



SmartRail

Thermocouple Input Module (Type J, K, T, R)

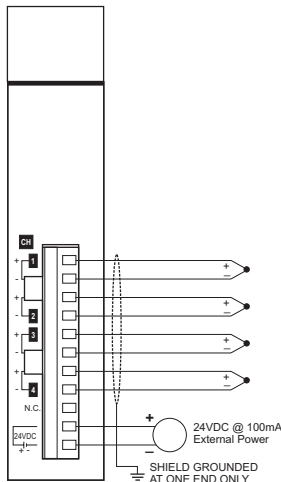
HE599THM100

0.1°C Resolution, typical

1 Specifications

Specifications		THM100
Number of Channels		4
Types Supported		J, K, T, R
Temperature Range	J	-200 to +1200 °C
	K	-200 to +1300 °C
	T	-200 to +400 °C
	R	0 to +1700 °C
Resolution	J,K,T	0.1°C
	R	0.5°C
Accuracy	Full-scale	±0.2% full scale @ 25°C
	Cold-Junction	±1°C
	Temp. Coefficient	±100ppm/°C CJ (0-55°C)
Warm-up Time		15 minutes
Input Impedance		>10MΩ
Isolation		500V (backplane)
Dielectric Withstand		400Vac for 1 min (ch-ch)
Conversion Time		50mS/ch
Backplane Power Consumed		100mA @ 5V
External Power Required		100mA @ 24V (+/-10%) CLASS 2 POWER SUPPLY ONLY
Terminal Type		M2 Screw Type, Removable 11-posn
Optional Spring Clamp Terminal Strip		HE599TRM011 , 11-position
Terminal Torque Rating		0.22 to 0.25 N-m 1.95 to 2.21 in-lb
Accepted Wire Size		16-28AWG (use copper)
Wire Stripping Length		7mm
Storage Temp.		-25° to 70° Celsius
Operating Temp.		-0° to 55° Celsius
Relative Humidity		5 to 95% Non-condensing
Dimensions WxHxD		20mm x 90mm x 60mm
		0.79" x 3.54" x 2.36"
Weight		63g (2.2 oz.)
CE & UL Compliance		CE, UL & C-UL
		Class I, Div 2 Groups A, B, C & D

2 Wiring – I/O



THM100 LED Status Indication	
LED	Meaning
RUN	ON = Normal Operation
	FLASH = I/O Error
	OFF = No Power or I/O Error
ALARM	OFF = Normal Operation
	FLASH = Open Circuit Detected

3 Reported Data & Configuration Data

Data is reported to the OCS in signed integer format, with a single implied decimal place. For a temperature of +762.4°C, with a data range configured for °C, the reported data value is 7624 decimal. For a temperature of -12.1°F, with a data range configured for °F, the reported data value is -121 decimal.

The SmartRail THM100 is configured using Cscope (9.1 or later). The following parameters are configurable for the THM100:

Cscope Configuration Data – Selectable per channel	
Parameter	Selections
Channel Enable	Enable
	Disable
Thermocouple Type	K
	J
	T
	R
Data Range	°C
	°F

4 Installation / safety

This equipment is suitable for use in Class I, Division 2, Groups A, B, C and D or Non-hazardous locations only

WARNING - EXPLOSION HAZARD -

Do not disconnect equipment unless power has been removed or the area is known to be non-hazardous

WARNING - EXPLOSION HAZARD -

Substitution of any component may impair suitability for Class I, Division 2

WARNING – POSSIBLE EQUIPMENT DAMAGE

Remove power from the I/O Base and any peripheral equipment connected to this local system before adding or replacing this or any module.

- All applicable codes and standards should be followed in the installation of this product.
- Shielded, thermocouple extension wiring of the proper type should be used for best performance.
- Shields should be terminated at one end only, at the end providing the best noise shunting.

For detailed installation and a handy checklist that covers panel box layout requirements and minimum clearances, refer to the hardware manual of the controller you are using.

When found on the product, the following symbols specify:



5 Technical Support

Technical Support at the following locations:

North America:
 Tel: 317 916-4274
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 Web: <http://www.heapg.com>
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