ERROR MESSAGES

Condition	Priority	LED Display	0-5V	0-10V	4-20mA	RS-232
Low Power	1	OFF	Under 0.1V	Under 0.1V	Under 4mA	Not Implemented
Hardware Internal Errors	2, 13	Uniform Flash	Over 4.9V	Over 9.8V	Over 19.7mA	Not Implemented
Vsig-Offset High	3	Uniform Flash	Over 4.9V	Over 9.8V	Over 19.7mA	Not Implemented
Vsig-Offset Low	4	Uniform Flash	Over 4.9V	Over 9.8V	Over 19.7mA	Not Implemented
EMI	5	Uniform Flash	Over 4.9V	Over 9.8V	Over 19.7mA	Not Implemented
Range Error	6	Uniform Flash	Over 4.9V	Over 9.8V	Over 19.7mA	Not Implemented
High Ambient	7	Long Flash**	Over 4.9V	Over 9.8V	Over 19.7mA	Not Implemented
Low Ambient	8	Short Flash*	Over 4.9V	Over 9.8V	Over 19.7mA	Not Implemented
Too Much Heat Flow	9	Long Flash**	Over 4.9V	Over 9.8V	Over 19.7mA	Not Implemented
Too Little Heat Flow	10	Short Flash*	Over 4.9V	Over 9.8V	Over 19.7mA	Not Implemented
High Target	11	Long Flash**	Over 4.9V	Over 9.8V	Over 19.7mA	Not Implemented
Low Target	12	Short Flash*	Over 4.9V	Over 9.8V	Over 19.7mA	Not Implemented

*Six counts off one count on
**Six counts on one count off

ORDERING INFORMATION

SmartIRt/c.F-P-O-T or Smart-microIRt/c.F-P-O-T-250OH

Examples: SmartIRt/c 3-24V-010-100C or Smart-microIRt/c-24V-420-250C

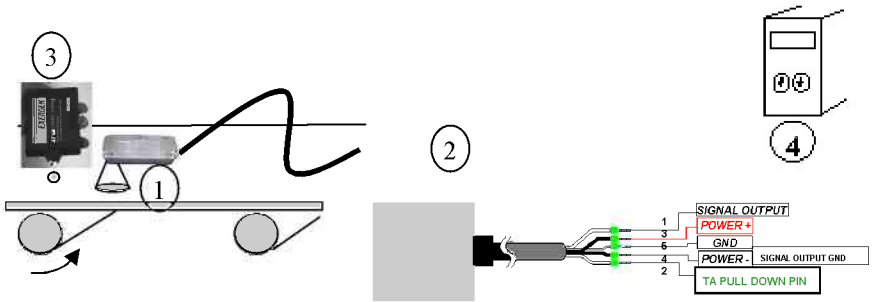
F	FIELD OF VIEW	P	POWER	O	OUTPUT	T	TEMPERATURE RANGE
.3	3:1	**12V**	12 VDC	**420**	4-20mA	**70C**	-30-70C
.5	5:1	**24V**	24 VDC			**100C**	0-100C
.20	20:1					**250C**	0-250C
.40	40:1					**500C**	0-500C
-	1:2					**1000C**	0-1000C
.SV	1:2						
.4	4:1						
.4SV	4:1						

Examples: SmartIRt/c.3-24V-420-250C-250OHM (3:1 field of view, 24VDC power, 4-20mA output from 0-250C), Smart-microIRt/c-12V-420-250C-250OHM (1:2 field of view, 12VDC power, 4-20mA output from 0-250C).

INSTALLATION INSTRUCTIONS

The following procedure is recommended:

1. Install the SmartIRt/c as close as practical to view the target material to be measured.
2. Wire the SmartIRt/c to the controller, PLC, etc. in standard fashion (see PINOUT and WIRING DIAGRAM)
3. Bring the process up to normal operating temperature and measure the actual temperature of the target material with the Microscanner D-Series, DX-Series Infrared Thermometer or any other reliable reference.
4. Adjust "input offset," "zero," "low cal," on the readout device to match the reading of your reference.
5. Installation Complete. (For OEM installations preset the same adjustments. Individual calibration is not required.)

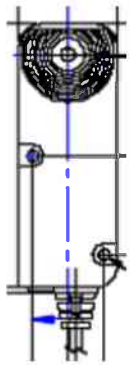


WIRING DIAGRAM

PINOUT

Carol C074 Series/Belden 953 Series/Alpha 630 Series cable

Pin	Color	Function
1	White	Positive Output Signal
2	Green	TA Pull Down Pin / IO option
3	Red	Positive Power
4	Black	Reference Output Signal
5	Bare	Shield



EASY TO USE

Simply attach the sensor utilizing the mounting holes built into the sensor and connect the unit to power and a controller. If air purge is desired, plug the air supply into the unit's connector. This is all that's required to use the SmartIRt/c and all of its features. No special knowledge of thermocouples or thermal management needed. The SmartIRt/c does all this for you.

SPECIFICATIONS	0-5V	0-10V	4-20mA	RS232
Sensing Range	-30 to 70 °C, 0 to 100 °C, 0 to 250 °C, 0 to 500 °C, or 0 to 1000 °C			
Ambient Temperature Range	0 °C to 70 °C (internal case temperature), Smart-microIRt/c sensor head to 100 °C			
Storage Temperature Range	-10 °C to 70 °C			
Field of View of Sensing Element	1:2. 3:1, 4:1, 5:1, 20:1, or 40:1 (distance:spot)			
Minimum Spot size	3 mm (0.1") (Smart-micro) 5 mm (0.2") (Smart) (16 mm (0.625") (SmartIRt/c.20 and 40)			
Dominant Spectral Response	5 to 14 um (Smart-micro), 5.5 to 20 um (Smart)			
Impedance	250 ohm max			
Emissivity Setting (e)	0.90 (can be factory adjusted)			
Measurement Type	Thermopile			
Resolution	10 bit***			4 Digit w/ floating decimal
Update Time	Less than 250ms after first reading**			
Response Time (95% of step change)	Less than 650 ms**			
Bandwidth	Typically 5Hz			
First Reading in	Less than 2 seconds			
Accuracy (Includes Repeatability and Interchangeability) ****	Typically: ±1 °C (±1.8 °F) or 1% of reading (e = 0.9)			
Recommended Power Supply	12 ± 10% V DC or 24 ± 10% V DC; depending on model			
Power Accepted*	Shuts off when voltage is functionally low*			
Power Consumption	12V power less then 400mW 24V Power less than 800 mW			
Dimensions	Contact Exergen for Drawings			
Housing	Zinc-Aluminum Alloy Z-12 (ISO/DIS 301) and stainless steel			
Sensor Connection	3 foot pigtail (and 3 feet from sensor to transmitter on Smart-microIRt/c)			DB9 and loose power wires
Recommended Air Purge Pressure	3 PSI - Contact Exergen for Pressure\Flow\Error Graphs			
Maximum Air Pressure	20 PSI - may cause reading errors on SmartIRt/c (Smart-microIRt/c with APJ-1 to 5 PSI)			
Air Cleanliness	Instrument Air is Recommended, ANSI/ISA-7.0.01-1996			
Humidity	Non-Condensing - ISA-71.01-1985 Environment Class C Severity X			
Shock	100G			
Weight	Approximately 200 grams (7oz.)			
LED	Constantly on for normal operation			

* The unit will not give an error message if the input voltage exceeds recommended high limit, but functionality or accuracy is not guaranteed when exceeding the Recommended Power Supply voltage.

** At room temperature

*** Current Output 10bit 0-20mA

**** Smart-microIRt/c accuracy is 2% of full scale for standard and SV models and 3% of full scale for .4 and .4SV models

Note: For additional or updated specifications please contact Exergen Corporation. **818665** REV B

EXERGEN

SmartIRt/c and Smart-microIRt/c™

4-20mA, 250 OHM VERSION

Infrared Temperature Sensor

INSTALLATION GUIDE

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