

108-19084

NUMBER

A: SECURITY CLASSIFICATION

DC

I

Product Specification

1. SCOPE:

1.1. Content.

This specification covers the product performance, requirements and test methods of size 6,3 (.250) series LIF FASTON* . These terminals are suitable for Consumer Goods applications in which low insertion forces are needed.

Products Base number involved: 100495 & 100570

1.2. Classification.

When tests are performed on the subject product line, the procedures specified in this Product Specification shall be used. All inspections shall be performed using the applicable inspection plan and product drawing.

2. APPLICABLE DOCUMENTS.

The following documents form a part of this specification to the extend specified herein. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take preference.

2.1. AMP Specification.

114-19025 : Application Specification

2.2. Commercial Standards.

IEC - 68 : Basic environmental testing procedures
IEC - 512 : Basic testing procedures and measuring methods for electromechanical components for electric equipment
IEC 760 (1989) : Flat quick-connect terminations

* Trademark of AMP Incorporated

Product code: 1100

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Table with columns for Loc., Size, LTR, REV., RECORD, DR., DATE, DR., DATE, NAME, NO., SHEET, REV. containing revision history and drawing details.

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3. **REQUIREMENTS:**

3.1. **Design and Construction.**

The product design feature and dimensions shall be conforming to the applicable product drawing.

3.2. **Materials:**

- A. Terminals brass 100 - 086 tinned and unplated
- B. Ph. bronze 100 - 221 tinned and unplated
- C. NS 103 100-41000

3.3. **Ratings:**

- A. Current: 16 Ampères maximum at 85° ambient temperature.

3.4. **Performance and Test Description.**

Terminals shall be designed to meet electrical, mechanical and environmental performance requirements specified in Figure 1. Plain terminals are tested with plain brass test tabs. Tinned terminals are tested with tinned brass test tabs.

3.5. **Test Requirements and Procedures Summary.**

Para.	Test Description	Requirements	Procedure
3.5.1.	Examination of Product	Meets requirements of product drawing and AMP Spec. 114-19025	Visual, dimensional and functional per applicable Inspection Plan
ELECTRICAL			
3.5.2.	Termination Resistance rated current	Initial Tab-Rec 1,5 mΩ max. Crimp 0,47 mΩ max.	Measure voltage drop at 16 A DC and calculate resistance according Fig. 1
3.5.3.	Temperature Rise	Temperature rise of any individual terminations shall not exceed 30 °C at 16 ampère	Apply LJF FASTONS to 2,5 mm ² plain wire mated with testtab Temperature measurements with thermocouple.
3.5.4.	Current Cycling	Termination Resistance Tab-Rec 1,5 mΩ max. Crimp 0,47 mΩ max.	Terminals wired with 2,5 mm ² . Test current 2x test current 2x 16 = 32 A DC One cycle consists of 45 minutes on and 15 minutes off. 500 cycles to be done.

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3.5. Test Requirements and Procedures Summary (continued).

Para.	Test Description	Requirements	Procedure						
MECHANICAL									
3.5.5.	Crimp Tensile	<table border="1"> <tr> <th>Wire Size</th> <th>Crimp Tensile (Min)</th> </tr> <tr> <td>1,0 mm²</td> <td>160N</td> </tr> <tr> <td>2,5 mm²</td> <td>250N</td> </tr> </table>	Wire Size	Crimp Tensile (Min)	1,0 mm ²	160N	2,5 mm ²	250N	Measure tensile strength on the tensile tester with a rate of 25 mm/minute. Make insulation crimp ineffective.
Wire Size	Crimp Tensile (Min)								
1,0 mm ²	160N								
2,5 mm ²	250N								
3.5.6.	Insertion Forces	First insertion 60N max.	Mount LIF FASTON and testtab on the push-pull tester. Speed: 100 mm/minute Number of insertions: 10						
3.5.7.	Withdrawal Forces	Tenth extraction 18 N min.							
3.5.8.	Humidity - Temperature	2 cycles	Submit the samples to a temperature humidity cycling test. Conditions: Upper temp.: 40 °C. Lower temp.: 25 °C. Relative humidity: 95% Number of cycles: 2 Acc. to IEC 68-2-30						
3.5.9.	Corrosion Salt Spray	96 hours	Place samples in a salt spray chamber with a solution of 5% NaCl. Acc. to IEC 68-2-11						
3.5.10.	Corrosion Test Industrial Air	Termination Resistance Tab-Rec. 1,5 mΩ max Crimp 0,47 mΩ max Temperature: 40 °C. SO ₂ : 2 litres Number of cycles: 6	Place samples in a test chamber with a saturated atmosphere in the presence of sulfordioxide for 6 cycles DIN 50018/SWF/2.0S						

End of Table 1.

Remark 3.5.6.

Because insertion- and withdrawal forces are not measured acc. IEC:
 - Tinplated rec. with plain test tab.

But tinplated rec. with tinplated test tab. This is an increased requirement.

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LOC. I

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3.6. Test Sequence.

Test	Measurements	Paragraph
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GROUP 1

Mechanical Endurance	(First) Insertion Force	3.5.6.
	(Tenth) Withdrawal Force	3.5.7.

GROUP 2

Temperature-humidity cycling	Millivolt drop tab-rec	3.5.8.
	Millivolt drop crimp	
Current cycling	Temperature humidity cycling	3.5.4.
	Millivolt drop tab-rec	
	Millivolt drop crimp	
	current cycling	
	Millivolt drop tab-rec.	
	Millivolt drop crimp	

GROUP 3

Salt spray test	Millivolt drop tab-rec.	3.5.9.
	Millivolt drop crimp	
Corrosion test	Salt spray test	3.5.10.
	Millivolt drop tab-rec.	
	Millivolt crimp	
	Corrosion test	
	Millivolt drop tab-rec.	
	Millivolt drop crimp	

GROUP 4

Tensile strength	3.5.5.
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3.7. Terminal Resistance.

Measuring points:

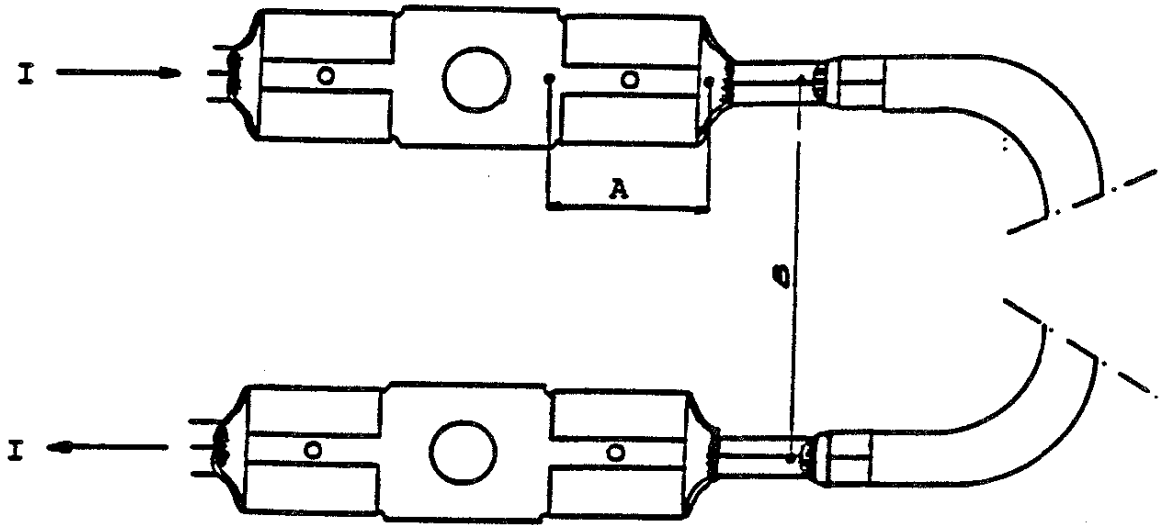


Figure 1

- A. Termination resistance of tab-receptacle connection.
- B. Termination resistance of crimp
 Subtract wire resistance from measured value and divide the result by 2 to find single crimp resistance.

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