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# Scotch® Wireless Weatherproofing Kit WK-101

## Instructions

**⚠ CAUTION**

This product should be used in accordance with standard safety practices of the industry.

## Description

The Scotch® Wireless Weatherproofing Kit WK-101 can be used to create an environmental seal, (e.g. moisture and debris), for connections found at wireless infrastructure sites. The tapes also help prevent the loosening of connections caused by vibrations. The kit is excellent for cold weather applications.

### Kit Contents

2 Rolls of ¾" x 66' Scotch® Super 33+™ Vinyl Electrical Tape

1 Roll of 2" x 20' Scotch® Super 33+™ Vinyl Electrical Tape

6 Rolls – 2 ½" x 24" 3M™ Butyl Mastic Tape 2212

Connection Type	Cable Diameter	Connections per kit
LDF12 to LDF4	2 1/4"–1/2" (57–13 mm)	2
LDF7 / VXL7 to LDF4	1 5/8"–1/2" (41–13 mm)	2
LDF6 / VXL6 to LDF4	1 1/4"–1/2" (32–13 mm)	2
LDF5 / VXL5 10 LDF4	7/8"–1/2" (22–13 mm)	4
LDF4 to LDF4	1/2"–1/2" (13–13 mm)	12
VXL5 10 Device	7/8"–1/2" (22 mm–13 mm)	12
LDF4 10 Device	1/2"–1/2" (13–13 mm)	12

Table 1

## 1.0 Installation Recommendations:

- Apply Scotch® Super 33+™ Vinyl Electrical Tape at temperatures down to 0°F (-18°C).
- Apply the vinyl tape in half-lapped layers with sufficient tension to produce a uniform wind. The final wrap should be made without tension to prevent flagging.
- Always cut vinyl tape to improve adhesion on final wrap.
- The last layer of vinyl tape on a vertical connection should be applied from bottom up to create a shingle effect for water run-off.
- Significant stretching not recommended for application of 3M Butyl Mastic Tape 2212.
- Always cut butyl mastic tape in order to ensure continuity of thickness.
- Ridges in butyl mastic tape can be smoothed by applying hand pressure.

## 2.0 Feeder Cable to Jumper Cable Connection

2.1 Connect the cables to the proper torque specification.

2.2 Ensure the cable is dry and free of debris or cable markers.



2.3 Start wrapping 2" (51 mm) beyond the feeder connector and create one half-lapped layer of  $\frac{3}{4}$ " (19 mm) vinyl tape. Wrap 2" (51 mm) past the jumper connector or any strain relief device.



2.4 Using the butyl mastic tape, build up the jumper cable diameter near the feeder cable to create a smooth tapered transition. (To create taper, strips of butyl tape may be folded in half lengthwise for faster build up.) Taper should end at the same point as the first layer of vinyl tape. Smooth final layer by hand.



2.5 Once smooth tapered transition is complete, use butyl mastic tape to create environmental seal. Start 2" (51 mm) beyond the first layer of vinyl tape and make half-lapped layers extending 2" (51 mm) past the opposite end of the first layer of vinyl tape. Smooth by hand.



2.6 Next, beginning 1" (25 mm) beyond the layer of butyl mastic tape applied in step 2.5, wrap the entire section of cable with one or two layers of half-lapped 2" (51 mm) wide vinyl tape extending 1" (25 mm) beyond the layer of butyl mastic tape.



- 2.7 Finally, wrap the entire section of cable with three continuous half-lapped layers of  $\frac{3}{4}$ " (19 mm) wide vinyl tape. Begin and end the final three layers 1" (25 mm) beyond each end of the previous layer of vinyl tape.



### 3.0 Jumper Cable to Antenna Connection

- 3.1 Connect the cable to the antenna to the proper torque specification.

- 3.2 Wrap the connection with one layer of  $\frac{3}{4}$ " (19 mm) vinyl tape. Start 1" (25 mm) beyond the jumper cable connector – or strain relief if applicable – and wrap past the connector clamping nut but short of antenna base.



- 3.3 Cut a length of butyl mastic tape that will allow the tape to extend 2" (51 mm) beyond the first layer of vinyl tape on the jumper cable and up to the base of the antenna when applied lengthwise. Wrap the butyl mastic tape around the cable connector and the cable lengthwise, stretching slightly if necessary, then press the tape edges together to ensure there are no gaps in coverage. Press to conform and smooth the tape against the connection, cable, and base of the antenna. Two lengthwise pieces of butyl mastic may be needed to ensure complete coverage of cable and connection.



- 3.4 Starting 1" below the butyl mastic tape, wrap one half-lapped layer of 2" (51 mm) vinyl tape up to the base of the antenna. Repeat the procedure to apply second half-lapped layer.



- 3.5 Starting 1" (25 mm) below the previous layer of vinyl tape, wrap the entire cable and connection section with three continuous half-lapped layers of ¾" (19 mm) wide vinyl tape.



#### 4.0 Jumper Cable to Antenna Connection – Restricted Access

*Note: For installations where access to the jumper cable and antenna connector is restricted, it is recommended to prepare the jumper cable prior to connection.*

- 4.1 Wrap the jumper cable and connector body with one layer of ¾" (19 mm) wide vinyl tape starting 1" (25 mm) beyond the jumper cable connector – or strain relief if applicable – up to, but not onto, the connector clamping nut.



4.2 Cut a length of butyl mastic tape that will allow the tape to extend 1" (25 mm) beyond the initial layer of vinyl tape on the jumper cable and up to, but not onto, the connector clamping nut when applied lengthwise. Slightly stretch width of tape so that it will wrap completely around the connector body and cable, then press the tape edges together to ensure there are no gaps in coverage. Press to conform and smooth the tape against the connector body and cable. More than one piece of butyl mastic tape may be needed to ensure full coverage.



4.3 Starting 1" (25 mm) below the butyl mastic tape, wrap one half-lapped layer of 2" (51 mm) vinyl tape up to the connector clamping nut. Repeat procedure to apply second half-lapped layer.



4.4 Starting 1" (25 mm) below the previous vinyl tape layer, wrap the cable with three continuous half-lapped layers of 3/4" (19 mm) wide 3M™ Scotch® Super 33+™ Vinyl Electrical Tape up to the connector clamping nut.



4.5 Connect the jumper cable to the antenna connector to the proper torque specification.





- 4.6 Start 1" (25 mm) below the connector clamping nut and apply one (1) half-lapped layer of  $\frac{3}{4}$ " (19 mm) vinyl tape extending 1" (25 mm) beyond the cable connector clamping nut. Wrap up to, but short of, the base of the antenna. If space restrictions prevent wrapping tape from roll, then the tape can be applied in one (1) or more strips if necessary, or a strip can be wound onto a small applicator, (e.g. a pencil), and unwound around the connection assembly.



**Note:** *When possible, leave some area of the connector body exposed.*

- 4.7 Cut a length of butyl mastic tape long enough to cover from the base of the antenna down to 1" past the end of the vinyl tape layer applied in Step 4.6 when applied lengthwise. Wrap the butyl mastic tape around the section, stretching slightly if necessary, and then press the tape edges together to ensure there are no gaps in coverage. Press to conform and smooth the tape against the connection. More than one piece of butyl tape may be needed to ensure complete coverage.



- 4.8 Wrap two (2) half-lapped layers of 2" (51 mm) vinyl tape starting 1" (25 mm) beyond the bottom of the butyl mastic tape and up to the base of the antenna.



- 4.9 Wrap three (3) half-lapped layers of  $\frac{3}{4}$ " (19 mm) vinyl tape starting 1" (25 mm) beyond the previous layer of vinyl tape, up to the base of the antenna.





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