NELSON HEAT TRACING SYSTEMS

PLT-CMD CONTINUITY MONITOR DEVICE

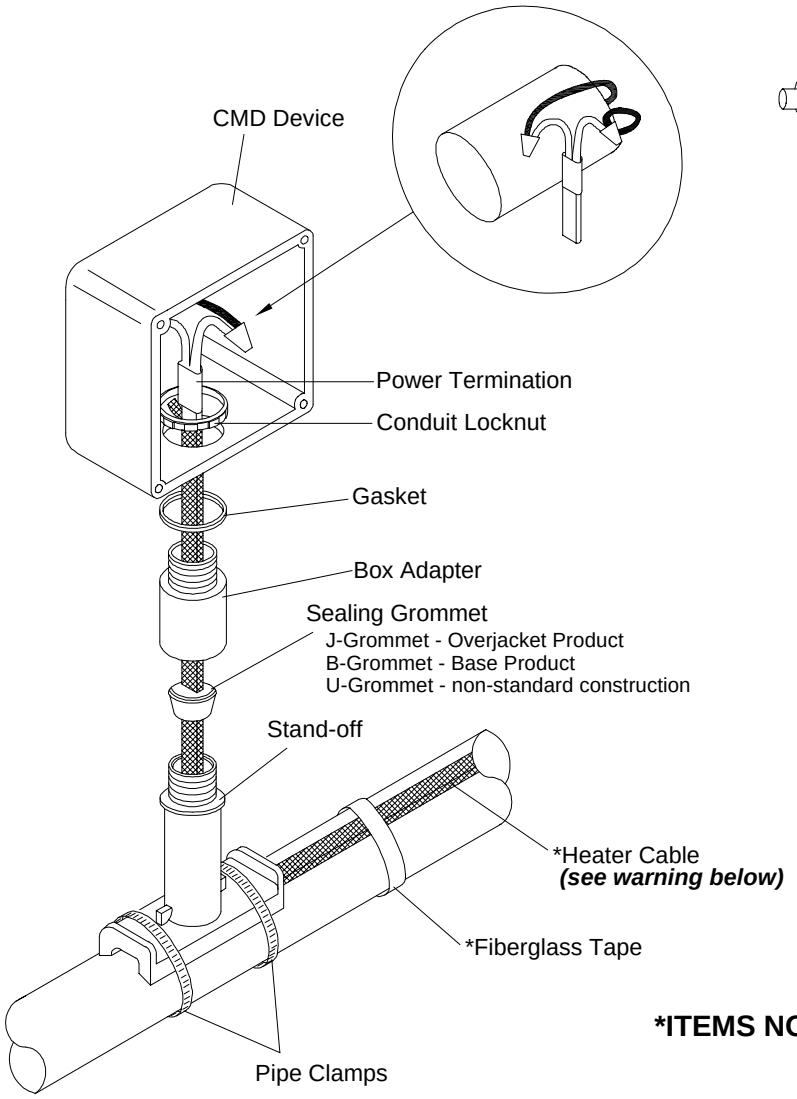
INSTALLATION INSTRUCTIONS

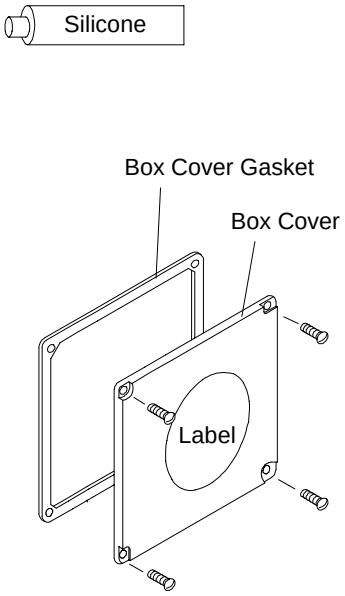
DESCRIPTION

The PLT-CMD continuity monitor device is used to monitor bus continuity on a parallel type heater cable. After the heater cable is installed on the pipe, connect the PLT-CMD to the opposite end of the power connection kit.

KIT CONTENTS

1	CMD Device	1	Power Termination
1	Conduit Locknut	1	Box Adapter
1	Sealing Grommet	1	Gasket
1	Stand-off	1	Tube of Silicone
1	Label	2	Pipe Clamps
2	Wire Nuts		





***ITEMS NOT INCLUDED IN KIT**

Note: This detail shows Braided "CB" Products only. For Overjacket "J" or "JT" Products see diagram on sheet 8.

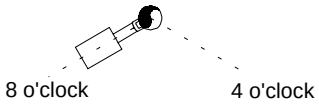
⚠ WARNING:

Article 427-22 of the National Electrical Code requires that all heaters shall have metal coverings and be provided with branch circuit ground-fault protection.

4041 S. SHERIDAN RD ■ TULSA, OK 74145 ■ P. O. BOX 726 (74101) ■ TEL 918-627-5530 ■ FAX 918-622-9308

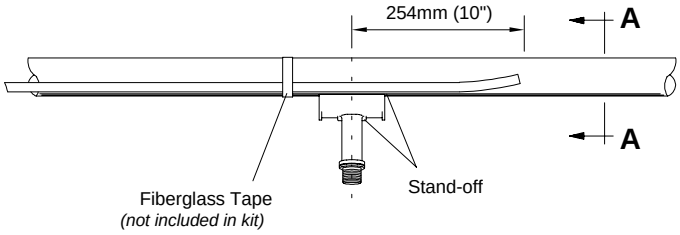
STAND-OFF POSITIONING

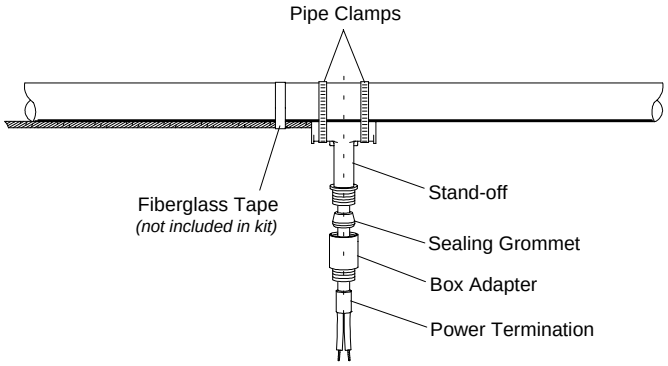
Section View A A
(recommend installing at the 4 or 8 o'clock positions.)



⚠ WARNING:

Do not place pipe clamps over the heater cable.





❶ Mark pipe where stand-off will be mounted.

❷ Push heater cable through bottom opening of stand-off.

❸ Slide the sealing grommet over the heater cable and position inside stand-off opening:

for Braided "CB" Products:
See *"Grommet Installation for Braided "CB" Products",* sheet 3.

for Overjacket "J" or "JT" Products
Proceed with step 4 below.

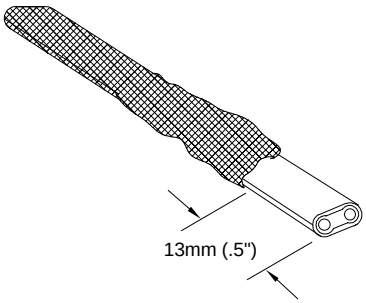
❹ Apply silicone around the heater cable on top of the sealing grommet and fill any voids in sealing grommet.

❺ Slide the box adapter over the heater cable and tighten securely to stand-off.

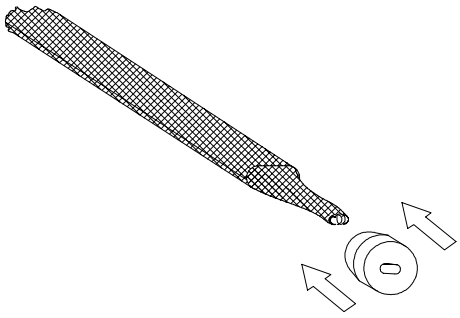
❻ Prepare heater cable for power termination:
for Braided "CB" Products, see sheet 3.
for Overjacket "J" or "JT" Products, see sheet 4.

❼ Terminate heater cable, see sheet 7.

SEALING GROMMET INSTALLATION FOR BRAIDED "CB" PRODUCTS

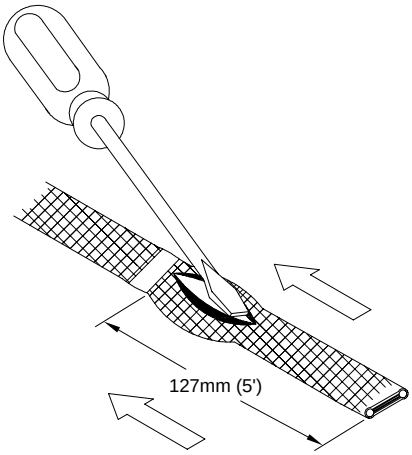


❶ Slide braid back, allowing at least 13mm (.5") of heater cable exposed.
❷ Cut and remove 13mm (.5") of heater cable.

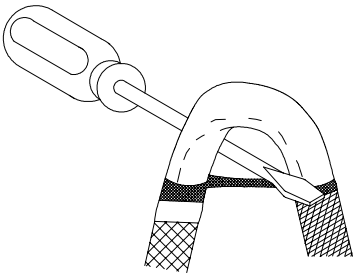


❸ Slide braid back over heater cable and twist excess braid into a pigtail.
❹ Slide the sealing grommet over the heater cable and position inside stand-off opening.
❺ Continue with step 4 on sheet 2.

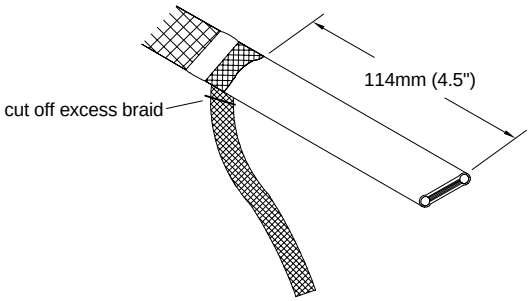
BRAIDED "CB" PRODUCTS



❶ Secure cable braid with fiberglass tape.
❷ Slide braid back 127mm (5") to create a bulge.
❸ At the bulge, separate the braid to make an opening.

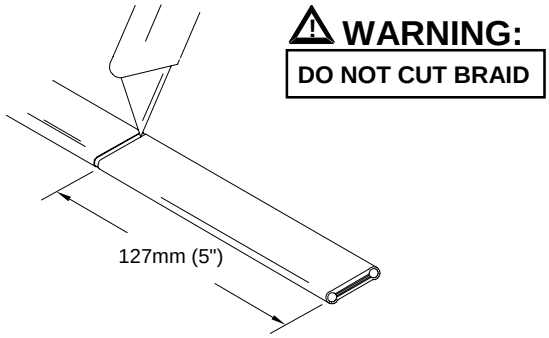


❹ While bending the heater cable, work it through the braid opening.



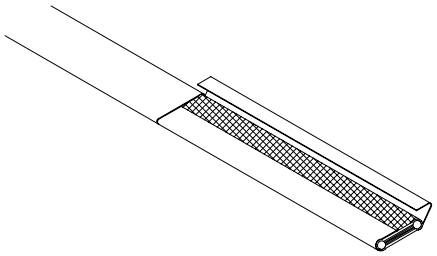
❺ Pull the braid tight.
❻ Cut off excess braid.
❼ Proceed to *"LT, CLT & HLT Products",* sheet 5

OVERJACKET "J or "JT" PRODUCTS

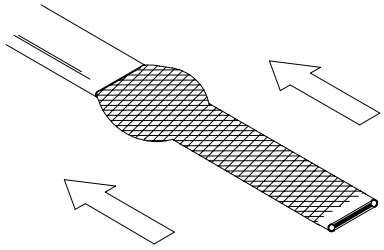


❶ Lightly cut around cable overjacket 127mm (5") from the end. Bend cable to break the overjacket.

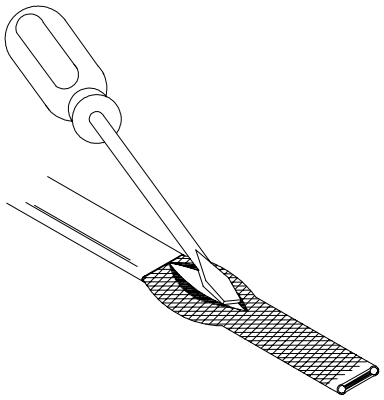
❷ Lightly cut overjacket up the center between first cut mark and the cable end. Bend cable to break the overjacket.



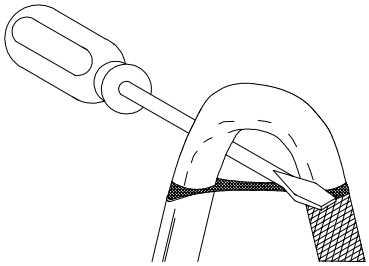
❸ Remove overjacket from heater cable.



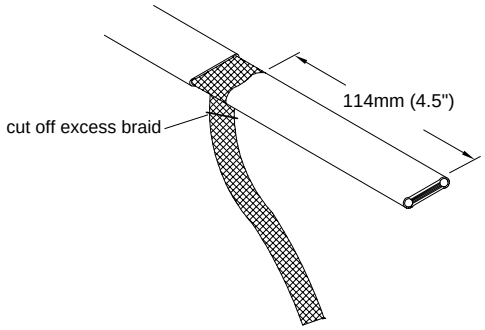
❹ Move braid back toward the overjacket, creating a bulge.



❺ At the bulge, separate the braid to make an opening.



❻ While bending the heater cable, work it through the braid opening.



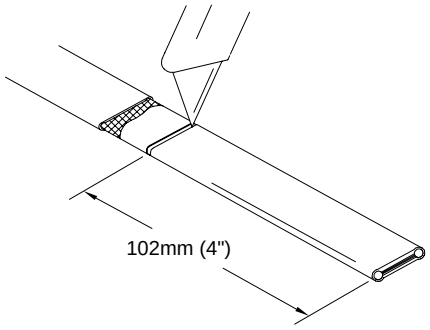
❼ Pull the braid tight.

❽ Cut off excess braid.

❾ Proceed to *"LT, CLT & HLT Products",* sheet 5.

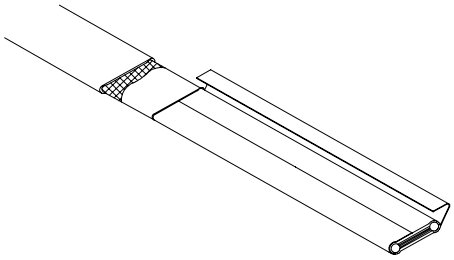
FOR ALL NELSON LT, CLT & HLT PRODUCTS

(See sheet 6 for an alternate stripping method for HLT products.)

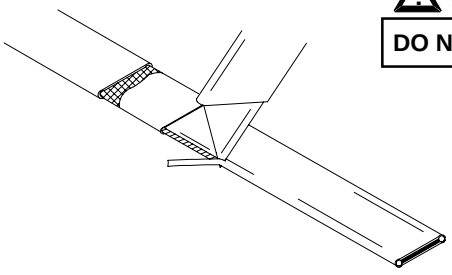


❶ Lightly cut around cable outer jacket 102mm (4") from the end. Bend cable to break outer jacket.

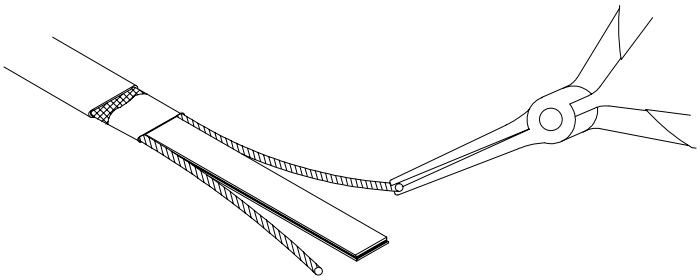
❷ Lightly cut the outer jacket up the center between the first cut mark & the cable end. Bend cable to break outer jacket.



❸ Remove the jacket from the heater cable.

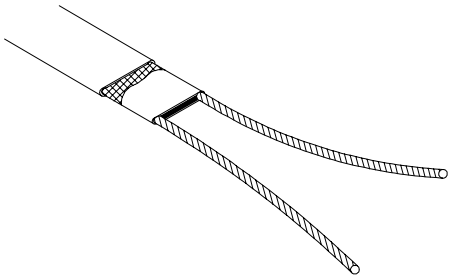


❹ Shave the core material from the outside of each bus wire.



❺ Starting at the end, pull each bus wire away from the core material.

❻ Remove exposed core material.



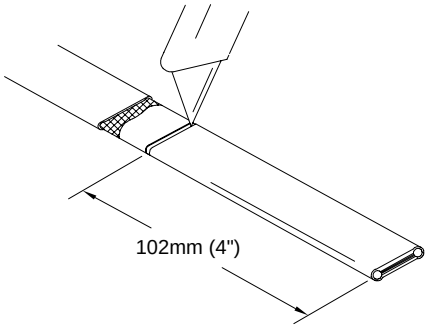
❼ Cut 6mm (0.25") off the end of each bus wire.

❽ Proceed to *"Power Termination",* sheet 7.

⚠ WARNING:

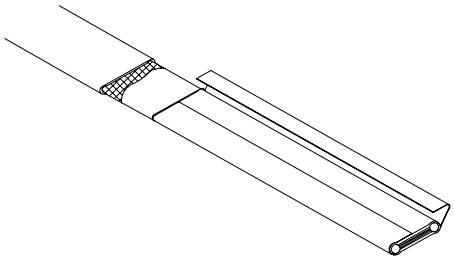
DO NOT CUT BUS WIRES

HLT PRODUCTS
ALTERNATE STRIPPING METHOD

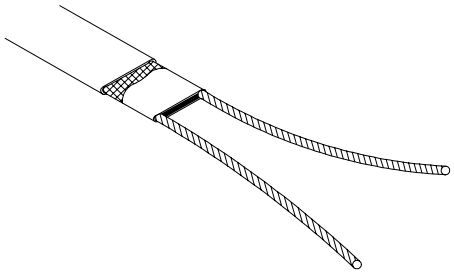


❶ Lightly cut around cable outer jacket 102mm (4") from the end. Bend cable to break outer jacket.

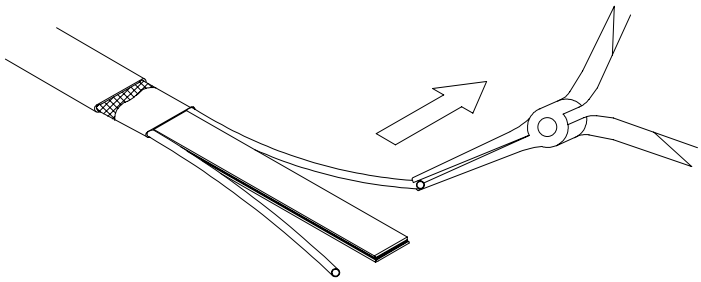
❷ Lightly cut the outer jacket up the center between the first cut mark & the cable end. Bend cable to break outer jacket.



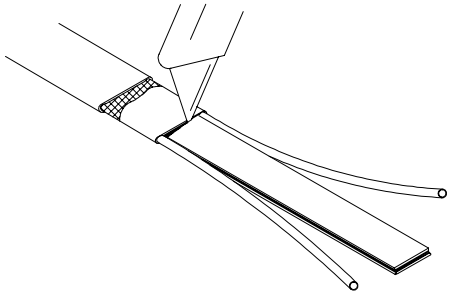
❸ Remove the jacket from the heater cable.



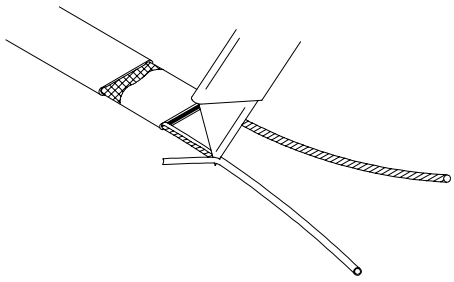
❹ Make a cut inside each bus wire.



❺ Starting at the end, in the same plane as the cable, pull each bus wire away from the core material.



❻ Remove the exposed core material.



❼ Remove the remaining core material off the outside of each bus wire.

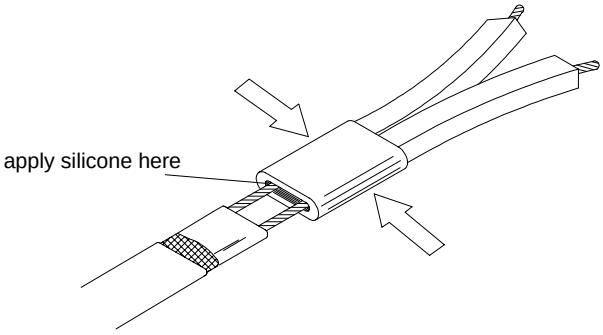
❽ Cut 6mm (0.25") off the end of each bus wire.

❾ Proceed to *"Power Termination",* sheet 7.

POWER TERMINATION

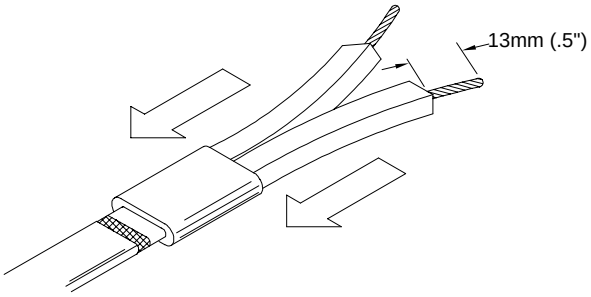
⚠ WARNING:

Bus wires must not touch or cross while inserting into power termination.



❶ Insert bus wires into power termination.

❷ Squeeze power termination opening and fill with silicone.

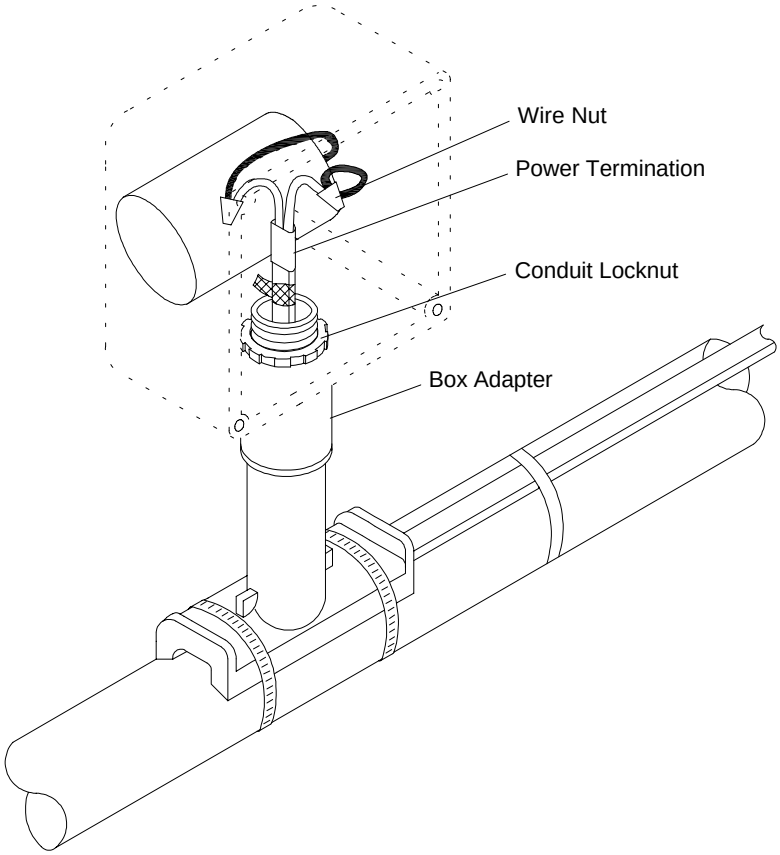


❸ Push power termination to overlap jacket.

❹ The silicone will set up in about 30 minutes with a complete cure after 24 hours.

❺ Proceed to *"Electrical Connection",* sheet 8.

CMD DEVICE CONNECTION



Note: This detail shows Overjacket "J" or "JT" Products only. For Braided "CB" Products see diagram on sheet 1.

❶ Place gasket onto the box adapter.

❷ Position the CMD device onto the box adapter and secure it with the conduit locknut.

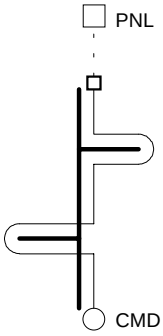
❸ Connect heater bus wires together with the CMD lead wires using the wire nuts. ***(See diagram above.)***

❹ Make sure all wires are placed inside the CMD device.

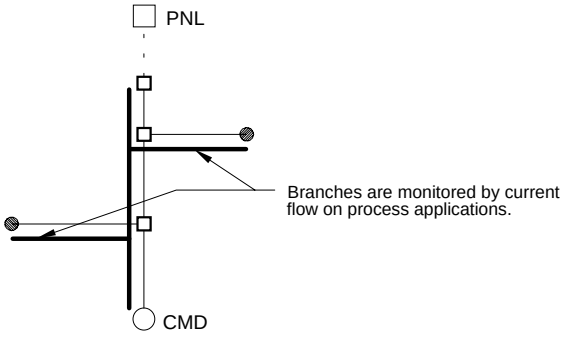
❺ Place the box cover and box cover gasket onto the CMD device.

❻ See sheet 9 for "CMD Cable Connections to CM-1 and CM-2/1".

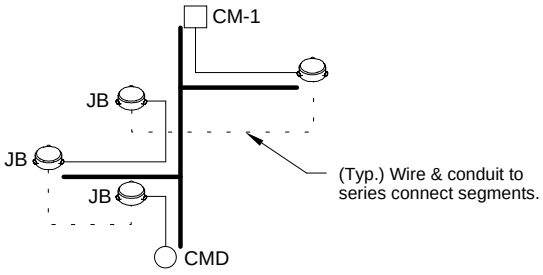
CMD CABLE CONNECTIONS TO CM-1 & CM-2/1



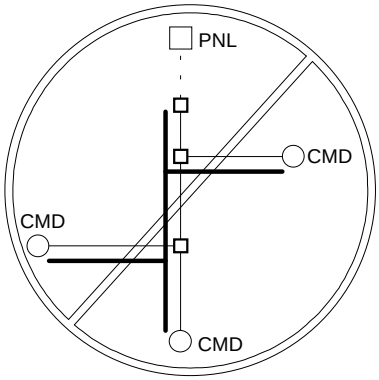
Short side branch (under 254mm (10"))



Long side branch

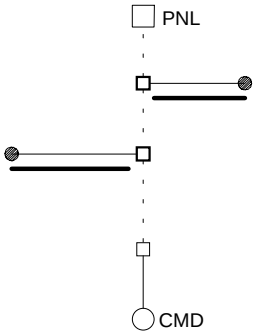


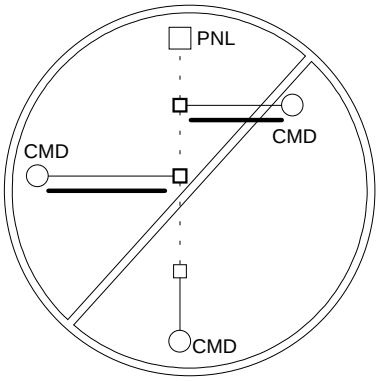
Long side branch



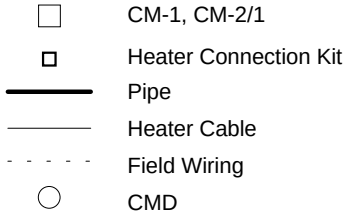
will not work

Branch / Tee Piping
(single circuit, multiple cable segments)





will not work



Grouped Segments
(several separate cables through single monitor point)