PRODUCT SPECIFICATIONS

TraceNet™ ECM-OS™

ELECTRONIC CONTROL MODULE

APPLICATION

The TraceNet ECM-OS is an electronic control module specifically designed for the Offshore Industry to control electric heat trace circuits used in freeze protection and temperature maintenance applications. Available in wall (WP) mount version, the ECM serves both the temperature control as well as the sensor and power connection for a heat trace circuit.

The ECM-OS is housed in a stainless steel enclosure with an environmental protection rating of IP66. Depending on options selected, the ECM-OS may be used as a combination of temperature control and limiter, or as a temperature controller with either low or high temperature alarm. Rotary switches are provided for adjusting temperature control and limiter set points. The standard version of the ECM-OS communicates on a physical network of RS485 by using a Modbus RTU communication protocol. Additionally, an alternate 4-20mA communication network option is available.

The ECM-OS is approved for use in both ordinary (non-classified) and hazardous (classified) areas.

RATINGS

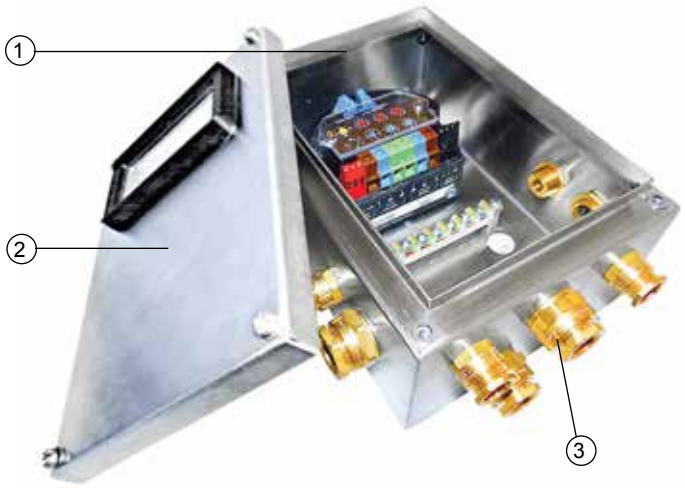
Operating/control voltage ... 120 Vac+10%/-10% (50/60 Hz)
230 VAC+10%/-10% (50/60 Hz)
Operating ambient range.....-60°C to 55°C
Minimum ambient storage range..... -74°C
Control switch type options.....SPST and DPST
Switching current ratings [1]
SPST..... 30/30/20 amps (25°C, 40°C, 55°C)
DPST ..... 28/23/17 amps (25°C, 40°C, 55°C)
Alarm output current rating.....2 A
Electrical connection.....terminal blocks [2]
Adjustable temp. control range..... 0° to 500°C
Measurement range .....-60° to 500°C
TMeasurement 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.....250,000 cycles

CERTIFICATIONS/APPROVALS

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

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

ECM has additional approvals including: DNV, CSA



CONSTRUCTION

1 Stainless steel box
2 Enclosure cover 2 mm with captive M6 stainless steel combo head screws and optional window
3 Available with metal and non-metallic glands

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

Notes

1. When located outdoors and subject to solar gain, some current de-rating will be required. Contact Thermon for additional information.
2. 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.
3. Refer to Form TEP0010, System Accessories - Heat Tracing Cables for additional accessories.

ISO 9001 REGISTERED
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PRODUCT SPECIFICATIONS

TraceNet™ ECM-OS™

ELECTRONIC CONTROL MODULE

PRODUCT REFERENCE LEGEND

ECM-C-12-P-WP-SP-OS-W

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

Comm. Network
1 = RS485
3 = 4-20mA

Nominal Voltage Range
1 = 120 Vac
2 = 230 Vac

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

Mounting Options**
WP = Wall Mount

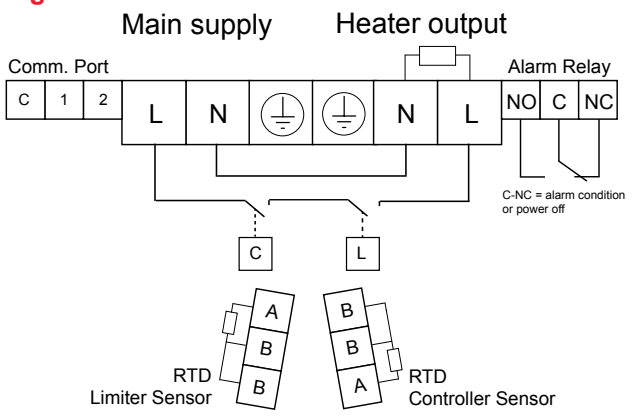
Switch Configuration
SP = Single Pole
DP = Double Pole

W* = Cover Window

NOTE: * = Optional
** = for pipe mounting an additional stainless steel expeditor is available (order separately)

TYPICAL WIRING DIAGRAM (for controller with limiter)

Single Pole



Double Pole