

MODEL 2050

HIGH ACCURACY PT100 THERMOMETER

FEATURES

High quality, High accuracy versatile microprocessor based PT100 instrument with many features as standard such as

- *** °C / °F / °A Switchable
- *** Measurement range -200°C to 850 °C
- *** Resolution of 0.1° to 1000° autoranging
- *** Max / Min / Hold Functions using dual display for ease of use
- *** Three or Four wire measurement modes
- *** User configurable Auto Switch Off capability
- *** Calibration via front keypad
- *** Full retention of sensor type and temperature scale
- *** Overrange / Open circuit sensor indication
- *** Low battery indication
- *** Supplied complete with shock resistant holster
- *** IP67 casing

The custom display allows Max / Min / Hold to be shown on a secondary display whilst the real time measurement continues to be displayed.

SPECIFICATION

ENVIRONMENTAL

AMBIENT OPERATING RANGE	:	-30 to 50 °C
STORAGE TEMPERATURE RANGE	:	-40 to 50 °C
HUMIDITY	:	0 to 70% R.H.

ELECTRICAL

MEASUREMENT RANGES	:	-200 to 850 °C
SENSOR TYPES	:	USER CONFIGURABLE FOR TWO THREE OR FOUR WIRE MODES
TEMPERATURE SCALES	:	°C / °F / °A
ACCURACY @23°C	:	+/- 0.1% OF READING +/- 0.2 °C
CHARACTERISING ACCURACY	:	LESS THAN 0.05 °C
TEMPERATURE COEFFICIENT	:	0.01% OF READING /°C
RESOLUTION	:	0.1° to 1000, 1° ABOVE 1000

GENERAL

BATTERY	:	PP3 9V I.E.C. 6F22
BATTERY LIFE (INTERMITTENT USE)	:	GREATER THAN 200 HOURS (ALKALINE)
WEIGHT	:	155 gms
DIMENSIONS	:	130 X 70 X 33 mm

CALIBRATION PROCEDURE

EQUIPMENT REQUIRED

1. RESISTANCE BOX ACCURATE TO WITHIN $\pm 0.06\Omega$

CALIBRATION PROCEDURE

The 2050 instrument has its own built in calibration sequence..

1. Remove the holster and the battery compartment.
2. To the left of the battery, towards the bottom of the instrument are two solder pads.
3. Switch the instrument ON
4. Using a screwdriver short across these pads.
5. The word 'CAL' will appear in the top right hand corner of the display.
6. Connect the resistance box and set for 200°C and allow to settle.
7. Press the 'HOLD' button.
8. A solid bar will appear on the left hand of the display. This indicates that the unit is calibrating. When the calibration is complete, the bar will be deactivated.
9. Note the calibration must be completed for both three and four wire operation
10. Check that the calibration is in accordance with the figures shown in Table 1. If not then repeat procedure.
11. Switch the unit OFF.
12. The unit is now fully calibrated.

NOTES

1. AUTO SWITCH OFF

Whilst the unit is in 'CAL' mode, if the 'SCL' button is pressed the Auto-Switch off feature will be toggled. The state of the Auto-Switch off feature is shown in the top right hand side of the display next to the 'CAL' message. If the Auto-Switch off is active the letter 'A' will be displayed if not then no character will be shown.

TEMPERATURE (°C)	LOW(°C)	HIGH(°C)
-150	-150.4	-149.6
-50	-50.2	-49.8
0	-.1	.1
30	29.8	30.2
100	99.7	100.3
500	499.4	500.6
850	849.0	851.0

Table 1. Calibration limit

Cross-reference for compatible probes

Suitable probes for use with this instrument

TME PART No	DESCRIPTION	APPLICATION
PRTM01	GENERAL PURPOSE PROBE	GENERAL PURPOSE LIQUID/GAS MEASUREMENT
PRTN05	NEEDLE PROBE	CORE TEMPERATURE OF SEMI-SOLID MATERIAL
PRTA04	AIR TEMPERATURE PROBE	FAST RESPONSE AIR TEMPERATURE PROBE