

114-5078

Application Specification

Termination of AMP-ULTREX\*  
2.5/2.54mm Series Connectors

1. Scope:

This specification provides requirements for termination of AMP-ULTREX\* 2.5/2.54mm pitch, connectors, manufactured by AMP. The requirements are applicable to the termination by hand tool and automatic machine applications, with the use of the wires of the sizes specified as follows.

1.1 Applicable Wire Specifications:

- 1.1.1 Type of Wire to Be Applied: PVC Insulated Wires
- 1.1.2 Wire Sizes:
  - #28 AWG 0.08 - 0.09 mm<sup>2</sup>
  - #26 " 0.12 - 0.15 mm<sup>2</sup>
  - #24 " 0.20 - 0.22 mm<sup>2</sup>
- 1.1.3 Conductor Composition: Tin-coated stranded wires, tin-plated solid wires or tin-plated stranded wires (7 strands)
- 1.1.4 Insulation Diameter: 0.88 - 1.56mm

2. Nomenclature:

For the purpose of this specification the illustrations of the connector application are shown, so that proper seating of contact in the connector cavity can be described.


The sketches are shown in sheet 2 of 5.

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C1	Revised RFA-1814	<i>[Signature]</i>	DR	<i>[Signature]</i>	 AMP (Japan), Ltd. TOKYO, JAPAN	REV	C1
C	Revised RFA-1119	<i>[Signature]</i>	CHK	<i>[Signature]</i>		LOC	J A
B	Revised RFA-1055	<i>[Signature]</i>	APP	<i>[Signature]</i>		NO	114-5078
A1	Para. 3.1.2 0.5mm Was 5mm	<i>[Signature]</i>					
A	Released RFA-677	<i>[Signature]</i>			SHEET 1 OF 5 NAME Application Specification Termination of AMP-ULTREX* 2.5/2.54mm Series Connectors		
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2.1 Sketches of Application:

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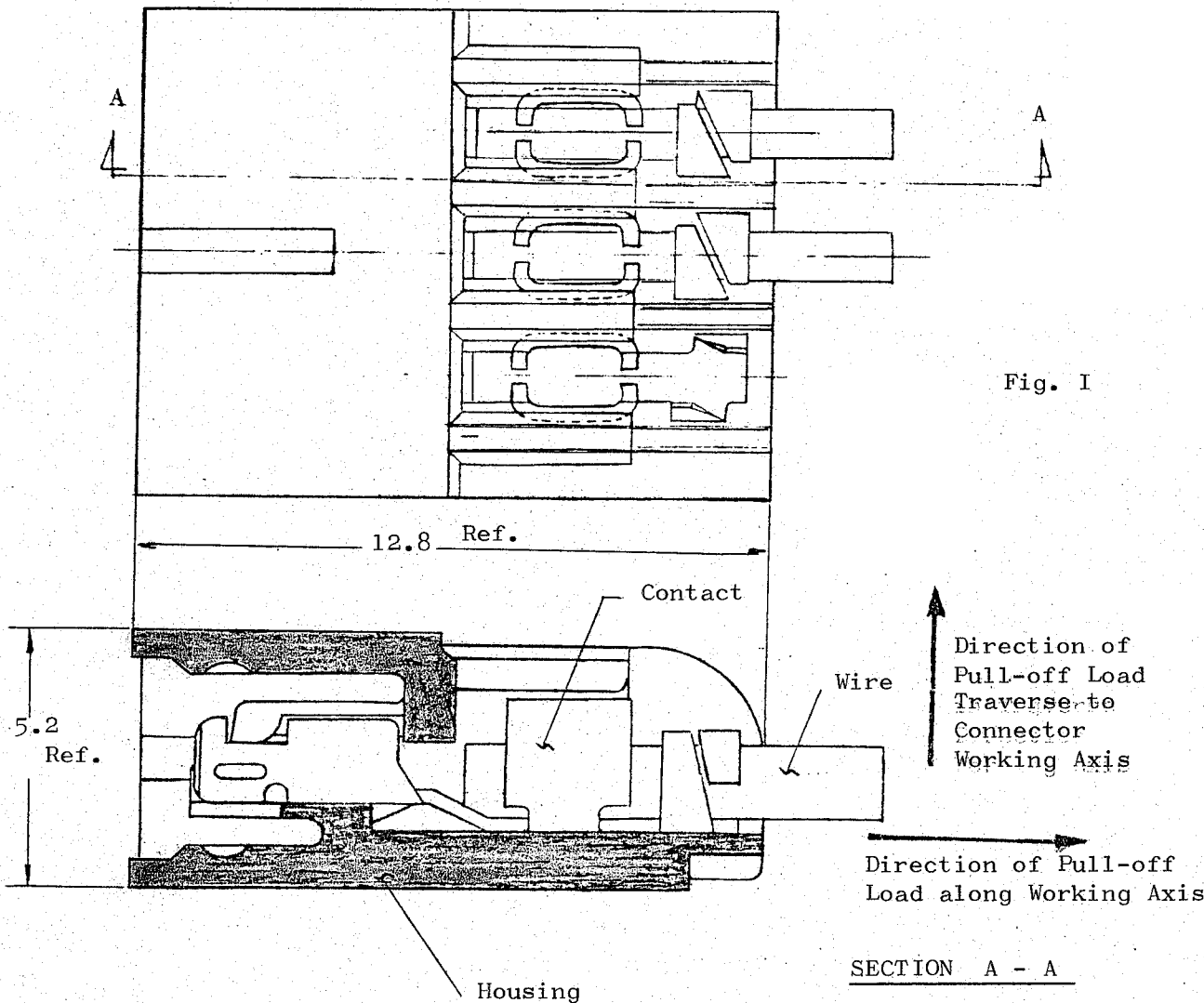


Fig. I

3. Requirements for Connector Termination:

Dimensional, functional and appearance requirements are specified in reference to Fig. (II).

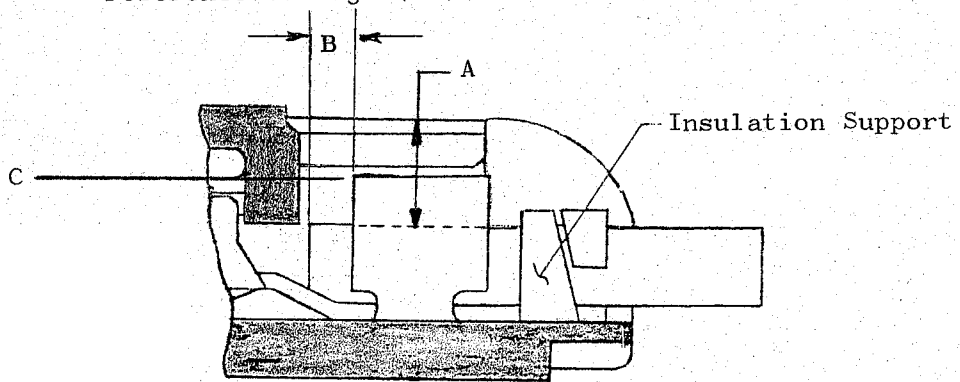


Fig. II

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3.1 Terminating Conditions:

3.1.1 Depth of Wire Insertion into Contact Slot:

Depth of wire insertion into contact slot shall be in the range of 1.9 - 2.5mm, when measured from the upper portion of housing to the tool-marked insulation surface of the wire by using vernier callipers as shown in Fig. II - A, regardless of wire sizes and insulation diameter.

3.1.2 Length of Wire End Protrusion:

The length of wire end protrusion beyond the front contact slot; as shown "B" in Fig - II, shall be not less than 0.5mm. And the wire insulation and the conductor shall not protrude beyond the limit as shown with "C" in Fig. II.

3.1.3 Insulation Support Crimp:

Terminated wire shall be securely gripped in the insulation barrel as shown in Fig. II and Fig. III, When wires having a large diameter are used for termination, insulation barrel may cut into insulation to some extent, but no conductor strand shall be cut off as a result of termination.

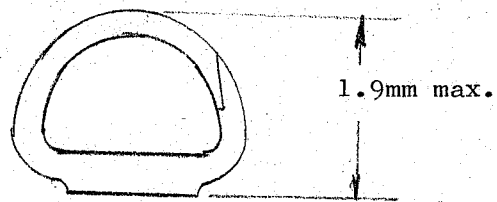


Fig. - III

3.2 Appearance:

3.2.1 Wires:

Terminated wires shall appear normal without evidence of cut, nick and damages on the portions other than wire termination, that is detrimental to connector functions.

3.2.2 Housing:

After termination, connector housing shall appear normal without evidence of damages that are detrimental to connector functions.

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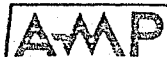
3.2.3 Contact:

After termination, contact and housing shall appear normal without evidence of damages by tooling on the terminated area. The tooled damage on the terminated insulation barrel portion, shall be not greater than one third of the stock thickness of contact.

3.3 Tensile Strength of Terminated Contact:

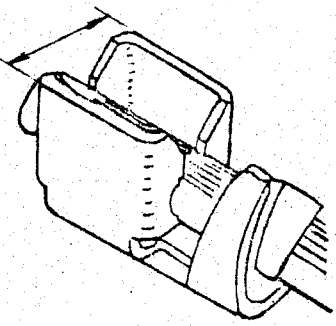
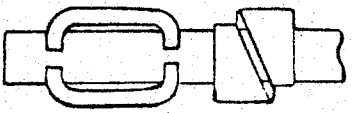
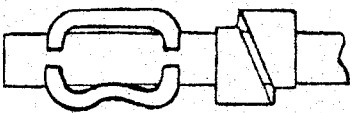

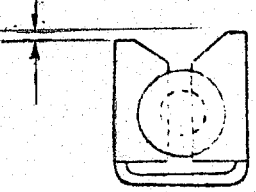
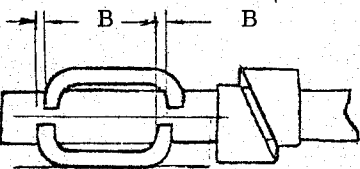
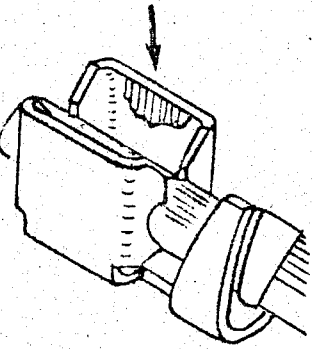
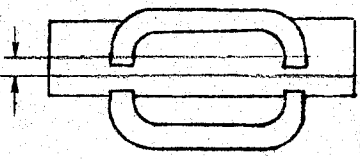
After termination, contact shall exercise sufficient tensile strength in connector working axis and also in the traverse direction to the axis, meeting the requirements specified in the following table.


Wire Size	mm <sup>2</sup>	(AWG)	Tensile Strength Axial Direction kg (Min.)	Tensile Strength Traverse Direction kg (Min.)
0.08		(#28)	1.5	1.0
0.13		(#26)	2.5	1.5
0.2		(#24)	3.5	1.8

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4. Criteria of Termination Acceptance:

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Check Points	Requirements	OK or NG	Appearance	Descriptions
	Upper edges of contact must be flush and parallel after termination.	○		Contact body appearing normal without deformation
		×		Contact body deformed inside one side or both sides
		×		Contact body deformed outside, one side or both sides.
	Contact slot must appear symmetrical without signs of difference of edge height as shown.	○	Difference of the height of the upper edges of contact (2 places) not greater than 0.3mm shall be acceptable.	
		×	Difference of the height of the upper edges of contact (2 places) greater than 0.3mm shall be not acceptable.	
	Contact slot must appear symmetrical without signs of aberration as shown.	○	Aberration not greater than 0.3mm shall be permissible, when measured at the points B and B' as shown.	
		×	Aberration greater than 0.3 mm shall be not acceptable, when the difference of contact beams is measured (B - B').	
	Contact shall appear normal without signs of deformation by the terminating tooling.	○	As a result of abnormal effects of termination, deformation or aberration specified in Steps 1, 2 & 3, is not greater than the limit.	
		×	As a result of abnormal effects of termination, deformation or aberration specified in Steps 1, 2 & 3, is greater than the limit.	
	Insulation must be placed symmetrical over the center line of contact slot.	○	Unsymmetrical placement of insulation to the center line of contact, not greater than 0.3mm shall be permissible.	
		×	Unsymmetrical placement of insulation to the center line of contact greater than 0.3mm, shall be not acceptable.	

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