PRODUCT SPECIFICATIONS

TraceNet™ ECM™

ELECTRONIC CONTROL MODULE

APPLICATION

The TraceNet ECM is an electronic control module specifically designed for controlling electric heat trace circuits used in freeze protection and temperature maintenance applications. Available in both pipe (XP) and wall (WP) mount options. The ECM serves both the temperature control as well as the sensor and power connection for a heat trace circuit.

The ECM is housed in a glass reinforced nonmetallic enclosure with an environmental protection rating of IP66. Depending on options selected, the ECM may be used as a combination temperature control and limiter, a temperature controller, or a temperature limiter. Rotary switches are provided for adjusting temperature control and limiter set points. The standard version of the ECM communicates on a physical network of RS485 by using a Mod-bus RTU communication protocol. Additionally, an alternate CAN-Bus communication network option is available.

The ECM is approved for use in both ordinary (non-classified) and hazardous (classified) areas. The ECM-OS is available in a stainless steel junction box for use in offshore applications. (Refer to Form TEP0138U)

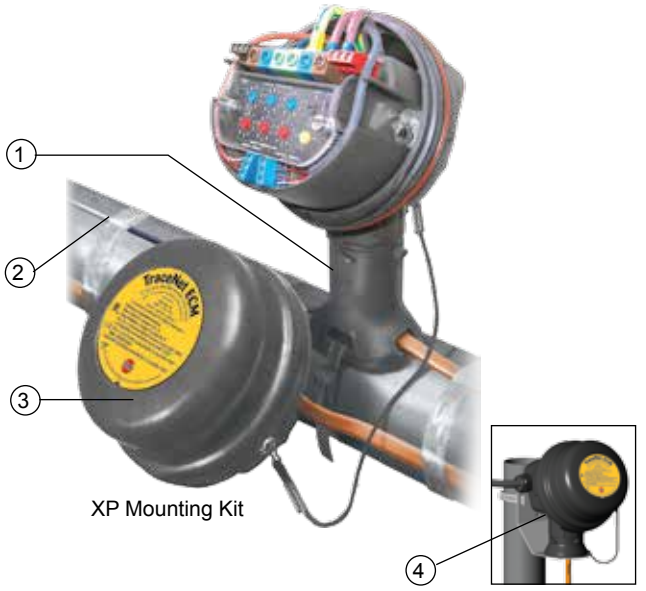
RATINGS

Operating/control voltage ..... 120/208/230 Vac
Operating ambient range ..... -60°C to 55°C
Minimum ambient storage range ..... -74°C
Control switch type options ..... SPST and DPST
Switching current ratings [1]
SPST ..... 30/30/20 amps (25°C, 40°C, 55°C)
DPST ..... 28/23/17 amps (25°C, 40°C, 55°C)
Alarm output current rating ..... 2 A
Electrical connection ..... terminal blocks [3]
Adjustable temp. control range ..... 0° to 500°C
Measurement range ..... -60° to 500°C
Measurement accuracy (ambient)
± 1°C (0°C to +55°C)
± 2°C (0°C to -60°C)
Temperature sensor(s) 100 Ohm three wire Platinum RTD
High temp. alarm/trip ..... programmable
(auto or manual reset)
RTD input circuitry ..... intrinsically safe (Ex i)
Life expectancy ..... 100,000 cycles

CERTIFICATIONS/APPROVALS

CE Ex
II 2 G Ex eb mb [ib] IIC T4 Gb SIRA 12ATEX5239X
II 2 D Ex tb IIIC T135°C IP66 Db

IEC IECEx
International Electrotechnical Commission
IEC Certification Scheme for Explosive Atmospheres
SIRA 12.0103X



CONSTRUCTION

1 Pipe-mount expediter [2], glass-reinforced polymer
2 Three-wire RTD sensor (order separately)
3 Junction box, glass-reinforced polymer
4 Stainless steel mounting bracket

PRODUCT FEATURES

- Encapsulated electronics and control
- One temperature control module for wide range of temperature control and limiter applications
- Energy saving accurate electronic temperature control action
- Data highway communication capability
- Selectable automatic or manual reset limiter action
- Control/limiter setting in degrees Centigrade or degrees Fahrenheit
- Combines power junction box and control module in one unit
- Also available as ambient thermostat (WP mount only)

Notes

1. When located outdoors and subject to solar gain, some current de-rating will be required. Contact Thermon for additional information.
2. The pipe mount expediter has a maximum pipe exposure temperature of 250°C.
3. The terminal blocks consist of:
   (6) 10 mm² line/load/PE terminals
   (3) 3 mm² comm. port terminals
   (3) 3 mm² alarm relay terminals
   (2 x 3) 2.5 mm² sensor terminals
   See installation instructions for maximum wire size.
4. Refer to Form TEP0010U, System Accessories - Heat Tracing Cables for additional accessories.

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PRODUCT SPECIFICATIONS

TraceNet™ ECM™

ELECTRONIC CONTROL MODULE

PRODUCT REFERENCE LEGEND

ECM-CL-12-P-XP-SP

Control Type
C = Controller (with low temp alarm)
CH = Controller (with high temp alarm)
L = Limiter
CL = Controller and Limiter

Comm. Network
0 = None
1 = RS485
2 = CAN-Bus

Nominal Voltage Range
1 = 120 Vac
2 = 230 Vac
3 = 208 Vac

Cable Profile
P = RSX, VSX, BSX, KSX, HTSX, FP, HPT
R = TESH
MI = MIS, MIQ

Mounting Options
XP = Pipe-Mount Expediter
WP = Wall Mount Bracket with Expediter

Switch Configuration
SP = Single Pole
DP = Double Pole

TYPICAL WIRING DIAGRAM