

# 5000 SERIES

SMART TRANSMITTER

## Typical Applications

*Printing*

*Induction Heating*

*Glass*

*Web Profile*

*Painting*

*Packaging*

*Furnaces*

The 5000 Series represents a significant breakthrough in non-contact or infrared temperature sensing. Designed to be used with Exergen's IRT/C sensors, the ST-5000 provides a linear output over any user selected range. Instead of using different sensors for each operating temperature now one sensor and an HT-5000 can do it all. The ST-5000 can also interface with Thermistors, Thermocouples, Voltage or Current sensors. Sophisticated table driven curve fitting allows the ST-5000 to be used with linear or non linear sensors.

Any IRT/C Sensor can be supplied with HTi's **SMART** transmitter. Sensor data tables can be preloaded at the factory, or our **TRANScon** Utility enables the user to configure the sensor and transmitter for a particular sensor, temperature span, emissivity, alarm, peak picker and moving average functions at their own facility.

The 5000 Series incorporates a built-in temperature sensor to measure the ambient temperature of the transmitter. This provides information for cold junction compensation and for the electronics to be corrected for the effects of ambient temperature.

Using Exergen IRT/C's for non contact thermometry, a wide variety of spot sizes and wavelengths are available to suit the intended application. HTi is also very willing to provide custom solutions to optimize the characteristics for a given application.

The 5000 Series is compatible with **TRANScon**, a Windows based application for configuring the transmitter. Configuration files can be stored easily for future use.

Our mission is to provide you with accurate and repeatable information so you can increase product uniformity and yield.



### SPECIFICATIONS

*Sensor type*

Any Exergen Infrared Irt/C  
Also

Thermistor, Thermocouple, Voltage or  
Current, Linear or Non Linear

*Output*

4-20mA, 0-5 or 10 Vout

*Accuracy*

$\pm 1$  % FS or  
 $\pm 0.3^\circ\text{F}$

*Output Range*

Any range available  
Field Scalable for any range

*Ambient Temperature Compensation*

Integral sensor in housing to sense  
changes in ambient temperature.

*Ambient Temperature Limit*

140°F

# HTi

Harmony Technology, inc.

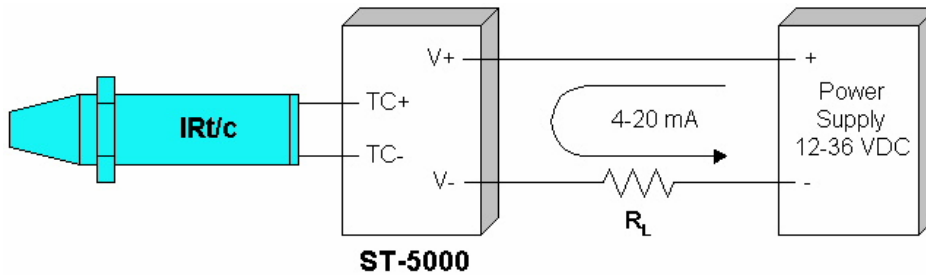
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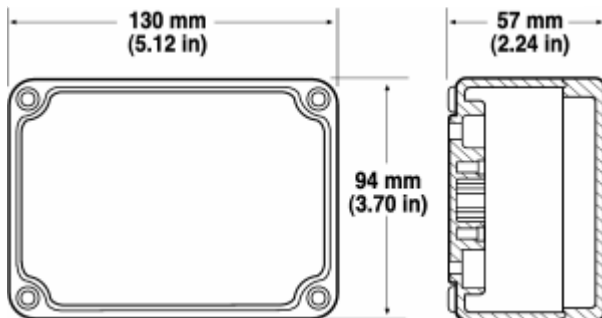
## Specifications

Sensor type	Infrared thermocouple Thermistor, Thermocouple, Voltage, Current
Output	Two wire, 4 to 20 mA, or 0-5 or 10 Vout
Accuracy (transmitter)	$\pm 0.3^{\circ}\text{F}$
Repeatability	$\pm 0.2^{\circ}\text{F}$
Update time	0.20 seconds
Cold junction compensation	Automatic correction to $\pm 0.5^{\circ}\text{F}$
Ambient operating temperature	0 to $140^{\circ}\text{F}$
Ambient temperature stability	Self correcting over 0 to $120^{\circ}\text{F}$
Power	12 to 36 VDC
Maximum load @ 24 VDC	600 ohms
Weight	5 oz (DIN); 8 oz (NEMA)

## Appendix B – Wiring Diagram



NEMA 4 protected enclosure for harsh locations.



DIN Rail mounted transmitter.

