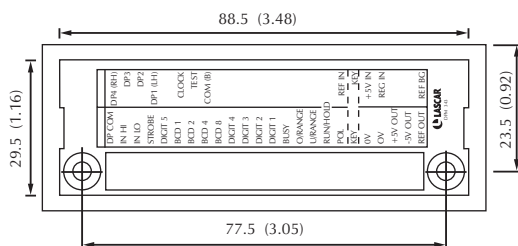
METHOD	LASCAR EC 24 DS
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DIMENSIONS All dimensions in mm (inches)



Viewing Area showing display in TEST mode

Panel cutout
91.5 x 30.0 (3.60 x 1.18)



SCALING RESISTORS
ON TOPSIDE OF BOARD

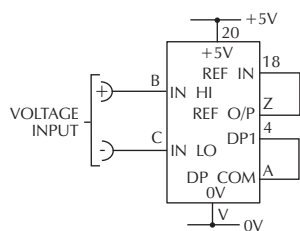
ON-BOARD SOLDER LINKS

PIN FUNCTIONS

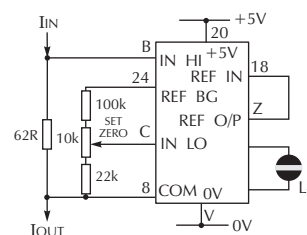
- A. DPCOM Connect this pin to required DP input.
 - B. IN HI Positive measuring input.
 - C. IN LO Negative measuring input.
 - D. STROBE Negative going output pulse to synchronise transfer of BCD data to external devices.
- During each measurement cycle a strobe occurs once in the centre of each digit drive pulse.
- E, K, L, M, N. DIGIT 5, DIGIT 4, DIGIT 3, DIGIT 2, DIGIT 1. DIGIT DRIVES. Each digit drive is a positive going signal that lasts for 200 clock pulses.
 - F, G, H, J. BCD 1, BCD 2, BCD 4, BCD 8. Binary coded decimal bits B8, B4, B2 and B1 are positive logic signals that occur simultaneously with the relevant digit driver signal.
 - P. BUSY Goes high at the beginning of signal integrate period and stays high until the first clock pulse after zero-crossing. Data latches are enabled during the first clock pulse after busy, and are inhibited at the end of this clock pulse.
 - Q. O/RANGE Over-range. Goes high when input signal exceeds the range (>19999) of the converter.
 - R. U/RANGE Under-range. Goes high when the reading is 9% of range or less.
 - S. RUN/HOLD When taken to V+ or left floating, the converter operates in the free run (normal) mode. When taken to 0V, the last displayed reading is held.
 - T. POL Polarity. Goes high when the input signal is positive or low when the input signal is negative.
 - U. KEY Polarising slot for edge connector.
 - V, W. 0V Negative power supply input.
 - X. +5V Internally connected to pin 20.
 - Y. -5V Internally generated negative supply, can be used for external circuitry up to 10mA.
 - Z. REF OUT Positive output from internal reference.
1. DP4 1999.9
 2. DP3 199.99
 3. DP2 19.999
 4. DP1 1.9999
 6. CLOCK This output can be used to synchronise the DPM 443 with external systems.
 7. TEST Connect to 0V to turn on all segments except DPs. Display will read 18888.
 8. COM Analogue Common. The ground for the analogue section of the converter internally connected to 0V.
 18. REF IN Positive input for reference voltage.
 19. KEY Polarising slot for reference voltage.
 20. +5V Positive power supply input.
 21. REG IN Positive input for 7.5V - 15V power supply option.
 24. REF BG Output of bandgap reference (2.5V nom).

VARIOUS OPERATING MODES

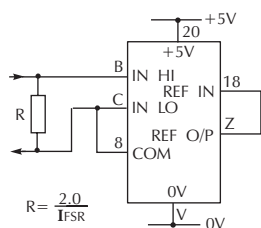
ON-BOARD LINKS: In order to quickly and easily change operating modes for different applications the meter has several on-board links. They are designed to be easily opened (cut) or shorted (soldered). Do not connect more than one meter to the same power supply if the meters cannot use the same signal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



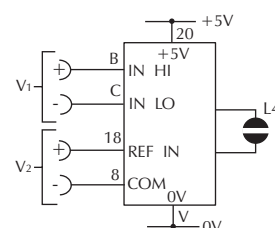
Operation with input floating with respect to power supply.



Measuring 4-20mA to read 0-9999.



Measuring current.



Measuring the ratio of two voltages
 Reading = 10000 V₁/V₂.