TCM18™ CONTROL AND MONITORING MODULE

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The TCM18 is a multicircuit microprocessor-based temperature control and monitoring module developed specifically for heat tracing. This module provides control and monitoring capabilities via digital information display for a maximum of eighteen heat trace circuits. This module can be configured for either process sensing control (with either one or two RTD inputs for each circuit) and/or ambient sensing control (with the option of one or two RTD inputs).

The TCM18 provides circuit information and programming capability through the LCD digital display and a dedicated touchpad on the front of each module.

TCM18 COMMUNICATION

The TCM18 has two RS485 ports which communicate via Modbus ASCII or RTU protocol. One port can communicate to TraceView Network Explorer or to compatible DCS system. The second port is provided for an auxiliary RS485 communication to an optional Ethernet or wireless communication module.

TCM18 RATINGS/SPECIFICATIONS

Control and monitoring capacity ....18 heat tracing circuits
Nominal module supply voltage..................120-240 Vac 50/60Hz
Input current .... 1.5 Amp max.
Power consumption ....40 watts
Mimimum ambient temperature...-40°C
Maximum storage ambient ....70°C
Data retention ....non-volatile EEPROM
Power clamp function .... programmable from 20% to 100%
Temperature input .... up to 36 3-wire platinum 100 Ω RTDs
Temperature control range ....-129°C to 600°C
Control band.................programmable in increments of 1 degree
High operating current alarm and trips ....0.1 to 100 Amps
Low operating current alarm.............................0.1 to 100 Amps
Ground leakage alarm and trips ....20 to 225 mA
(in 1 mA increments)

Alarm relays
   Three sealed dry contacts, rated @ 0.4-amps resistive at 24 Vdc/Vac
Auxiliary output power...24 Vdc at 0.5 Amps
Self-test frequency.................programmable from 2 to 99 hours
Communication..........Modbus ASCII/RTU via Dual RS 485 ports
Communication rate ....up to 57600 Baud
Certifications...ATEX
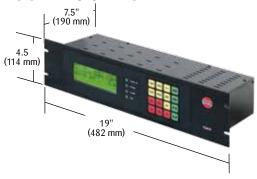Pollution category 2

TCM18 PRODUCT FEATURES

- Module operates in a wide range of ambient conditions.
- Each heat tracing circuit allows input from single or dual RTD inputs.
- User friendly four line heated LCD display for circuit and alarm information with input from a dedicated touchpad.
- Conformally coated electronics for use in panels in indoor and outdoor locations.
- Low and high temperature alarm and additional programmable high temperature trip functions.
- Low and high heater current alarm and trip functions.
- High ground/earth leakage current alarm and trip functions
- Internal test functions for ground/earth leakage functionality.
- Includes On-Off, On-Off with Soft Start, Proportional, and APC (Ambient Proportional Control) modes.
- Auxiliary 24 Vdc output for powering optional communication modules or other auxiliary devices.
- Equipment has been evaluated and found suitable for Overvoltage Category II over the stated range of module supply voltage, in accordance with IEC-61010-1:2010.

TCM18 DIMENSIONAL DATA

7.5" (190 mm)
4.5 (114 mm)
19" (482 mm)

TCM18 CONNECTION PORTS

Auxiliary Power Out
External Fuse
Auxilary Input / Remote Acknowledge
Power Input
Alarm Output Terminals
PM6/RM6 Input Cable Ports
RTB6 Input Cable Ports
RS485 Ports