

4½ Digit LED Volt Meter Module GM-145B

FEATURES:

- 4½ digit LED display.
- Single +5 volt operation
- Decimal point selectable
- 0.4 inch (10mm) digit height
- 2V full scale input sensitivity
- Automatic polarity indication
- Guaranteed zero reading for 0 volts input on all scales
- High input impedance > 100M ohm
- 15 auxiliary output pads are available for interfacing to UARTS, microprocessors or other complex circuitry
- Self-mountable with optional mounting bezel
- RUN/HOLD terminal allows indefinite display hold

APPLICATIONS:

- Voltmeter
- Currentmeter
- Thermometer
- Capacitance meter
- P.H meter

GENERAL DESCRIPTION:

The GM-145B is a complete digital voltmeter module in a compact package incorporating a dual-slope analog-to-digital converter, a 1V reference and full scale input with sensitivity of 2V.

The use of large-sized and red solid-state light-emitting diode(LED) display makes the module easily readable from distance away. The single 5VDC operation enable the module to be easily operated with a standard voltage regulator(7805 type).

Auto-zeroing is provided by the circuitry, so no adjustment is required. Automatic input polarity indication is available. Over-range is indicated by the flashing "0000" display.

The STROBE, OVER-RANGE, UNDER-RANGE, RUN/HOLD and BUSY lines, enable GM-145B to interface to UART, microprocessors or microcomputer.

OPERATION SPECIFICATION

ABSOLUTE MAXIMUM RATINGS

Operating Voltage..... 6V
 Operating Temperature..... 0 to 50 (32 to 122)
 Storage Temperature..... -10 to 80 (14 to 176)

ELECTRICAL CHARACTERISTICS TA=25 , RH below 80%

CHARACTERISTICS	MIN	TYP	MAX	UNIT
Power Supply Voltage	4.75	5	5.25	V
Power Supply Current		150	200	mA
Sampling Rate		2.5		Reading/sec.
Accuracy		0.01%±2dgt		%±digits
Input Impedance	100			M ohm



TERMINAL DEFINITION

Terminal	Symbol	Description
1	N.C	No connection
2	V+	Positive power supply
3	GND	Ground
4	DP ₄	Decimal point select. The decimal point will be shown if connected to DP.com and will be off if kept floating.
5	DP ₃	
6	DP ₂	
7	DP.com	
8	DP ₁	
9	RUN/HOLD	When floating, A/D converter operates in the free-run mode. When connected to V-, the last display reading
10-13	N.C	No Connecting.
14	IN HI	2V full scale single ended input, if "IN HI" is lower than "IN LO", display will show negative.
15	IN LO	

OUTPUT PAD DESCRIPTION:

Pad position please refer to PC Board, the sequence (from left to right) is UNDER, OVER, STRO, R/H, BUSY, CK, D₁, D₂, D₃, D₄, D₅, B₈, B₄, B₂, B₁.

1. UNDER (UNDER-RANGE)
This pad goes positive when the reading is 9% of range or less.
2. OVER (ORVER-RANGE)
This pad goes positive when the input signal exceeds the range (20000) of the converter.