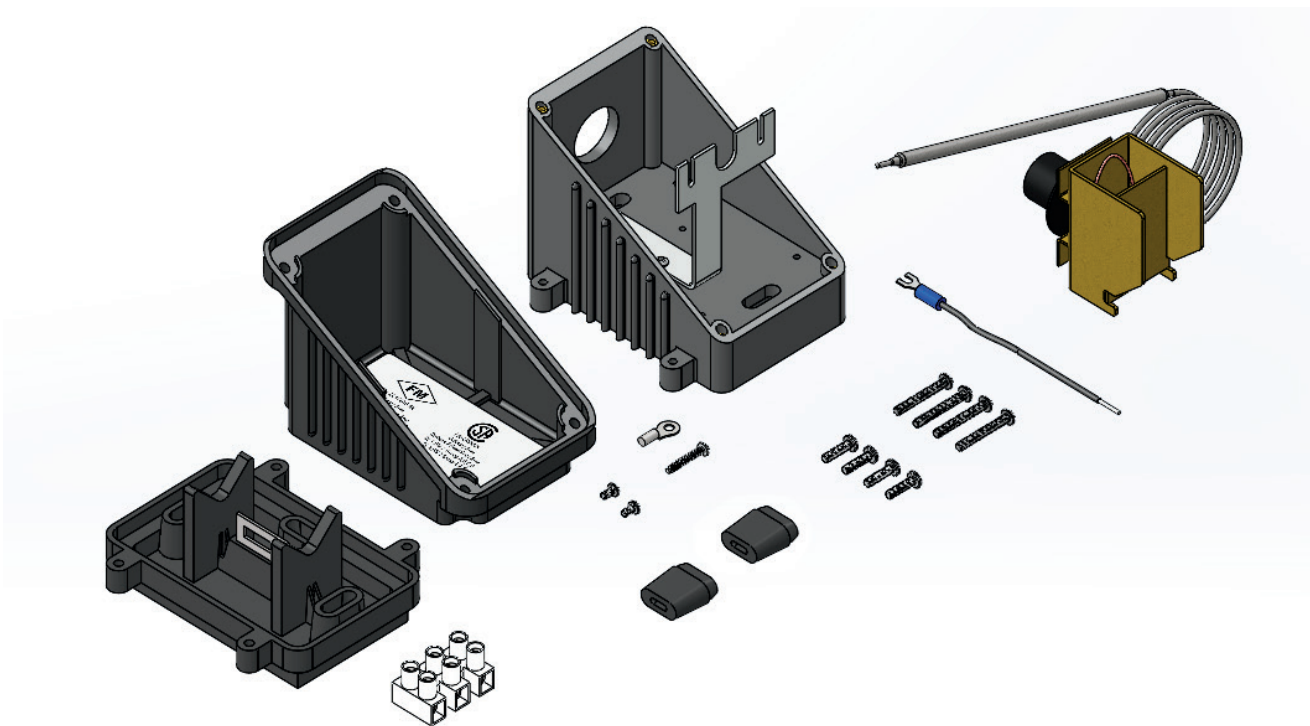


Installation Instructions

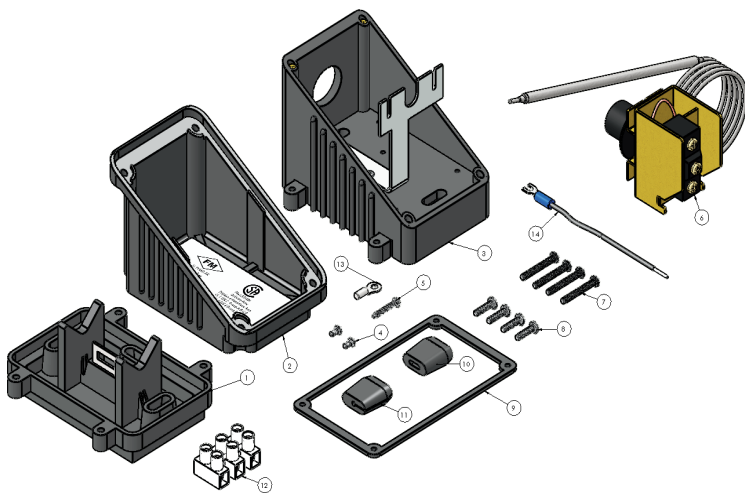
RTBC-FS Power Connection Kit with Integral Thermostat



PJ969
161-562765-003
November 2020

RTBC-FS Power Connection Kit

Installation Instructions



| Item | Qty. | Description |
|------|------|-----------------------------------|
| 1 | 1 | Junction Box Base |
| 2 | 1 | Junction Box Lid |
| 3 | 1 | Junction Box |
| 4 | 1 | Thermostat Mounting Screws |
| 5 | 1 | Terminal Block Mounting Screw |
| 6 | 1 | Thermostat 3" Capillary 30A |
| 7 | 4 | Box Screws 5/8" Long |
| 8 | 4 | Cover Screws 5/8" Long |
| 9 | 4 | Cover Gasket |
| 10 | 1 | Grommet |
| 11 | 1 | Capillary Grommet |
| 12 | 1 | Terminal Block |
| 13 | 1 | Ring Connector |
| 14 | 1 | 8" Length of 14AWG Insulated Wire |

General

RTBC-FS is a power connection kit with an integral line sensing thermostat which is used to monitor the temperature of the branch lines with CPR heating cable as listed in file E68611.

The NEMA4X power connection enclosure is constructed of corrosion resistant Ryton®, that features an oblique sided box to allow easy access to terminal block and thermostat settings. The enclosure includes an 3/4" opening on the side for customer provided conduit hub. The RTBC-FS base features a waterproof cableway for the heating cable and capillary to enter the enclosure from underneath to protect the cables and thermostat from damage. The base includes a stainless steel tie down to mounting tab to strap the kit to the fire sprinkler piping with a stainless steel pipe strap (PS). Inside the enclosure is a three-position terminal block for connecting the line voltage and heating cable together and the line sensing thermostat that includes a dial temperature control knob. The RTBC-FS lid is sealed with a gasket and screws on each corner.

Certifications/Approvals



Tools Required for Kit Installation



Order Separately

UL Certified Pipe Straps

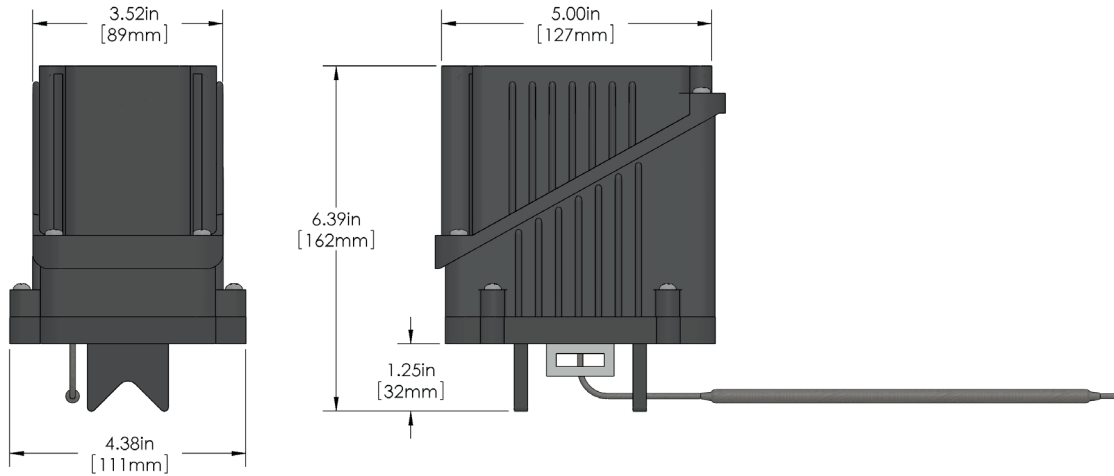
- Pipe Strap: 1/2" to 3/4" pipes SS-01 (512700)
- Pipe Strap: 1" to 3-1/2" pipes SS-03 (512719)
- Pipe Strap: 2-1/2" to 9" pipes SS-10 (512727)
- Pipe Strap: 9" to 19.5" pipes SS-20 (512735)



- Caution Label WL-05 (512743)
- Fiberglass Tape FT-66 (512680)



Actual Kit Dimensions



⚠ WARNING

HAZARD OF ELECTRIC SHOCK. Disconnect all power before starting. All installations must be effectively grounded in accordance with the National Electrical Code to eliminate shock hazard.

⚠ WARNING

Turn off power before removing junction box cover at all times.

⚠ WARNING

Users should install adequate controls and safety devices with their electric heating equipment. Where the consequences of failure may be severe, back-up controls are essential. Although the safety of the installation is responsibility of the user, Chromalox will be glad to assist in making equipment recommendations.

⚠ WARNING

Keep ends of heating devices and kit components dry before and during installation.

⚠ WARNING

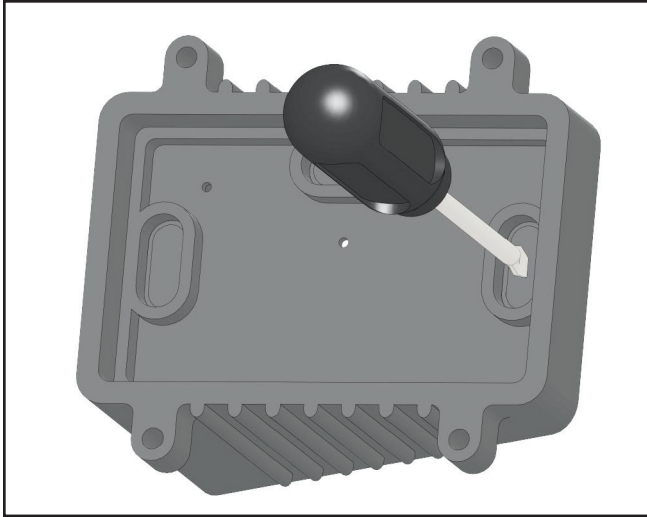
Ground fault equipment protection is required for each circuit.

⚠ WARNING

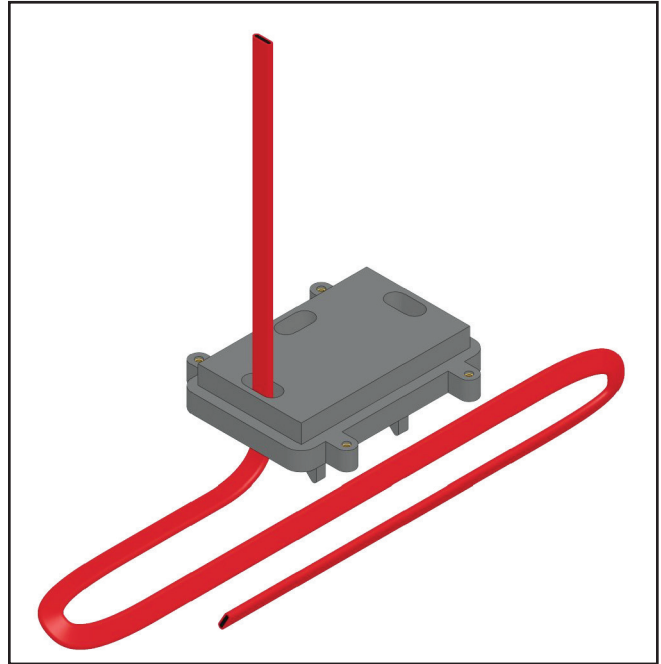
The presence of the heating devices shall be made evident by the posting of caution signs or markings at appropriate locations and/or at frequent intervals along the circuit.

Cable Installation Instructions: CPR cable special instructions denoted by *

1. Use a hammer and screwdriver to punch out the knockouts on the bottom of the box which correspond to the openings in the base through which the heating cable and bulb & capillary passes. Only punch out the knockouts that are to be used. If one is mistakenly punched, blank grommets can be ordered to re-establish the water tight seal.

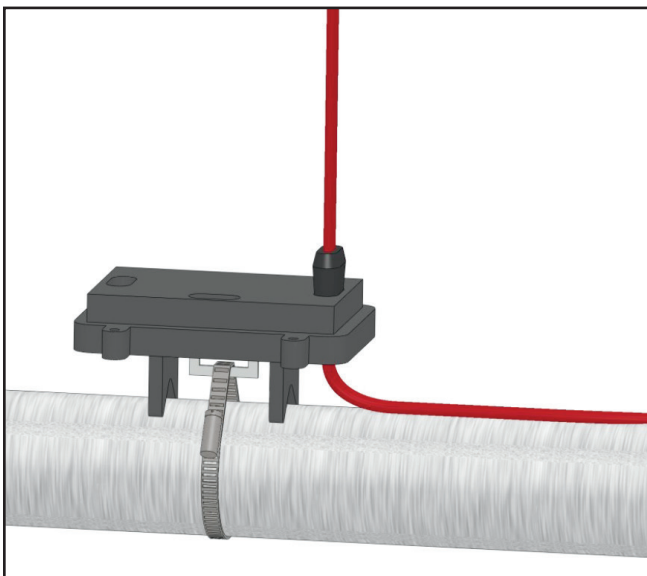


2. Feed the ends of the cables through the appropriate hole in the base. Allow 8" of cable to extend above the top of the base.

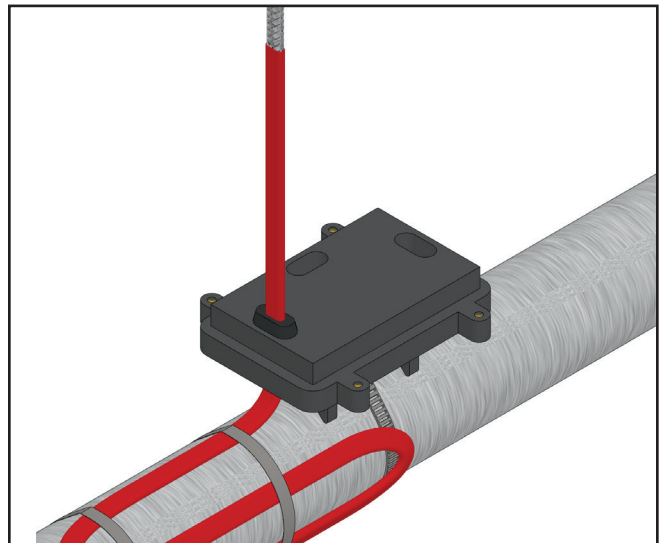


3. Secure the base to the pipe by threading the appropriate sized pipe strap through the slot in the mounting plate. Tighten the pipe strap until the base is securely attached to the pipe.

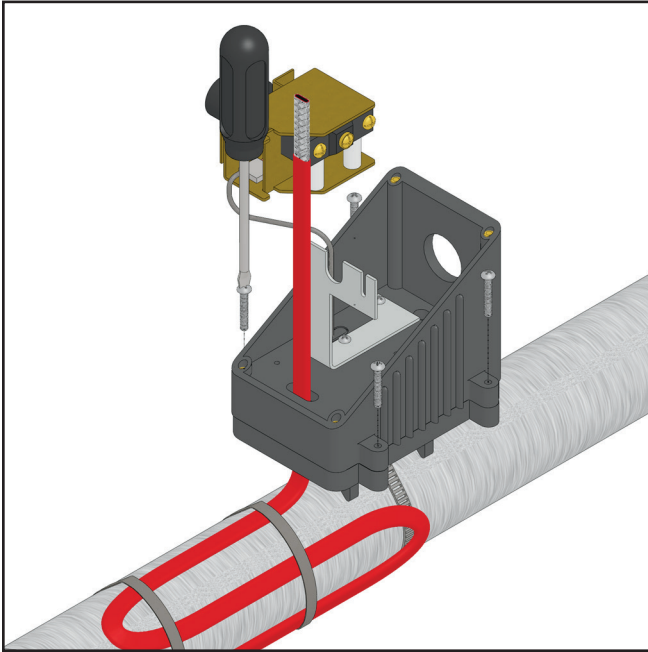
*Slide the grommet over the cable until it reaches the base of the box.



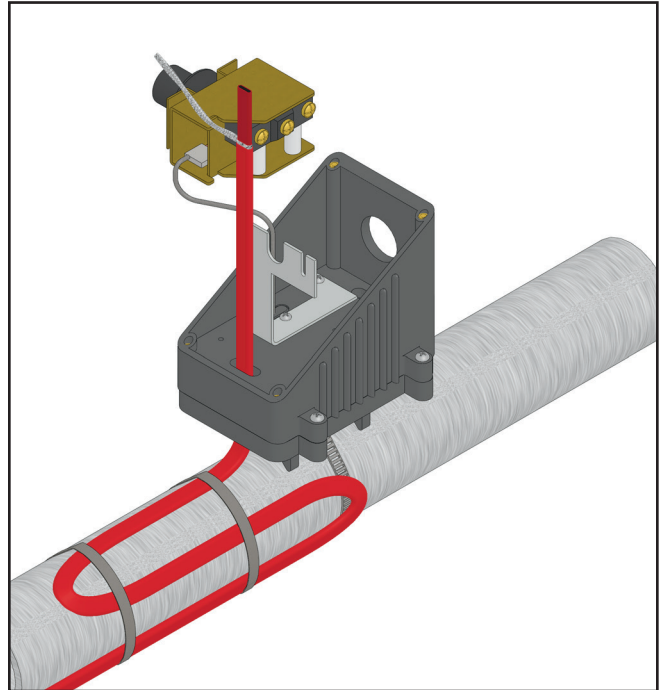
4. Score the outer insulation 1-1/2" from the end of the cable. Remove the jacket to expose the metal braid. **CAUTION:** When removing outer jacket, be careful not to damage the braid of the base cable insulation.



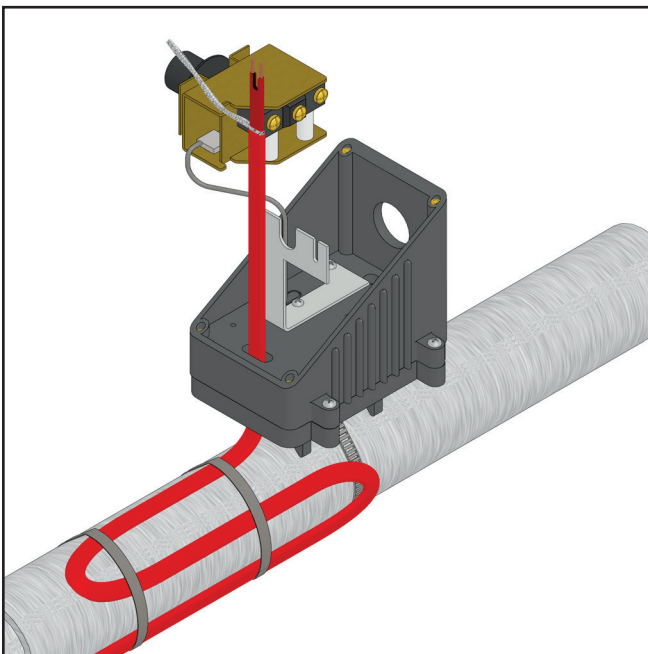
5. Feed the capillary of the thermostat through the side hole of the box. Slip the grommet over the capillary between the box and the base. Allow 3/4" of stainless steel capillary to extend above the bottom of the box. Secure box to base using all four larger (8-32) screws.



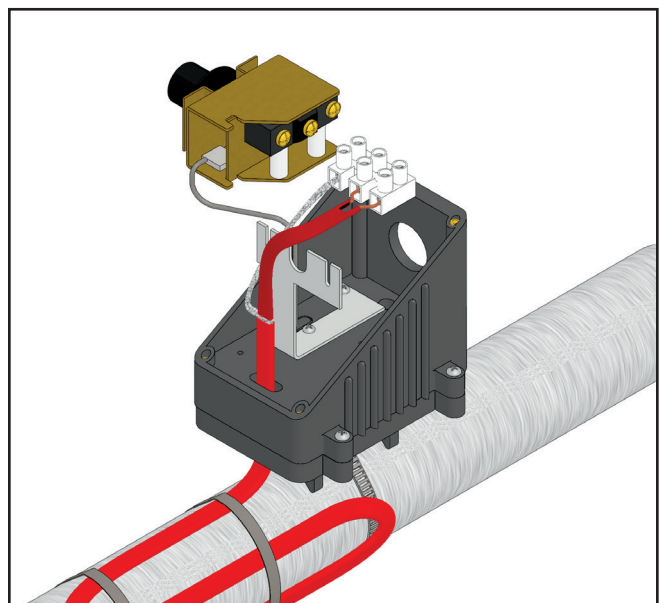
6. Starting from the end of the cable, unravel 1-1/2" of the braid. Twist the strands together to form a pigtail.



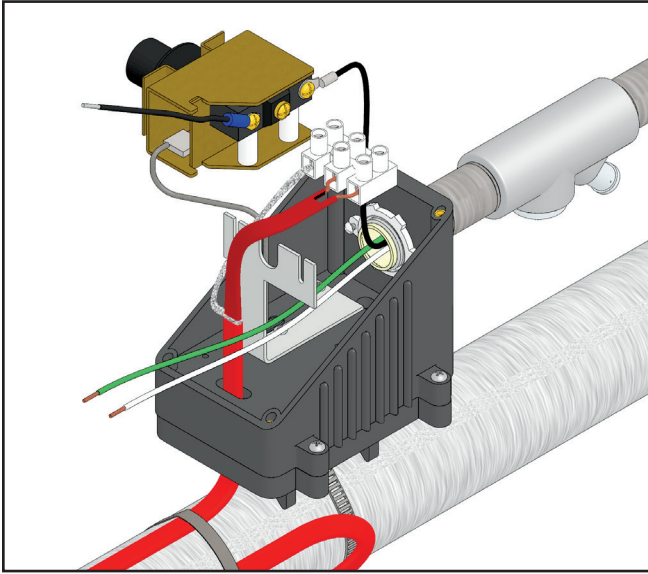
7. Using standard electrical cutters, cut a 3/4" long notch out of the cable between the conductor wires. Bare a 3/8" length of each conductor by stripping off the outside insulation and the inner black core material.



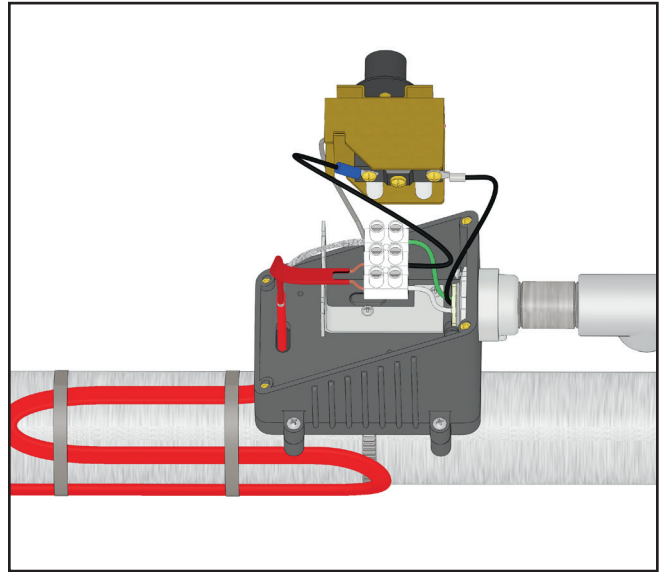
8. Insert the bared ends of the conductors and the braid into the openings in the terminal block. Tighten screws firmly to hold the wires in place. Attach UL certified conduit to hub and bring power leads into box. Strip 3/8" length of each power wiring. Connect UL certified conduit hub (Chromalox CCH-1, CH-75 or equal) to the box. Attach conduit to hub and bring 8" of power leads into the box.



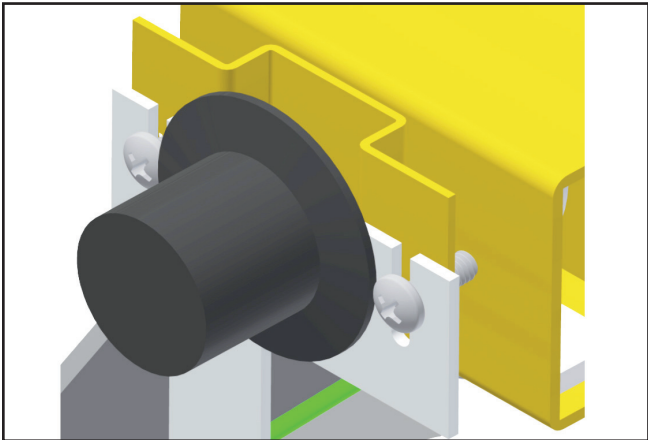
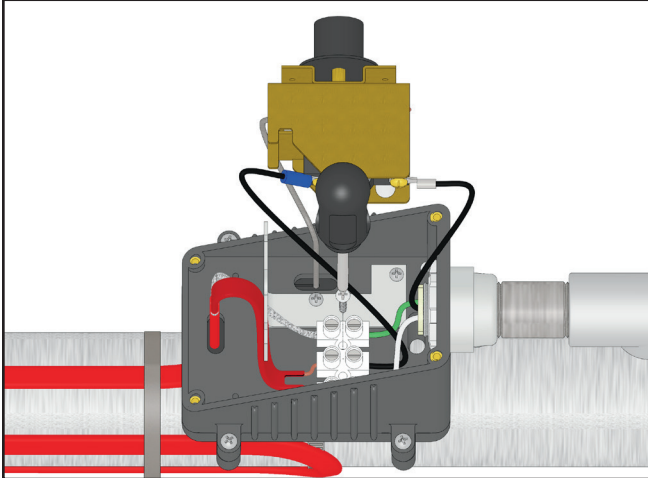
9. Remove the screw and collar from the NORMALLY CLOSED terminal of the thermostat. Discard the collar. Push the screw through the opening in the connector attached to the insulated wire and screw it back into the NORMALLY CLOSED terminal. Crimp the ring connector onto the end of the "HOT" conductor. Remove the screw and collar from the COMMON terminal. Discard the collar and push the screw through the opening in the ring connector. Drive the screw back into the COMMON terminal.



10. Insert the bared end of the grounding wire into the opening of the terminal block which is opposite of the braid. Insert the ends of the other hot (or neutral) wire and the 8" long wire into the two (2) remaining openings in the terminal block. Tighten screws firmly to hold conductors in place. See wiring diagram.

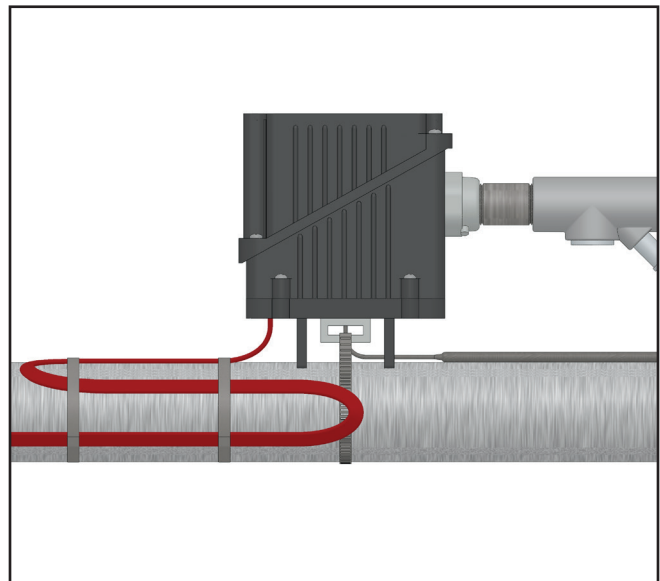
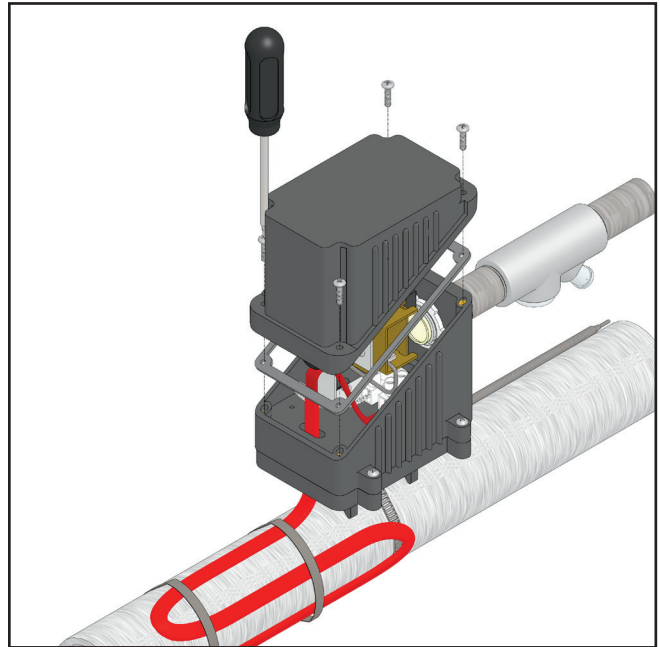


11. Mount terminal block to bottom of the box by driving the self-tapping screw provided into the mounting hole as shown. Thread the screws into the outside pair of mounting holes of the thermostat leaving approximately 1/8" of thread. Slide the screws into the slots in the mounting bracket. Push the thermostat down as far as it will go and tighten the screws firmly.

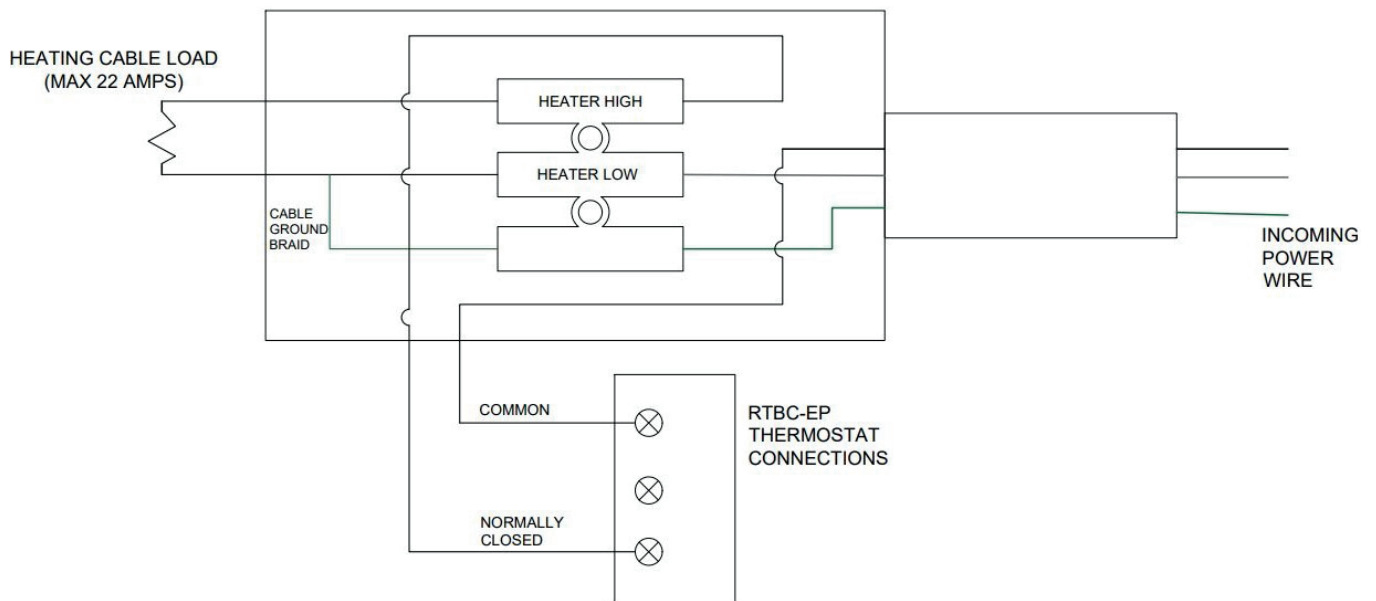
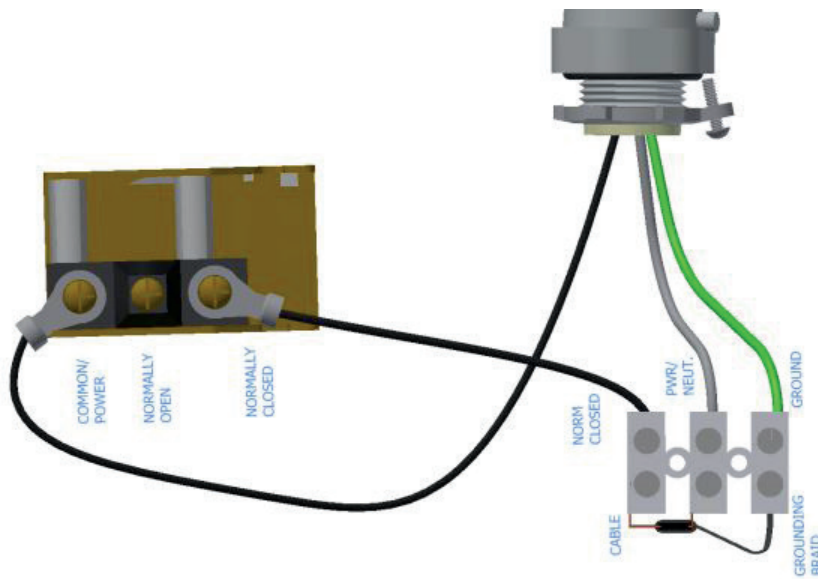


12. Carefully push all the wires into the box and secure the lid to the box. Make sure water tight rubber gasket (Item 9) is in place. The thermostat is shipped factory preset and pre-calibrated for 40°F operation. The setting may be changed by rotating the white knobs until the desired temperature is directly behind the setting post. Extend capillary to allow bulb to be placed in desired location. The bulb should be placed on the bottom half of the pipe spaced 90 degrees from the nearest heating cable or centered between equally.

Do not locate the bulb within three feet of a pipe support or other heat sink.



Wiring Diagrams



Limited Warranty:

Please refer to the Chromalox limited warranty applicable to this product at <http://www.chromalox.com/customer-service/policies/termsofsale.aspx>.

Chromalox, Inc.
1347 Heil Quaker Boulevard
Lavergne, TN 37086
(615) 793-3900
www.chromalox.com