
ELE-3COP-360

Title – Termination of a Primary Wire to an Individual Cable Screen with DEF STAN 61-12 Part 25 Multicore Cables.

Before starting work please read this document carefully and note the guidance given.

1 Purpose and Scope

This COP describes the procedure to be used when terminating a primary wire to an individual cable screen of DEF STAN 61-12 Part 25 multicore cable. The instructions in this document take preference over IPC/WHMA requirements, as do the drawing and any customer documentation.

2 Performance Objective

This code of practice is produced to support operators already trained in the installation of heat shrinkable and harnessing products. It identifies the installation procedure to be used when terminating an individual cable screen using a solder sleeve to obtain an insulated and controlled soldered joint on a DEF STAN 61-12 PART 25 Cable.

3 Materials and Equipment:

Appropriate Solder Sleeve, B-150 range only (B-155 is RoHS alternative)

Appropriate primary Wire

DEF STAN 61-12 Part 25 multicore cable

RNF 100 Tubing

Heat Gun CV1981 or equivalent. Other hot air guns may be used but these must be capable of delivering the temperatures required for installation of the solder sleeve. This also includes hot air guns with temperature displays.

Reflector PR25 and PR25D. (Refer to Table 1)

4 Health and Safety

Adhere to local Codes and Regulations relating to Safe Working practices. For the U.K. adhere to requirements of the Health and Safety at Work Act 1974 and subsequent amendments.

A knife should never be used for jacket stripping as this can easily cause personal injury, shield or conductor damage.

5 Procedure

Prepare the primary wire for termination of the correct type and gauge as per Figure 1. Details on primary wire stripping can be found in ELE-3COP-251.

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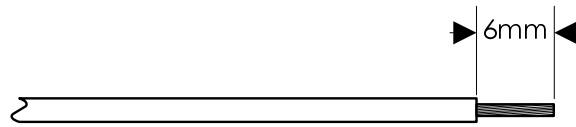


Figure 1

Position and recover a piece of RNF-100-3/16-X 15mm long to secure the Mylar Wrap™ before removing. See Figure 2



Figure 2

Prepare the screened cable component using one of the following methods.

End Strip

Cut back shield leaving 6mm for termination. See Figure 3



Figure 3

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Shield Fold Back

Cut and fold back 6mm of shield over RNF-100 tubing for termination. See Figure 4

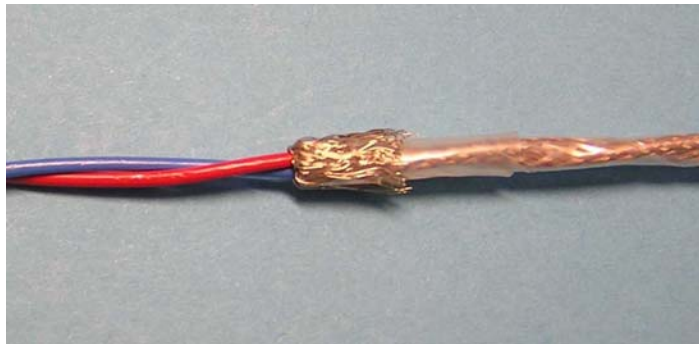


Figure 4

Position the pre-strip wire in line with the cable shield.

Position and recover the Solder Sleeve (See Figure 5) using the correct heat gun and reflector (See Table 1), slightly rotate either the heat gun or the cable until the solder ring completely disappears and wets the cable shield. Wire may exit either end of solder sleeve, depending on the application.

Ensure that the meltable sealing rings at both ends have melted and flowed between the shrink sleeve and the cable. See Figure 6

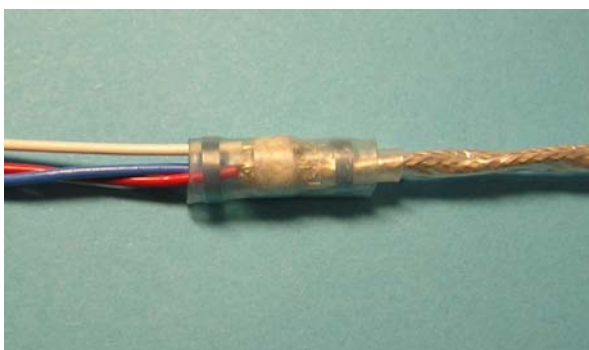


Figure 5

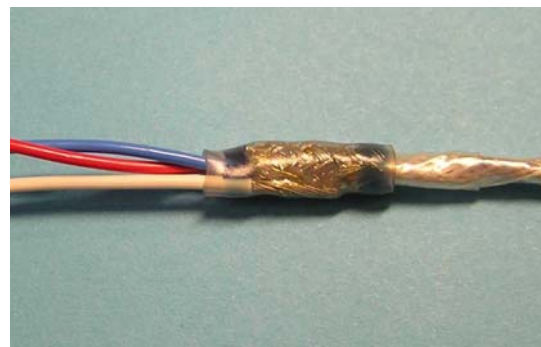


Figure 6

Always ensure that the air vent on the rear of the hot air gun is open and that it is dust free.

Always allow the hot air gun to stabilize at the required temperature and setting for two minutes before commencing calibration and installation.

The recommended recovery temperature range using a CV1981 Heat gun and PR reflector as per Table 1 is 230°C to 250°C.

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During the installation of solder devices onto DEF STAN 61-12 Part 25 cables it is essential that the wire insulation is not exposed to excessive heat as this could lead to thermal damage.

Consequently, any hot air gun used must be controlled so that the hot air stream at the point of shrinking is set to 250°C maximum (note: IR heaters cannot be used). The use of a CV1981 hot air gun is recommended with a PR reflector.

Solder Sleeve Part Number	Cable Size Reference	Reflector Part Number
B-150-03-S	Table 1N and 1Q 0.35mm ²	PR25
B-150-07-S	Table 1P 1.00mm ²	PR25D

Table 1

6 Inspection Requirements

No inspection of the joint should take place until it has completely cooled.
 Check the primary wire conductor is aligned with the cable shield.
 Check there is evidence of wetting at the joint and that the solder has flowed.
 There should be no scorching of the solder sleeve, or damage to the Mylar Wrap™ and wires.
 Ensure no strands are protruding through the solder sleeve insulation.

7 Visual Standards

See Figures 2 to 6 in section 5 of this document

Rev No	CR No	Date	Raised	Approved
2	CR06-DM-071	21/10/08	John Cronin	Ken Wallington
3	CR09-DM-018	03/02/09	Paul Newman	Neil Dorricott
4	Visual Identity	06/06/11	Paul Newman	Neil Dorricott

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