



## OEM335A 3.5 digit LED voltmeter module

### features

- Bright, red LED display
- Single 5V DC operation.
- 10.16mm digit height
- Decimal point selectable
- Self mountable.
- Single ended or differential input.



### DESCRIPTION

The OEM335A is a complete digital voltmeter module in a very compact package incorporating a dual-slope analogue to digital converter, a 100mV reference with 200mV full scale input sensitivity.

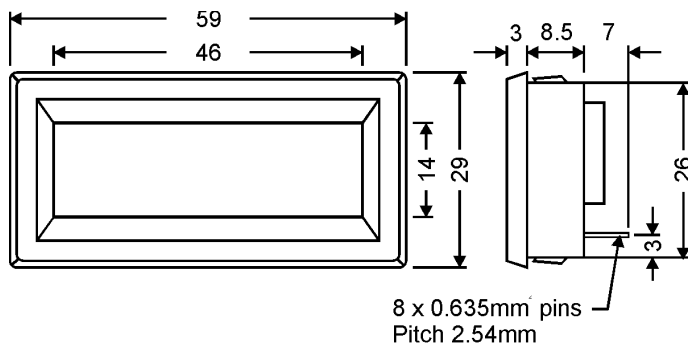
The large sized LED makes the module easily readable from distance away. Auto-zeroing is provided by the circuit itself, so no zero adjustment is required. The module also has input polarity and over-range indication.

### ELECTRICAL CHARACTERISTICS $T_A = 25^\circ\text{C}$

CHARACTERISTIC	MIN	TYP	MAX	UNIT
Power supply Voltage	4.75	5	5.25	V
Power Supply Current			180	mA
Sampling Rate		2.5		Reading/sec.
Accuracy		0.1 $\pm$ 1		% $\pm$ digits
Input Impedance	100			M $\Omega$
Input leakage Current		1	10	PA
Temperature Coefficient		100		PPM/ $^\circ\text{C}$

### DIMENSIONS

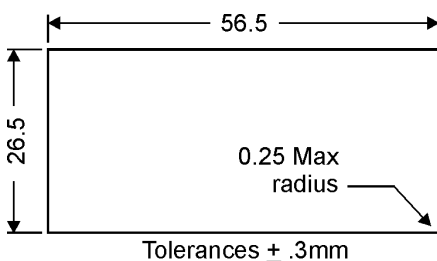
mm



### PIN FUNCTIONS

PIN	SYMBOL	DESCRIPTION
1	V+	+5V Power supply.
2	GND	Ground (0V for power supply).
3	IN HI	Signal input terminals. If potential on INHI is
4	IN LO	lower than INLO, display will show negative.
5	DP1	Decimal point select. The decimal point will be shown if connected to DP.com and will be off if kept floating.
6	DP2	
7	DP3	
8	DP.com	Decimal point return

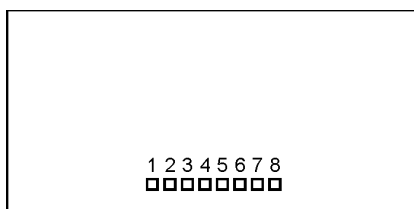
### PANEL CUT OUT



### OPERATING SPECIFICATION

Operating voltage	5V DC $\pm$ 5%
Operating temperature	0 to 50 $^\circ\text{C}$
Storage temperature	-10 to 70 $^\circ\text{C}$
Relative humidity	80%

### MODULE VIEW FROM REAR



8 x 0.635mm pins, pitch 2.54mm

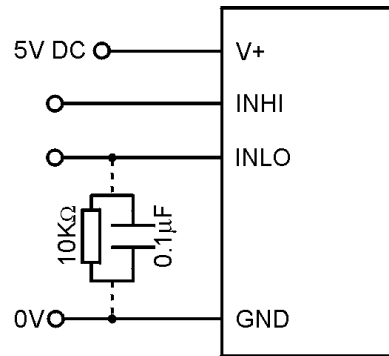
### ORDERING INFORMATION

OEM335A	3.5 Digit, 200mV LCD voltmeter module
LM201	Connector and cable

## USER INSTRUCTIONS

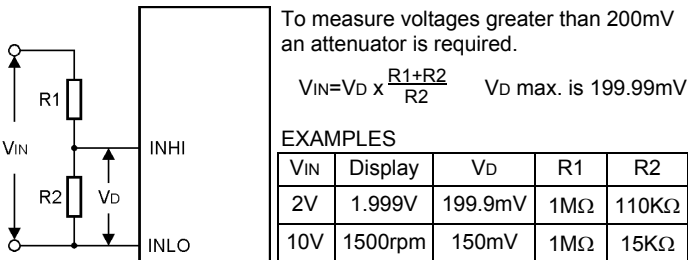
The OEM335A is designed for +5V single rail supply. Incorrect supply will damage the module.  
 Apply the input signal between pin 3 (INHI) and pin 4 (INLO). The input range is 0 - 199.9mV.  
 Over range is indicated by illuminating a "1" in the most significant digit and blanking the other digits.  
 It is recommended to use this module with floating inputs i.e. the low input signal (INLO) must be isolated from the power supply ground (GND). Where (INLO) must be referenced to the power supply, connect via a 10KΩ resistor and a 0.1μF capacitor as shown opposite.  
 To activate a decimal point, connect the appropriate decimal point pin to DPcom.

## CONNECTION DIAGRAM BASIC CONFIGURATION



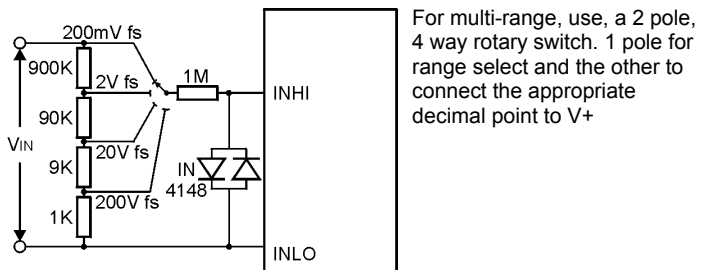
## APPLICATION CIRCUITS

### DC VOLTAGE MEASUREMENT

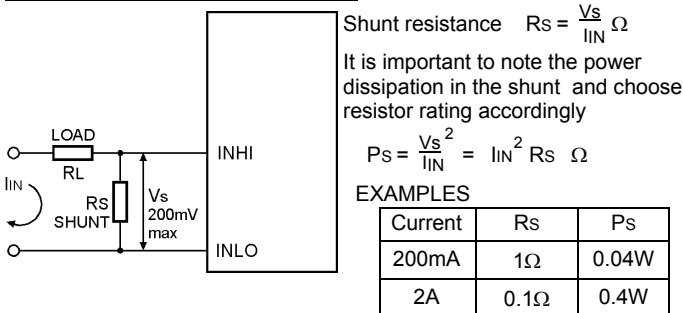


The input impedance becomes R1+R2. Choose accurate stable resistors. Typically, R1=1MΩ. 9MΩ is a practical upper limit.

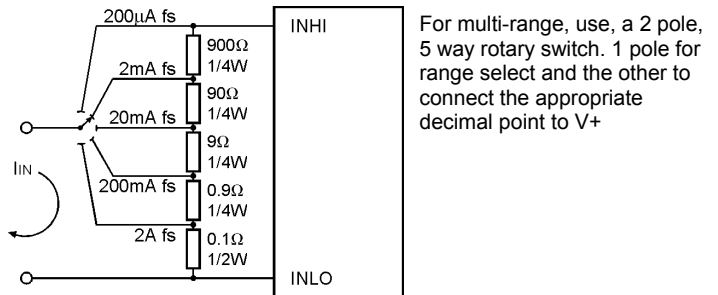
### MULTI-RANGE DC VOLTAGE MEASUREMENT



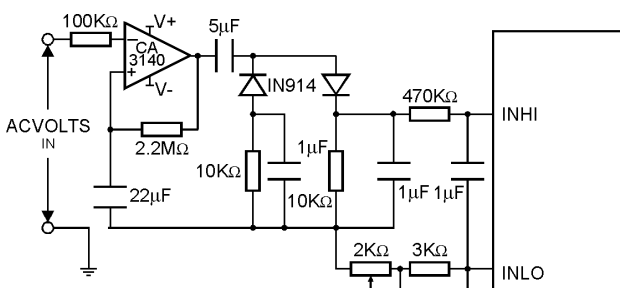
### DC CURRENT MEASUREMENT



### DC MULTI-RANGE CURRENT MEASUREMENT



### AC VOLTAGE MEASUREMENT



The meter can only measure DC. Use the above circuit to convert AC to DC. For voltages above 200mV AC, a potential divider is required before the converter circuit as shown in the "Voltage measurement" section above

OEM335AV4 Revision 4 - 21/10/03