F-4300 Clamp-on Ultrasonic Thermal Energy Measurement System

Installation Hardware Instruction for Clamp-on Thermowells

For Use with Kit: INSTL0501-TSC & INSTL0502-TSC

Please read entire manual before installing the meter.

The two temperature sensors must be located in such a manner as to accurately measure only the temperature of the supply line entering and the return line leaving the portion of the piping system for which the energy measurement is being made.

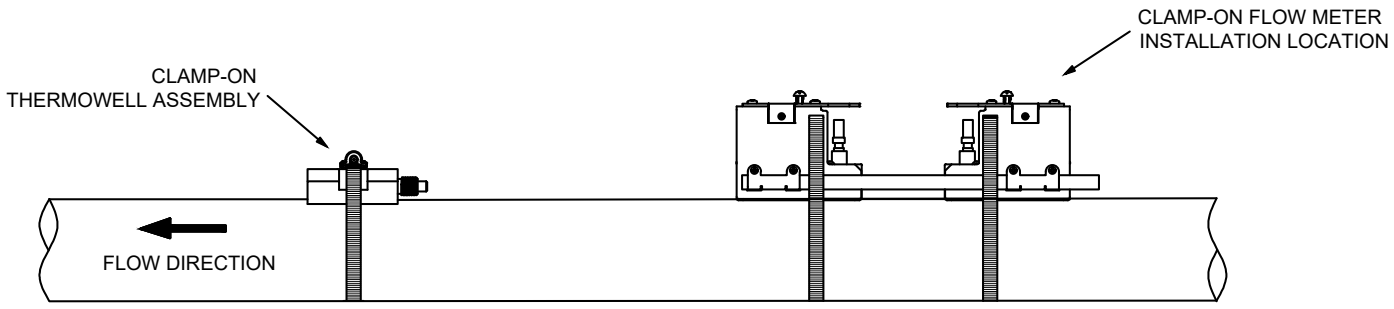
If possible, find an easily accessible location where wire connections can be made from floor level. This will facilitate any future service.

IMPORTANT NOTE

ONICON BTU meters are precision measuring devices that must be installed according to the instructions contained in this document in order to maintain their accuracy and reliability.

IMPORTANT NOTE:
Place the temperature sensors away from strong sources of electrical noise that might affect the performance of the sensors.

TYPICAL THERMOWELL INSTALLATION

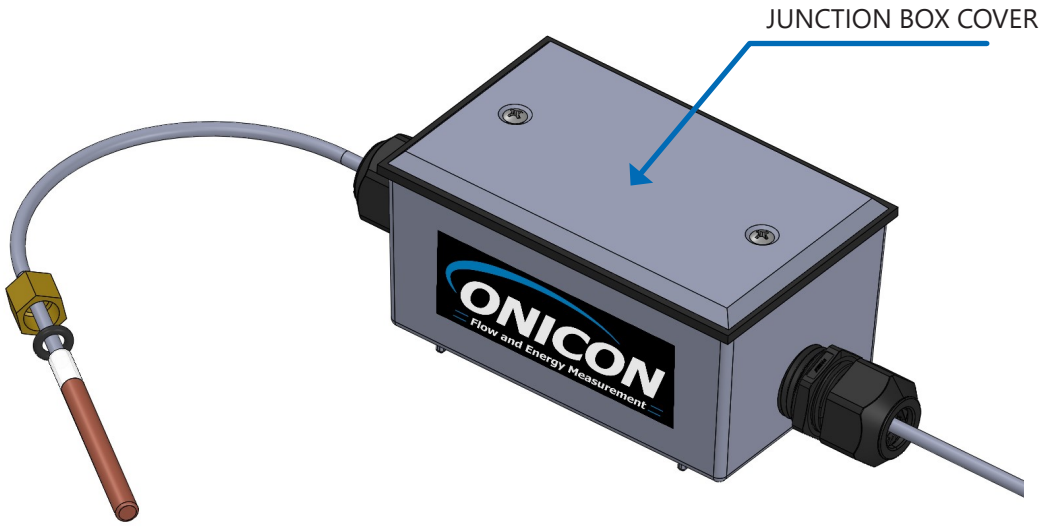


One temperature sensor thermowell will need to be placed in the same pipe as the mounting brackets. If it is an immersion thermowell, it must be located on the downstream side of the mounting brackets.

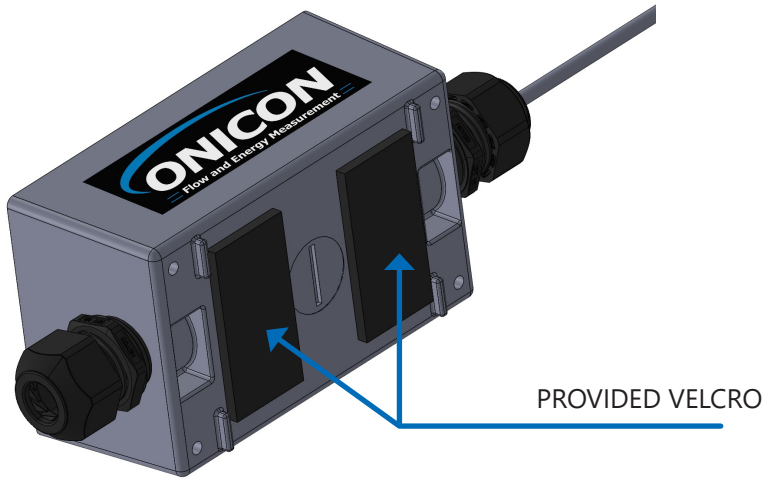
The downstream distance between the thermowell and brackets should be at least five (5) pipe diameters, leaving enough clearance to remove either sensor from the pipe without interference from the other sensor.

Directions for Installation:

1. Remove junction box cover and set aside.

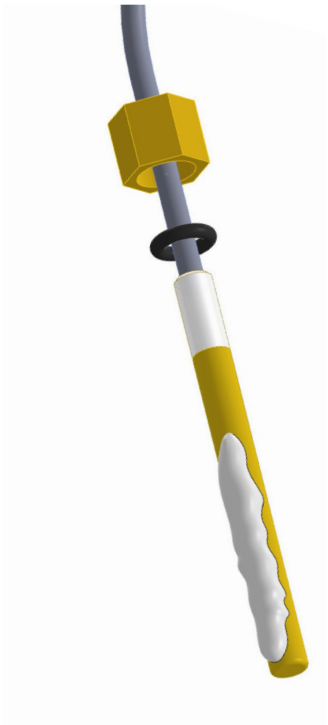


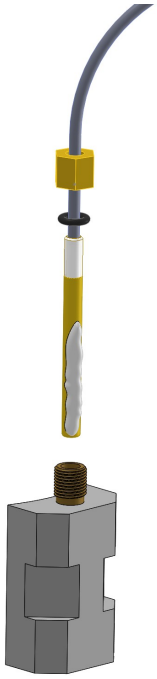
2. Attach the provided Velcro or the enclosure mounting hardware in the desired location as shown below.

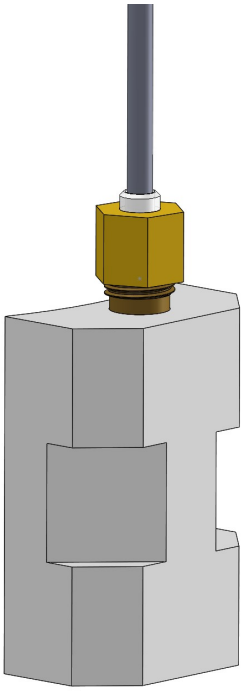


Directions for Installation (Continued):

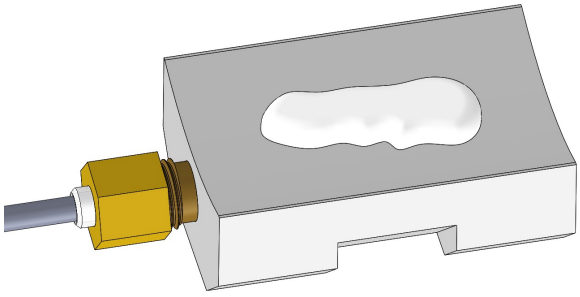
3. Apply a thin coat of thermal compound to the temperature sensor, and gently insert the temperature sensor all the way into the clamp-on thermowell.

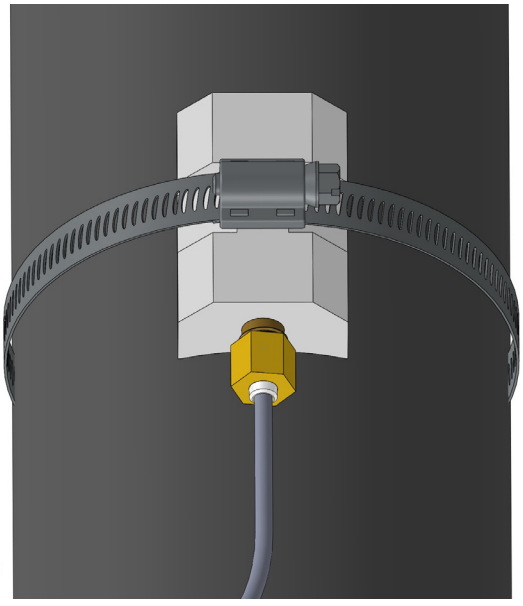






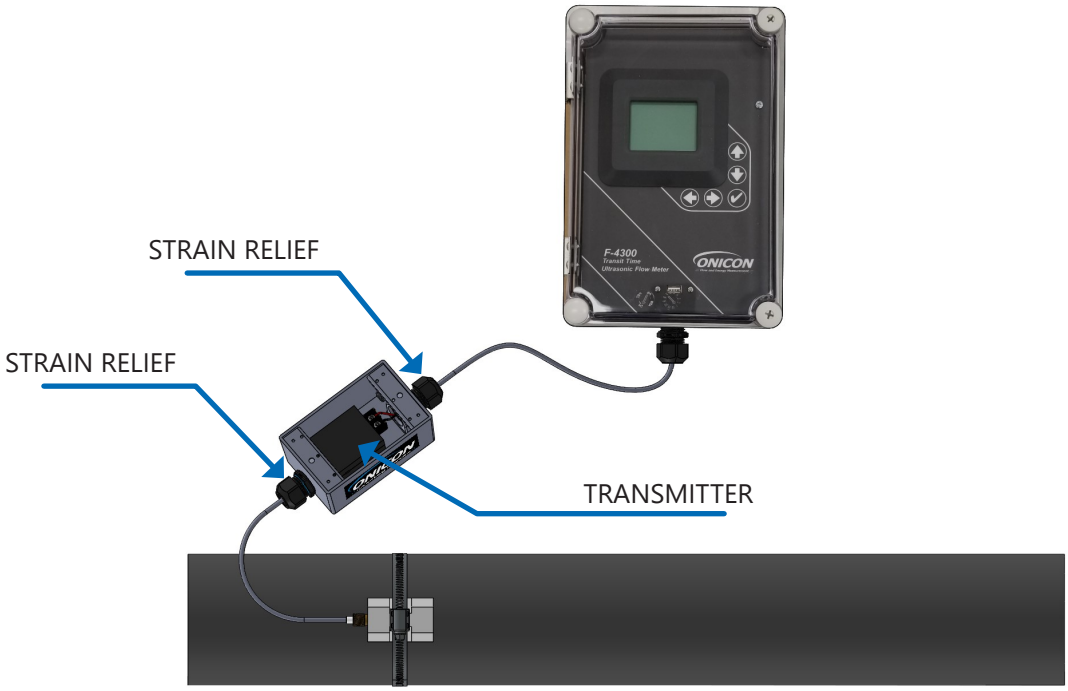
4. Apply thermal compound to the heat sink and install the clamp-on thermowell on to the pipe using the pipe strap as shown.



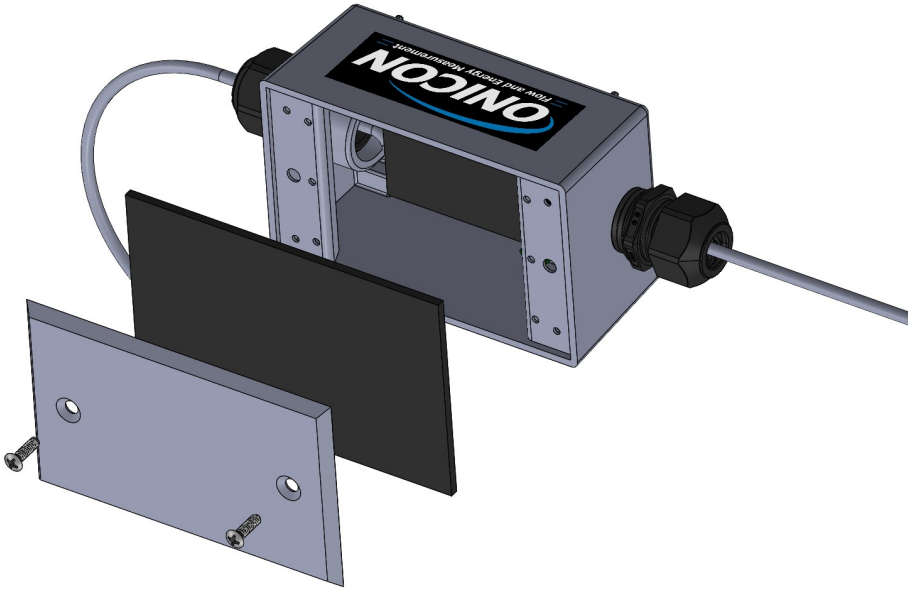


Directions for Installation (Continued):

5. Connect the Signal (+) and Reference (-) wires from the transmitter to the F-4300 BTU meter through the strain relief. Be sure to observe the polarity of the connection, positive to positive and negative to negative. Shield wires should be connected at the F-4300, but left open at the temperature sensor transmitter.



6. Tighten the strain reliefs and reinstall the junction box cover. Once the thermowells and sensors are fully installed and tested, insulate the thermowells and the pipe to complete the installation.



If you have any questions or need assistance, please contact ONICON Sales at (727) 447-6140 or sales@onicon.com.