

# TraceNet™ ECM

## Electronic Control Module

### INSTALLATION PROCEDURES

For use with RSX, VSX, BSX, KSX, HTSX, FP, and  
HPT Heating Cables



**The Heat Tracing Specialists®**

# TraceNet™ ECM

The following installation procedures are suggested guidelines for the installation of the TraceNet ECM-P-XP Kit.

## Kit Contents . . .

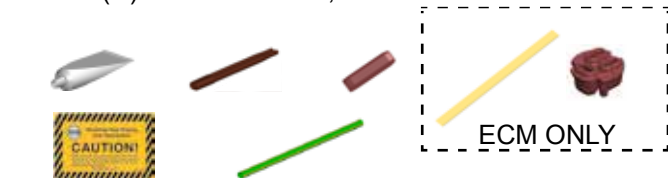


Item	Quantity	Description
1	1	Expediter Assembly Support Cap with O-Ring Threaded Grommet Compressor Grommet Support Base with O-Ring
2	1	Junction Box Lid
3	1	Junction Box Base with O-Ring
4	1	Nut
5	1	Banding
6	1	Banding Guide
7	1	Electronic Control Module w/ Terminal Blocks <small>(Refer to terminal specifications for maximum allowable wire size)</small>  ECM Type* C - Controller L - Limiter CL - Controller/Limiter <small>* The maximum pipe exposure temperature is limited to 250°C</small>
8	1	Junction Box Lid Cord

## Order Separately . . .

### PETK Power and End Termination Kits (per cable)

- PETK-1(D)\* for RSX, VSX, BSX
- PETK-2(D)\* for KSX, HTSX
- PETK-3(D)\*-ECM for HPT, FP



### PT100



Temperature Sensor



Limiter Sensor

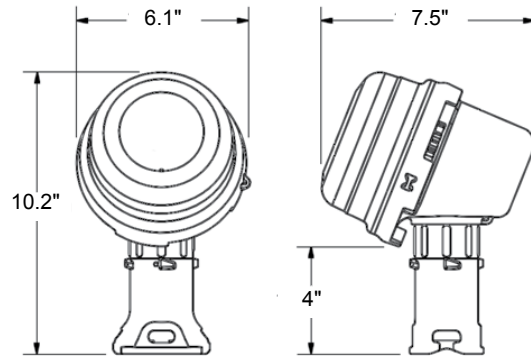
\* PETK kits with "(D)" should be used for Division 2.

# INSTALLATION PROCEDURES

## Receiving, Storing and Handling . . .

1. Inspect materials for damage incurred during shipping.
2. Report damages to the carrier for settlement.
3. Identify parts against the packing list to ensure the proper type and quantity has been received.
4. Store in a dry location.

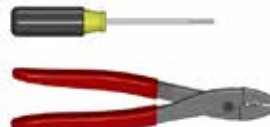
## Dimensions . . .



## Installation Precautions . . .

- To minimize the potential for arcing and fire caused by product damage or improper installation use ground-fault protection. The National Electrical Code (NEC) and Canadian Electrical Code (CEC) require ground-fault protection of equipment for each branch circuit supplying electric heat tracing.
- Installation must comply with Thermon requirements and be installed in accordance with the NEC, CEC, or any other applicable national and local codes.
- Component approvals and performance ratings are based on the use of Thermon specified parts only. User supplied power connection fittings must be listed or certified for intended use.
- De-energize all power sources before opening enclosure.
- Keep ends of heating cable and kit components dry before and during installation.
- Individuals installing these products are responsible for complying with all applicable safety and health guidelines. Proper personal protective equipment, or PPE, should be utilized during installation. Contact Thermon if you have any additional questions.

## Tools Required . . .



## Certifications/Approvals . . .

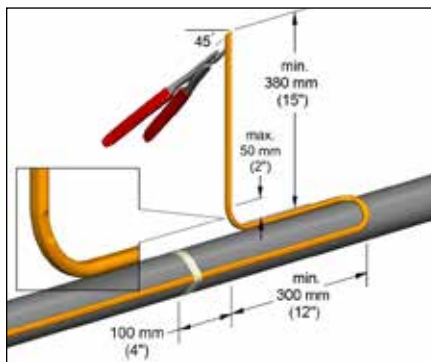
CE Ex II 2 (?) G Fx eh mh [ib] IIC T4, Ex tb IIIC T135°C SIRA 12ATEX5239X  
II 2 (2) D Ex tb IIIC T135°C IP66 Db



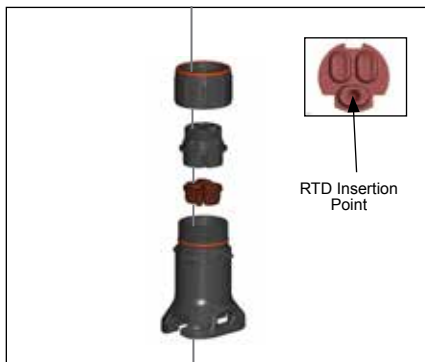
**International Electrotechnical Commission**  
IEC Certification Scheme for Explosive Atmospheres  
SIR 12.0103X

Class I Division 2, Groups A, B, C, D  
Class II Division 2, Groups E, F, G; Class III; T4  
Ex eb mh [ib] IIC T4, Zones 21, 22  
Ex tb IIIC T135°C, Zones 21, 22

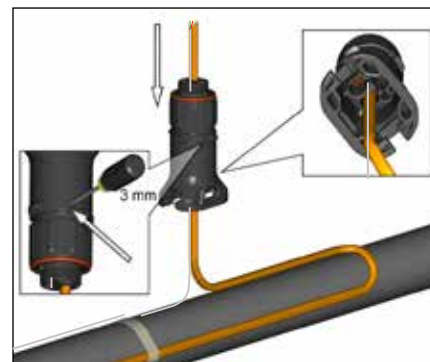




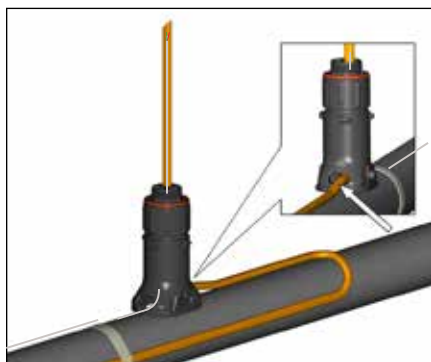
**1.** Locate bus connection (HPT and FP only) and cable as shown. Cut end of cable at angle to aid in piercing grommet. Leave additional cable for expansion loop. See page 5 for multiple cable installation tips.



**2.** Position RTD Sensor(s) (order separately) in grommet (when applicable). Do not pull from the sensor end when routing through the expediter assembly. Pull sensor from the lead wire portion.



**3.** Insert cable into expediter. If mounted on bottom or side of pipe, punch out weep hole. Note: For HPT and FP cable, exchange grommet in Terminator with grommet provided in PETK-3-ECM.



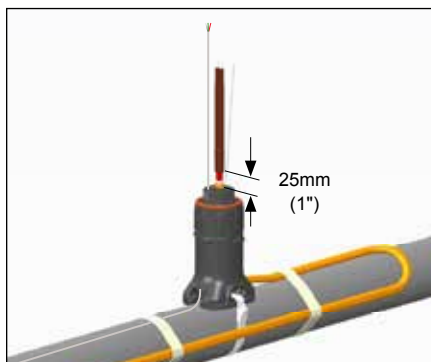
**4.** Slide expediter toward pipe and route cable through support base entry.



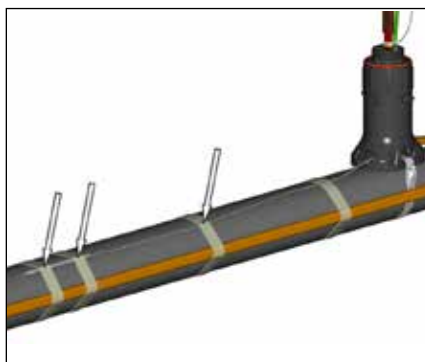
**5.** Insert banding guide into expediter and snap into place.



**6.** Mount expediter to pipe using pipe band. Do not band over cable.



**7.** Cut off end of cable. Terminate cable with appropriate PETK termination kit. Refer to PETK installation instructions. Push excess cable back through expediter. Tighten cap securely. Tape cable expansion loop to pipe.



**8.** Fix expediter, RTD, and lead wire to pipe.



**9.** Mount junction box base on expediter. Make sure to align slots to properly orient junction box base.

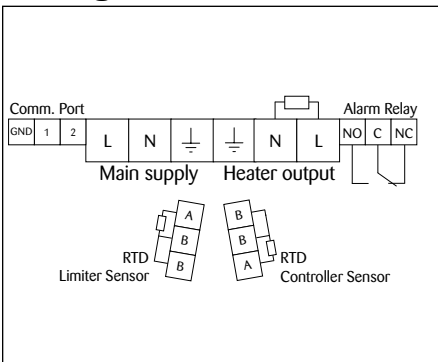


**10.** For power connection applications: Use dimple molded into side of junction box base to locate center of hole, drill for user supplied power connection fittings per manufacturer's recommendations.

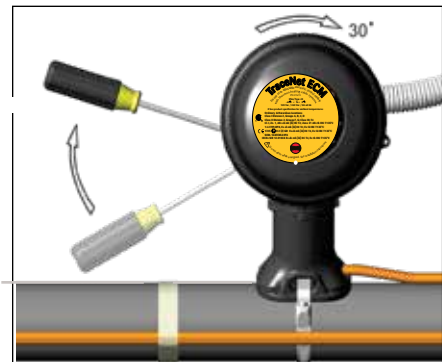
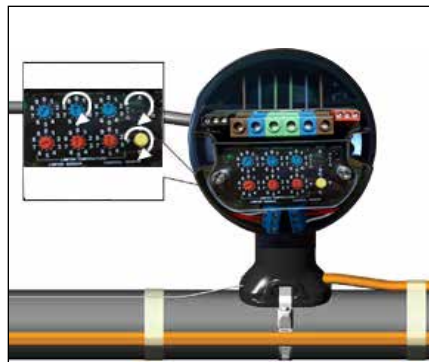
**11.** Install power connection fitting (user supplied) and pull in power and ground wires.

**12.** Install electronic control module and complete system wiring. Terminal set screws shall be tightened to a torque value of 1,4 Nm (12,4 lb-in). Set modules electronic control and/or control limiter at desired setpoints.

## Wiring Details



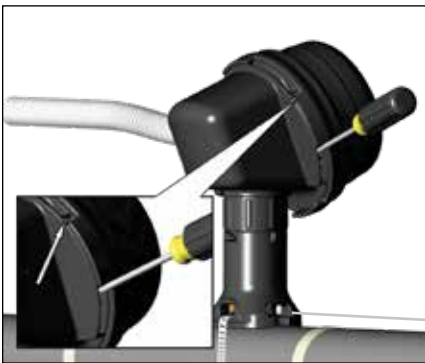
Connection (1 or 2 Heating Cables)



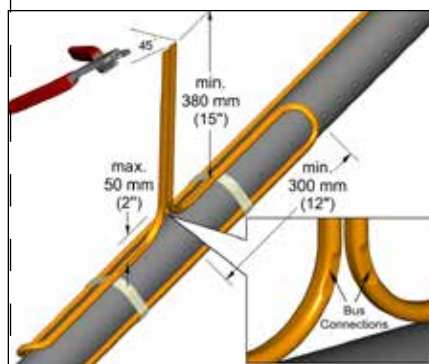
**13.** Use rotary switches for settling Control and Limit Temp, Celsius or Fahrenheit and Auto or Manual reset (Control switches on Type "C", Limiter switches on Type "L" and both on Type "CL").

**14.** Use screwdriver to ratchet on junction box lid. Lid will rotate 30 degrees. Install junction box lid and twist hand tight. Insert screwdriver into ratchet slots located on side of junction box base.

## Two Cable Layout Tips



**15.** Lid latch mechanism fully engaged. To remove lid, repeat step 16 but in the opposite direction.



Locate bus connection (HPT and FP only) and cable as shown. Cut end of cable at angle to aid in piercing grommet. Leave additional cable for expansion loop.



Insert two cables into expediter.

Note: For HPT and FP cable, exchange grommet in Terminator with grommet provided in PETK-3-ECM.



**THERMON . . . The Heat Tracing Specialists®**

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For Access To Installation Videos:



ISO 9001  
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Specifications and information are subject to change without notice. Form PN50866-0314