

SINGLE POINT CIRCUIT MANAGEMENT SYSTEM

SPECIFICATION/APPLICATION INFORMATION

Specifications

Temperature Input

Range:	-58 to 932 degrees F (-50 to +500 degrees C)
Accuracy:	+2 degrees C
Repeatability:	+1 degrees C
RTD:	100 ohm platinum, 3-wire RTD, 20 ohms maximum lead resistance
RTD Configuration:	Single, Backup, Highest, Lowest, Average or High Temperature Cutout
RTD Fail-safe:	Heater ON or Heater OFF

Heater Switching

Configuration:	Two-pole, dual SCR per phase, 800 amp, 1 cycle inrush
Ratings:	85-280 Vac, 30A continuous
Line Frequency:	50 or 60 Hz
Current Measurement:	0.1 to 30A 3%+0.2A
GF Measurement:	10 to 1000mA 5%+mA
Voltage Measurement:	0 to 300 Vac 3%+2V

Control Power

Power Requirement:	Control power from heater voltage 85-280 Vac, 10Va max. Protected by 2A fuse
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Communications

Port:	(1) RS-485
Protocol:	Modbus RTU
Transmission Rate:	600, 1200, 2400, 4800, 9600 baud
Wiring:	2-wire, shielded, twisted pair
Max. Wiring Run:	4,000 feet without repeater
Modules per Network:	32

Measured Values

Temperature:	-58 to 932 degrees F (-50 to +500 degrees C)
Minimum Temperature:	-58 to 932 degrees F (-50 to +500 degrees C)
Maximum Temperature:	-58 to 932 degrees F (-50 to +500 degrees C)
Heater Current:	0.1 to 60A
Ground Fault Current:	10 to 1000mA
Min. Heater Voltage	85 to 300 Vac
Max. Heater Voltage	85 to 300 Vac

User Interface

Display:	16-character x 2-line Alphanumeric display.
Keypad:	9 tactile keys, polyester faceplate <ul style="list-style-type: none">- Setpoint, actual, status- Message Up, Message Down- Value Up, Value Down- Reset- Enter
Panel Indicators:	Power On Heater On Serial Communication active Process Alarm

Environment

Approvals:	FM, CSA, and NRTL/C Class I, Div 2, Groups A, B, C, D Class I, Zone 2, Groups IIC Class II, Div. 1, Groups E, F, and G Class III
Operating Temperature:	-40 degrees C to +50 degrees C
Conformal Coating:	Boards conformal coated for hostile environments

Enclosure

Type:	NEMA 4X coated steel or stainless steel, painted black
Size:	10"H x 8"W x 6"D
Features::	Flat aluminum plate acts as heatsink and mounting flange for mounting on Uni-Strut. One 3/4" conduit entry hole for power and three 1/2" conduit entry holes for RTD and signal wiring.

Alarm Output

Alarm:	Programmable for NO or NC contacts One DC opto-isolated contact One AC triac contact
Alarm Rating:	DC contact: 30 Vdc/0.1A, 500mW max AC contact: 12-240 Vac@0.5A maxLED
Alarm Output:	LED Indicator: 5Vdc/50mA

Alarm Function

Temperature:	High Temperature Alarm Low Temperature Alarm
Current:	Low Current Alarm High Current Alarm
Ground Fault Current:	Ground Fault Current Alarm Ground Fault Current Trip
Voltage:	High Voltage Alarm Low Voltage Alarm
Hardware:	Self-Check Failure Switch Shorted RTD Failure

User Definable Options

Heater Name or Tag:	16-character x 2-line Alphanumeric
Temperature Units:	Degrees C or degrees F
Control Method:	ON/OFF with deadband or proportional
Deadband:	1 to 50 degree C (2 to 90 degree F)
Power Limit:	0.1 to 30A, off
Soft Start:	10 to 999s, off
Auto Check:	1 to 24 hours, off
Temperature Setpoint:	-50 to 500 degrees C (-58 to 932 degrees F), off, none
High Temp Alarm:	-50 to 500 degrees C (-58 to 932 degrees F), off
Low Temp Alarm:	-50 to 500 degrees C (-58 to 932 degrees F), off
High Current Alarm:	0.1 to 30A, off
Low Current Alarm:	0.1 to 30A, off
Ground Fault Alarm:	10 to 1000mA, off
Ground Fault Trip:	10 to 1000mA
High Voltage Alarm:	85 to 300V, off
Low Voltage Alarm:	85 to 300V, off
Override:	On or Off
Alarm Contacts:	Solid State - NO or NC for each contact
