DESIGN OBJECTIVES

The product described in this document has not been fully tested to insure conformance to the requirements outlined below. Therefore AMP Incorporated makes no representation or warranty, expressed or implied, that the product will comply with these requirements.

Further, AMP Incorporated may change these requirements based on the results of additional testing and evaluation.

Contact AMP Engineering for further details.

Il prodotto descritto in questa specifica non è stato ancora completamente provato per garantirne la conformità ai requisiti indicati nel documento. Perciò l'AMP non può al momento fornire assicurazione sulla conformità del prodotto a questi requisiti.

L'AMP si riserva inoltre la facoltà di modificare i requisiti della specifica sulla base dei risultati di addizionali prove e valutazioni.

Per ulteriori informazioni si prega di contattare l'Ufficio Tecnico.

2 POS. SPLASH PROOF FEMALE CONNECTORS WITH SEC. LOCKING DEVICE (FOR JUNIOR POWER TIMER CONTACT)

1. SCOPE

This specification covers features and performances of Splash Proof connector with the following AM P/N:
C-282788-1 to -8 : 2 pos. female connector (with internal spring - Type B)

with the relevant contacts - wire seals with AMP P/N :
C-929939-3 : contact "AMP Junior Power Timer" wire range 0,5-1 mm2
C-929937-3 : contact "AMP Junior Power Timer" with wire range > 1-2,5 mm2
C-929937-1 : contact "AMP Junior Power Timer" wire range > 1-2,5 mm2
C-828904-1 : wire seal for single wire (and contact C-929939-3)
C-828905-1 : wire seal for single wire (and contact C-929937-3, -1)
C-282536-1 : wire seal for single wire (and contact C-929937-3, -1)
C-828906-2 : cavity plug to close connector cavity (or, in alternative, P/N C-282081-1)

This connector is suitable for header counterpart, as shown on the AMP customer drawing C-282788 (sheet 2 of 2)

PRODUCT CODE 2004

REV LTR	REVISION RECORD	DR	CHK	DATE
0	FIRST ISSUE (ENGLISH VERSION)	-	-	-

DR R. MARTINI 20 Dec 95
CHK C. TARTARI 20 Dec 95
APP.

AMP ITALIA S.p.A.
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LOC. I | NUMBER 108 - 20156 | REV. 0

SHEET 1 OF 7

NAME SPLASH PROOF CONN. WITH SEC. LOCK FOR JUNIOR POWER TIMER 2 POS. TYPE "B", PRODUCT SPECIFICATION

2. CONNECTOR FEATURES :

2.1 Materials : - contacts : Phosphor Bronze, or Cu Fe alloy for contact 929937-1, bright tin plated (with external reinforcement spring in stainless steel).
- housings : PA 6.6, glassfiber filled (and retaining spring in stainless steel and frontal sealing in silicone rubber).
- single wire seals : silicone rubber.

2.2 Wire Range : - stranded cable acc. to FIAT normation table n° 91107/03

0.5 mm²	reduced	insul.	cable	" phase 3 "	dia.	1.5 - 1.7 mm
1.0 "	"	"	"	"		1.9 - 2.1 mm
1.5 "	"	"	"	"		2.2 - 2.4 mm
2.5 "	"	"	"	"		2.7 - 3.0 mm

2.3 Current Rating : 20 A (with 2.5 mm² wire and contact 929937-1)

2.4 Working Temperature : -30 to +125 °C (with included the temperature increasing due to working current flow).

2.5 Degree of Protection : IP 5.4 according to IEC 529.

2.6 Female Housings: provided with secondary locking device like a door moulded at hinge and integral with housing body.
The sec. locking device hooks on the housing body after the complete introduction of contacts into their cavity; it ensures a correct holding of contacts in their cavity in case of primary lock bad working.

2.7 Maximum Operating Voltage: 24 V d.c. ; for application at higher voltage please contact AMP.

3. FEATURES AND TEST CONDITIONS

FEATURES	TEST CONDITIONS	LIMITS
3.1 Connector mating force (with contacts inserted)	In working condition with header counterpart. Mating speed 50 mm/minute Direction equal to contact axis.	I st mating ≤ 60 N
3.2 Connector unmating force (with contacts inserted)	like point 3.1	I st unmating ≥ 60 N X th unmating ≥ 30 N
3.3 Single contact insertion force	Single cont. (tab as shown in Fig.1)	≤ 18 N Ist insertion
3.4 Single contact extraction force	Single cont. (tab as shown in Fig.1)	I st extr. ≤ 18 N X th extr. ≥ 4 N
3.5 Retention force of the single contact from the housing	At temperature + 23 ± 5°C and at tensile speed of 50 mm/minute	Only with primary locking dev. ≥ 70 N Only with secondary locking dev. ≥ 30 N
3.6 Crimping tensile strength	Tensile speed 25 - 50 mm/minute	0.5 mm2 ≥ 70 N 1.0 mm2 ≥ 115 N 1.5 mm2 ≥ 155 N 2.5 mm2 ≥ 235 N
3.7 Voltage drop	Between a point on the wire at 1 cm from the conn. edge and a point on the tab very closed to the conn.edge see Fig.2 as ref.	≤ 3 mV/A on new contacts and after 10 insertions/extractions

FEATURES	TEST CONDITIONS	LIMITS
3.8 Insulation resistance	Between two adjacent contacts apply 500 Vdc for 1 minute.	≥ 10 MΩ
3.9 Dielectric breakdown resistance	Between two adjacent contacts apply voltage for 1 minute	≥ 1000 Vac
3.10 High temperature resist. with current load.	On all ways contemporarily : -Not airy ambient-with a test temp. of 80 ± 2°C : -Test current on each way : 14 A (with a 1.5 mm2 wire) or 20 A (with a 2.5 mm2 wire) -Duration: 5 hours	Temperature increasing detected: ≤ 50 °C (thermocouple placed on transition between contact body and wire barrel) Voltage drop within limits indicated for new contacts. No damaging.
3.11 Current overload	On one way only w/o housing : - Test current : 21 A (with a 1.5 mm2 wire) or 30 A (with a 2.5 mm2 wire). - Duration: 500 cycles composed of : 45' current "ON" 15' current "OFF".	Temperature increasing ≤ 60°C on transition between contact body and wire barrel Voltage drop ≤ 4.5 mV/A No damaging
3.12 Thermal cycling resistance	5 cycles composed of : 2 hrs. at +125°C ± 2°C 2 hrs. at + 40°C ± 2°C and 90-95% R.H. 2 hrs. at -30°C ± 2°C (connector mated with header counterpart).	No deformat. or cracking of hsg. Voltage drop ≤ 4.5 mV/A Insul resist., dielectr. breakdown resist.,and mech. features,at points 3.2 and 3.5,within limits indicated for new contacts.
3.13 Accelerated ageing test	200 hours at +125 ± 2°C (Connector mated with header counterpart).	No deformat. or cracking of hsg., and plastic matl discol is admitted. Voltage drop ≤ 4.5 mV/A Dielectr. breakdown resist.and mech. features, at points 3.2 - 3.5, within limits indic. for new cont.

FEATURES	TEST CONDITIONS	LIMITS
3.14 Kesternich corrosion	4 cycles composed of : 8 hrs of exposure to an atmosphere with 0.66% of SO_2 at 40 ± 2°C (method acc. to DIN 50118) 16 hrs in free air. (Connector mated with header counterpart).	Voltage drop ≤ 4.5 mV/A Insulation resistance within indicated limits.
3.15 Salt spray corrosion test	150 hrs of salt mist at 35 ± 2°C, 5% of NaCl, pH 6.5-7.2 class 2. (Connector mated with header counterpart).	Voltage drop ≤ 4.5 mV/A Insulation resistance within indicated limits.
3.16 Vibration test	2 hours for each axis : Freq: 10-500-10 Hz in 5 minutes Displacement : 1.5 mmpp Acceleration : 25 g (Connector mated with header counterpart).	Voltage drop ≤ 3 mV/A No circuit break greater than 1µs
3.17 Water resistance	Acc. to IEC norm.529 para. 7.4 and para. 8.4. Duration 2 hours. Test device acc. to Fig.4 Position of the conn.,connected with header counterpart, as required on the relevant Customer Dwg. NOTE : This test must be carried out after tests 3.12 + 3.13	Insulation resistance within indicated limits. Dielectric breakdown resistance within indicated limits. Voltage drop ≤ 4.5 mV/A No water infiltration inside the connector.

GENERAL NOTE : Each test must be carried out, if not otherwise specified, at an ambient temperature of 23 ± 5°C .
See also page 6 for test groups and sequencies.

TEST TO BE CARRIED OUT	TEST GROUP AND SEQUENCY											
	A	B	C	D	E	F	G	H	I	L	M	N
- Visual examination	1 , 5	1 , 7	1 , 8	1 , 3	1 , 4	1 , 4	1 , 9	1 , 8	1 , 6	1 , 6	1 , 5	1 , 9
- Single contact mating force	2	2										
- Single contact unmating force	3	4										
- Connector mating force with contacts inserted			2									
- Connector unmating force with contacts inserted			3				5	5				
- Mechanical duration (10 cycles)	4	5	4									
- Voltage drop		3 , 6			3	3	2 , 4	2 , 4	2 , 4	2 , 4	2 , 4	2 , 6
- Retention force of the single contact in the housing			7				8	7				
- Crimping tensile strength				2								
- Insulation resistance			5				6		5	5		7
- Dielectric breakdown resist.			6				7	6				8
- High temperature resistance with current load					2							
- Current overload						2						
- Thermal cycling							3					3
- Accelerated ageing test								3				4
- Kesternich corrosion									3			
- Salt spray test										3		
- Vibration test											3	
- Water resistance												5

TAB CONTACT IN BRIGHT TINNED BRASS

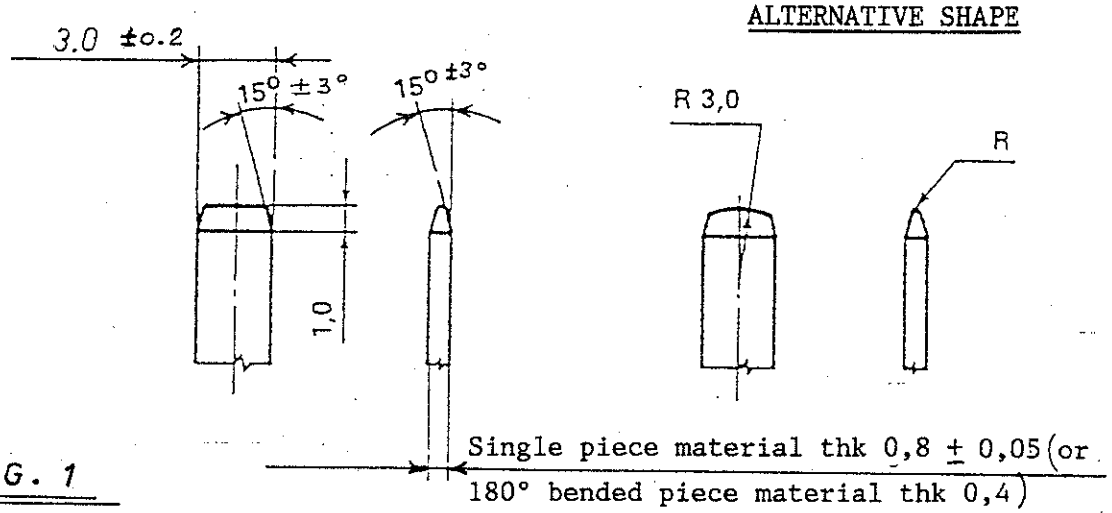

FIG. 1

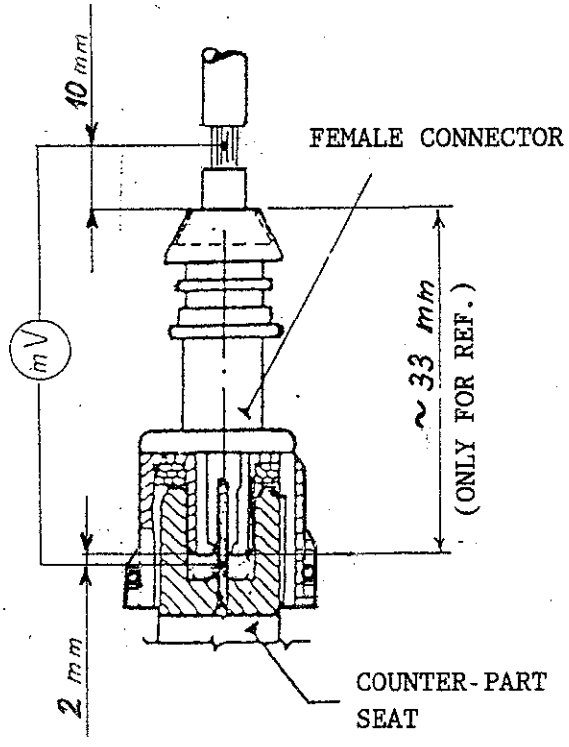

FIG. 2