



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



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



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

THERMON The Heat Tracing Specialists®


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CONSTRUCTION

- 1 Pipe-mount expediter², 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 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

Switch Configuration

- SP = Single Pole
- DP = Double Pole

Mounting Options

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

Cable Profile

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

Comm. Network

- 0 = None
- 1 = RS485
- 2 = CAN-Bus

Nominal

Voltage Range

- 1 = 120 Vac
- 2 = 230 Vac
- 3 = 208 Vac

TYPICAL WIRING DIAGRAM

