tempco °C °F K
SYSTEMS SENSORS SERVICES
Member of the Rössel group

DAkkS

CE RoHS COMPLIANT

MODEL MHT 2020

DIFFERENTIAL THERMOCOUPLE THERMOMETER

FEATURES

This instrument is designed for applications requiring either direct or differential measurement. It incorporates many features such as

*** **°C / °F / °A Switchable**
*** **I/P 1 , I/P 2 , DIFFERENTIAL, HOLD**
*** **True arithmetic differential reading or differential result and input 1**
*** **Simultaneous display of both inputs**
*** **Resolution of 0.1° to 1000° autoranging**
*** **Switchable thermocouple types K / T / J / R / N / E / S**
*** **Infra-Red compatability**
*** **Full retention of thermocouple type and temperature scale**
*** **User configurable Auto Swith Off capability**
*** **Overrange / Open circuit sensor indication**
*** **Low battery indication**
*** **Supplied complete with shock resistant holster**
*** **IP67 casing**

The custom display allows input 1 to be shown on a secondary display whilst displaying differential measurement. Input 1 and input 2 may also be displayed simultaneously

SPECIFICATIONS

ENVIRONMENTAL

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

ELECTRICAL

MEASUREMENT RANGES	:	K	-200 to 1372 °C
		T	-200 to 400 °C
		J	-200 to 1200 °C
		R	0 to 1767 °C
		N	-200 to 1200 °C
		E	-200 to 1000 °C
		S	0 to 1767 °C
THERMOCOUPLE TYPES	:	K T J R N E S	
INFRA-RED SENSOR (Exergen K80)	:	K80 –50 to 250 °C	
ACCURACY @23°C	:	+/- 0.1% OF READING +/- 0.2 °C	
CHARACTERISING ACCURACY	:	LESS THAN 0.05 °C	
TEMPERATURE COEFFICIENT	:	0.01% OF READING/°C	
COLD JUNCTION COMPENSATION	:	0.0075 °C/°C	
RESOLUTION	:	0.1° to 1000, 1° ABOVE 1000	
TEMPERATURE SCALES	:	°C / °F / °A	
FUNCTIONS	:	I/P1 / I/P2 / DIFFERENTIAL / HOLD	

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

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CALIBRATION PROCEDURE

EQUIPMENT REQUIRED

1. 30mV GENERATOR ACCURATE TO WITHIN ±4uV
2. THERMOCOUPLE SIMULATOR ACCURATE TO WITHIN ±.0.1°C
3. TYPE 'K' MINIATURE THERMOCOUPLE PLUG TO MINIATURE THERMOCOUPLE PLUG LEAD
4. COPPER MINIATURE THERMOCOUPLE PLUG TO COPPER MINIATURE THERMOCOUPLE PLUG LEAD

CALIBRATION PROCEDURE

The MHT 2020 instrument has its own built in calibration sequence that is activated via the 'HOLD' and '1/2/DIFF' buttons on the front panel

1. Switch the unit OFF.
2. Whilst holding down both the '1/2/DIFF' and the 'HOLD' buttons switch the unit ON.
3. The word 'CAL' will appear in the top right hand corner of the display.
4. Connect the 30mV source and allow to settle.
5. Press the 'HOLD' button.
6. 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.
7. Connect the thermocouple simulator and set for 0 °C type 'K', Allow to settle (approx 10 minutes)
8. Press the '1/2/DIFF' button.
9. 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.
10. The unit should now be displaying 0.0°C.
11. Check that the calibration is in accordance with the figures shown in Table 1. If not then repeat procedure.
12. Remove the battery to switch the unit OFF.
13. The unit is now fully calibrated.

NOTES

1. AUTO SWITCH OFF

Whilst the unit is in 'CAL' mode, if the pads within the battery compartment to the left of the battery are shorted 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	499.6	500.4
1300	1301	1299

Table 1. Calibration limit

TEMPCO voor innovatie en zijn wij constant bezig met ontwikkeling/ontwerp/advies zodat u de juiste oplossing voor uw vraag /probleem wordt geboden. Om u te helpen bij het kiezen van het juiste product staat een team van product specialisten tot uw beschikking. Voor (aan)vragen kunt ons als zoals hieronder vermeld bereiken: **Telefoon 0172 493141** of stuur een mail bericht naar **info@tempco-sensors.nl**

Vragen en opmerkingen: