PRODUCT SPECIFICATION

1. SCOPE

1.1. CONTENT

This specification covers the performance, tests and quality requirements for the combined 9 way housing, Jr. Power Timer, STD Power Timer & Positive Lock, with double locking, PN 881696.

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 Rev C: General Requirements for Test Specifications

B. 109 Series : Test Specifications as indicated in Figure 1. (Comply with MIL-STD-202 Rev 1 Apr 1980, MIL-STD-1344 Rev 31 Oct 1973 and EIA RS-364 Rev 17 Aug 1971).

C. 108-18013 Rev D: Jr. Power Timer Terminal Specification

D. 108-18025 Rev 0: STD Power Timer Terminal Specification

E. 108-3017 Rev 0: Positive Lock Terminal Specification

3. REQUIREMENTS

3.1. DESIGN AND CONSTRUCTION

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

3.2. MATERIALS

A. Contacts: Brass, Tin Plated
B. Housing : PA 6.6, UL 94 V-2

3.3 RATINGS

A - Operating Temperature : -40oC to 85oC
B - Voltage : 250 V

3.4. PERFORMANCE AND TEST DESCRIPTION

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

3.5. TEST REQUIREMENTS AND PROCEDURES SUMMARY

TEST DESCRIPTION	REQUIREMENT	PROCEDURE
Examination of Product	Meet requirements of product drawing	Visual, dimensional and functional per applicable quality inspection plan.
ELECTRICAL		
Termination Resistance, Specified Current	See Product Spec. Terminal (2.1.)	Measure potencial drop of mated contacts assembled in housing, AMP Spec 109-25 Rev B
Dielectric Withstanding Voltage	No breakdown or flashover when 1 Kv is applied for 1 minute	Test between adjacent contacts of mated connector assemblies; AMP Spec 109-29-1 Rev C
Insulation Resistence	R $\geqslant$ 10 M Ω	Tests between adjacent contacts of mated assembled; AMP Spec 109-28-4 Rev B
Temperature Rise vs Current	See Product Spec. Terminals (2.1.)	Measure temperature rise vs current; AMP Spec 109-45-1 Rev B
MECHANICAL		
Vibration Sinusoidal Low Frequency	No discontinuities greater than 1 microsecond	Subject mated connectors to 10-55-10 Hz traversed in 1 min at .06 inch total excursion; 2 hours in each of 3 mutually perpendicular planes; AMP Spec 109-21-1 Rev D

FIGURE 1 (CONT.)

TEST DESCRIPTION	REQUIREMENT	PROCEDURE
Contact Retention Force	Contact shall remain locked in hsg when a pull of 100 N min. (S.P.T.); 80 N min. (J.P.T.); 100 N min.(Pos.Lock)	Measure force necessary to unmate receptacle contact from hsg; AMP Spec 109-30 Use #18 AWG wire or larger this test. Rev. C
Contact Insertion Force	15 N max. per contact	Measure force to insert contact into hsg; AMP Spec 109-41 Rev A
Housing Lock Strength	180 N minimum	Determine strength of housing locking mechanism ; AMP Spec 109-50 Rev 0
Thermal Shock	No physical damage; 6 mΩ max., final termination resistance at specified current	Subject mated connectors to 5 cycles between -40oC for 30 min. and 85oC for 30 min.; AMP Spec 109-22 Rev A
Humidity - Temperature Cycling	No physical damage; 6 mΩ max.; final termination resistance at specified current	Subject mated conn. to 10 humidity-temperature cycles between 25oC and 65 oC at 95% RH; AMP 109-23-3 Rev B; cond B
Salt Spray Corrosion	7.0 mΩ max. termination resistance	Subject mated conn.to 48h. at 5% of concentration NaCl (Temperature 35oC ± 2oC); AMP Spec 109-24 Rev 0 ; Cond. B
FIGURE 1 (END)		

3.6 CONTACT TEST AND SEQUENCE

Test or Examination	Test Group			
	1	2	3	4
	Test Sequence (A)			
Examination of Product	1,6	1,6	1,8	1,4
Termination Resistance, Specif. Current	3,5	2,5	7	
Dielectric Withstanding Voltage			3	
Insulation Resistence			2,5	
Temperature Rise vs. Current		3		
Vibration	4			
Contact Retention Force				3
Contact Insertion Force	2			
Housing Lock Strength				2
Thermal Shock			4	
Humidity Temperature Cycling		4		
Salt-Spray, Corrosion			6	

(A) Numbers indicate sequence in which tests are performed.

FIGURE 2.

4. QUALITY ASSURANCY PROVISIONS

4.1. QUALIFICATION TESTING

A - Connector housing and contacts shall be prepared in accordance with applicable instructions sheets.
They shall be selected at random from current production.

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

C - Acceptance
Failures atributed to equipment, test setup or operator deficiencies shall not disqualify the product.
When product failures occurs, corrective action shall be taken and samples resubmitted for qualification.

4.2. 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.