

TERMINAL FASTON 6,35 SRS LOW INSERTION FORCE**1. SCOPE**

1.1 Content

This specification covers the performance requirements, tests and quality requirements for FASTON * terminals that mate with tab size 6,3 mm with hole and that is according to the commercial standard IEC 760 and/or UNE 20-680-87.

These terminals are suitable for Consumer Goods applications in which low insertion and high retention forces are needed.

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 extent 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 precedence.

2.1. AMP Specifications

- A. 109-1 : General Requirements for Test Specifications
- B. 114-2036 : FASTON Receptacle Contacts, Application of

2.2. Commercial Standards

IEC Publication 512

- IEC " 760, first edition (1983)
- UNE " 20-606
- UNE " 20-680-87 (equivalent to IEC 760, 1983)

3. REQUIREMENTS

3.1. Design and Construction

Terminals shall be of the design, construction and physical dimensions specified on the applicable product drawing.

3.2. Materials

- A. Terminals: Brass 100-41027

3.3. Ratings

DR DATE J. Lázaro **	23 Mar 1999	APVD DATE L. Batlló **	23 Mar 1999
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- A. Current/Voltage: 240 Vac at 16 amperes maximum
- B. Operating Temperature: -55° to 105°C

4. PERFORMANCE AND TEST DESCRIPTION

Terminals shall be designed to meet the electrical, mechanical and environmental performance requirements specified in Figure 1.

4.1 Test Requirements and Procedures Summary

TEST DESCRIPTION	REQUIREMENTS			PROCEDURE										
Examination of Product	Meets requirements of product drawing and AMP Specification 114-2036			Visual, dimensional and functional per applicable inspection plan										
ELECTRICAL														
Termination Resistance Rated Current	Wire Size mm ² 0,5 0,75 1,0 2,5	Test Current Ampere 4 6 8 16	Resistance Milliohms maximum (Initial) 2,1 1,6 1,3 0,8	Measure potential drop of mated contacts according to UNE 20-606-2, test 2b with details specified in UNE 20680 part 13.1 or according to test 2b of IEC 512-2 with details specified in IEC 760 part 13.1.										
Temperature Rise (a)	Temperature rise of any individual termination shall not exceed 30°C (temp rise= temp of conn - room temp)			Temp rise at rated current; procedure according to test 5a of UNE 20606/3 or IEC 512-3 with details specified in part 14.1 of UNE 20680 or IEC 760										
Electrical Overload Resistance	<p>After 24 cycles and at the completion of 500 cycles, the following requirements shall be met</p> <p>a) Termination resistance shall not exceed the following limits:</p> <table border="0"> <tr> <td>wire size</td> <td>termination resistance</td> </tr> <tr> <td>0,5</td> <td>2,7</td> </tr> <tr> <td>0,75</td> <td>1,9</td> </tr> <tr> <td>1</td> <td>1,6</td> </tr> <tr> <td>2,5</td> <td>1</td> </tr> </table> <p>b) Temperature rise of each termination shall not exceed 85° C</p>			wire size	termination resistance	0,5	2,7	0,75	1,9	1	1,6	2,5	1	<p>Subject mated contacts to 500 cycles at 200% rated current for 45 minutes 'ON' - 15 minutes 'OFF'.</p> <p>Test shall be performed in accordance with test 10d of UNE 20606-5 or IEC 512-5.</p> <p>Details specified in part 15.1 of UNE 20680 and IEC 760.</p>
wire size	termination resistance													
0,5	2,7													
0,75	1,9													
1	1,6													
2,5	1													

TEST DESCRIPTION	REQUIREMENTS			PROCEDURE
MECHANICAL				
Crimp Tensile	Wire Size mm ² 0,5 0,75 1,0 2,5	Crimp Tensile Min. (N) 60 80 110 230	Crimp Height mm 1,32 1,40 1,47 1,81	Determine crimp tensile at a rate of 50 mm minute, according to test method 16d of UNE 20606-8 or IEC 512-18, with details specified in part 17 of UNE 20680 or IEC 760.
Insertion Forces	Contact insertion forces, initial			Test shall be performed in accordance with test 13b of UNE 20606-7 or IEC 512.7 <ul style="list-style-type: none"> • Male tabs AMP PN 140736 without any plating shall be used. • Insertion withdrawal speed shall be 10 mm/min. Maximum. • Other details, as specified in part 16d of UNE 20680 or CEI 760.
	P/N	Max. Individual Force		
	737439-1/-2/-3/-4 737440-1/-2/-3/-4	40 N		
336235-1/-2/-3/-4 336236-1/-2/-3/-4	35 N			
Withdrawal Forces	1 st withdrawal (N) 80 max. 18 min. 6 th withdrawal (N) 18 min.			
Bending	The transition between mating part of the terminal and wire barrel shall show no evidence of fracturing. Number of cycles shall be 3 average minimum without showing fracturing over not less than 12 samples.			Samples shall be placed in a fixture similar to that shown in Figure 3. Samples shall be bent 45° from the longitudinal axis of the terminal and then bent 90° from the first bend. Then return to the initial position.

End Figure 1

- (a) Maximum rated current that can be carried by this product is limited by maximum operating temperature of housings, which is 105° C, and temperature rise of contacts, which is 30°C. Variables which shall be considered for each application are: wire size, connector size, contact material and ambient temperature.

4.2. Connector Test and Sequences

TEST OR EXAMINATION	TEST GROUP (a)					
	1	2	3	4	5	6
	TEST SEQUENCE (b)					
Examination of product	1	1	1-5	1	1	1-3
Termination Resistance Specified Current	2		2-4			
Temperature Rise vs Current		2				
Current Cycling			3			
Crimp Tensile				2		
Insertion Forces					2	
Withdrawal Forces					3	
Bending						2

Figure 2

5. QUALITY ASSURANCE PROVISIONS

5.1. Qualification Testing

A. Sample Selection

Samples shall be prepared in accordance with applicable Instruction Sheets. They shall be selected at random from current production. Each group shall consist of 10 or more samples per wire size.

B. Test Sequence

Qualification inspection shall be verified by testing samples as specified in Figure 2.

C. Acceptance

- (1) Requirements put on test samples, as indicated in the requirements portion of Figure 1, exist as either the upper or lower statistical tolerance limit (95 % confidence, 99 % reliability). All samples tested in accordance with this specification shall meet the stated tolerance limit.
- (2) Failure attributed to equipment, test group, or operator deficiencies shall not disqualify the product. **W**hen product failure occurs, corrective action shall be taken and samples resubmitted for qualification.

5.2. Requalification Testing

Requalification shall be established by the cognizant divisional engineering function and may consist of all or any part of the overall qualification program provided that it is conducted within the required time period.

5.3. Quality Conformance Inspection

The applicable AMP inspection plan will specify the sampling acceptable quality level to be used. Dimensional and functional requirements shall be in accordance with the applicable product drawing and this specification.

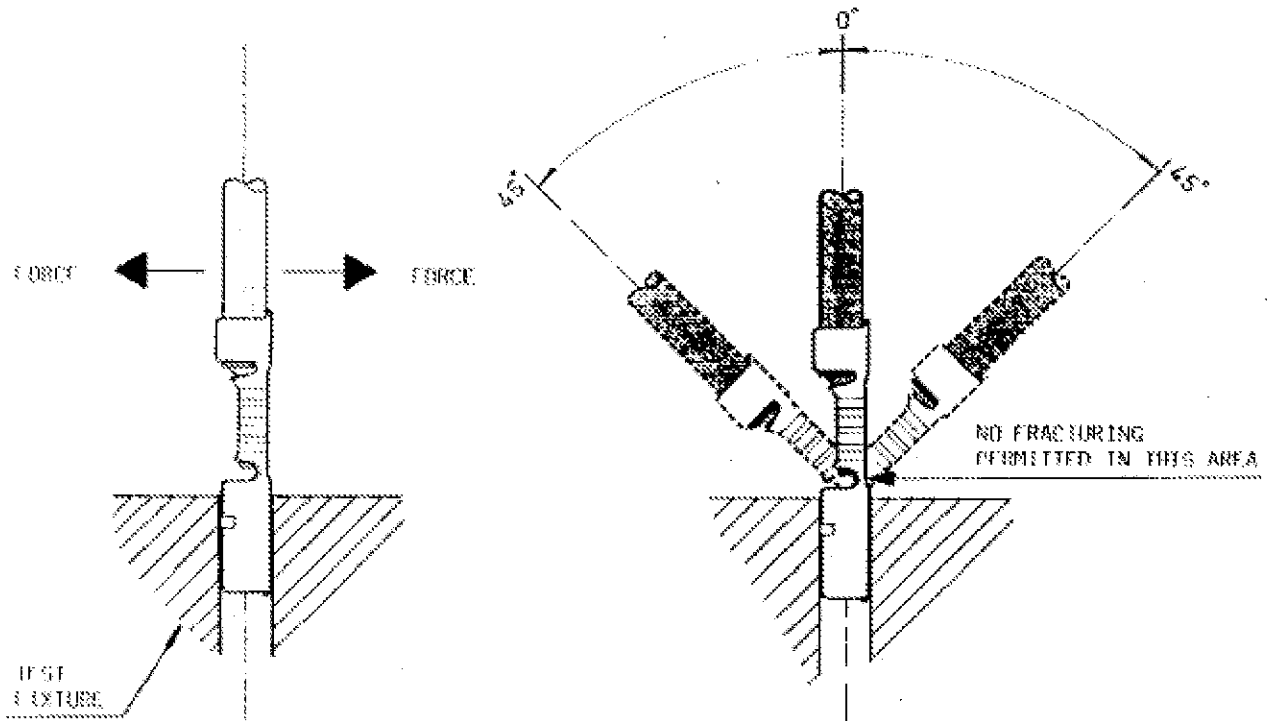


Figure 3