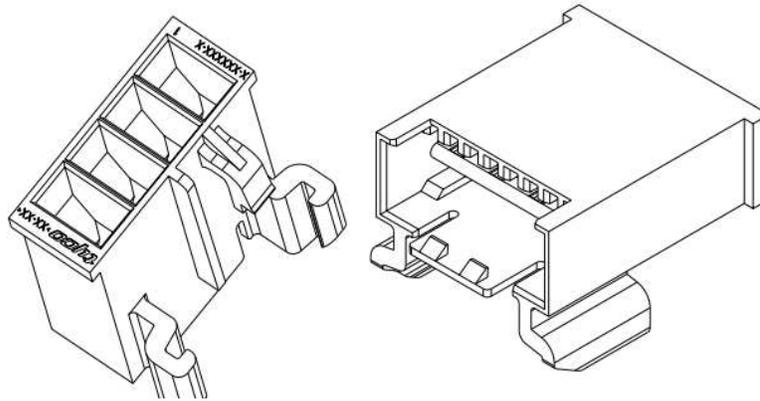

DUOPLUG POWER MOTOR MOUNT RAST 2.5 CONNECTOR

1. SCOPE

1.1. Content

This specification covers performance, tests, and quality requirements for the Duoplug Power Motor RAST 2.5 connector. The assembly is designed with locking and keying to the RAST 2.5 Specification. Base numbers covered by this specification is 293230. The image is shown in Figure 1.

**Figure 1**

1.2. Qualification

When tests are performed on the subject product line, procedures specified in Figure 2 shall be used. All inspections shall be performed using the applicable inspection plan and product drawing.

2. APPLICABLE DOCUMENTS AND FORMS

The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the latest edition of the document applies. 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. TE Connectivity Specifications

293230	Customer Drawing – Duoplug Motor Mount 4 Pos RAST 2.5.
501-106557	Validation test report for Duoplug Motor Mount 4 Pos RAST 2.5.

2.2. Commercial Standards and Specifications

IEC 60335-1	International Standard – Safety of Household and Similar Appliance
IEC 60695-2-11	Fire Hazard Testing - Part 2-11: Glowing/hot-wire Based Test Methods -Glow-wire Flammability Test Method for End-products
EIA-364	Electrical Connector/Socket Test Procedures Including Environmental Classifications

2.3. Reference Documents

- 109-1 General Requirements for Testing
- 102-950 Qualification of Separable Interface Connectors

3. REQUIREMENTS

3.1. Design and Construction

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

3.2. Materials

Materials used in the construction of this product shall be as specified on the applicable TE drawing.

3.3. Ratings

- A. Voltage Rating: 250 VAC
- B. Current Rating: 2 A / 6 A
- C. Temperature Rating: -40°C to $+110^{\circ}\text{C}$

3.4. Performance Requirements and Test Description

The product should meet the electrical, mechanical and environmental performance requirements specified in Figure 2. Unless otherwise specified, all tests shall be performed at ambient environmental conditions per AMP Specification 109-1 unless otherwise specified.

3.5. Test Requirements and Procedure Summary (Figure 2)

Test Description	Requirements	Procedures
Examination of Product	Meets requirements of product drawing. No physical damage.	Visually, dimensionally and functionally inspected per applicable inspection plan. EIA-364-18
Electrical		
Insulation Resistance	5000M ohms min. (Initial) 5000M ohms min (Final)	Measure by applying test potential between adjacent contacts. EIA-364-21
Dielectric Strength	Withstand test potential of 1500VAC for 1 min. Current leakage limit to 0.5mA max.	Measure by applying test potential between adjacent contacts. EIA-364-20, Method A
Mechanical		
Contact Retention Force	20 N [4.49 lbf] minimum.	EIA-364-13. Measure force necessary to remove contact tab from housing at a maximum rate of 12.7 mm [.5 in] per minute.
Environmental		
Glow wire test	Tested part shall have rating of 750°C with no flame.	IEC 60695-2-11
Temperature Life	No Physical damage	Subject connectors to temperature life at 85°C±2°C for 96 hours. EIA 364-17 condition III.
Humidity-Temperature Cycling	No Physical damage	Subject connectors to steady state humidity at 40°C±2°C and 90-95% R.H for 96hrs. EIA-364-31, Method III, condition B
Cold	No physical damage	Acc. IEC 512-11-10 T: -40 ° C, duration time: 2 hours.
Dry heat	No physical damage	Acc. IEC 512-11-9 T: 120 ° C, duration time: 7 days

Figure 2 (end)



NOTE

- a) Product must be without rust, corrosion transformation, crack and discoloration
- b) Shall meet visual requirements, show no physical damage, and meet requirements of additional tests as specified in the Product Qualification and Requalification Test Sequence shown in **Error! Reference source not found.3.**

3.6. Product Qualification and Requalification Test Sequence (Figure 3)

TEST OR EXAMINATION	Test Group			
	1	2	3	4
	Test Sequence			
Examination of product	1	1,3	1,8	1,4
Insulation Resistance			2,6	
Dielectric withstanding Voltage			3,7	
Contact Retention Force	2			
Glow Wire Test		2		
Temperature Life			5	
Humidity-Temperature Cycling			4	
Cold				2
Dry Heat				3

Figure 3 (end)

4. QUALITY ASSURANCE PROVISIONS

4.1. Test Conditions

Unless otherwise specified, all the tests shall be performed in any combination of the following test conditions shown in Figure 4.

Temperature	15°C – 35°C
Relative Humidity	45% – 75%
Atmospheric Pressure	86.6 – 106.6 KPa

Figure 4

4.2. Qualification Testing

A. Specimen Selection

Specimens shall be prepared in accordance with applicable Instruction Sheets and shall be selected at random from current production. Test group 1 shall consist of a minimum of 10 specimens. Test groups 2, 3 and 4 shall each consist of a minimum of 5 specimens.

B. Test Sequence

Qualification inspection shall be verified by testing specimens as specified in Fig 3.

4.3. Acceptance

Acceptance is based on verification that the product meets the requirements in Figure 2. Failures attributed to equipment, test setup or operator deficiencies shall not disqualify the product. If product failure occurs, corrective action shall be taken and specimens resubmitted for qualification. Testing to confirm corrective action is required before resubmittal.

4.4. Quality Conformance Inspection

The applicable quality inspection plan shall 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.