



SmartRail

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

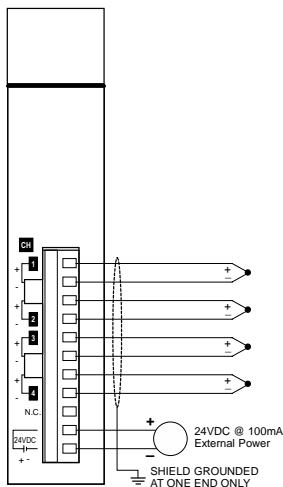
HE599THM100

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.)
Certifications		North America or European website

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
Fax: 317 639-4279

Web: <http://www.hornerautomation.com>
Email: techsppt@heapg.com

Europe:
Tel: +353-21-4321266
Fax: +353-21-4321826

Web: <http://www.hornerautomation.eu>
Email: tech.support@horner-apg.com

No part of this publication may be reproduced without the prior agreement and written permission of Horner APG, Inc. Information in this document is subject to change without notice.