

THERMAL RUNAWAY CONTROLLER

01 APPLICATIONS: The Thermal Runaway Controller (TRC) is purpose-built for safety-critical environments and is ideal for applications that require:

- Monitoring for early signs of thermal runaway and rapid disconnect response
- Integration of thermal safety controls into mission-critical environments
- High relay capacity to support large or complex battery systems

02 KEY FEATURES:

- Purpose-built for thermal runaway protection
- Provides 10 configurable relay outputs for alarms and controls
- Integrates seamlessly with Cellwatch monitoring systems
- Supports flexible response strategies in critical facilities
- Operates reliably in harsh electrical environments
- Simple installation and configuration for fast deployment

03 WHAT SETS THE THERMAL RUNAWAY CONTROLLER (TRC) APART?

- Detects early warning signs of thermal runaway before failure
- Enhances the overall safety of Cellwatch-monitored systems
- Provides targeted protection for high-risk battery environments

04 DEDICATED THERMAL RUNAWAY PROTECTION: The TRC delivers string-level thermal safety by combining continuous monitoring with 10 relay outputs for protective response. Built for mission-critical facilities, it provides the confidence operators need when safety cannot be compromised.



05 TRC: Thermal Runaway Controller

Product Codes

721004	Thermal Runaway Controller
721022	Thermal Runaway Controller w/ IP Interface

06 Technical Specifications

Operating Specifications	
Ambient operating temperature	Voltage readings 0°C - 50°C Storage temperature: -10C - 80C
Maximum Relative Humidity	95% non-condensing
Maximum Altitude	2,000 meters (6,000ft)
Pollution category	Dry and non-conductive pollution with temporary conductivity due to condensation
Power supply	Required to be fed from UPS 110 - 240 V AC
Permitted mains supply variations	+/-10%
Transient over-voltage category	Category II

06

Technical Specifications

Operating Specifications Power supply Frequency Power supply power rating Fuse rating	50 Hz - 60 Hz 20 Watts 240 volt 250 mA Slo-Blo
Communications RS-485 interface Max range Fiber optic range (can be extended with Fiber Optic extender Kit) Maximum CUs per RS-485 bus Cable Type Interface for generator extender kit	Input and output with optional jumper for bus termination. Signal not regenerated 2,000 ft (600 meters) total bus length Min: 150 mm (6") Max: 45 m (150 ft) (No radius sharper than 130 mm (5 in)) 31 Belden 8102 or equivalent RJ45
Alarm Outputs Output Relays Electrical characteristics Electrical isolation	10 relays, each single contact, volts free change over. 30 VDC @ 5 amps max. 1500 VAC
Sensing inputs Temperature sensor Resolution Accuracy Range Mounting Current Sensor Resolution Useful range Communication rate Maximum Cable distance	Solid state probe 0.05 °C +/- 1 °C 2 - 80 °C 8 mm (5/16 in) lug fitted to adhesive pad (removable) Solid state, magnetic core sprung clamp. 2 in (50 mm) capacity (1,000 amp) or 4.5 in (112 mm) 2,500 lamp 0.5 amp +/- 10 to maximum amps of clamp 9600 baud 150 ft (45 m)
Protection Sensing Inputs Insulation resistance	Short circuit proof 600 volts DC
Physical Characteristics Dimensions Mounting centers Mounting hole size	302 mm x 298 mm x 121 mm (11 7/8 in x 11 3/4 in x 4 3/4 in) 4 corner mounting holes, 260 mm x 260 mm (10 7/32 in x 10 7/32 in) centers 8 mm (5/16 in) diameter