Installation Instructions

DREX0001AL LP-PC-1-AL

Metallic Low Profile Power Connection – Single Cable

These installation instructions are only for use with the following Drexan HeatTracer Self-Regulating heater products:

PipeGuard® Warm (PGW), MultiTrace® (MT), HotTape® (HT) and PipeGuard Hot (PGH).

This kit may be installed in temperatures as low as -40°F/°C.

⚠ **WARNING**: This is an electrical device and in order to ensure proper operation and prevent shock or fire it must be installed correctly. Read these important warnings. Follow all installation instructions.

CAUTION: Ground-fault equipment protection shall be provided to de-energize all normally ungrounded conductors of electrical heating cable sets, with ground fault settings sufficient to allow normal operation of the heater unless applicable codes permit otherwise, and to minimize the danger of fire from sustained electrical arcing if the heating cable is damaged or improperly installed and to comply with Drexan requirements, agency certifications and National Electrical codes. Conventional circuit breakers may not stop arcing. Each heating device branch circuit or each heating device shall have ground fault equipment protection.

Do not use substitute parts or substitute electrical tape. Component approvals and performance characteristics are based on Drexan specific parts only. Substitution will void warrantee, approvals and performance claims.

The heating cable core is conductive and can short if not properly insulated and kept dry. Component and heating cable ends must be kept dry before and during installation. Fire-resistant thermal insulation materials should be used.

Heating cable core bus wires can overheat and short when damaged. When cutting the cable jacket or core do not break bus wire strands.

Bond the metallic braid of the self-regulating heating cable to a suitable grounding (earth) terminal. De-energize before installation or servicing.

HEATING CABLE RATINGS

120 – 277 Volt
PGH only: 5–20 W/ft., Maximum 40A.
Maximum intermittent exposure temperature 446°F/230˚C.
Minimum bend radius: 1.72 in. (44 mm) @ -40˚F/˚C.

All other cables: 3–10 W/ft., Maximum 32A.
Maximum continuous exposure temperature 150°F/65˚C.
Minimum bend radius: 1.18 in. (30 mm) @ 68˚F/20˚C.

Note: For installation in Class I, Div. 1 or Class II, Div. 1 areas, this kit must be used with kit DREX0019 (Division 1 Adapter Kit: Drexan Cat.# DIV1-ADP – supplied separately).

*APPROVALS

C SP® US
231572
Class I, Div. 1/2, Groups A, B, C, D
Class II, Div. 1/2, Groups F, G
Class II, Div. 1, Group E

c UL us LISTED
E471335
**E484945
Class I, Div. 2, Groups A, B, C, D
Class II, Div. 2, Groups F, G
Class III
** General Purpose/Ordinary Location UL File

c UL LISTED
E471335
Class I, Groups B, C, D
Class II, Groups E, F, G

*This kit is not UL listed for use with PGH/HotTape products

Drexan Energy Systems, Inc.
Kelowna, BC, Canada, V4V 1S5

KIT CONTENTS

- Metallic Housing with cover and gasket
- Metallic Strain Relief (cap, washer, grommet, base)
- Warning Label
- Insulated Crimp Sleeve (2)
- Cold applied Core Sealer
- 3/16" tube (for PGW, MT, HT only)
- Installation Instructions

REQUIRED BUT NOT PROVIDED

Materials

- Cable Lubricant
- Glass Fiber Cloth Tape, Drexan Cat. TAPE-GCR-HT / TAPE GCS-LT or equivalent

Note: For installation in Class I, Div. 1 or Class II, Div. 1 areas, this kit must be used with kit DREX0019 (Division 1 Adapter Kit: Drexan Cat.# DIV1-ADP – supplied separately)

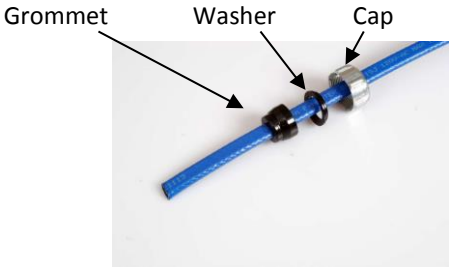
Equipment

- Utility Knife
- Wire Stripper
- Wire Cutter
- Crimp Tool
- Multi Head Screw Driver
- Pipe Wrench
- Heat Gun

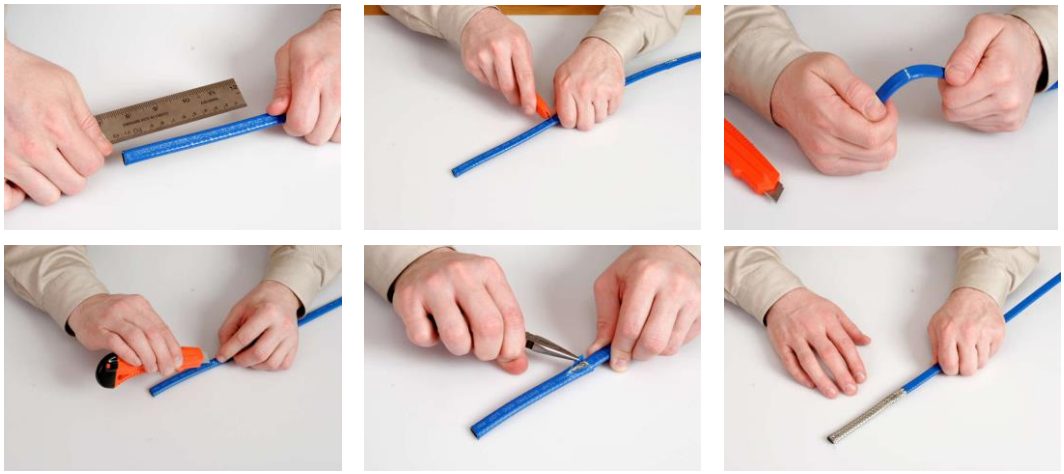
ASSEMBLY INSTRUCTION DETAILS

PIPEGUARD WARM (PGW) / MULTITRACE (MT) / HOT TAPE (HT)

1. Allow approximately 24" (60 cm) of heating cable for installation from the pipe.
2. Disassemble the Strain Relief assembly, cut heater on approximately a 45˚ angle. Lubricate heater with cable lubricant and thread heater through Strain Relief cap, washer and grommet respectively (wide end towards washer) until 8" (20.3 cm) of the heater end is exposed. Put Strain Relief base aside.

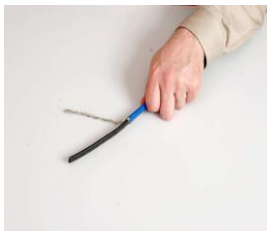


3. Taking care not to cut the Ground Braid, remove 7" (17.8 cm) of outer jacket from the Heater.



4. Push Ground Braid back towards the outer jacket cut back. Make a buckle in the Braid. With a screw driver, create an opening in the Ground Braid without cutting it, big enough to pull the cable through. Bend cable enabling it to push through the opening in the Ground Braid. Twist the Ground Braid into a solid ground lead.



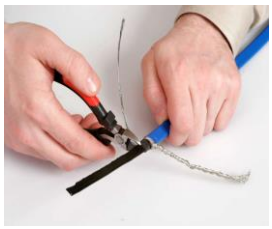
5. Strip back inner jacket and clear membrane within 1½" (38 mm) of the outer jacket cut-back.

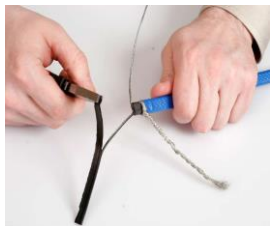


6. Notch core. Peel one of the conductors from the core. Score core between the conductors as close as possible to cut-back end. Peel core from remaining conductor. Clean conductor wires until wires are completely exposed.










7. Place the supplied tube over one bus wire prior to sliding the core sealer over the bus wires (PGW, MT, HT only - this will provide added protection from a short between the two bus wires). Then slide the core sealer over the bus wires of the cable, over the inner core until as close to the Braid as possible.

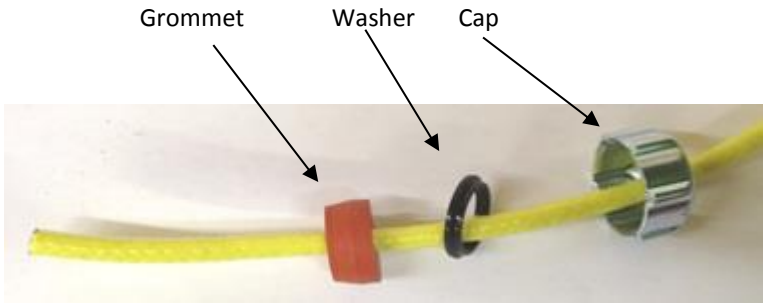
   Note: Ensure the crotch of the core sealer is tight up to the inner jacket separating the two bus wires.



8. Push Heater Strain Relief Grommet to the edge of the insulation, until only the stripped Heater twisted Ground Braid and conductors are exposed.

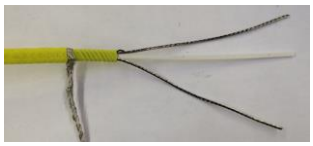
PIPEGUARD HOT (PGH)

1. Allow approximately 24” (61 cm) of heating cable for installation from the pipe.
2. Disassemble the Strain Relief assembly, cut heater on approximately a 45° angle. Thread heater through Strain Relief cap, washer and grommet (wide end towards washer) respectively until 8” (20.3 cm) of the heaters end is exposed. Put Strain Relief base aside.



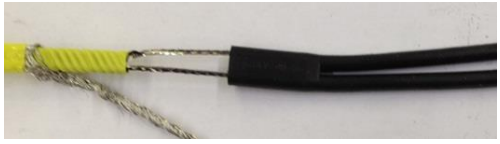
3. Taking care not to cut the Ground Braid, remove 7” (17.8 cm) of outer jacket from the Heater

4. Push Ground Braid back towards the outer jacket cut back. Make a buckle in the Braid. With a screw driver, create an opening in the Ground Braid without cutting it, big enough to pull the cable through. Bend cable enabling it to push through the opening in the Ground Braid. Twist the Ground Braid into a solid ground lead.
5. Strip back inner jacket to within 1½” (38 mm) of the outer jacket cut back exposing the bus wires. Trim the fiber heating element and spacer.




6. Slide the core sealer over the bus wires of the cable, over the inner core until as close to the Braid as possible.

   Note: Ensure the crotch of the core sealer is tight up to the inner jacket separating the two bus wires.




7. Push Heater Strain Relief Grommet to the edge of the insulation, until only the stripped Heater twisted Ground Braid and conductors are exposed.

FINAL ASSEMBLY

1. Install Strain Relief Base into Housing and tighten with pipe wrench.
2. Feed Heater Conductors and Ground wire through the Strain Relief Housing into the Housing and fit the Heater Strain Relief Grommet into the Strain Relief Housing. Tighten the Strain Relief Nut hand tight.
3. Attach Heater Ground Lug to one of the Ground Positions in the Housing.



4. Feed Power Conductor into Housing.
5. Crimp Power Conductor Cables to Heater Conductors using Insulated Crimp.

   Note: The illustrations shown in this installation instructions document illustrate the use of flexible cord and cord connectors for supply power field wiring which is not an acceptable wiring method in hazardous locations. For installation in hazardous locations, the wiring method used shall comply with one of the wiring methods permitted in the National Electrical Code or Canadian Electrical Code (as applicable) for the hazardous location classification of the installation.


6. Check that the Crimp Splices are firm. Cut, strip and splice conductors again if necessary.
7. Check Ground Connections to ensure they are firm.
8. Push conductors into the Housing taking care not to kink wires or expose conductors.
9. Retighten the heating cable Strain Relief Nut (¼ turn) with a wrench.
10. Find a suitable location and affix the Electrical Warning Label. The presence of the trace heaters shall be made evident by the posting of caution signs or markings at appropriate locations and/or at frequent intervals along the circuit.