



LINK™



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Commercial Heat Trace Splice, Power Connection, and End Seal

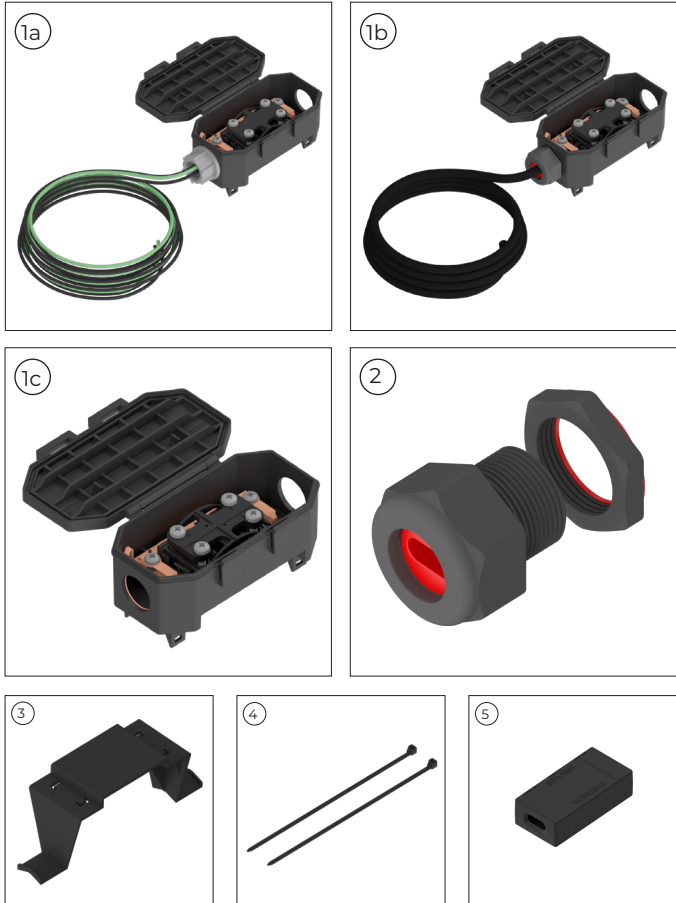
INSTALLATION PROCEDURES

for **BSX™**, **DLX™**, **FLX™**, and **RGS™** Heat Tracing



The following instructions are guidelines for the installation of Thermon's **LINK** connection systems. They are not intended to preclude the use of other methods and good engineering or field construction practices.

Kit Contents



ITEM	QUANTITY	DESCRIPTION
1a	1	LINK-*-PC (Note 1) Enclosure & IDC Assembly Power Connection (Conduit Fitting) x Heat Trace Splice
1b	1	LINK-*-PF (Note 1) Enclosure & IDC Assembly Power Connection (Flexible Cable) x Heat Trace Splice
1c	1	LINK-X-HS (Note 1) Enclosure & IDC Assembly Heat Trace Splice
2	1 (or 2 for Splice kit)	M25 Cable Gland (fits "B" or "D" sized heat trace)
3	1	Optional mounting bracket
4	2	Zip tie
5	1 (or 0 for Splice kit)	LINK-X-ES End Seal

Note 1: * = B for BSX (OrdLoc), FLX, and RGS heat trace; * = D for DLX heat trace

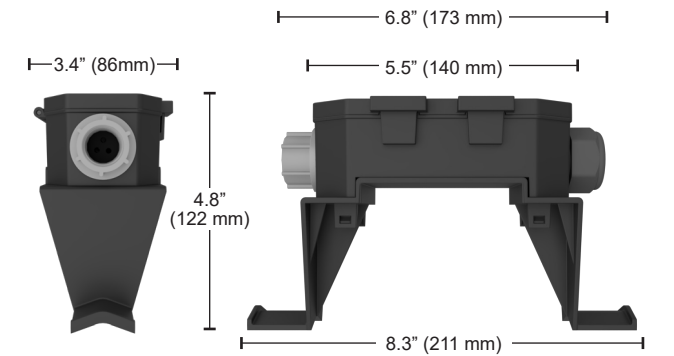
Note 2: LINK-B-PC, LINK-B-HS, and LINK-X-ES are UL listed for use with System FLX+LINK

Certifications/Approvals



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.



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. For UL compliant heat tracing systems, a UL Listed Liquid-Tight Flexible Conduit, Conduit Adapter, and junction box must be used to terminate heat tracing circuits.
- De-energize all power sources before opening enclosure.
- Keep the ends of heating cable and kit components dry before and during installation. At the completion of installation, the heating cable and end seal must also be completely covered and not exposed to sunlight.
- 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.
- The kit instructions should be used with reference to the installation instructions for the heating cable (REFERENCE: PN50207).



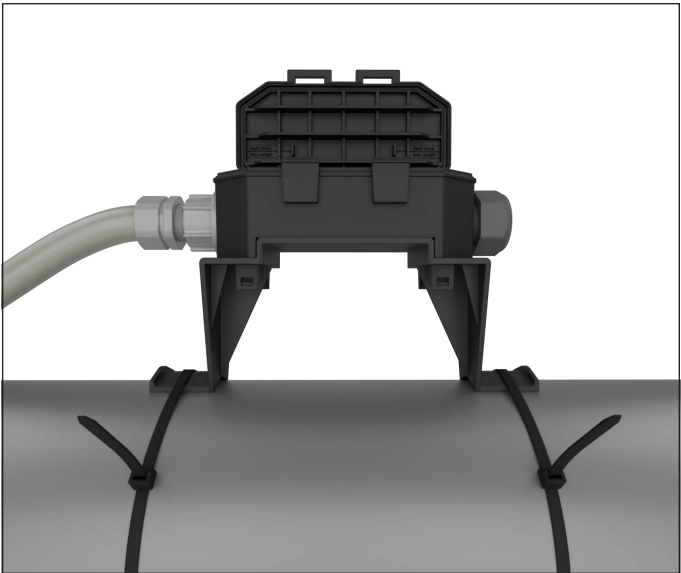
INSTALLATION PROCEDURES



- 1. Place housing on pipe and secure with the zip ties. If using a "PC" kit, connect 1/2" flexible conduit and adapter (user provided) to the 1/2"-14 NPT conduit fitting on the enclosure, ensuring not to exceed 18 Nm of torque. If using a "PF" kit, the **LINK** will include a flexible power cable instead of conduit fitting (see Kit Contents, Image 1b). If using an "HS" kit, the **LINK** will have heat trace glands on both sides (see Kit Contents, Image 2).
- WARNING:** do not connect the power wires to the power supply terminals (user provided) until installation of the **LINK** is complete.



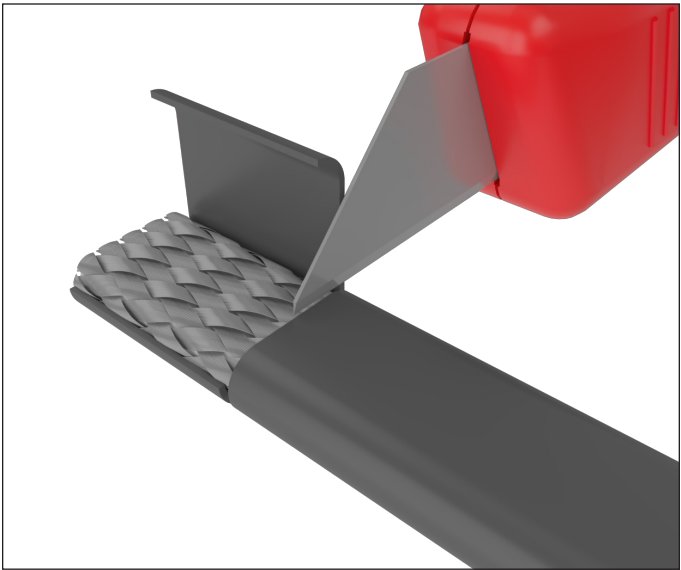
- 3. Cut off the end of the heat trace cable, in order to ensure that it is clean and straight..



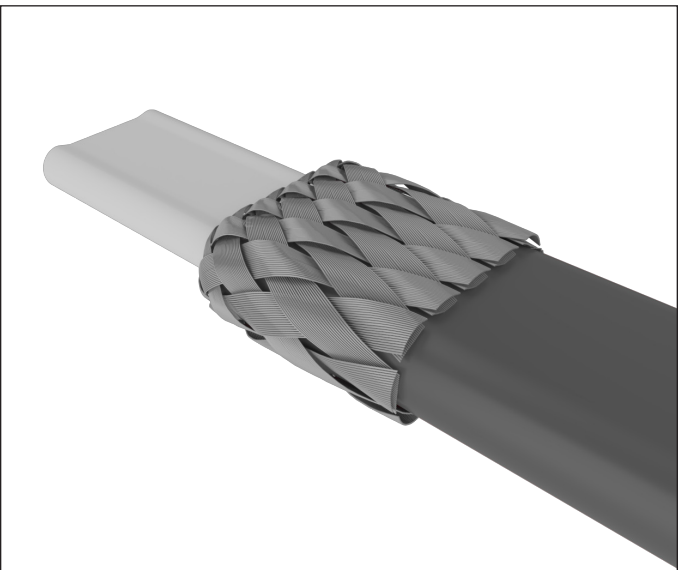
- 2. For installations where higher height is required to allow the enclosure to be accessible above the insulation, clip housing into bracket. Place bracket on pipe and secure with the zip ties.



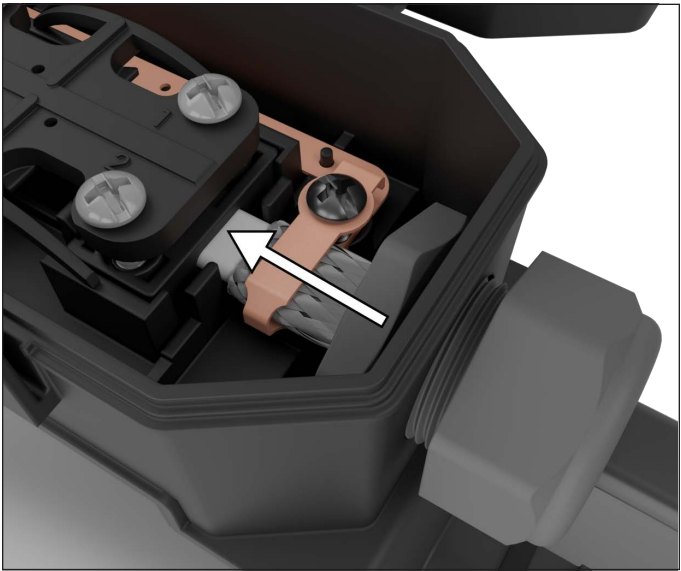
- 4. Using the template provided on the underside of the lid or a printout, measure and mark cut length. On the lid template the exact cut length is marked with arrows.



5. Cut and remove heating cable overjacket, being careful not to cut into the braid.



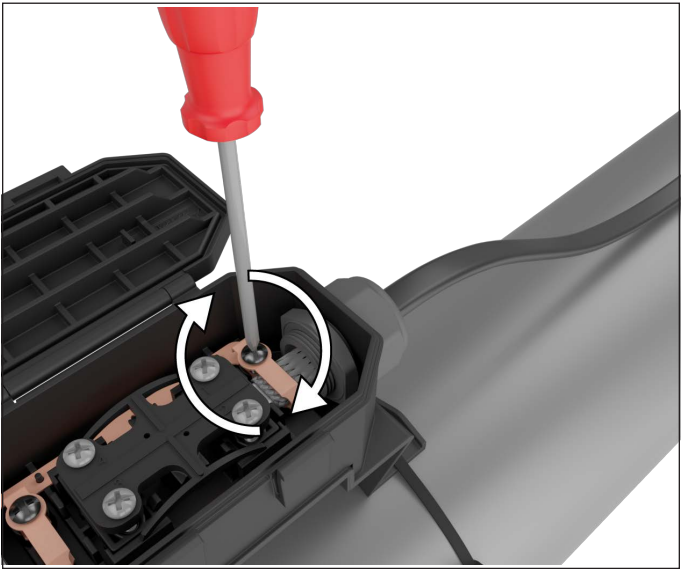
6. Pull back braid strands



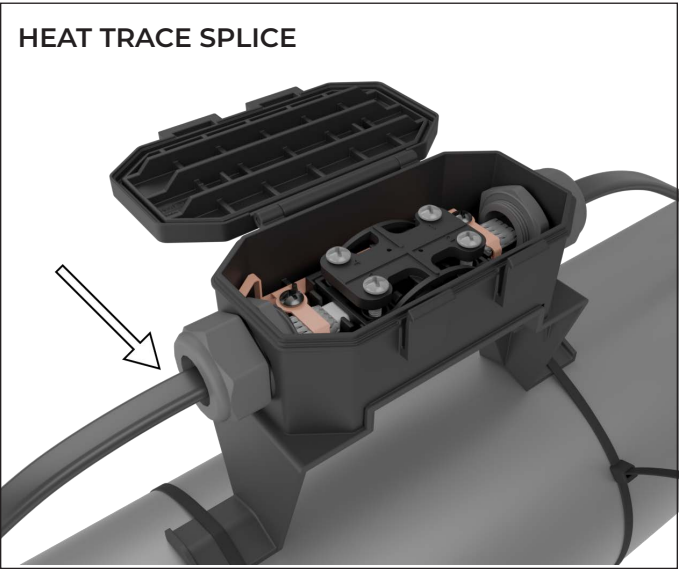
7. Insert cable into gland side entry until cable dead ends on inner housing rib.



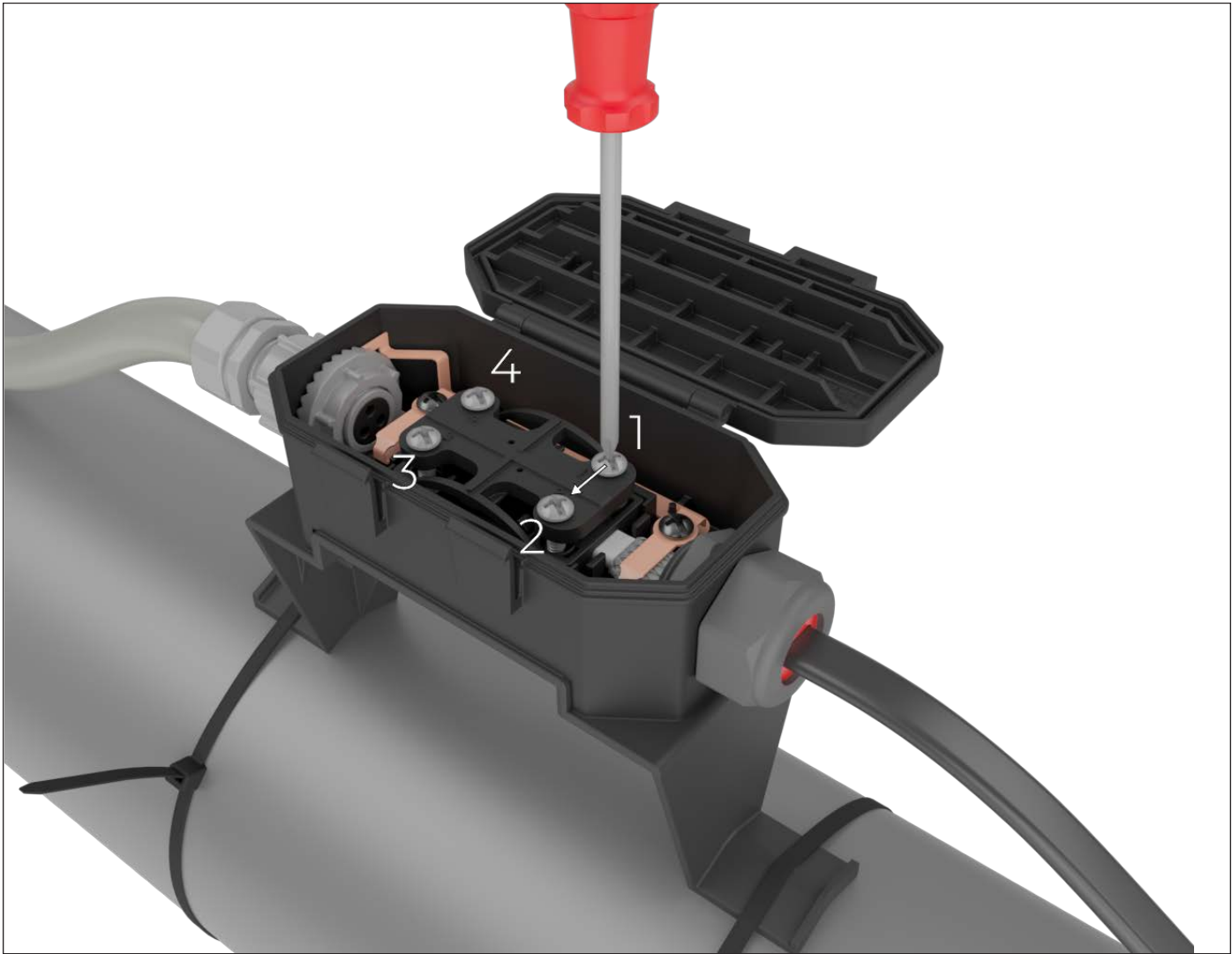
8. Torque gland nut (8 Nm for "LINK-B" version, 5 Nm for "LINK-D" version) to seal around cable.



9. Screw down grounding bar around cable to 2 Nm.

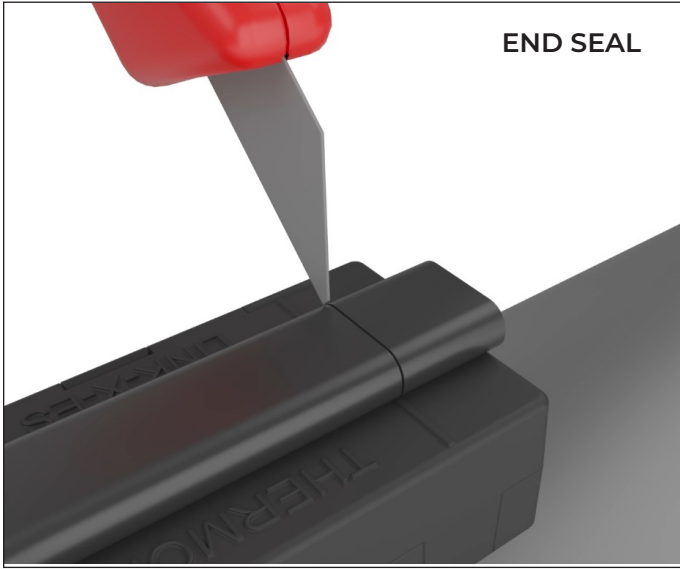


10. If connecting a splice, repeat steps 3-9 on the other side.

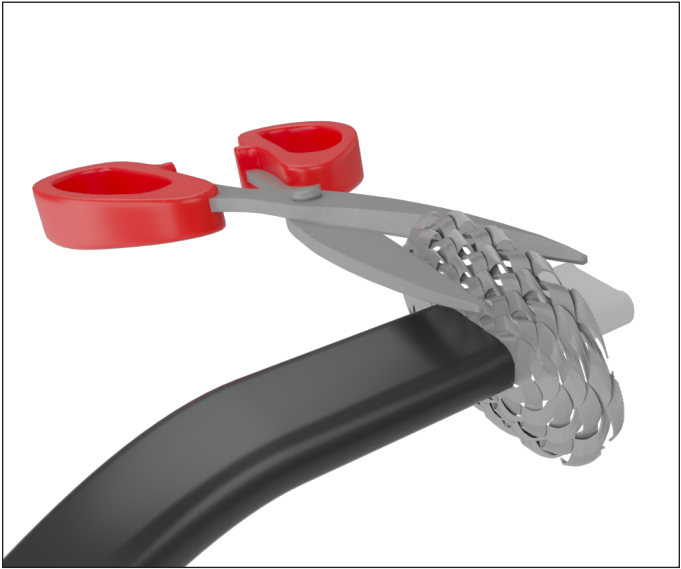


11. Starting with the screws labeled "1" and "2", tighten each screw approximately halfway down. Then tighten screws labeled "3" and "4" approximately halfway down. Repeat this order until the IDC is fully seated with a torque of 2 Nm on each screw.

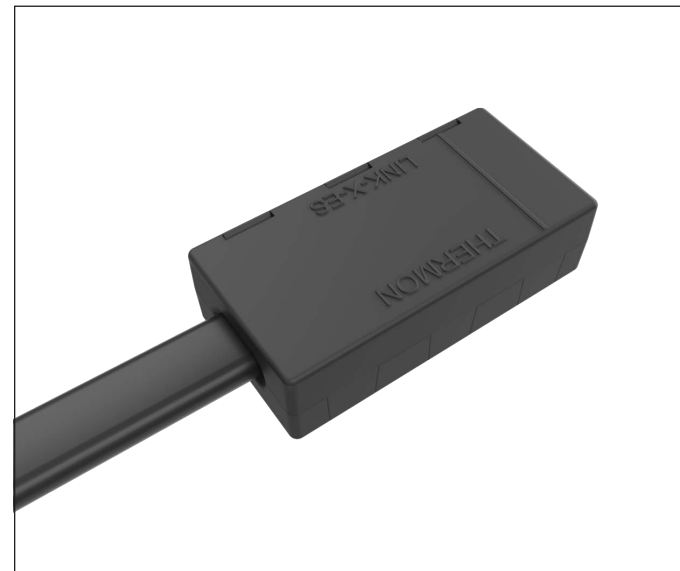
⚠ WARNING: The IDC mechanism punctures the heat trace cable and is single use only. Once the IDC is tightened, do not attempt to loosen the screws and do not attempt to remove or re-insert the heat trace cable.



12. For installing an end seal, repeat steps 3-5 on the opposite end of the heat trace cable from the enclosure, with the exception that for step 4, line the heat trace up with the edge of the end seal and use the molded line on the end seal to mark the cut length.



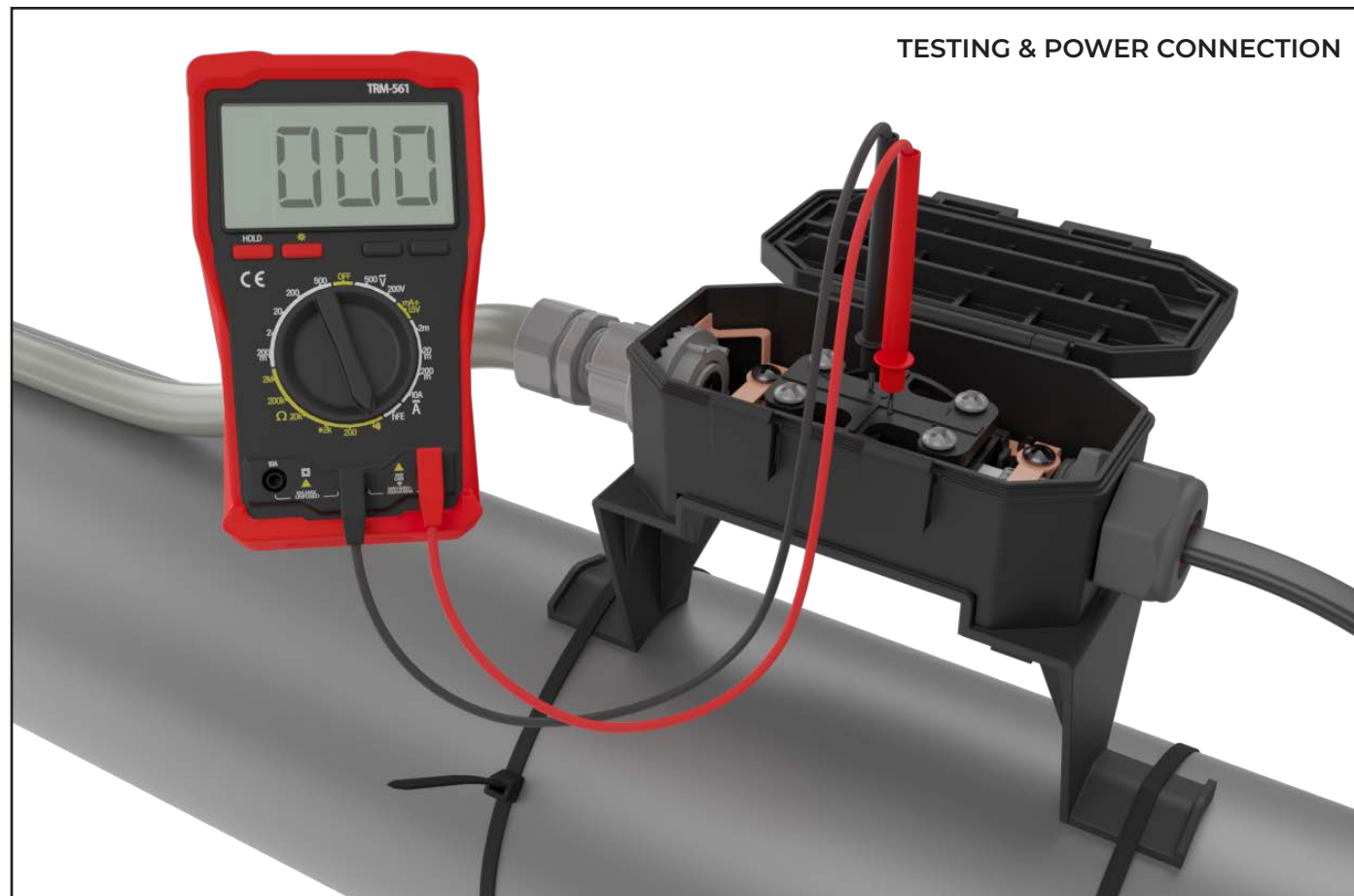
13. Trim away the exposed braid from the heat trace cable.



14. Push the end seal onto the heat trace cable until the overjacket is fully contained within the end seal.

15. The end seal is single use only, do not attempt to remove once installed.

TESTING & POWER CONNECTION



16. Test ports are included in all **LINK** IDC models to help the heat trace installer confirm there is continuity across the device after the connection is made. Please refer to the heat trace design guide and installation instructions for detailed information about heat trace use. Please refer to the instruction manual of the specific multimeter being used as exact details will vary by model. The basic process for continuity testing is as follows:

1. **⚠ WARNING:** Ensure power source is not energized.
2. Set multimeter to the Continuity Test function.
3. Place a multimeter probe in each test port.
4. Confirm continuity on multimeter (refer to multimeter manual for exact reading and form of continuity indication).

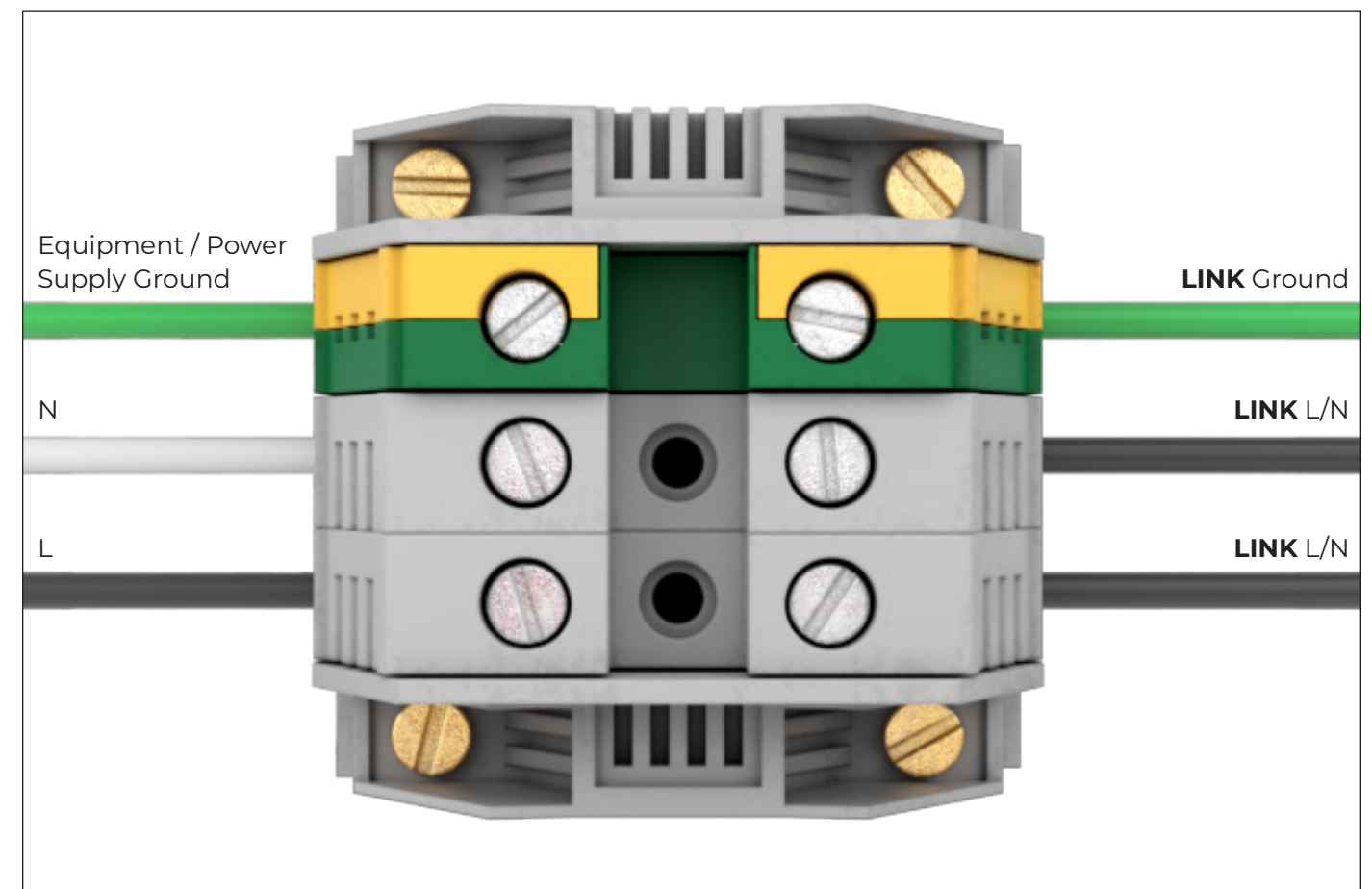


17. Verify that the lid gasket is fully seated in the groove and close the lid, ensuring that both snaps are fully secured.

⚠ WARNING: Do not close the lid until all steps have been completed. If the device needs to be re-entered, a flathead screwdriver is required to disengage the enclosure snaps.



18. The heat trace circuit is now ready for taping to the piping, final electrical connections, and insulation. Ensure that the heat trace cable and end seal are completely covered and not exposed to sunlight.



19. Complete system wiring according to customer design. Customer supplied terminal blocks, lugs, wire nuts, or other suitable and appropriately rated connection equipment to be used. Refer to typical terminal block example shown above.

RATINGS

Ingress protection²: Type 4X, IP65

Maximum continuous exposure temperature: 85°C (185°F)

Minimum installation temperature: -20 C (-4 F)

Maximum breaker size: 20 A (“D”), 30 A (“B” & “X”)

Max. operating current: 12 A (“D”), 17 A (“B” & “X”)

Maximum voltage: 277 Vac

Note 1: LINK-B-PC, LINK-B-HS, and LINK-X-ES are UL listed for use with System FLX+LINK

Note 2: Type 4X and IP65 are not covered by the UL listing

CIRCUIT BREAKER SELECTION & MAXIMUM CIRCUIT LENGTHS FOR 120 VAC

120 Vac Service Voltage		Max. Circuit Length vs. Breaker Size m (ft)	
Heat Trace Catalog Number	Start-Up Temp. °C (°F)		
		20 A	30 A
3-FLX-1	10 (50)	108 (354)	103 (340)
	0 (32)	108 (354)	103 (340)
	-20 (-4)	96 (315)	103 (340)
5-FLX-1	10 (50)	71 (234)	67 (220)
	0 (32)	71 (234)	67 (220)
	-20 (-4)	61 (200)	67 (220)
8-FLX-1	10 (50)	57 (186)	54 (178)
	0 (32)	57 (186)	54 (178)
	-20 (-4)	44 (144)	54 (178)
10-FLX-1	10 (50)	47 (156)	45 (148)
	0 (32)	42 (138)	45 (148)
	-20 (-4)	33 (108)	45 (148)

CIRCUIT BREAKER SELECTION & MAXIMUM CIRCUIT LENGTHS FOR 208, 240 & 277 VAC

208 Vac Service Voltage		Max. Circuit Length vs. Breaker Size m (ft)	
Heat Trace Catalog Number	Start-Up Temp. °C (°F)		
		20 A	30 A
3-FLX-2	10 (50)	214 (702)	204 (672)
	0 (32)	214 (702)	204 (672)
	-20 (-4)	192 (630)	204 (672)
5-FLX-2	10 (50)	146 (479)	131 (432)
	0 (32)	146 (479)	131 (432)
	-20 (-4)	117 (384)	131 (432)
8-FLX-2	10 (50)	117 (384)	108 (355)
	0 (32)	108 (354)	108 (355)
	-20 (-4)	84 (276)	108 (355)
10-FLX-2	10 (50)	57 (289)	89 (294)
	0 (32)	85 (279)	89 (294)
	-20 (-4)	67 (220)	89 (294)

240 Vac Service Voltage		Max. Circuit Length vs. Breaker Size m (ft)	
Heat Trace Catalog Number	Start-Up Temp. °C (°F)		
		20 A	30 A
3-FLX-2	10 (50)	214 (702)	204 (672)
	0 (32)	214 (702)	204 (672)
	-20 (-4)	192 (630)	204 (672)
5-FLX-2	10 (50)	142 (468)	131 (432)
	0 (32)	142 (468)	131 (432)
	-20 (-4)	117 (384)	131 (432)
8-FLX-2	10 (50)	113 (372)	107 (354)
	0 (32)	108 (354)	107 (354)
	-20 (-4)	84 (276)	107 (354)
10-FLX-2	10 (50)	57 (289)	90 (295)
	0 (32)	85 (279)	90 (295)
	-20 (-4)	67 (220)	90 (295)

277 Vac Service Voltage		Max. Circuit Length vs. Breaker Size m (ft)	
Heat Trace Catalog Number	Start-Up Temp. °C (°F)		
		20 A	30 A
3-FLX-2	10 (50)	207 (681)	204 (672)
	0 (32)	207 (681)	204 (672)
	-20 (-4)	192 (630)	204 (672)
5-FLX-2	10 (50)	135 (443)	131 (432)
	0 (32)	135 (443)	131 (432)
	-20 (-4)	117 (384)	131 (432)
8-FLX-2	10 (50)	111 (366)	108 (355)
	0 (32)	108 (354)	108 (355)
	-20 (-4)	84 (276)	108 (355)
10-FLX-2	10 (50)	57 (289)	90 (295)
	0 (32)	85 (279)	90 (295)
	-20 (-4)	67 (220)	90 (295)

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