**TCM18 CONTROL AND MONITORING MODULE**

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 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
- Minimum 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 CONNECTION PORTS**

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

**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 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**

- Dimensions: 7.5" (190 mm) x 4.5" (114 mm) x 19" (482 mm)

---

Thorne & Derrick
+44 (0) 191 490 1547
www.heatingandprocess.com