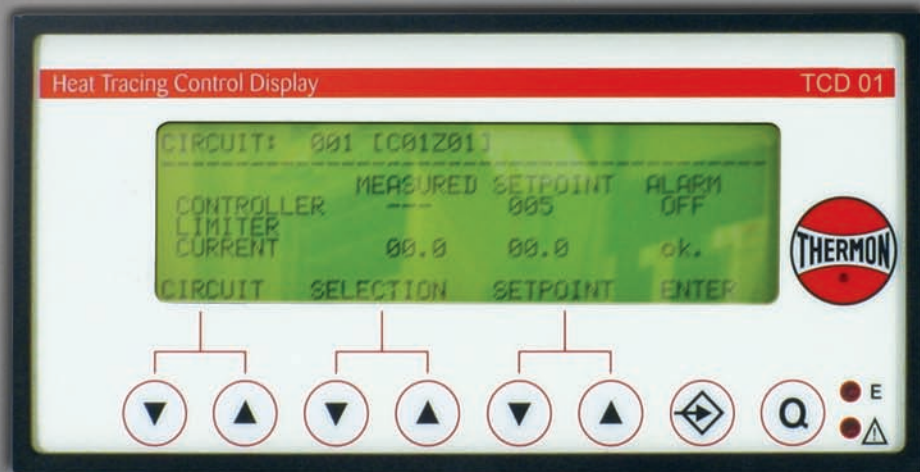


# TC 816

Modular Control and Monitoring System



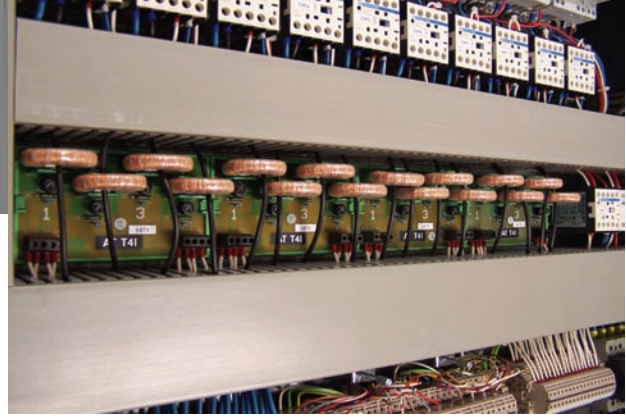
*Stay in...*  
control



The Heat Tracing Specialists®

# TC 816

## Modular Control and Monitoring System



The TC 816 is a multi-circuit microprocessor-based temperature modular control and monitoring system developed specifically for cost-effective heat tracing. The unit provides heat tracing control and monitoring capabilities via a digital information display or remote computer (optional) for as many as 960 heat tracing circuits.

The system can conduct periodic tests on the heating cables indicating the integrity of the heating cables before they are needed. After a power outage the system reboots and continues its operation automatically.

All control parameters can either be entered into the TC 816 by means of the central heat tracing control display or optional control and monitoring software.

### TC 816 Modular Controller

The following modules can be used for inputs/outputs:

Module	Description	No of I/O
AF-TIT	Temperature Inputs	2 x 8
AF-TIC	Current Inputs	16
AF-TOM	Output for Mechanical Contactor	16
AF-TOE	MCB/RCD Monitoring	16
	Output for Electronic Relays	16
AF-TC4	Processor Module This module controls the outputs by using ON/OFF-, PID- or APC- operational methods. Communication by RS485 or Modbus.	
AF-TC5	Processor Module This module controls the in-/ouputs by using ON/OFF-, PID- or APC- operational methods. Communication by RS485/RS232 & Profibus	
AF-TPA	Power Supply Module, with alarm outputs: <ul style="list-style-type: none"> <li>• Low Alarm</li> <li>• High Alarm</li> <li>• Deviation Alarm</li> <li>• System Alarm</li> </ul>	

### TC 816 System Configurations

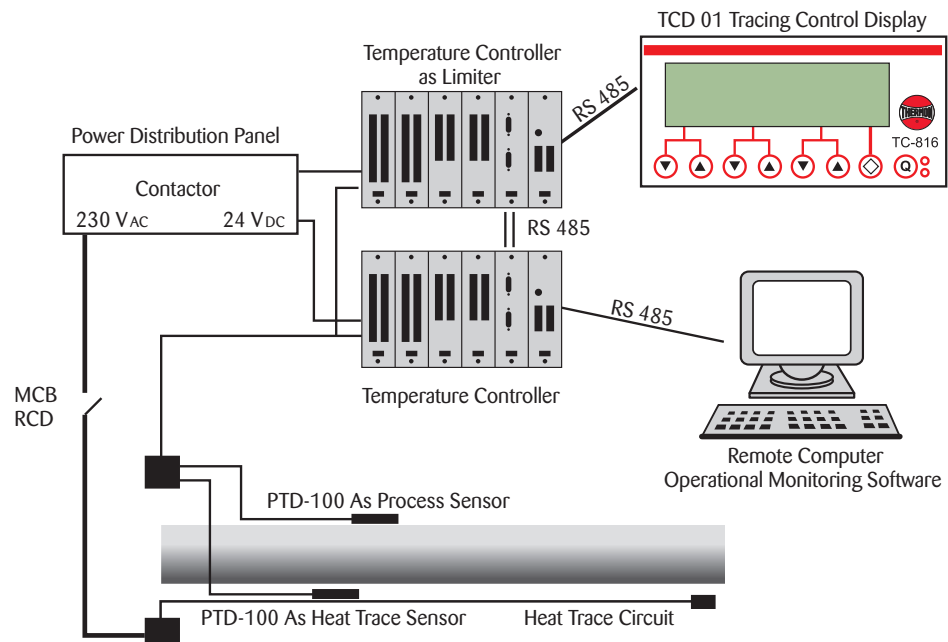
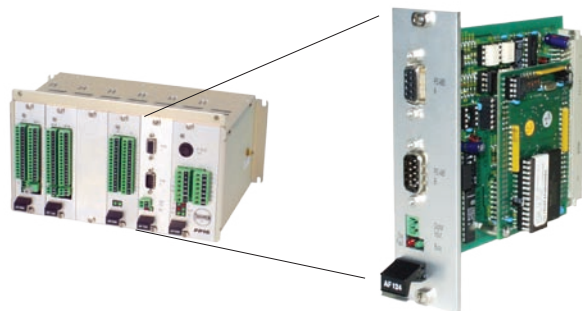
#### Temperature Controller

Configured as a temperature controller, the TC 816 controls the process temperature by using standard RTD sensors for pipe sensing and standard MCB/RCD circuit breakers to control the power output of the heat tracing cables. This configuration controls pipeline temperature by means of:

- 3 or 4 wire RTD or PT-100
- Current Measurements (optional)
- MCB/RCD Circuit Breakers

#### Limiter

As required, a second TC 816 can be utilized as a temperature limiter, providing the heating cable temperature set-point, measured value and alarm status with the relevant heat tracing pipe temperature. Enabling hazardous area requirement compatibility with the least of efforts.



# TC 816

## Modular Control and Monitoring System

### Monitoring & Control Software

The monitoring and control software package is available for connecting multiple TC 816 units together. The optional software package provides:

- Up to 960 heating circuits to be controlled and monitored.
- 30 curve diagrams. Each can show up to 16 curves.
- 40 Faceplate views. Each can show up to 8x4 views.
- 10,000 pictures or drawings to be shown. This can be photo's, P&ID's or isometrics with heat tracing. The status or values of the heat tracing can be put into the pictures.
- Periodic test of all the stand-by heating circuits, to be sure that the heating circuits operate when needed. Even if the cables are in standby for months (cables that are switch off will not be tested).
- 100 jobs to be planned in the timetable. Single action or with a certain cycle time.
- Overview/adjust/store/reload all heat tracing parameters of all connected TC 816 units.
- Save parameter settings to file and load them for specific product or processes.
- Compressed and uncompressed storage of data.
- 5 inlogging levels (e.g. for managing & operating).
- Reporting of all system alarms in program or by e-mail/SMS.



Visual Fecon is available in two package types;

#### RS232

- RS232/RS485 Converter
- Parallel Lock Key
- Visual Fecon Software

#### USB

- USB/RS485 Converter
- USB Lock Key
- Visual Fecon Software

Additional functions for both packages of Visual Fecon:

- Actual Trend
- History Trend
- Process Picture



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### Tracing Control Display

The TCD 01 Tracing Control Display can be connected to the TC 816 system to control and monitor the systems at site.

All control parameters can be entered into the TC 816 by means of the TCD 01 unit.

The TCD 01 unit shows the following per heating circuit:

- Measured Temperature
- Temperature Settings
- Cable Temperature (when limiter is used)
- Alarm Status
- Load Current (optional)



Up to 30 TC 816 units can be connected to the TCD 01.

#### Benefits of using the TCD 01 unit:

- Easy to use.
- No complex menu's
- Customized views.
- Password protected.





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