

Trilogy offers a variety of connector types for AirCell® Transline, Radiating and Plenum coaxial cables. AirCell® connectors are engineered and manufactured to the highest standards, achieving superior performance in all areas. AirCell® connectors are available in both the male and female versions of type N and type 7/16 DIN connectors.

Connectors can be installed on AirCell® coaxial cable quickly, easily and consistently. Standard coring tools prepare the inner and outer conductors for connectorization. The smooth-wall construction and high strength jacket provide for an optimum electrical and mechanical interface between connector and cable.

# Advantages of AirCell® Connectors

# Ease of Installation

AirCell® connectors drastically reduce installation time and eliminate the soldering process. Instead of using a connector requiring highly accurate preparation measurements, AirCell® connectors can be attached in less than two minutes with unique AirCell® coring tools. One of the best features of AirCell® connectors is that they are designed for installers who do not need to be specially trained for installing connectors.

# Completely Weatherproof for Long Life and Consistent Performance

The AirCell® connector has the highest level of resistance to water migration. This is accomplished through a unique design, which attaches the connector to both the outer conductor and the jacket. AirCell® connectors incorporate O-ring seals at critical junctions to keep moisture out of the interface and maintain their excellent electrical performance.

# Superior Resistance to Connect Pull-Off Provides Long-term Mechanical Integrity

It takes an excess of 900 pounds to separate the connector from the cable before electrical continuity breaks. As a result, AirCell® connectors ensure long-term mechanical integrity.

# Low Intermodulation and VSWR

AirCell® connectors achieve the highest level of return loss stability performance in the industry due to their unique design. During attachment, the silver plated connector pin is compressed onto the center conductor of the cable. As the connector is tightened, multiple annular teeth are compressed with extremely high normal forces onto the center conductor of the cable, producing a tight connection that promotes consistently low VSWR, and minimizes intermodulation problems.

# **Corrosion Resistant**

AirCell® connectors are constructed of corrosion resistant metals that are compatible with AirCell® cables for long term corrosion protection in outdoor applications. Trilogy uses special plating on its solid brass connectors to reduce the effects of corrosion. The RF current carrying surfaces are silver-plated on both DIN and N-type connectors, which ensures that all metals behave well together.

# Designed for AirCell® Cables

AirCell® connectors are designed to work integrally with AirCell® cables to optimize the electrical and mechanical performance of the transmission line system.





AirCell® connectors and cable are designed to work integrally to provide the lowest VSWR in the industry. Connectors are silver-plated at electrical contact interfaces. The design of the AirCell® connectors also provides the highest structural integrity between cable and connector, as well as minimizes intermodulation concerns.

# Type N and DIN Connectors

AirCell® Type N and Din connectors offer long term performance and reliability, which translates into long term cost savings. Both interfaces offer many advantages:

- Ease of attachment and installation
- Corrosion resistant/durable construction
- Long-term mechanical integrity
- Silver-plated bodies and silver-plated electrical contacts
- Completely weatherproof connection

# **DIN Connector Advantages**

- Improved intermodulation performance
- Handles four times the power requirements versus N-type connector
- Consistent and improved VSWR performance

The pictures below show the Type N and Din connector interfaces and body styles available for AirCell® cables. In many cases, a single picture is used to represent several similar connectors. See the Connector Selection Guide for details.

AirCell® I-5/8" Type N Female Connector



AirCell® 1/2" Type N Male Connector



AirCell® 1-5/8" 7/16 DIN Female Connector



AirCell® 1/2" 7/16 DIN Male Connector









# **Premium Performance Connectors**

# **O-Ring**

The EPDM ozone-resistant O-Rings used in AirCell® connectors create a waterproof seal, ensuring that water will not enter at the connection and degrade the cable.

# **Center Conductor Seizing Mechanism**

The metal-to-metal positive stop created by Trilogy's Center and Outer Conductor seizing mechanism prevents over tightening, maintains optimum seizure from jacket on through to center conductor, and assures reliable performance.

# **Two Piece Construction**

Having only two conductor pieces to deal with promotes fast, reliable connectorization, reducing the possibility of human errors.

## **Silver Plated Contact Surfaces**

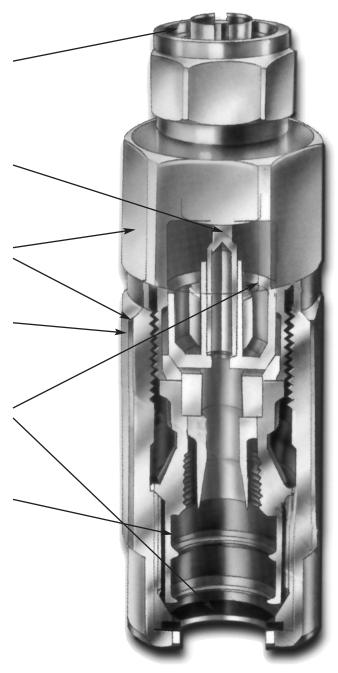
All RF contact surfaces on Trilogy's AirCell® connectors are silver plated to reduce intermodulation, promote contact resistance over time, and resist tarnish.

# O-Ring

The EPDM ozone-resistant O-Rings used in AirCell® connectors create a waterproof seal, ensuring that water will not enter at the connection and degrade the cable.

# **Outer Conductor Seizing Mechanism**

The metal-to-metal positive stop created by Trilogy's Center and Outer Conductor seizing mechanism prevents over tightening, maintains optimum seizure from jacket on through to center conductor, and assures reliable performance.





Cable Type



Available Connector Interface

# Connector Selection Guide

		N Male	N Female	7/16 DIN Male	7/16 DIN Female
Transline					
	hm Transline		Proc	luct Code	
AT012J50	1/2" Transmission Line, 50 Ohm, Black Polyethylene Jacket	NMA01250	NFA01250	DMA01250	DFA01250
AT012FX50	1/2" Transmission Line, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	NMA01250	NFA01250	DMA01250	DFA01250
AT012F50	1/2" Transmission Line, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, MSHA	NMA01250	NFA01250	DMA01250	DFA01250
AT012FV50	1/2" Transmission Line, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL 1685-12 (FT4/IEEE1202, NFPA-130)	NMA01250	NFA01250	DMA01250	DFA01250
AT012R50	1/2" Transmission Line, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1,IEC332-3C, UL-1666, CMR	NMA01250	NFA01250	DMA01250	DFA01250
AT058J50	5/8" Transmission Line, 50 Ohm, Black Polyethylene Jacket	NMA05850	NFA05850	DMA05850-2G	DFA05850-20
AT058FX50	5/8" Transmission Line, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	NMA05850	NFA05850	DMA05850-2G	DFA05850-2G
AT058FV50	5/8" Transmission Line, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL 1685-12 (FT4/IEEE1202, NFPA-130)	NMA05850	NFA05850	DMA05850-2G	DFA05850-2G
AT058R50	5/8" Transmission Line, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL-1666, CMR	NMA05850	NFA05850	DMA05850-2G	DFA05850-2G
AT078U50	7/8" Transmission Line, 50 Ohm, Unjacketed	NMA07850	NFA07850	DMA07850	DFA07850
AT078J50	7/8" Transmission Line, 50 Ohm, Black Polyethylene Jacket	NMA07850	NFA07850	DMA07850	DFA07850
AT078FX50	7/8" Transmission Line, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	NMA07850	NFA07850	DMA07850	DFA07850
AT078FV50	7/8" Transmission Line, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL 1685-12 (FT4/IEEE1202, NFPA-130)	NMA07850	NFA07850	DMA07850	DFA07850
AT078R50	7/8" Transmission Line, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1,IEC332-3C,UL-1666, CMR	NMA07850	NFA07850	DMA07850	DFA07850
AT114J50	1-1/4" Transmission Line, 50 Ohm, Black Polyethylene Jacket	NMA11450	NFA11450	DMA11450	DFA11450
AT114FX50	1-1/4" Transmission Line, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	NMA11450	NFA11450	DMA11450	DFA11450
AT114FV50	1-1/4" Transmission Line, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL 1685-12 (FT4/IEEE1202, NFPA-130)	NMA11450	NFA11450	DMA11450	DFA11450
AT114R50	1-1/4" Transmission Line, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1,IEC332-3C,UL-1666, CMR	NMA11450	NFA11450	DMA11450	DFA11450
AT158J50	1-5/8" Transmission Line, 50 Ohm, Black Polyethylene Jacket	NMA15850	NFA15850	DMA15850	DFA15850
AT158FX50	1-5/8" Transmission Line, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	NMA15850	NFA15850	DMA15850	DFA15850
AT158FV50	1-5/8" Transmission Line, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL 1685-12 (FT4/IEEE1202, NFPA-130)	NMA15850	NFA15850	DMA15850	DFA15850
AT158R50	1-5/8" Transmission Line, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1,IEC332-3C,UL-1666, CMR	NMA15850	NFA15850	DMA15850	DFA15850
AirCell® 50-Ol	am I litra-Fley		Pro	duct Code	
	1/2" Ultra-Flex, 50 Ohm, Corrugated, Black Polyethylene Jacket	NMP01250		DMP01250	DFP01250
AU012350	1/2" Ultra-Flex, 50 Ohm, Corrugated, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL-1666, CMR	NMP01250	NFP01250	DMP01250	DFP01250
AirCall® 75 Al			Due	dust Codo	
AirCell® 75-Ol AT012J75	1/2" Transmission Line, 75 Ohm, Black Polyethylene Jacket	NMA01275	NFA01275	duct Code	
AT012J75 AT012FX75	1/2 Transmission Line, 75 Ohm, Black Polyethylene Jacket  1/2" Transmission Line, 75 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	NMA01275	NFA01275		
AT012F75	1/2" Transmission Line, 75 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket,	NMA01275	NFA01275		
AT012R75	MSHA 1/2" Transmission Line, 75 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket.	NMA01275	NFA01275		
AT058175	UL-1666, CMR 5/8" Transmission Line, 75 Ohm, Black Polyethylene Jacket	NMA05875	NEADE975		
AT058J75	5/8" Transmission Line, 75 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket.	C/OCUMININI	NFA05875		
AT058FX75	IEC332-1  5/8" Transmission Line, 75 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket,  5/8" Transmission Line, 75 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket,	NMA05875	NFA05875		
AT058R75	5/8" Transmission Line, 75 Onm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, UL-1666, CMR	NMA05875	NFA05875		

Cable Type			Available Connector Interface			
		N Male	N Female	7/16 DIN Male	7/16 DIN Female	
AirCell® 75-Ol	hm Transline		Pro	duct Code		
AT078J75	7/8" Transmission Line, 75 Ohm, Black Polyethylene Jacket	NMA07875	NFA07875			
AT078FX75	7/8" Transmission Line, 75 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	NMA07875	NFA07875			
AT078R75	7/8" Transmission Line, 75 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, UL-1666, CMR	NMA07875	NFA07875			
Radiating		'	<u>'</u>		•	
AirCell® 50-Ohm Radiating				duct Code		
AR012J50	1/2" Radiating, 50 Ohm, Black Polyethylene Jacket	NMA01250	NFA01250	DMA01250	DFA01250	
AR012FX50 AR012F50	1/2" Radiating, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1 1/2" Radiating, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, MSHA	NMA01250 NMA01250	NFA01250 NFA01250	DMA01250 DMA01250	DFA01250 DFA01250	
AR012R50	1/2" Radiating, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL-1666, CMR	NMA01250	NFA01250	DMA01250	DFA01250	
AR058J50	5/8" Radiating, 50 Ohm, Black Polyethylene Jacket	NMA05850	NFA05850	DMA05850-2G	DFA05850-2G	
AR058FX50	5/8" Radiating, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	NMA05850	NFA05850	DMA05850-2G	DFA05850-2G	
AR058R50	5/8" Radiating, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL-1666, CMR	NMA05850	NFA05850	DMA05850-2G	DFA05850-2G	
AR078J50	7/8" Radiating, 50 Ohm, Black Polyethylene Jacket	NMA07850	NFA07850	DMA07850	DFA07850	
AR078FX50	7/8" Radiating, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	NMA07850	NFA07850	DMA07850	DFA07850	
AR078R50	7/8" Radiating, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL-1666, UL 1685-12 (FT4/IEEE1202, NFPA-130), CMR	NMA07850	NFA07850	DMA07850	DFA07850	
AR114J50	1-1/4" Radiating, 50 Ohm, Black Polyethylene Jacket	NMA11450	NFA11450	DMA11450	DFA11450	
AR114FX50	1-1/4" Radiating, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-	NMA11450	NFA11450	DMA11450	DFA11450	
AR114R50	1-1/4" Radiating, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL-1666, CMR	NMA11450	NFA11450	DMA11450	DFA11450	
AR158J50	1-5/8" Radiating, 50 Ohm, Black Polyethylene Jacket	NMA15850	NFA15850	DMA15850	DFA15850	
AR158FX50	1-5/8" Radiating, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-	NMA15850	NFA15850	DMA15850	DFA15850	
AR158FV50	1-5/8" Radiating, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL 1685-12 (FT4/IEEE1202, NFPA-130)	NMA15850	NFA15850	DMA15850	DFA15850	
AR158R50	1-5/8" Radiating, 50 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332- 1, IEC332-3C ,UL-1666, CMR	NMA15850	NFA15850	DMA15850	DFA15850	
Appendix		NIN 4 A 0 4 2 7 F		duct Code	ı	
AR012J75	1/2" Radiating, 75 Ohm, Black Polyethylene Jacket	NMA01275	NFA01275			
AR012FX75 AR012F75	1/2" Radiating, 75 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1 1/2" Radiating, 75 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, MSHA	NMA01275 NMA01275	NFA01275 NFA01275			
AR012R75	1/2" Radiating, 75 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL-1666, CMR	NMA01275	NFA01275			
AR058J75	5/8" Radiating, 75 Ohm, Black Polyethylene Jacket	NMA05875	NFA05875			
AR058FX75	5/8" Radiating, 75 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	NMA05875	NFA05875			
AR058R75	5/8" Radiating, 75 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL-1666, CMR	NMA05875	NFA05875			
AR078J75	7/8" Radiating, 75 Ohm, Black Polyethylene Jacket	NMA07875	NFA07875			
AR078FX75	7/8" Radiating, 75 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1	NMA07875	NFA07875			
AR078R75	7/8" Radiating, 75 Ohm, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C ,UL-1666, CMR	NMA07875	NFA07875			
Plenum						
AirCell® 50-Ol	hm Plenum			duct Code		
AP6012J50	1/2" Plenum, 50 Ohm, Corrugated (6 GHz), Jacketed CMP (UL-910, UL-444), Canadian CSA 22.2/FT6	NMP01250, NMP01250- PIM	NFP01250, NFP01250- PIM	DMP01250, DMP01250- PIM	DFP01250, DFP01250- PIM	
APC012J50	1/2" Plenum, 50 Ohm, Corrugated, Copper Outer Conductor, Jacketed CMP (UL-910, UL-444), Canadian CSA 22.2/FT6	NMP01250, NMP01250-	NFP01250, NFP01250-	DMP01250, DMP01250-	DFP01250, DFP01250-	
A' C 110 TO TO		PIM	PIM	PIM	PIM	
AQ012J50	hm Plenum Radiating  1/2" Plenum Radiating, 50 Ohm, Corrugated, Jacketed CMP (UL-910, UL-444), Canadian	NMP01250	NFP01250	duct Code DMP01250	DFP01250	
AQC012J50	CSA 22.2/FT6  1/2" Plenum Radiating, 50 Ohm, Corrugated, Copper Outer Conductor, Jacketed CMP	NMP01250	NFP01250	DMP01250	DFP01250	
AirCell® 75-O	(UL-910, UL-444), Canadian CSA 22.2/FT6		Dro	duct Code		
AP012J75	1/2" Plenum, 75 Ohm, Corrugated, Jacketed UL-910, CATVP	NMP01275	NFP01275	DMP01275	DFP01275	
AirCell® 50-Ol		012/3		duct Code	2.1012/3	
AP012U50	1/2" Conduit Cable, 50 Ohm, Corrugated, UL-444	NMP01250, NMP01250- PIM	NFP01250, NFP01250- PIM	DMP01250, DMP01250- PIM	DFP01250, DFP01250-	

Cable Type

**Available Connector Interface** 



# **Connector Installation Instructions**

# For AirCell® Transline and Radiating Cables -- 1-1/4" & 1-5/8" 50 Ohm

For use with Power Prep Tools CT11450AIO, CT15850AIO, CT11450P, and CT15850P

AirCell® connectors are designed specifically for use with Trilogy's AirCell® 50 Ohm Transline and Radiating cables. Instructions should be read thoroughly prior to connector installation.

Power Prep Tool (Figure 1) (CT11450AIO, CT15850AIO, CT11450P, CT15850P)

# Additional Tools Required (Figure 2)

Power Drill 3M Scotchbrite™ Pad Heat Shrink (or Weatherproofing Kit) Razor Knife Adjustable Wrenches Small Ruler or Wire Hacksaw

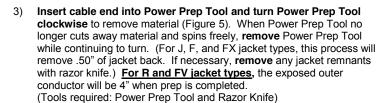




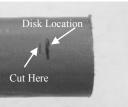
Figure 2

**Prepare Cable for Connectorization** 

- Locate the 1st disc by inserting small ruler or wire. Mark location on jacket surface. Cut cable .125" behind disc using hacksaw (Figure 3). Ensure that cable is straight for at least 10" from the end. (Tools required: Small Ruler or Wire and Hacksaw)
- For R and FV jacket types (J, F, and FX jacket types proceed to step 3).
  - Remove 5" of jacket and tape using razor knife (Figure 4). (Tool required: Razor Knife)
  - Remove jacket strip blade from Power Prep Tool.



Remove disc remnants from center conductor using razor knife (Figure 6). Deburr center conductor using file. Remove adhesive with 3M Scotchbrite™ pad. Remove any remaining debris from cable end. (Tools required: Razor Knife, File, and 3M Scotchbrite™ Pad)



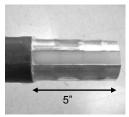


Figure 4

# Connectorization

Slide back-nut of connector onto prepared cable end. Center conductor will protrude at least .50" (Figure 7). Slide front-nut onto center conductor and hand-tighten connector by turning the back-nut.

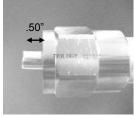


Figure 7





Figure 8

# **Tighten the Connector**

Tighten the connector with wrenches by holding front-nut while turning back-nut until back-nut reaches a positive stop (Figure 8). (Tools required: Adjustable Wrenches)



For R and FV jacket types, seal connector with appropriate weatherproofing. Ensure that seal begins with connector and extends at least 2" past the beginning of cable jacket (Figure 9).

Caution: For best electrical performance, do not damage the center or outer conductors.



Rev. 8/3/12

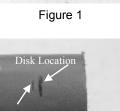


Figure 3



Figure 6



Figure 9





# **Connector Installation Instructions**

# For AirCell<sup>®</sup> Plenum, Ultra-Flex, Conduit, and In-Conduit 1/2" 50 and 75 Ohm Cables

For use with Power Plenum Strip Tools PCT012 / PCT012-2

AirCell® connectors are designed specifically for use with Trilogy's AirCell® 50 and 75 Ohm 1/2" cables. This instruction only applies when the Power Plenum Strip Tool (PCT012 / PCT012-2) is used.

Instructions should be read thoroughly prior to connector installation.

Power Plenum Strip Tool\* (Figure 1) (PCT012 / PCT012-2)

Additional Tools Required (Figure 2) Power Drill Abrasive Pad Inner Conductor Strip Tool (ICST)

Razor Knife Adjustable Wrenches Cable Cutter (TC63050)



- Squarely cut the cable using a cable cutter. Ensure that the cable is straight for at least six inches behind the point where connector will attach. Ensure that the center conductor is centered (Figure 3).
- 2) Insert cable end into Power Plenum Strip Tool and turn Power Plenum Strip Tool clockwise\* to remove material (Figure 4). Operate the Power Plenum Strip Tool in the 300-700 rpm range at steady speed. When Power Plenum Strip Tool no longer cuts away material and spins freely, remove Power Plenum Strip Tool while continuing to turn.
- Remove disk remnants from center conductor using razor knife or Inner Conductor Strip Tool. Remove adhesive from center conductor using an abrasive pad. Remove any remaining debris from inside of cable (Figure 5).

### Connectorization

4) Slide back-nut of connector onto prepared cable end. Back-nut should snap into place. Center conductor will protrude .38" (Figure 6). Slide front-nut onto center conductor. Hand-tighten connector by turning the back-nut.

# **Tighten the Connector**

Tighten the connector with wrenches by holding front-nut while turning back-nut until back-nut reaches a positive stop (Figure 7).

### **Seal the Connector**

6) Seal connector with appropriate weatherproofing. Ensure that seal begins with connector and extends at least 2" past the beginning of cable jacket (Figure 8).



Figure 1



Figure 2



Figure 3



Figure 4



Figure 5



Figure 6



Figure 7



Figure 8

Caution: For best electrical performance, do not damage the center or outer conductors.

<sup>\*</sup> Ensure that Power Plenum Strip Tool is free of debris prior to each use.





# **Connector Installation Instructions**

# For AirCell<sup>®</sup> Plenum, Plenum Radiating, Ultra-Flex, and In-Conduit 1/2" 50 and 75 Ohm Cables

2A

For use with Manual Plenum Strip Tool PST012

AirCell® connectors are designed specifically for use with Trilogy's AirCell® 50 and 75 Ohm 1/2" cables. This instruction only applies when the Manual Plenum Strip (PST012) is used.

Instructions should be read thoroughly prior to connector installation.

Manual Plenum Strip Tool\* (Figure 1) (PST012)

Additional Tools Required (Figure 2) Inner Conductor Strip Tool (ICST) Abrasive Pad Cable Cutter (TC63050)

Razor Knife Adjustable Wrenches



- Locate the 1<sup>st</sup> disc by inserting smaller ruler or wire. Cut cable with the cable cutter behind disc. Mark 2<sup>nd</sup> corrugation valley behind disc by using the same method to locate the disc. Ensure that cable is straight for at least 6" from the end.
- Attach Manual Plenum Strip Tool (Figure 3). Ensure arrow on tool points to cable end. Pinch tool in place and spin until outer conductor is cut through. Pinch blade end together and spin once more.
- 3) Remove jacket and outer conductor (Figure 4). Remove disk remnants from center conductor using Razor Knife or Inner Conductor Strip Tool (Figure 5). Remove adhesive from center conductor using abrasive pad while holding the cable end down. Do not allow debris to get inside the cable.
- Cut center conductor to .75" using gauge on the Manual Plenum Strip Tool (Figure 6). Deburr center conductor with Inner Conductor Strip Tool. Ensure that the inside of cable is free of debris.

### Connectorization

5) Slide back-nut of connector onto prepared cable end. Back-nut should snap into place. Center conductor will protrude .38" (Figure 7). Slide front-nut onto center conductor. Hand-tighten connector by turning the back-nut (Figure 8).

### **Tighten the Connector**

- Tighten the connector with wrenches by holding front-nut while turning back-nut until back-nut reaches a positive stop (Figure 9).
- \* Ensure that Manual Plenum Strip Tool is free of debris prior to each use.

Caution: For best electrical performance, do not damage the center or outer conductors.



Figure 1



Figure 2



Figure 3



Figure 4



Figure 5



Figure 6



Figure 7



Figure 8



Figure 9

# **CONNECTORS & TOOLS**





# **Connector Installation Instructions**

# For AirCell® Plenum 1/2" 75 Ohm Cables

**2B** 

For use with cable prep tools TC1000 & TC10099 (Manual Tools) and F & PIN Connectors (FMP/PMP01275)

AirCell® connectors are designed specifically for use with Trilogy's AirCell® 75 Ohm 1/2" cables. This instruction only applies when the Tube Cutter (TC1000) and Razor Knife (TC10099) are used. **Instructions should be read thoroughly prior to connector installation**.

### **Installation Tools**

Tube Cutter (TC1000) Needle Nose Pliers Small Ruler or Wire Adjustable Wrenches Razor Knife (TC10099) 3M Scotchbrite™ Pad





# **Prepare Cable for Connectorization**

- Cut to the center conductor and remove .75" of material (Figure 1). Ensure that cable is straight for at least 6" from the end. (Tool required: Tube Cutter)
- Locate the 1<sup>st</sup> disc by inserting smaller ruler or wire (Figure 2). Cut in the 2<sup>nd</sup> corrugation valley behind disc and remove jacket and outer conductor. (Tools required: Small Ruler or Wire and Tube Cutter)
- 3) Trim center conductor to .75" (Figure 3). Deburr center conductor with file. Remove disc with razor knife and remove adhesive from center conductor with 3M Scotchbrite™ pad. (Tools required: Needle nose pliers, File, Razor Knife, and 3M Scotchbrite™ Pad)
- Remove .63" of jacket from the outer conductor (Figure 3).
   Remove any remaining debris from inside ofcable.
   (Tools required: Razor knife)

## Connectorization

 Slide back-nut of connector onto cable end. Center conductor should protrude .38" (Figure 4). Slide front-nut onto center conductor and hand-tighten connector by turning the back-nut (Figure 5).

### **Tighten the Connector**

6) Tighten the connector with wrenches by holding front-nut while turning back-nut until back-nut reaches a positive stop (Figure 6).

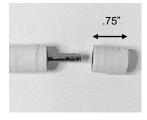


Figure 1



Figure 2

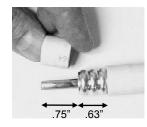


Figure 3

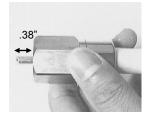


Figure 4



Figure 5



Figure 6

Caution: For best electrical performance, do not damage the center or outer conductors.





# **Connector Installation Instructions**

# For AirCell® Plenum, Conduit, and In-Conduit 1/2" 50 Ohm Cables 2C

For use with Plenum Strip Tool PCT012-PIM and PIM Connector

AirCell® connectors are designed specifically for use with Trilogy's AirCell® 50 Ohm 1/2" cables. This instruction only applies when the Plenum Strip Tool (PCT012-PIM) is used.

Instructions should be read thoroughly prior to connector installation.

Plenum Strip Tool\* (Figure 1) (PCT012-PIM)

**Additional Tools Required** (Figure 2) Cable Cutter (TC63050) Abrasive Pad

Razor Knife Adjustable Wrenches



- Cut the cable while rotating the cable cutter to attain a rounded cable end.
   Straighten the cable at least 12 inches from the cut.
- Remove 1 ¼ inch of jacket from the end of the cable. Insert a gauge into the cable to determine the location of the next disc and mark the location on the outer conductor.
- 3) Cut the outer conductor with the cable cutter in the 2nd corrugation valley behind the mark. Use a rotating motion to ensure the cable end is round (Figure 3). Cut the center conductor flush with the outer conductor and check that the center conductor remains centered (Figure 4).
- 4) Slide the Plenum Strip Tool over the cable and begin turning the tool clockwise (Figure 5). Continue turning the tool until the tool no longer cuts away material. To remove the tool, continue to turn while pulling it from the cable. Inspect the end of the cable to ensure the tool finalized its cut on a corrugation peak (Figure 6). A correctly prepared cable end has 1 inch of outer conductor exposed and 1/4 inch center conductor exposed.
- 5) Remove any dielectric disc and adhesive from the center conductor using the razor knife and abrasive pad while holding the cable end down. Do not allow debris to get inside the cable.

# Connectorization

- Slide the back half of the connector onto the cable. It should snap into the first corrugation valley of the outer conductor (Figure 7).
- 7) Pull the tool handle to separate the flaring tool from tool body (Figure 8). Press the flaring tool against the cable and ensure that the flaring pin is inside the outer conductor. Rotate the flaring tool to flare the outer conductor. (Figure 9). Remove any remaining debris.
- 8) Slide the front half of the connector onto the center conductor. Handtighten the connector halves together by turning only the back half.

### **Tighten the Connector**

- Continue tightening the connector with wrenches by holding the front half while turning the back half until the connector reaches a positive stop (Figure 10).
- \* Ensure that Plenum Strip Tool is free of debris prior to each use.

Caution: For best electrical performance, do not damage the center or outer conductors.



Figure 1



Figure 2



Figure 3



Figure 4



Figure 5



Figure 6



Figure 7



Figure 8



Figure 9



Figure 10





# **Connector Installation Instructions**

### For AirCell® Plenum, Conduit, and In-Conduit 1/2" 50 Ohm Cables **2D**

For use with Power Plenum Strip Tool PPT012-PIM, Flaring Tool PPT-FT, and PIM Connector

AirCell® connectors are designed specifically for use with Trilogy's AirCell® 50 Ohm 1/2" cables. This instruction only applies when the Power Plenum Strip Tool (PPT012-PIM) and Flaring Tool (PPT-FT) are used.

Instructions should be read thoroughly prior to connector installation.

Power Plenum Strip Tool\* (PPT012-PIM) Flaring Tool (PPT-FT) (Figure 1)

Additional Tools Required (Figure 2) Cable Cutter (TC63050) Abrasive Pad

Razor Knife Adjustable Wrenches



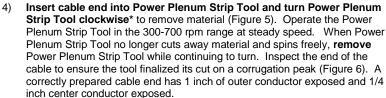
Figure 1



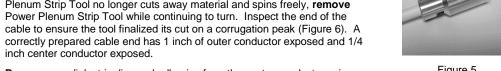
Figure 2

# **Prepare Cable for Connectorization**

- Cut the cable while rotating the cable cutter to attain a rounded cable end. Straighten the cable at least 12 inches from the cut.
- Remove 1 1/4 inch of jacket from the end of the cable. Insert a gauge into the cable to determine the location of the next disc and mark the location on the outer conductor.
- Cut the outer conductor with the cable cutter in the 2nd corrugation valley behind the mark. Use a rotating motion to ensure the cable end is round (Figure 3). Cut the center conductor flush with the outer conductor and check that the center conductor remains centered (Figure 4).



the razor knife and abrasive pad while holding the cable end down. Do not



Remove any dielectric disc and adhesive from the center conductor using allow debris to get inside the cable.

### Connectorization

- Slide the back half of the connector onto the cable. It should snap into the first corrugation valley of the outer conductor (Figure 7).
- Press the flaring tool against the cable and ensure that the flaring pin is 7) inside the outer conductor. Rotate the flaring tool to flare the outer conductor. (Figure 8). Remove any remaining debris.
- Slide the front half of the connector onto the center conductor. Handtighten the connector halves together by turning only the back half.

### **Tighten the Connector**

- Continue tightening the connector with wrenches by holding the front half while turning the back half until the connector reaches a positive stop (Figure 9).
- \* Ensure that Power Plenum Strip Tool is free of debris prior to each use.

Caution: For best electrical performance, do not damage the center or outer conductors.



Figure 3



Figure 4



Figure 5



Figure 6



Figure 7



Figure 8



Figure 9







3

# **Connector Installation Instructions**

# For AirCell® Transline and Radiating Cables – 1/2", 5/8", & 7/8" 50 Ohm

For use with Power Prep Tools CT01250AIO-2, CT05850AIO-2, and CT07850AIO-2

AirCell<sup>®</sup> connectors are designed specifically for use with Trilogy's AirCell<sup>®</sup> 50 Ohm Transline and Radiating cables. **Instructions should be read thoroughly prior to connector installation**.

**Power Prep Tool** (Figure 1) (CT01250AIO-2, CT05850AIO-2, CT07850AIO-2)

### Additional Tools Required (Figure 2)

Power Drill
3M Scotchbrite™ Pad
Heat Shrink (or Weatherproofing Kit)

Razor Knife Adjustable Wrenches Small Ruler or Wire Hacksaw



- Locate the 1<sup>st</sup> disc by inserting small ruler or wire. Mark location on jacket surface. Cut right in front of disc using hacksaw (Figure 3). Ensure that cable is straight for at least 10" from the end. (Tools required: Small Ruler or Wire and Hacksaw)
- 2) For R and FV jacket types\* (J, F, and FX jacket types proceed to step 3).
  - a) Remove 5" of jacket and tape using razor knife (Figure 4).
     (Tool required: Razor Knife)
  - b) Remove jacket strip blade from Power Prep Tool.
- 3) Insert cable end into Power Prep Tool and turn Power Prep Tool clockwise to remove material (Figure 5). When Power Prep Tool no longer cuts away material and spins freely, remove Power Prep Tool while continuing to turn. (For J, F, and FX jacket types, this process will remove .50" of jacket back for 1/2" and 7/8" cable or .63" of jacket back for 5/8" cable. If necessary, remove any jacket remnants with razor knife.) For R and FV jacket types, the exposed outer conductor will be 4.25" for 1/2" cable or 4.50" for 5/8" and 7/8" cables when prep is completed.
  (Tools required: Power Prep Tool and Razor Knife)
- 4) Remove disc remnants from center conductor using razor knife. Deburr center conductor using file. Remove adhesive with 3M Scotchbrite™ pad. Remove any remaining debris from cable end. (Tools required: Razor Knife, File, and 3M Scotchbrite™ Pad)

# Connectorization

5) Slide back-nut of connector onto prepared cable end. Center conductor will protrude at least .38" for 1/2" cable or .25" for 5/8" and 7/8" cables (Figure 6). Slide front-nut onto center conductor and hand-tighten connector by turning the back-nut.

### **Tighten the Connector**

Tighten the connector with wrenches by holding front-nut while turning back-nut until back-nut reaches a positive stop (Figure 7). (Tools required: Adjustable Wrenches)

### **Seal the Connector**

- For R and FV jacket types, seal connector with appropriate weatherproofing. Ensure that seal begins with connector and extends at least 2" past the beginning of cable jacket (Figure 8).
- \* For AirCell® Radiating Double Jacketed Cables please contact Trilogy's Tech Support Department

Caution: For best electrical performance, do not damage the center or outer conductors.

Notice: Trilogy disclaims any liability or responsibility for the results of improper or unsafe installation, inspection, maintenance, or removal practices.



Figure 1



Figure 2

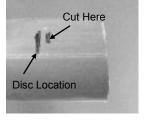


Figure 3



Figure 4



Figure 5



Figure 6



Figure 7



Figure 8

Rev. 8/3/12



### **CONNECTORS & TOOLS**



# **Connector Installation Instructions**

# For AirCell® Transline and Radiating Cables - 5/8" 50 Ohm, and 1/2", 5/8", & 7/8" 75 Ohm

**3A** 

For use with Power Prep Tools CT01250AIO, CT05850AIO, and CT07850AIO

AirCell® connectors are designed specifically for use with Trilogy's AirCell® 50 Ohm Transline and Radiating cables. Instructions should be read thoroughly prior to connector installation.

Power Prep Tool (Figure 1) (CT01250AIO, CT05850AIO, CT07850AIO)

### Additional Tools Required (Figure 2)

**Prepare Cable for Connectorization** 

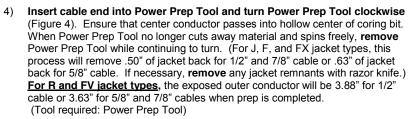
Power Drill 3M Scotchbrite™ Pad Heat Shrink (or Weatherproofing Kit) Razor Knife Adjustable Wrenches Small Ruler or Wire Hacksaw



Figure 1 Figure 2



- Cut cable squarely using a hacksaw. Ensure that cable is straight for at least 10" from the end. (Tool required: Hacksaw)
- For R and FV jacket types (J, F, and FX jacket types proceed to step 3).
   Remove 5" of jacket and tape using razor knife (Figure 3).
   Remove jacket strip blade from Power Prep Tool and proceed to Step 4.
   (Tool required: Razor Knife).
- For radiating cables\* (otherwise proceed to step 4).
   Remove .50" of jacket using razor knife (Figure 3). Remove jacket strip blade from Power Prep Tool.
   (Tool required: Razor Knife)



5) Remove disc remnants from center conductor using razor knife. Deburr center conductor using file. Remove adhesive with 3M Scotchbrite™ pad. Remove any remaining debris from cable end. (Tools required: Razor Knife, File, and 3M Scotchbrite™ Pad)



Figure 3 Figure 4

Figure 5



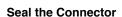
Figure 6

### Connectorization

6) Slide back-nut onto cable end. The plastic insert should be firmly secured inside cable and back-nut will slide back and forth. Center conductor should protrude slightly when back-nut is fully forward (Figure 5). Slide front-nut onto center conductor and hand-tighten connector by turning the back-nut (Figure 6).

# **Tighten the Connector**

7) **Tighten the connector** with wrenches by **holding** front-nut while **turning** back-nut until back-nut reaches a positive stop (Figure 7).



8) For R and FV jacket types, seal connector with appropriate weatherproofing. Ensure that seal begins with connector and extends at least 2" past the beginning of cable jacket (Figure 8).



Figure 7



Figure 8

\* For AirCell® Radiating Double Jacketed Cables please contact Trilogy's Tech Support Department

Caution: For best electrical performance, do not damage the center or outer conductors.



## **CONNECTORS & TOOLS**



# **Connector Installation Instructions**

# For AirCell® Transline and Radiating Cables – 1/2", 5/8", & 7/8" 75 Ohm

**3B** 

For use with cable prep tools TC1000 & TC10099 (Manual) and N Connectors

AirCell® connectors are designed specifically for use with Trilogy's AirCell® 75 Ohm Transline and Radiating cables. Instructions should be read thoroughly prior to connector installation.

### **Installation Tools**

Tube Cutter (TC1000) Razor Knife (TC10099)

File Hacksaw

Adjustable Wrenches Small Ruler or Wire

3M Scotchbrite™ Pad Heat Shrink (or Weatherproofing Kit)

# **Prepare Cable for Connectorization**

- Locate the 1<sup>st</sup> disc by inserting small ruler or wire. Mark location on jacket surface. Cut right in front of disc using hacksaw (Figure 1). Ensure that cable is straight for at least 10" from the end. (Tools required: Small Ruler or Wire and Hacksaw)
- 2) Cut 3/4" of outer conductor and jacket using tube cutter. Stop cutting when outer conductor is cut through. Do not crush cable end. Cut through the dielectric tube using razor knife and remove material (Figure 2). (Tools required: Tube Cutter and Razor Knife)
- 3) Remove cable jacket (Figure 3)
  - a) For standard jacket cables, remove 5/8" of jacket for 1/2" cable or 1" of jacket for 5/8" and 7/8" cables.
     (Tool required: Razor Knife)
  - For riser rated cables, remove 5" of jacket and tape using razor knife.
     (Tool required: Razor Knife)
- 4) Remove disc remnants from center conductor using razor knife. Deburr center conductor using file. Remove adhesive with 3M Scotchbrite™ pad. Remove any remaining debris from cable end. (Tools required: Razor Knife, File, and 3M Scotchbrite™ Pad)



Figure 1

Disc Location

Cut Here

Figure 3



Figure 2

Figure 4

### Connectorization

Slide back-nut of connector onto prepared cable end. Center conductor will protrude at least 3/8" for 1/2" cable or 1/4" for 5/8" and 7/8" cables (Figure 4). Slide front-nut onto center conductor and hand-tighten connector by turning the back-nut.

### **Tighten the Connector**

Tighten the connector with wrenches by holding the front-nut while turning back-nut until back-nut reaches positive stop (Figure 5). (Tools required: Adjustable Wrenches)



7) For riser rated cables, seal connector with appropriate weatherproofing. Ensure that seal begins with connector and extends at least 2" past the beginning of cable jacket (Figure 6).

Caution: For best electrical performance, do not damage the center or outer conductors.



Figure 5



Figure 6





# **Power Tools - Blade Replacement**

# Blade Replacement Instructions for AirCell® Power Tools

4

For use with CT01250AIO-2, CT05850AIO-2, CT07850AIO-2

Instructions should be read thoroughly prior to blade replacement.

## **Additional Tools Required**

Hex Wrench, 3/32 Hex Wrench, 5/64

# Blade Replacement Kit CTAIO-2RB/3PK

(2) CB6667H (1) CB26

# **Blade Replacement**

# Jacket Strip Blade CB6667H

Remove blade by loosening the socket head cap screw with a 3/32 hex wrench (Figure 1). Blade is slotted and should be positioned completely towards the center of the tool. Install new blade by tightening the socket head cap screw securely.

### Dielectric Blade CB6667H

Remove blade by loosening the socket head cap screw with a 3/32 hex wrench (Figure 2). Blade is slotted and should be positioned completely towards the center of the tool. Install new blade by tightening the socket head cap screw securely.

### **Outer Conductor Chamfer CB26**

Remove blade by loosening the button head socket screw with a 5/64 hex wrench (Figure 3). Blade requires no adjustment. Install new blade by tightening the button head socket screw securely.



Figure 1



Figure 2



Figure 3





# **Power Tools - Blade Replacement**

# Blade Replacement Instructions for AirCell® Power Tools

5

For use with PCT012-2

Instructions should be read thoroughly prior to blade replacement.

### **Additional Tools Required**

Hex Wrench, 3/32 Hex Wrench, 5/64

# Blade Replacement Kit PCT012-2RB/3PK

(1) CB6667H (2) CB26

# **Blade Replacement**

# Jacket Strip Blade CB6667H

Remove blade by loosening the socket head cap screw with a 3/32 hex wrench (Figure 1). Blade is slotted and should be positioned completely away from the center of the tool. Install new blade by tightening the socket head cap screw securely.

### **Dielectric Blade CB26**

Remove blade by loosening the button head socket screw with a 5/64 hex wrench (Figure 2). Blade requires no adjustment. Install new blade by tightening the button head socket screw securely.

### **Outer Conductor Chamfer CB26**

Remove blade by loosening the button head socket screw with a 5/64 hex wrench (Figure 3). Blade requires no adjustment. Install new blade by tightening the button head socket screw securely.



Figure 1



Figure 2

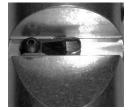


Figure 3





# **Power Tools - Blade Replacement**

# Blade Replacement Instructions for AirCell® Power Tools

6

For use with CT11450P and CT15850P

Instructions should be read thoroughly prior to blade replacement.

# **Additional Tools Required**

Hex Wrench, 5/32

# Blade Replacement Kit CT114/158RB/3PK (3) CB214

### **Blade Replacement**

# Jacket Strip Blade CB214

Remove blade by loosening the socket head cap screw with a 5/32 hex wrench (Figure 1). Blade requires no adjustment. Install new blade by tightening the socket head cap screw securely.

# **Outer Conductor Chamfer CB214**

Remove blade by loosening the socket head cap screw with a 5/32 hex wrench (Figure 2). Blade requires no adjustment. Install new blade by tightening the socket head cap screw securely.

### **Dielectric Blade CB214**

Remove blade by loosening the socket head cap screw with a 5/32 hex wrench (Figure 3). Blade requires no adjustment. Install new blade by tightening the socket head cap screw securely.



Figure 1



Figure 2



Figure 3





# **Power Tools - Blade Replacement**

# Blade Replacement Instructions for AirCell® Power Tools

7

For use with PPT012-PIM

Instructions should be read thoroughly prior to blade replacement.

# **Additional Tools Required**

Hex Wrench, 3/32 Hex Wrench, 5/64

# Blade Replacement Kit PPT012-PIMRB

(1) CB6667H (1) CB292

# **Blade Replacement**

# Jacket Strip Blade CB6667H

Remove blade by loosening the socket head cap screw with a 3/32 hex wrench (Figure 1). Blade is slotted and should be positioned completely away from the center of the tool. Install new blade by tightening the socket head cap screw securely.

# **Outer Conductor Chamfer CB292**

Remove blade by loosening the button head socket screw with a 5/64 hex wrench (Figure 2). Blade requires no adjustment. Install new blade by tightening the button head socket screw securely.





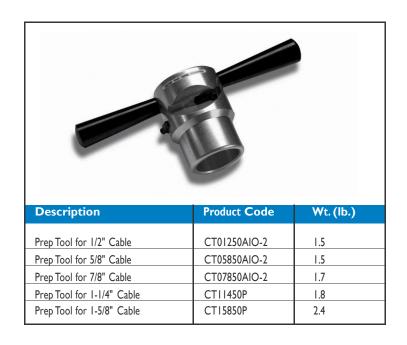
Figure 1 Figure 2





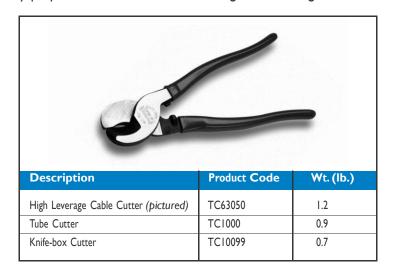
# Prep Tools for AirCell® Transline and Radiating Cable

AirCell® All-In-One Prep Tool is a unique cutting tool designed exclusively for AirCell® Transline and Radiating cable. Cable installers can dramatically reduce cable preparation time by using Trilogy's new All-In-One Prep Tool to aid in fast and continuously reliable connectorization. This dependable tool is designed to ensure the most superior connectorization in the industry by eliminating costly human errors. It simultaneously cuts back dielectric, and outer conductor to expose the correct center conductor length, and strips the jacket back in one easy operation.



# Tools for AirCell® Plenum Cable

AirCell Plenum cables can be easily prepared for connectorization using the following tool.







# Universal Weatherproofing Kit For AirCell" Transline - 1/2", 5/8", 7/8", 1-1/4" and 1-5/8"

# **General Description**

The Universal Weatherproofing Kit for AirCell® connectors includes mastic and electrical tapes that are applied to provide a multi-layer, long-term environmental seal over multiple connections. The following instructions describe the required procedure to install the Weatherproofing Kit over AirCell® connectors on coaxial cables. Instructions should be read thoroughly prior to installation.

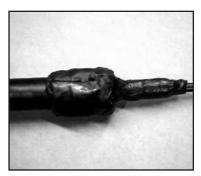
### **Installation Tools**

Razor Knife (product code 10-099) Weatherproofing Kit (product code WK-U)

- 1) Apply one layer of 2" x 20' electrical tape over lapping each row approximately 1/4". Tape layers should extend approximately 1" past each end of connection and each layer should be tightly wrapped to eliminate any void or air pockets.
- 2) Apply one layer of vinyl backed mastic overlapping each row approximately 1/2". Mastic layer should overlap fist tape layer at a minimum of 1/2" on each side of connection.
- 3) Apply three final layers of 3/4" x 44' electrical tape overlapping each row approximately 1/4". Tape layers should extend approximately I" past each end of connection and each layer should be tightly wrapped to eliminate any void or air pockets. The installation is complete at this point.







**NOTE:** Please refer to page 67 of Hardware and Accessories for information on AirCell®  $3M^{\text{TM}}$  Cold Shrink $^{\text{TM}}$  Weatherproofing Kit alternative method.

