



Now you're getting warmer!

ORBIT MANUFACTURING COMPANY
RADIANT HEATING PRODUCTS GROUP
1507 B WEST PARK AVE. PERKASIE, PA 18944
PHONE: 215-453-9228
FAX: 215-257-7399

TXLP Series Electric Roof & Gutter Melting Cable Instructions

Installation Of The Heating Cable

IMPORTANT NOTE: THESE CABLES ARE NOT TO BE INSTALLED IN WALLS OR CEILINGS FOR ANY REASON AND ALL ELECTRICAL CONNECTIONS MUST BE PERFORMED BY A QUALIFIED, LICENSED ELECTRICIAN.

NEVER:

Cross the heating cable over itself.
Cut the heating cable for any reason.
Run the heating cable directly into the junction box.
Subject any part of the cable to harmful surfaces.

ALWAYS:

Follow local and national electrical codes.
Test the cable for the proper readings before, during and after the installation.
Fill out the warranty card and return it to Orbit.

GENERAL INSTALLATION GUIDELINES

Description: Heating cables are delivered as factory custom made heating elements, which are a pre-determined length of single conductor heating cable with the two conductor ends spliced to non-heating cold leads. TXLP Roof and Gutter Cables are designed for permanent installation and utilize hard wired controls. The heating cables are custom designed under precise specifications and can not be altered for any reason and are not interchangeable with other cables. **It is very important for the cable layout to be held as close to the design parameters as possible in order to avoid installation problems.**

Loading: Heating cables covered by these installation instructions are designed with the following MAXIMUM values:

Outdoor on Roofs & Gutters: 4.5 - 7.5 watts linear ft.

Voltage: 120, 208, 220, 230, 240, 277, 460 and 480. (Single Phase or Three Phase)

The relationship between supply voltage, linear resistance, cable length and center spacing are important, as they need to be understood in order to give the right operating temperature and surface temperature distribution.

Electrical code and safety: All heating cable installations shall be installed according to the National Electric Code (NEC) Article 426 for outdoor deicing and snow melting. **(In addition, the installation shall be in accordance with the regulations of all authorities having jurisdiction.)** **Caution:** This equipment shall only be installed by qualified personnel, who are familiar with the construction, operation, installation and hazards involved in outdoor environments. Weatherproof materials shall be used per all governing local and NEC requirements.

TESTING PROCEDURES FOR TXLP ROOF & GUTTER MELTING CABLE

CABLE DESCRIPTION: 2 Black (Non-Heated Power Leads), 2 Green (Ground Wires) Spliced to Each End of the Heating Cable.

1. Verify the cable you ordered is the one that you received. Refer to the cable flag tag that is attached to one of the black non-heated lead wires. This tag will list the following information: Watts, Volts, Cable Length, Ohms and Amps.
2. Visually check the cable for obvious flaws or breaks.
3. With a digital ohm meter, check your resistance between the two black wires. Reading should be between +/- 10% of the value listed on the Cable tag. Record your readings for warranty registration.
4. With a megger, perform a leak test on the cable. (If a megger is not available, step 3 will have to suffice). The reading should be 1999, all blanks, or infinity.
5. During the installation, monitor the cable for any sudden changes in the ohms.
6. After the cable is installed, repeat steps 3 & 4.
7. When performing an actual amperage test, never run the cable for more than 15 seconds.

GUTTER CABLE INSTALLATION:

Important Note: When pulling the cable off the spool or from the wire tie wraps, always pull by the heating cable, not by the green and black lead wires. This will ensure that the integrity of the splice is not compromised.

Do not install TXLP Roof and Gutter Snow and Ice Melting Cable in temperatures below 25F, as the outer pvc jacket becomes brittle at low temperatures, and may crack as a result.

If you have any questions during installation, please contact tech support at **1-800-522-3986**.

GUTTER GUARDS MUST BE USED IN ALL APPLICATIONS OR WARRANTY WILL BE VOIDED

Gables, steel, copper, or aluminum gutters shall be free of any sharp objects. Down spout openings shall be free of all burrs and down spouts shall not have any sheet metal screw points penetrating the inside of the down spout. Most gutters have a high and low side to direct the water to the down spout. If a gutter sensor was purchased, place in the low side to assure proper detection of moisture and temperature. Find the spacing formula on the Packing List that came with your system. On metal roofs, the cable should be looped between the raised seems, and not over top of the seems. Lay the splice (Fig. 1A) into the gutter, but do not secure at this time. On the roof, lay out the cable to mirror the actual installation in the gutter and down spouts. Measure the down spout, then install the clips every 6" to help lower the cable down the spout. Now, install the cable in the gutter and in the down spout. Place the DSCS Clips every 12" on the cable in the gutter. Use the down spout hanger kit (Fig. 5) to secure the cable. Now, secure the splice with two RC-2 Clips, shown in Figure 1A.

(FOR RUNS OVER 50 FEET, AN RC-2 CLIP SHOULD BE INSTALLED TO SECURE THE CABLE TO THE GUTTER).

We have been asked about different ways to secure the TXLP Roof & Gutter Cable to various roofing materials without making holes in the roof. The following methods are recommended:

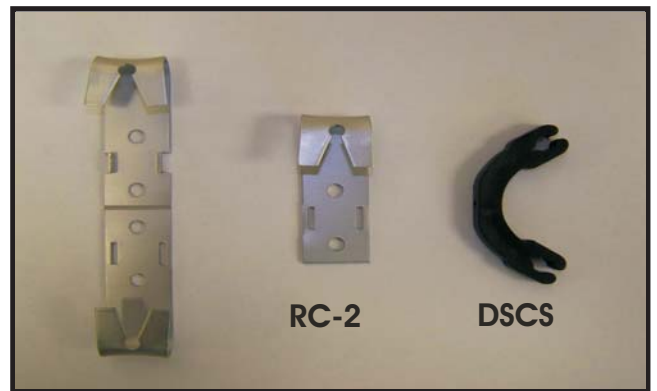
1. For rubber (PVC) type roofs, we recommend using an actual piece of roofing material and heat welding it to the roof surface.

Figure 1-A

Lead And Splice Installation



Figure 1



2. For metal (Tin or Aluminum) or shingle roofs, we suggest using our RC-2 Clips, which will be secured to the roof per the design layout. See Figure 3. These metal clips can be used as spacers for the runs of cable, or broken in half to use as clips. To secure the RC-2 Clip, use double sided tape. (STIKL-11, No. 43-23, or equivalent). RCT-1 Tape is a double sided tape, 3.4" wide by 108' long used to attach our RC-2 clips to the roof and gutter. When using this tape on a shingle roof, make sure to scrape off the rough surface of the shingle before applying the tape to assure a proper bond. The tape cannot be installed in temperatures below 50 degrees Fahrenheit .

Shingle Roof Installation:

When installing the cable on a shingle roof (Figure 2), see the packing list for the design layout so the cable will be installed properly. Lay the cable per design and secure with our RC-2 clips. (Pg 2). The bottom loop should extend approximately 2" over the roof edge before looping back onto the roof.

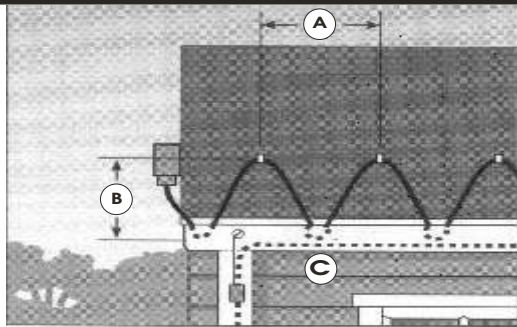


Figure 2

Note: Gutter and downspouts will have 2 parallel runs, with DSCS Clips every 12 inches in the gutter, and every 6 inches in the downspouts.



Metal (Standing Roof) Cable Installation:

For installation on metal roofs (Figure 3), loop up between the seems per the design layout, then back down around the bottom edge of the seem. The bottom loop should extend approximately 2" over the roof edge, as with a shingle roof. Secure at the top and bottom with an RC-2 Clip. Repeat as needed.



Figure 3



Downspout Installation

The TXLP Snow and Ice Melting Cable will hold its shape when formed. You will find this useful when fabricating a drop loop for downspouts. When melting snow and ice in a downspout, we do not suggest installing the cable in downspouts longer than approximately 10 Feet. To begin, place DSCS Clips every 6 inches along the cable loop that goes into the downspout and follow the procedures in Figure 6 to mount the downspout hanger.

Orbit Radiant Heating DSH-1 Downspout Hanger Kit Contents and Installation

DSH-1 Downspout Hanger Kit:

2-Stainless Steel Clamps
2-Split Grommets
2-Stainless Steel Wire Hangers

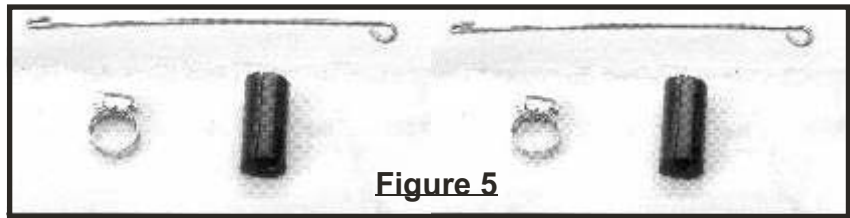


Figure 6

Figure A.



Figure B.



1. Position the split grommet around the heating cable where the downspout hanger will be placed. (Fig. A)

2. Center the hairpin end of the wire hanger along the split grommet. Slide the clamp over the hanger so the band of the clamp is between the "legs" of the hairpin. (Fig. B)



Figure C.



Figure D.

3. Tighten the clamp until the hanger and the cable are firmly held in place. (Fig. C)

4. Attach the hanger assembly to the roof structure with a roofing nail or screw. (Fig. D)

LIMITED WARRANTY

The warranty time shall be 10 (ten) years from the time of shipment from the factory. Orbit guarantees that the cables are free from defects in the material and workmanship. This guarantee is from Orbit and is limited to delivery of new products to the customer.

Orbit or its distributors are under no circumstances liable for consequential damages or losses including without limitation the loss of profits arising from any cause whatsoever. This guarantee is a material warranty only and does not cover field labor.

Please fill out the enclosed warranty card. On the line marked conductor resistance, insert the resistance found in step 3 of the testing procedure (Page 1). Fill in the date section, signature section and return to:

Orbit Radiant Heating
1507 B West Park Avenue
Perkasie, PA 18944

This must be done to assure your warranty is registered !