

**Hsg. Ass'y Fastin-on 4 posn. .110 series Sealed
(Pressure Sensor Conn.)**Design Objectives

This product described in this document has not been fully tested to insure conformance to the requirements outlined below. Therefore, AMP do Brasil makes no representation or warranty, express or implied, that the product will comply with these requirements. Further, AMP do Brasil may change these requirements based on the results of additional testing and evaluation. Contact AMP Engineering for further details.

1. SCOPE**1.1 Content**

This specification covers the performance, tests and quality requirements for the Hsg. Ass'y 4 posn. .110 Series Fastin-on Receptacle for automotive vehicles.

1.2 Qualification

When tests are performed on the subject product line, the procedures specified in AMP 109 Series Specifications 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 Documents

- | | | |
|----|---------------------------|---|
| a) | 109-1 | General Requirements for Test Specifications |
| b) | 109 Series | Test Specifications as indicated in Figure 1. (Comply with MIL-STD-202, MIL-STD-1344 and EIA RS-364). |
| c) | Corporate Bulletin 401-76 | Cross-reference between AMP Test Specifications and Military or Commercial Documents. |

3. PRODUCT PART NUMBERS AND DESCRIPTIONS

The products of the following part numbers shall be governed under this specification.

Part Number	Description
444407-1	Hsg. Ass'y, Fastin-On, 4 Posn. Rec.
444406-1	Rec. .110 Series Fastin-On

Prepared by : Xavier P. Jareño

Approved by : Rolands Indriksons

4. REQUIREMENTS

4.1 Design and Construction

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

4.2 Materials

- a) Housing : Polyamide 6.6
- b) Connector Seal : Silicone Rubber
- c) Wire Seal : Silicone Rubber
- d) Contact : Brass , Tin Plated

4.3 Ratings

- a) Temperature : -40°C to 80°C (based on material).
- b) Cable Range and Test Current .

Contact P/N Rec.	Contact Description	Wire Range (mm ²)	Insulat. Dia (mm)	Wire Seal P/N	Test Current	
					Wire Size (mm ²)	A
444406-1	Rec. .110 Sr. Fastin-On	0,5 - 1,0	1,4 - 2,6	1-172888-3	0,5	6
					1,0	11

Table 1

4.4 Performance and Test Description

The product is designed to meet the electrical , mechanical and environmental performance requirements specified in Figure 1 . All tests are performed at ambient environmental conditions per AMP Specification 109-1 unless otherwise specified .

4.5 Test Requirements and Produce Summary

Test Description	Requirements	Procedure
Electrical		
Examination of Product	Meets requirements of product drawing	Visual, dimensional and functional per applicable quality inspection plan .
Dielectric Withstanding Voltage	No break down or flash-over when 1KVAC is applied for one minute.	Test between adjacent contacts of unmated connector assembly; AMP Spec. 109-29-1.
Insulation Resistance	200 megohms minimum.	Test between adjacent contacts of unmated connector assembly; AMP Spec. 109-28-4.
Mechanical		
Connector Mating Force	70 N maximum.	Measure force necessary to mate connector assembly with locking latches, to a counterpart (see figure 3), at a rate of 25mm/min ; AMP Spec 109-42 ; cond "A".
Connector Unmating Force	70 N maximum.	Measure force necessary to unmate connector assembly with locking latches removed or released, from a counterpart (see figure 3), at a rate of 25mm/min. ; AMP Spec. 109-42 ; cond. "A".
Contact Retention	40 N minimum.	Apply axial force to dislodge terminal from housing ; AMP Spec. 109-30.
Housing Lock Strength	70 N minimum.	Determine strength of housing locking mechanism at a rate of 12mm/min; AMP Spec. 109-50.

Figure 1

cont.

Environmental		
Temperature Life	See note (a).	Subject mated connectors to temperature life at 125°C for 96 hours duration ; AMP Spec. 109-43 .
Salt-spray corrosion	See note (a).	Subject mated connectors to 5% NaCl concentration for 150 hours (35 ± 2°C).
Water-tight Sealing	See note (a).	According to IEC 529 IP x.4.

Figure 1

Note (a) : Shall meet visual requirements , show no physical damage, and shall meet requirements of additional tests as specified in Test Sequence of Figure 2.

5. TEST SEQUENCE

All the tests shall be performed in the sequence specified in Figure 2.

Note : Numbers indicate sequence in which tests shall be performed .

Test Description	Groups and Sequence				
	A	B	C	D	E
Examination of Product	1,4	1,4	1,5	1,7	1,7
Dielectric Withstanding Voltage				2,6	2,6
Insulation Resistance			2,4	3,5	3,5
Conn. Mating Force	2				
Conn. Unmating Force	3				
Contact Retention		2			
Hsg. Lock Strength		3			
Temperature Life				4	
Salt Spray Corrosion					
Water Tight Sealing			3		4

Figure 2

6. QUALITY ASSURANCE PROVISIONS

6.1 Qualification Testing

Connector housings and contacts shall be prepared in accordance with applicable Instructions Sheets. They shall be selected at random from current production . Each group of the sample contacts shall consist of more than 30 sets of prepared contacts and connector sample group shall consist of more 5 sets of assembled connectors .

6.2 Requalification Testing

If changes significantly affecting form , fit or function are made to the product or to the manufacturing process , product assurance shall coordinate requalification testing consisting of all or part of the original testing sequence as determined by Product Engineering .

6.3 Acceptance

Acceptance is based on verification that the product meets the requirements of Figure 2 . Failures attributed to equipment , test set-up or operator deficiencies shall not disqualify the product . When product failure occurs , corrective action shall be taken and samples resubmitted for qualification . Testing to confirm corrective action is required before resubmitted .

6.4 Quality Conformance Inspection

The applicable AMP Quality Inspection Plans 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 .

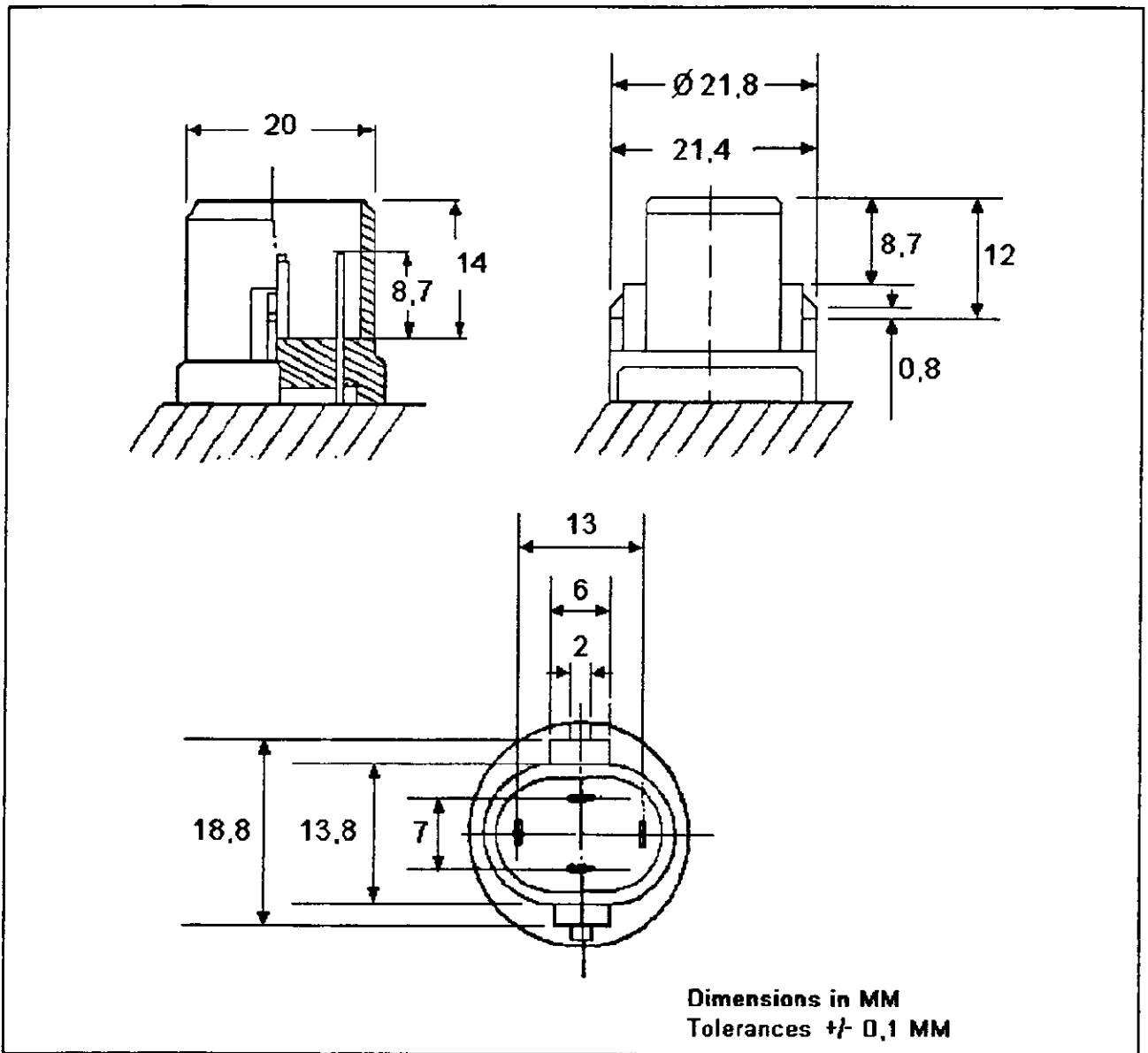


Figure 3
Counter part information for the Hsg. Ass'y Fastin-on 4p Rec.

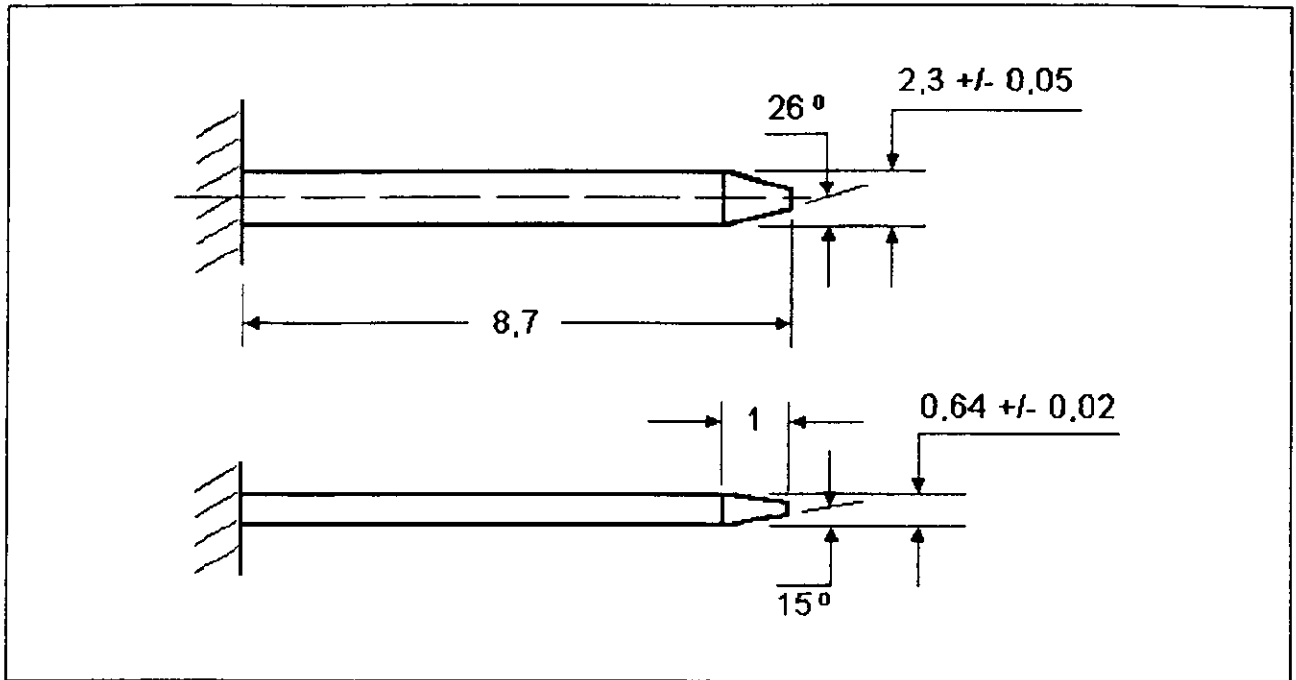


Figure 4
 Tab Information for the .110 Fastin-on Rec. Contact

Revision Record		
Revision	Date	Description
0	19-Nov-96	Released

Edited by Engineering Services Division