



PRODUCT SPECIFICATIONS

CVM™-12 MONITORING MODULE

APPLICATION

The CVM-12 is a microprocessor-based multipoint module developed specifically for cost-effective heat tracing monitoring. The 12-circuit module monitors loss of voltage at either the circuit breaker or the end of a heat tracing circuit (when using parallel circuitry heating cables equipped with a third continuity monitoring wire). The module can, as an alternative to voltage monitoring, be outfitted with optional current sensing transformers to detect loss of current to each heat tracing circuit.

As a modular unit, the CVM-12 is typically located within an enclosure suitable for the application. Since multiple modules can be installed in a common enclosure, the CVM-12 is ideally suited to provide cost-effective monitoring for ambient temperature-controlled power distribution panels controlling large numbers of freeze protection heat tracing circuits.

RATINGS/SPECIFICATIONS

Monitoring capacity..... 12 heat tracing circuits
Supply voltage 120/240 Vac (field switchable)
Voltage sensing range 110 to 575 Vac
Power consumption 12 watts
Operating ambient -40°F to 158°F
(-40°C to 70°C)
Maximum storage ambient 185°F (85°C)
Data retention nonvolatile EEPROM
Voltage range 70 to 300 Vac
Dimensions (H x W x D) 12.375" x 6.75" x 3.56"
(314 x 171 x 90 mm)
Remote alarm output SPST, 5 amps at up to 250 Vac



CVM-12
(shown mounted in
stainless steel enclosure)

PRODUCT FEATURES

- Voltage loss detection ($\geq 50\%$) for heat tracing circuits operating at up to 575 Vac
- Current loss detection ($>25\%$) for heat tracing circuits with currents from 0.5 to 60 amps
- Field programmability for: Data set/reset functions
Data highway address
- RS 485 communications port for interfacing to a PC or facility DCS
- Back plate panel mounting
- Optically isolated remote acknowledge input
- Programming security lock
- Internal microprocessor and memory fault detection
- Lamp test function

THERMON The Heat Tracing Specialists®

ISO 9001
REGISTERED

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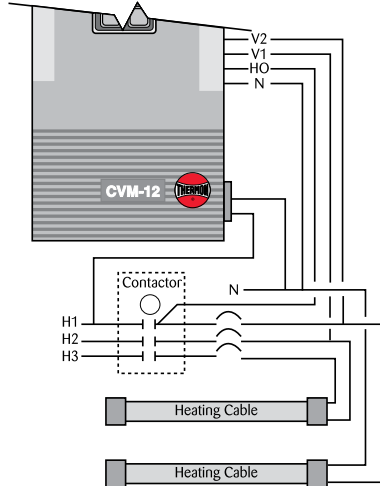


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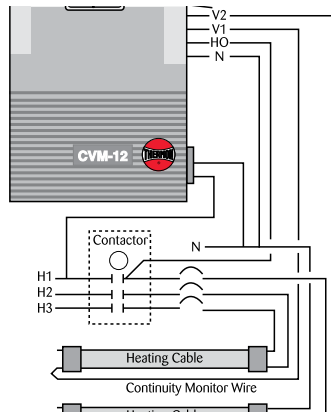
MONITORING METHODS

Heat tracing circuits can be monitored through the circuit breaker, heat tracing circuit current or by parallel circuit continuity monitoring.

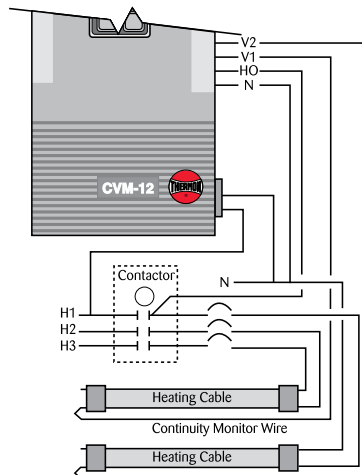
Circuit Breaker Monitoring: The CVM-12 can continuously monitor the status of voltage to each heat tracing circuit. It is ideally suited to monitor the status of ground-fault branch circuit breakers. Any damage to the heating cable (or power supply wiring that feeds the circuit) which permits ground leakage current to trip the EPD breaker will signal an alarm condition.



Current Loss Monitoring: The integrity of constant wattage parallel or series heating cables and power-limiting parallel heating cables can be monitored by checking the magnitude of the current in the circuit using the optional CT-60 current sensor. If a 25% loss in current occurs, the CVM-12 will signal an alarm condition.



Parallel Circuit Continuity Monitoring: When used with a parallel resistance heating cable which includes a third wire for continuity monitoring, the CVM-12 assures that voltage is being continuously supplied along the entire length of the heating cable. Should the heating cable be cut or damaged when wired in this configuration, the CVM-12 will signal an alarm condition.



ENCLOSURES

The CVM-12 monitoring module must be located in an enclosure suitable for the application. Thermon offers enclosures to meet a variety of environments as part of a HeatChek® control and monitoring unit. These HeatChek control and monitoring units may be configured with or without power distribution. An array of optional accessories and configurations are available to meet specific project requirements.

CERTIFICATIONS/APPROVALS

When housed in a NEMA 4 or 4X enclosure, the CVM-12 is approved for use in ordinary (nonclassified) areas as an industrial control panel.

