

Tyco Electronics Corporation
300 Constitutional Drive

Raychem Specification: ES-61172

Rev: E

ECN#: T-19415 Date: Sept. 8, 1994

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# Termination Procedure for Triaxial Contacts for D-602-1108, 1109, 1110, 1111, MIL-C-38999, Size 8

## 1. Scope

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1.1 This procedure outlines the method of terminating D-602-1/08 through 1111 triaxial connectors to triaxial, twinaxial, coaxial, twisted pair, and single conductor cable.

## 2. Applicable Documents

2.1 <u>Specifications and Standards</u> The following documents form a part of this standard to the extent specified herein. In the event of a conflict between this document and component drawing, the latter shall govern.

## 2.1.1 Raychem Specification Control Drawings

D-602-1108	Triaxial Socket Contact MIL-C-38999
	Size 8 twinaxial cable
D-602-1109	Triaxial Pin Contact MIL-C-38999
	Size 8 Twinaxial Cable
D-602-1110	Triaxial Socket Contact MIL-C-38999
	Size 8 Triaxial Cable
D-621-1111	Triaxial Pin Contact MIL-C-38999
	Size 8 Triaxial Cable

## 2.1.2 Raychem Engineering Standards

ES 61199	Termination Procedure for
	SolderTacts® Contacts D-602-0126/0127
ES 61133	Termination Procedure for
	SolderTact® Contacts D-602-44/45

# 3. <u>Tools and Equipment</u>

- 3.1 AA-400 Super Heater with No. P79663 mini-SolderSleeve® terminator reflector, or CV-5300 MiniGun® heater with MG-1 SolderSleeve terminator reflector.
- 3.2 AD-1319 holding fixture with AT-1319-14 adapter.
- 3.3 AD-1319 holding fixture with AT-1319-22 adapter.
- 3.4 AD-1496 trimmer for twisted pair wire.
- 3.5 AD-1447 or AD-1464 contact removal tool for inner contact, M81969/14-06 or Astro ATBX-2277 for Size 8 contact.

## **NOTES**

CV-5300 and MG-1 replace CV-5700 and MG-7, respectively. CV-5700 may be used, but CV-5300 is preferred over CV-5700.



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# 4. <u>Description</u>

The D-602 triaxial contacts covered by this standard are used with No. 748 SolderTacts® to interconnect triaxial and twinaxial cable. Table 4-1 gives the designed combinations of contacts and cable types.

TABLE 4-1

SOCKET CONNECTOR SIDE			
Socket	SolderTact	Cable	
Connector	Contact	Type	
No.	No.		
D-602-1108	D-602-0126	Twinaxial	
D-602-1110	D-602-44	Triaxial	

PIN CONNECTOR SIDE			
Pin	SolderTact	Cable	
Connector	Contact	Type	
No.	No.		
D-602-1109	D-602-0127	Twinaxial	
D-602-1111	D-602-45	Triaxial	



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## 5. Procedures

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## 5.1 Cable Accommodation

## 5.1.1 Triaxial Cable.

5.1.1.1 D-602-1110 and D-602-1111 contacts will accommodate triaxial cable with the following dimensions:

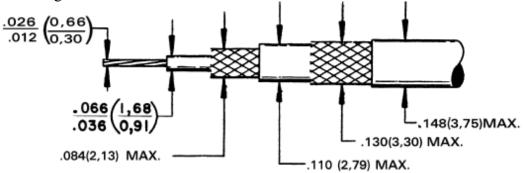


FIGURE 1

5.1.1.2 The following triaxial cables meet these dimensions:

RG 403/U

Raychem 5026A5111

Raychem 5026A5117

Raychem 5026A5314

Raychem 5026D5214

Raychem 5026E5312

## 5.1.2 Twinaxial Cable Accommodation.

5.1.2.1 D-602-1108 and D-602-1109 contacts will accommodate twinaxial cable with the following dimensions:

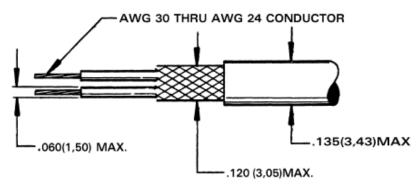


FIGURE 2



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5.1.2.2 The following twinaxial cables meet these dimensions:

Raychem 0028AO314

Raychem 2528D1118

Raychem 7826DO130

Raychem 7826DO530

Raychem 10595

Raychem 10602

## 5.2 Cable Preparation

# 5.2.1 <u>Triaxial Cable Preparation:</u>

A. Slip strain relief sleeve and braid terminator over cable; then strip outer cable jacket from cable for a distance of  $.200 \pm 0.015$  (5,08  $\pm$  0,38) from end of cable.



FIGURE 3

B. Trim exposed braid away from cable.



FIGURE 4



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C. Strip outer cable jacket from cable for a distance of  $0.620 \pm 0.015$  (15,75  $\pm$  0,38) from end of cable.

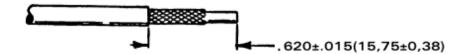


FIGURE 5

D. Comb out braid and fold it back over outer cable jacket.



FIGURE 6

E. Proceed to Section 5.3 for termination procedures.

# 5.2.2 <u>Twinaxial Cable Preparation</u>

5.2.2.1 Slip strain relief sleeve and braid terminator over cable; then strip outer cable jacket from cable per Figure 7.



FIGURE 7



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5.2.2.2 Trim exposed braid away from cable per Figure 8.

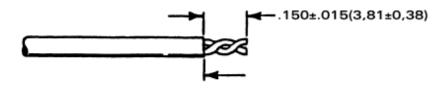


FIGURE 8

5.2.2.3 Strip outer cable jacket from cable per Figure 9.



FIGURE 9

5.2.2.4 Comb out braid and fold it back over jacket; then straighten exposed twisted pair wires per Figure 10.

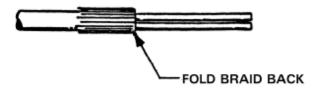


FIGURE 10

## **NOTE**

For ease in straightening the exposed twisted pair wires, warm both wires slightly in the reflector of the CV5300 MiniGun® and straighten while warm

5.2.2.5 Proceed to Section 5.3 for termination procedures.



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## 5.3 <u>Termination Procedure</u>

## 5.3.1 Termination to Inner Contacts

## **NOTE**

Braid Terminator and any other components that may be impractical to install once the inner contacts are in place should carefully be placed over the cable without damaging the prepared ends of the cable.

Use the proper termination procedure paragraph of the ES listed in Table 2 for the different types of contacts.

**TABLE 2** 

Type of Contact	Cable Type	Termination Per
	(REF)	
D-602-44/-45	Triaxial	ES 61133
D-602-0126/0127	Twinaxial	ES 61199

## 5.3.2 Termination of Cable Braid to Triaxial Contacts

5.3.2.1 Insert inner contact into rear of triaxial contact. Continue insertion until retention clip locks into insulator.



FIGURE 11



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5.3.2.2 Brush cable braid forward over rear barrel section of triaxial contact. Trim braid strands to yield spacing shown in Figure 12.

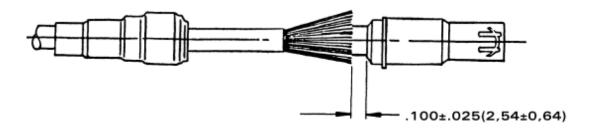


FIGURE 12

5.3.2.3 Slip braid terminator assembly over cable braid and triaxial-contact barrel section, capturing cable braid between barrel section and braid terminator. Push braid terminator assembly until it bottoms.

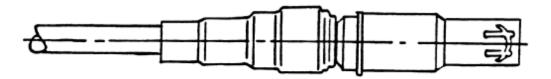


FIGURE 13

5.3.2.4 Position contact assembly into either AA-400 Super Heater or CV-5300 MiniGun® fitted with proper reflector (paragraph 3).



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5.3.2.5 Heat terminator assembly until solder melts and f lows. Heating of terminator assembly should begin on end of terminator butted against larger diameter of contact body. After solder flow occurs in this area, proceed slowly to other end of terminator which recovers down on cable jacket. Entire contact assembly should be slowly rotated in reflector during termination to assure even heating. It is recommended that contact body be supported during termination with a triaxial contact termination support tool or equivalent.

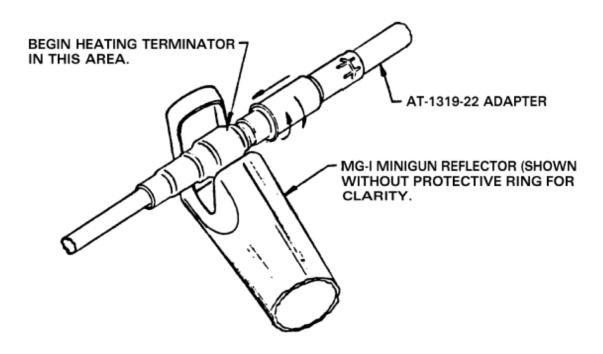


FIGURE 14

# **CAUTION**

The contact and tools are hot after the termination. Allow the contact to cool before handling.