

TWO POINT HEAT TRACE MANAGEMENT SYSTEM

SPECIFICATION/APPLICATION INFORMATION

Specifications

Temperature Input

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|--------------------|---|
| 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; One RTD input for each control/monitor point |
| RTD Fail-safe: | Average or High Temperature Cutout Heater ON or Heater OFF |

Heater Switching

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| 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 $3\% \pm 0.2A$ |
| GF Measurement: | 10 to 1000mA $5\% \pm mA$ |
| Voltage Measurement: | 0 to 300 Vac $3\% \pm 2V$ |

Control Power

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| Power Requirement: | Control power from Heater 1 voltage 85-280 Vac, 10Va max. Protected by 2A fuse |
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Communications

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| 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

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|-----------------------|---|
| 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

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| 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

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| 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

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|------------|---|
| 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

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| 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

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|-----------------------|---|
| 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

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| 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 |
