

1. SCOPE

This Product Specification covers features and performances of:
"15 POS. J.P.T. SEALED FEMALE CONNECTOR"
 manufactured by AMP Italy.

The product feature, construction and dimensions, shall conform to the relevant customer drawing.


2. PRODUCT NUMBER AND DESCRIPTION

PART NUMBER	DESCRIPTION
C-282311-1	Female connector (Coding 1)
C-282311-3	Female connector (Coding 3)
C-929939-3	JPT Female contact wire range 0.5÷1.0 mm ²
C-929937-3	JPT Female contact wire range 1.5÷2.5 mm ²
C-828904-1	Single wire seal (for JPT 929939)
C-828905-1	Single wire seal (for JPT 929937)
C-828906-1 or in alternative C-282081-1	Cavity plug, to close connector cavity

3. PRODUCT DESCRIPTION

This product consists of a 15 Position Female Connector suitable to meet a 15 Pos. Header Counterpart (See AMP Dwg C-282311-1 Sheet 2/2).

Polarization: Two polarizations. (See AMP Dwg C-282311-1).
 Secondary Locking: Two pieces. (Rear mounted).
 Mating to Counterpart: By proper slide.

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		<i>DB</i>	<i>DR.</i>	<i>E.CINI</i>			AMP ITALIA S.p.A. C.so F.lli Cervi, 15 Collegno (Torino)	
A	PROD. QUALIFIED (ET00-0317-96)	DB	D.C.	28.08 1996			CHK. C.TARTARI	
2	REVISED	EC	T.C.	07.07 1994	APP.	LOC. I	NUMBER 108-20113	REV. A
1	REVISED & RETYPE (English version)	EC	TC	31.05 1991	SHEET 1 OF 8	NAME 15 POS J.P.T. SEALED FEMALE CONNECTOR - PRODUCT SPECIFICATION -		
0	FIRST ISSUE (italian version)	TC	-	20.09 1991				
REV LTR	REVISION RECORD	DR.	CHK.	DATE				

4. MATERIAL AND FINISH

Housing: PA 6.6	PA 6.6 glassfiber filled.
Slide & Sec.Lock:	PA 6.6 glassfiber filled
Frontal sealing:	Silicon Rubber
Single wire seal:	Liquid Silicon Rubber
Female contacts:	Pre-tinned phospor bronze (with external reinforcement spring in stainless steel).
Tab contacts:	shrouded tab contacts used as a counterpart are made in tin plated copper alloy; product features and dimensions are in accordance with the sheet 2 of 2 of the customer drawing C-282311.

5. APPLICABLE WIRE RANGE

Stranded cable acc. to FIAT normation Table 91107/03:

- 0.5 mm² reduced insulation cable "Phase 3" (insulation dia. 1.5-1.7 mm)
- 1.0 mm² reduced insulation cable "Phase 3" (insulation dia. 1.9-2.1 mm)
- 1.5 mm² reduced insulation cable "Phase 3" (insulation dia. 2.2-2.4 mm)
- 2.5 mm² reduced insulation cable "Phase 3" (insulation dia. 2.7-3.0 mm)

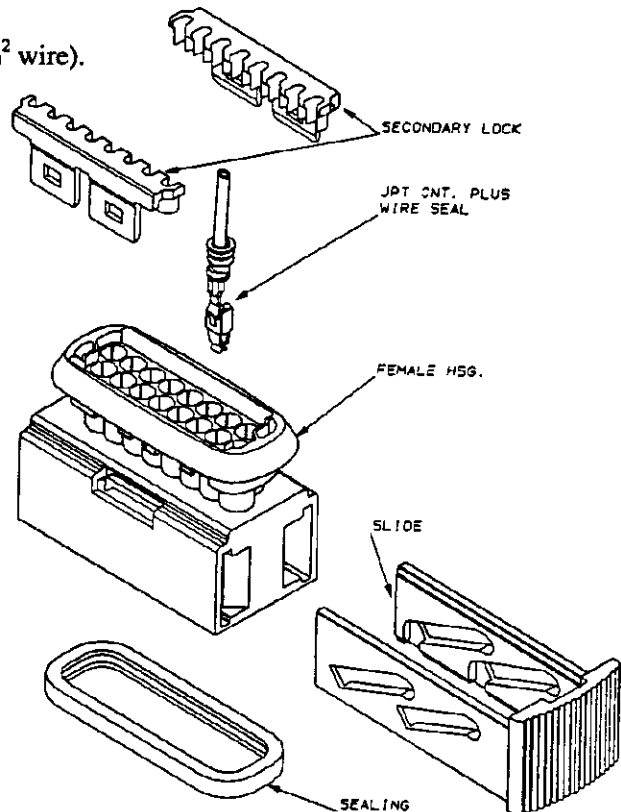
6. RATINGS

6.1 Working Temperature: -40°C ÷ +125°C (with included the temperature increasing due to working current flow).

6.2 Current rating: 14 A (with 1.5 mm² wire).

7. DEGREE OF PROTECTION

IP 5.4 according to IEC 529



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8. PERFORMANCE REQUIREMENTS AND TEST CONDITIONS

TABLE 1

TEST DESCRIPTION & CLAUSE NUMBER	TEST CONDITIONS	LIMITS
8.1 Engaging Force	Single cont. (tab as shown in Fig.1)	≤ 18N 1st insertion ≤ 18N 10th insertion
8.2 Separating Force		≤ 18N 1st extraction ≥ 2.5N 10th extraction
8.3 Contact Insertion Force	Single wire crimped onto 2.5 mm ² inserted into relevant housing cavity, at speed of 25.4 mm/min	≤ 30 N
8.4 Kojiri test	A Single contact was put under strain using a force of 70 N. Then the wire had to be rotated with an angle of 45° with the right straight axis of the same connector.	No damages admitted. No circuit break greater than 1 μsec.
8.5 Contact extraction Force (from the housing)	At a tensile speed of 25÷50 mm/min (FIAT norm. 7.Z0690)	Only with primary locking dev. ≥ 70 N Only with secondary locking dev. ≥ 30 N
8.6 Crimping Tensile Strenght	Tensile speed 25 ÷ 50 mm/min. (FIAT norm. 7.Z0700)	0.5 mm ² ≥ 70 N 1.0 mm ² ≥ 115 N 1.5 mm ² ≥ 155 N 2.5 mm ² ≥ 235 N
8.7 Connector Mating/Unmating Force(with contacts inserted)	In working condition with header counterpart. Slide closing/opening, speed 25-50 mm/min. (tab, header as shown in fig.1)	≤ 140 N 1st IN ≤ 140 N 10th IN ≤ 80 N 1st OUT ≤ 50 N 10th OUT
8.8 Connector extraction Force (Unintentional disengagement with contacts inserted)	In mated condition with header counterpart and closed slide; the force to be applied to the cable, at speed of 25÷50 mm/min., to cause failure to any component shall not be less than.	≥ 100 N

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TEST DESCRIPTION & CLAUSE NUMBER	TEST CONDITIONS	LIMITS
8.9 Millivolt 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 (FIAT n° 7.Z0350) see Fig.2 as ref.	≤ 3 mV/A on new contacts and after 10 insertions/extractions
8.10 Insulation Resistance	Between two adjacent contacts apply 500 Vdc for 1 min. (FIAT norm 7.Z0250)	≥ 10 MΩ
8.11 Dielectric Withstanding Voltage.	Between two adjacent contacts apply voltage for 1 min. ((FIAT norm 7.Z0200)	≤ 1500 Vac
8.12 Temperature Rise over Oven Temperature with Current Load (ESERCIZIO GRAVOSO)	On ways 4,5,6,12,13,14 contemporarily: - Not airy ambient with a test temp. of 80 ± 2°C: - Test current on each way: 14 A (with a 1.5 mm ² wire) - Duration: 5 hours	Temperature increasing detected: ≤ 50°C (thermocouple placed on transition between contact body and wire barrel) Millivolt drop within limits indicated for new contacts. No damaging
8.13 Current Overload	On one way only w/o housing: - Test current: 21 A (with a 1.5 mm ² wire). - Duration: 500 cycles composed of: 45' current "ON" 15' current "OFF"	Temperature increasing detected: ≤ 60°C on transition between contact body and wire barrel Millivolt drop ≤ 4.5 mV/A No damaging
8.14 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. Millivolt drop ≤ 4.5 mV/A Insulation resistance, dielectric Withstanding voltage, and mech. features, at point 8.5 and 8.7, within limits indicated for new contacts

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TEST DESCRIPTION & CLAUSE NUMBER	TEST CONDITIONS	LIMITS
8.15 Accelerated Ageing	200 hrs at + 125°C±2°C (connector mated with header counterpart)	No deformat. or cracking of hsg., and plastic matl discol is admitted. Millivolt drop ≤ 4.5 mV/A Withstanding voltage and mech. features, at point 8.5 and 8.7, within limits indicated for new contacts
8.16 Rain test	Acc. to IEC norm. 529 (IP 5.4) para. 7.5 and para. 8.4. (Test device acc. to Fig 4) Duration 2 hours. Position of the connector connected with header counterpart.	Insulation resistance within indicated limits. Withstanding voltage within indicated limits. No water infiltration inside the connector.
8.17 Corrosion Test - Salt spray	150 hrs of salt mist at 35±2°C, 5% of NaCl, ph 6.5-7.2 class 2. Mated connector (FIAT norm. 7.Z8460)	Millivolt drop ≤ 4.5 mV/A
8.18 Corrosion Test - Kesternich	4 cycles composed of: 8 hrs of exposure to an atmosphere with 0.66% of SO ₂ at 40±2°C (method D1 acc. to FIAT norm 50180) 16 hrs in free air. Mated connector.	Millivolt drop ≤ 4.5 mV/A
8.19 Vibration test (Sine & Random)	- <i>Sine Vibration test</i> : 2 hrs for each axis: Freq.: 10-500-10 Hz in 5 min. Displacement: 1.5 mmpp Acceleration: 25 g (FIAT norm. 7.Z8510). - <i>Random Vibration test</i> 24 hrs. for one axis Test method according to FIAT table of 22/02/91 (See sheet 8 of 8). Conn. wires shall be fixed to the rigid support at 40 cm from the female conn. edge.	Millivolt drop ≤ 3 mV/A No microinterruption greater than 1µs (Test current 1mA) Withstanding voltage and mech. features, at point 8.5 and 8.7, within limits indicated for new contacts



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GENERAL NOTE: Each test must be carried out, if not otherwise specified, at an ambient temperature of $23^{\circ}\text{C} \pm 5^{\circ}\text{C}$.

See also page 6 of 8 for test groups and sequencies

Test Groups and Sequences.

Test	Para.	A	B	C	D	E	F	G	H	I	L	M	N	O
Visual Examination		1,9	1,7	1,3	1,5	1,4	1,4	1,9	1,8	1,7	1,5	1,5	1,7	1,5
Engaging Force	8.1	2,6												
Separating Force	8.2	4,8												
Durability 10 Cycles		5	4											
Contact Insertion Force	8.3				2									
Kojiri Test	8.4				3									
Contact Extraction Force	8.5				4			8	7				6	
Crimp tensile	8.6			2										
Connector Mating Force	8.7		2,5											
Connector Unmating Force	8.7		3,6					5	6				5	
Connector Extraction Force	8.8													2
Millivolt Drop	8.9	3,7				3	3	2,4	2,5		2,4	2,4	2,4	
Insulation Resistance	8.10							6		5				
Dielectric withstanding Voltage	8.11							7		6				
Temperature Rise over oven Temperature	8.12					2								
Current Overload	8.13						2							
Thermal Cycling	8.14							3	3	2				
Accelerated Ageing	8.15								4	3				
Rain Test Resistance	8.16									4				
Salt Spray	8.17										3			
Industrial Atmosphere (Kesternich)	8.18											3		
Vibration (Sine & Random)	8.19												3	



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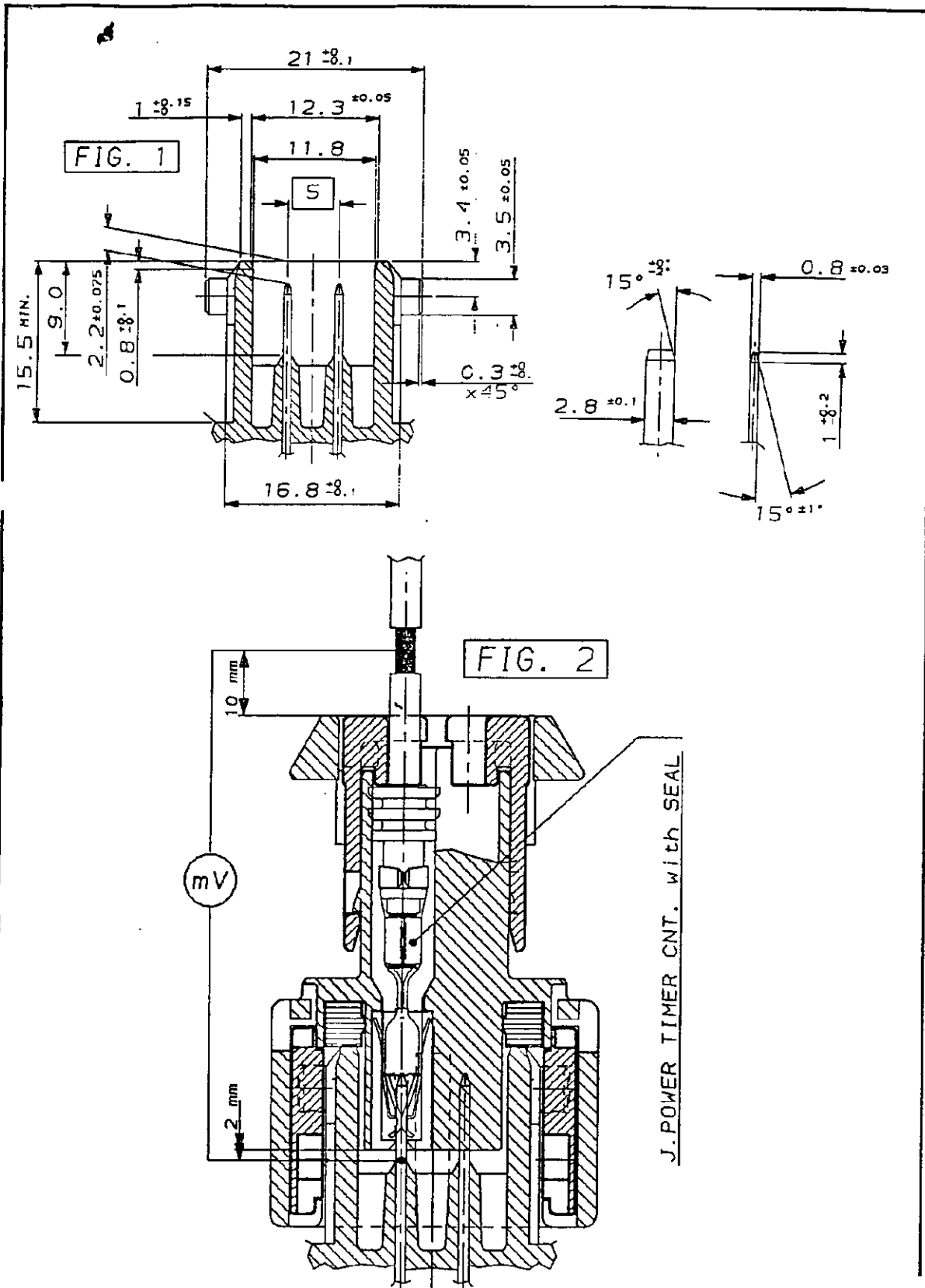
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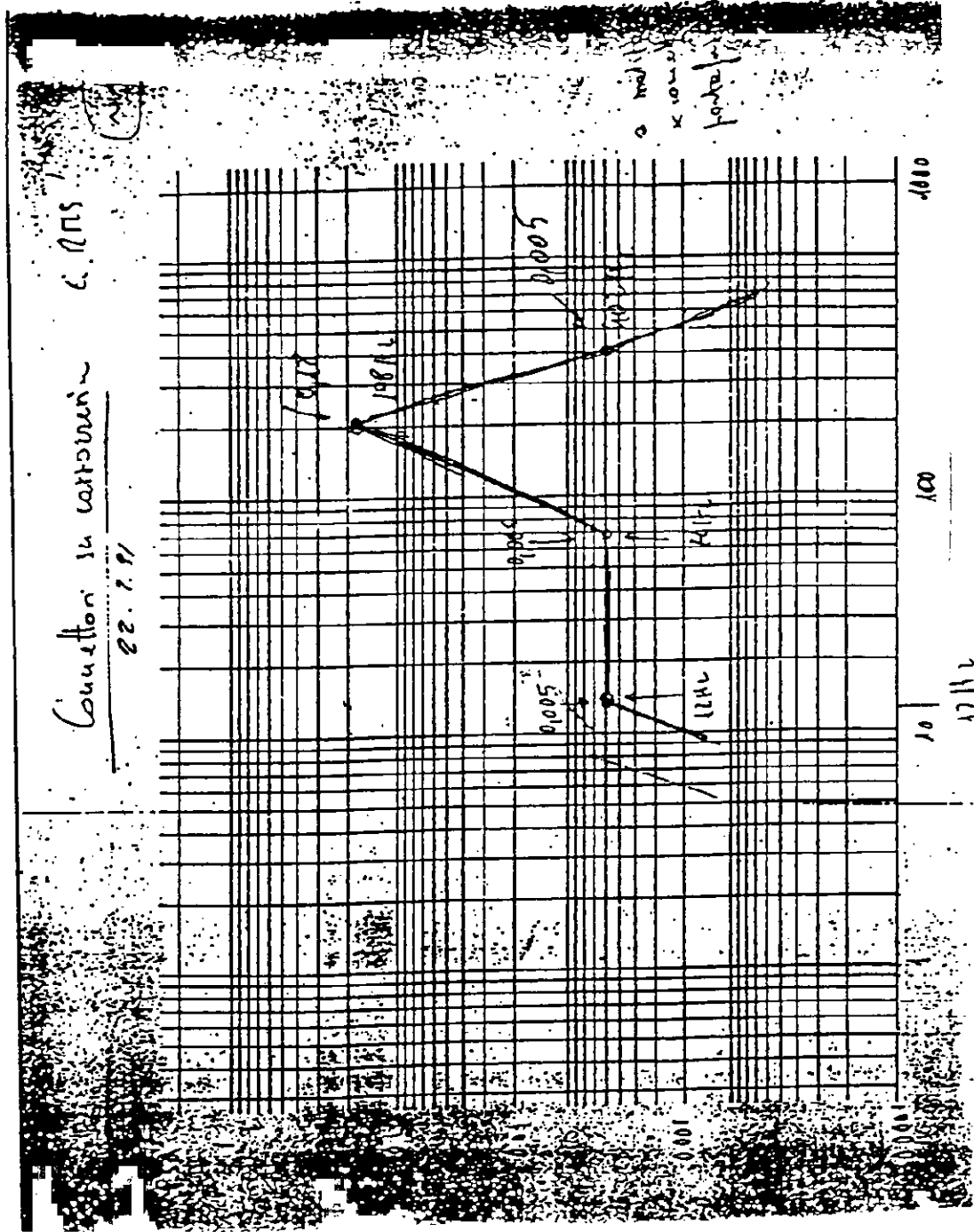


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Contatori in costruzione

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