EMT 1900

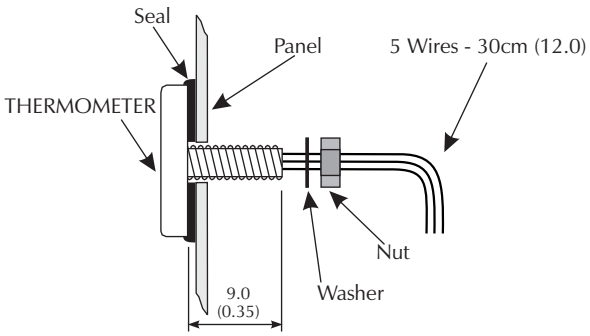
Single Hole Mounting Thermometer

EMT 1900 is an easy to mount LCD digital panel meter. The module can measure ambient temperature via a built-in sensor and outside temperature via an external sensor (not supplied). The module uses NTC temperature sensors to ensure high accuracy over a wide temperature range. To mount the module, the user need only drill a single 5.5mm / $^{7}/_{32}$" hole in the panel. The module is fitted to the panel by locating its screw threaded stud through the hole, fitting the washer and tightening the nut provided. The module's connecting wires pass through the hollow stud into the target application, where they can be easily plugged or soldered into place. A rubber seal is included, providing splashproof protection for the unit when fitted to the meter during installation.

- Single Hole Mounting
- 4 Measurement Ranges
- 12.5mm / 0.5" LCD Digit Height
- Compatible with 10kΩ NTC Sensors
- 5-Wire Connection
- Splashproof



Shown Actual Size

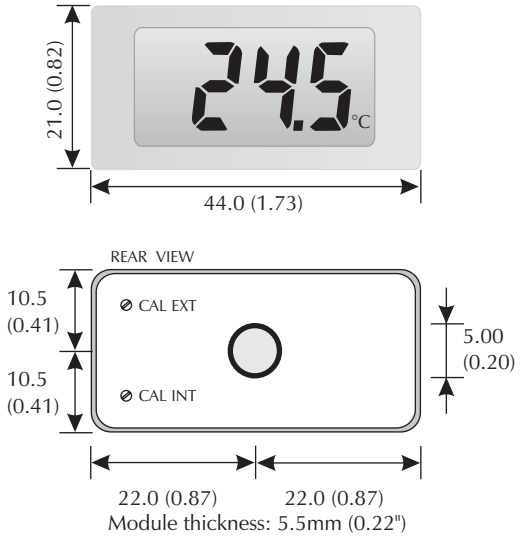


Easy Mounting Thermometer					Stock Number EMT 1900
Specification		**Min.**	**Typ.**	**Max.**	**Unit**
Measurement ranges	°C range (Internal Sensor)	-10		+50	°C
	°F range (Internal Sensor)	+14		+122	°F
	°C range (External Sensor)	-20		+220	°C
	°F range (External Sensor)	-4		+428	°F
Resolution Internal Sensor			0.5 (1)		°C (°F)
Resolution External Sensor	-20 to +140°C		1 (2)		°C (°F)
	+140 to +170°C		2 (4)		°C (°F)
	+170 to +220°C		5 (10)		°C (°F)
Accuracy*	°C range (Both Sensors)		1		°C (±2 count)
	°F range (Both Sensors)		2		°F (±4 count)
Sample rate			3		sample/sec
Operating temperature range		-10		+50	°C
Supply voltage**		4		28	V d.c.
Supply current			1		mA

* Using external NTC sensor with 10kΩ @ 25°C and a 25 to 85°C Beta value of 3977, for example: BC Components 2322-640-73103. The module may require recalibration.
To ensure maximum accuracy, recalibrate periodically. Calibrate the module at top end of measurement range.

** Do not apply more than 28V, as this may damage the meter.

DIMENSIONS All dimensions in mm (inches)



Module thickness: 5.5mm (0.22")



Underrange display



Overrange display

FITTING THE EMT 1900

Drill a 5.5mm / $^{7}/_{32}$" hole in the panel. Fit seal to the rear of the module. Fit the module to the panel by passing its screw threaded stud and the wires through the hole, fitting the washer and tightening the nut provided. Take care not to trap any of the connecting wires. Do not overtighten the nut as this may damage the meter.

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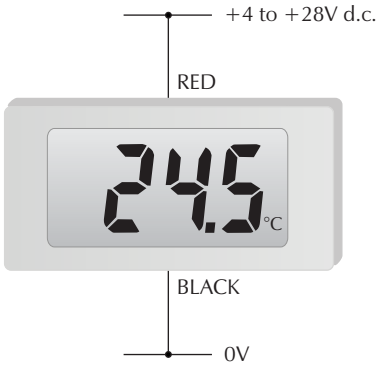
0.	BLACK	0V	Negative supply voltage to the module.
1.	BROWN	NTC	Connection for external 10kΩ NTC sensor.
2.	RED	V+	Positive supply voltage to the module.
3.	ORANGE	INT/EXT	Leave floating to display internal sensor temperature. Connect to 0V to display external sensor temperature.
4.	YELLOW	°C/°F	Leave floating to select °C measurement range. Connect to 0V to select °F measurement range.

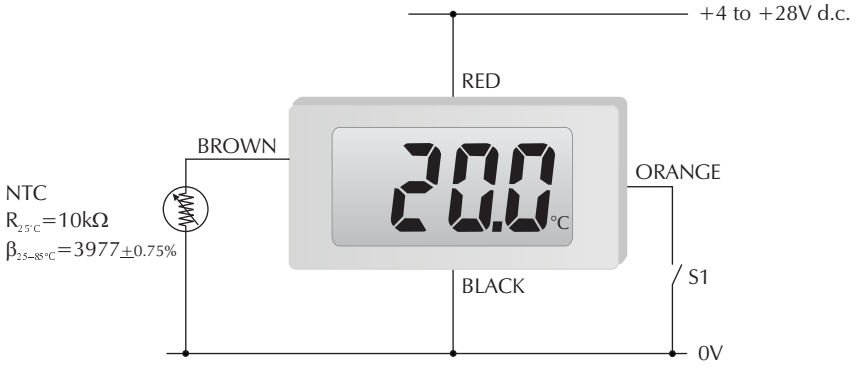
SAFETY

As the NTC temperature sensor is a passive device, no voltages should be applied to the input terminals of the EMT 1900. The user must ensure that the incorporation of the meter 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).

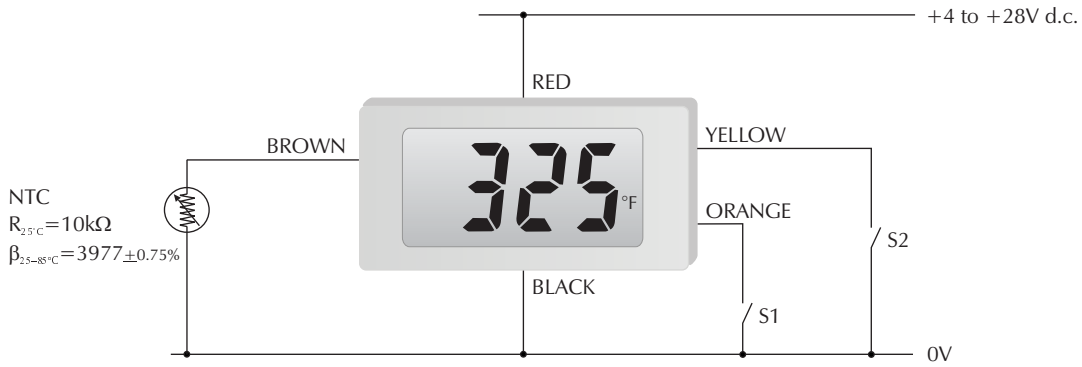
APPLICATIONS



Displaying ambient temperature in °C,
using the module's internal temperature sensor.



Leave S1 open to display internal sensor temperature in °C.
Close S1 to display external Sensor temperature in °C.



Leave S1 open to display internal sensor temperature.
Close S1 to display external Sensor temperature.
Leave S2 open to display temperature in °C.
Close S2 to display temperature in °F.