OFFICES WORLDWIDE
UNITED STATES  CANADA  MEXICO
NETHERLANDS  UNITED KINGDOM  FRANCE  SPAIN  GERMANY
RUSSIA  AUSTRALIA  MALAYSIA  JAPAN  SOUTH KOREA
BAHRAIN  INDIA  CHINA

For the Thermon office nearest you
visit us at . . . www.thermon.com
TraceNet™
Control and Monitoring
for Electric Heat Tracing Systems

INTRODUCTION
Heat trace has become increasingly important for efficient and reliable operation of industrial process plants. This is true for both freeze protection (winterization) systems and those maintaining higher process temperatures.

Process specifications call for increased heat tracing surveillance with high reliability, increased safety, more efficient energy management and lower operating costs.

ENVIRONMENTALLY TOUGH
The world's appetite for oil and gas continues to grow, and there are challenges for systems to operate in harsh arctic environments.

Likewise, the demands on electrical heat trace controls and monitoring systems for refineries and chemical plants in harsh desert climates are increasing.

THERMON’S SOLUTION
The NEW TraceNet system is an extension of the proven Thermon TC101, TC202, and TC1818 control and monitoring systems. TraceNet introduces modular construction that provides:

- Design Versatility
- Reduced Assembly Times
- Reduced Fabrication Cost
- Easy Expansion for the Future
- Resistance to Vibration and Shock

REduced FIELD Wiring
To reduce field wiring, RTD Sensors can be multiplexed via CAN bus back to a central panel. Repeaters can be located in the “RTD POD” to extend the ranges beyond the standard 300 m (984 ft).

Remote “RTD POD’s” can be employed to maximize multiple RTD sensors.

LOWER TOTAL COSTS
For some companies the issue is design simplicity, for others lower installation costs. Owners continue to call for preventive maintenance to reduce downtime, provide efficient energy management, and lower operating costs. TraceNet accomplishes all of these objectives!

Reduced Energy Consumption = Lower Operating Costs
Electrical heat trace is designed based on heat losses during the coldest ambient conditions expected. In some cases this may represent miles of pipe in an arctic environment requiring several hundred kilowatts of electrical power.

Conventional ambient control uses one or two sensors to energize contactors for all connected heat trace whenever ambient temperatures fall to the thermostat set-point. This commonly accepted method of control delivers at or nearly 100% of the total heating capacity, even if it's only a few degrees below the control set point.

Ambient Proportional Control (APC) reduces operating costs up to 50% when compared to conventional ambient control.

With over 50 years of experience, THERMON has the solution for your heat tracing needs.
COMMUNICATIONS
- Ethernet Direct to DCS
- Modbus RTU

TRACENET REMOTE "RTD-PODS" - REDUCE INSTALLATION COSTS:
Can multiplex up to thirty-six RTD sensors to two-wire CAN bus for distances up to 300 m (984 ft.). Distance can be extended via CAN for greater distances where required.
- CAN Interface Module: CIM1 isolates CAN network and extends the network link.
- Temperature Sensor Module: TM6 module for up to six (6) RTD sensors per heat trace circuit for additional monitoring points.
- Power Supply: 24 Vdc, input from 100-240 Vac.

TRACENET SUPPORTS ALL RTD TEMPERATURE SENSOR CONFIGURATIONS:
1. Up to six (6) RTD’s per Heater
2. APC (Ambient Proportional Control) Eliminates Sensors and Reduces Cost.*
3. Conventional Process Control with a Dedicated RTD Sensor per Heater

* APC reduces operating cost on average of 50% over conventional ambient sensing control. Alternately APC reduces installed costs for process maintenance systems when compared to line-sensing control.

TraceNet Systems are recognized for installation in hazardous (classified) locations.
The TraceNet TSM1 supports remote communication to a DCS system, to a network-capable device via Virtual Network Computing (VNC), and to a PC with TraceView Network Explorer (TVNE).

- **Temperature Sensor Module**
  - "TM6" module for up to six (6) RTD sensors, and can be either DIN-rail (TM6DR) or track mounted (TM6RM). (Note: The PCM6 and TM6 Modules shown there are track mounted in the "BP6" Backplane Module.)

- **Heater Control “Power Modules”**
  - Optimize switching life and current ratings with non-arcing solid state relays mounted on external heat sinks. Internal heat sinks and sealed mechanical relays are also available. (Each “PM6” includes six 1 or 2-pole relays, and also provides self-test for earth-leakage current.)

- **Power Supply**
  - Provides 24 Vdc from 100-240 Vac supply voltage.

- **RTD to CANBus connections**
  - DIN rail mounted “RT6” for (6) RTD terminations

- **Control Module**
  - Each “PCM6” control module independently controls up to six (6) heaters, and can be either DIN-rail (PCM6DR) or rack mounted (PCM6RM).

- **OperATOr Access**
  - The TraceNet touch-screen monitor can be located almost anywhere to serve as the interface and central communications point for multiple systems. The operator can view real time temperature and current conditions and access control & monitoring set-points throughout the CAN “Control Area Network”. Up to (180) heat trace circuits can be accessed from a single TraceNet touch screen monitor. (TSM1 shown at right.)

- **REMOTE COMMUNICATIONS**
  - The TraceNet TSM1 supports remote communication to a DCS system, to a network-capable device via Virtual Network Computing (VNC), and to a PC with TraceView Network Explorer (TVNE).

- **Access in Your Language**
  - The Windows CE operating system provides for user-selected languages whenever entering data or monitoring of heat trace circuits. Almost every language can be supported.

- **Touch Screen TSM1 User Interface and Communications Module**
  - The touch screen interface for data entry or information retrieval is simple to use. Three (3) USB ports are provided to quickly import/export large amounts of data, change control configurations, connect to a notebook PC, remote mouse or pointer device.

- **Power Distribution**
  - All power distribution designs are compatible with TraceNet control and monitoring systems for electrical heat trace. Sealed breakers can be installed in IP65 or NEMA 4/4X cabinets for hazardous (classified) area installations. Alternately, standard open frame main and branch breakers can be installed in IP65 or NEMA 4/4X cabinets with purge for hazardous (classified) areas.

- **Wireless VNC and TraceView Network Explorer**
  - Wireless VNC and TraceView Network Explorer

- **THERMON . . . THE HEAT TRACING SPECIALISTS®**