18 Pos. Header with Action Pin

SCOPE

The specification describes the product performances defining the functional limits.
Any test not mentioned here following, will not be considered by Tyco Electronics for the product validation.

REFERENCE DOCUMENTS

Enclosed to the present specification, the following documents must be considered:

Drawing 284582 - 18 Pos. Header with Action Pin
Fiat spec. 9.90110 – Rev. July 1999

PRODUCT PROFILE- PRODUCT DESCRIPTION

The product sold by Tyco is composed of the following Pin Headers, to be mounted to Printed Circuit Board :
P/N 284582-1 18 Pos. Header with Action Pin

The Pin Headers are suitable to be mated with the following Receptacle Connectors mounted on Frame, respectively:
P/N 284134-1/-3 9 Pos MQS Crimp module
P/N 284126-1 9 Pos MQS IDC module
P/N 284136-1/-2 18 Pos Frame (Crimp/IDC)
P/N 284360-1/-2 18 Pos Frame (Crimp)

The connector assembly operations are made by different users:
BITRON , producer of the electronic, is responsible for the application of the Pin Headers connectors into the electronic BOX , which will be then assembled on the car and mated with the relevant counterpart Receptacle Connectors under the responsibility of the OEM (FIAT). Tyco is not responsible for malfunctions caused by an uncontrolled process during the assembly operations in BITRON or in FIAT.

rev letter	rev. record	DR	Date	CHK	Date
A1	ET00-0036-02	M.P.	25FEB2002	O.C.	25FEB2002
A.	FIRST ISSUE AND ACTIVE ET00-0163-01	M.P.	26JUN2001	O.C.	26JUN2001
0.	PRELIMINARY ISSUE	O.C.	DEC 2000	A.G.	DEC 2000

DWN.	DATE	APVD	DATE
O.CANUTO	DEC 2000	A. GENTA	DEC 2000

OPERATING CONDITIONS AND RATINGS

Maximum Voltage: 24 V d.c. ; for application at higher voltage please contact AMP.
Current I = 6 A max with 0,75 mm^2 wire for MQS contact
Operating temperature 85°C max ; -30°C min.
Test temperature: +105°C max; -30°C

TEST CONDITIONS

If not specified, tests must be performed under the following conditions:
Ambient temperature: 23°C ± 5°C
Relative Humidity: 45 – 70%
Room pressure: 860-1060 mbar

TEST DESCRIPTION

TEST TYPE	TEST CONTROLS	TEST PARAMETERS
1) VISUAL EXAMINATION	Any cracking of deformation allowed on the specimen at new ad after mechanical and environmental test	Visual examination of the specimen by eyes or by lens
2) THERMAL CYCLING	No deformation or cracking of plastic parts Voltage drop: ≤10mV/A	5 cycles composed of: 4 hours at + 105°C±2°C 4 hours at - 30°C±2°C 5 cycles composed of: 4 hours at + 105°C±2°C 4 hours at + 40°C±2°C and 90÷95%r.h. 4 hours at - 30°C±2°C
3) ACCELERATED AGEING	No deformation or cracking of plastic parts Discoloration are admitted Voltage drop: ≤10mV/A	200h at 105°C
4) VOLTAGE DROP	≤10mV/A	Between a point of wire at 1cm from the conn. Edge and pin length up to the pcb Termination resistance is obtained after deducing the mV drop of wire length used for termination. Current rating according to FIAT spec. 91107
5)INSULATION RESISTANCE	≥10MΩ	Between two adjacent contacts >500V ac. , t= 60 s
6) DIELECTRIC BREAKDOWN RESISTENCE	No breakdown	Between two adjacent contacts ≥1000V ac. , t= 60 s
7) VIBRATION TEST (Random passenger compartment)	-Any electrical discontinuity greater than per t >1μ s -milliVolt drop within limits indicated a new -visual examination	Random vibration test (as diagram fig.1 enclosed) Duration: 16 hrs on the direction of mating axis Test current : 1mA
8) CONNECTOR MATING FORCE	F ≤ 40 N	-connector fully loaded -operating speed 25 mm/min.
9) CONNECTOR UNMATING FORCE	F ≤ 40 N	-connector fully loaded) -operating speed 25 mm / min.

10) CONNECTOR INSERTION FORCE TO PRINTED CIRCUIT BOARD	F ≤ 3240 N	Applied a force on header perpendicular to PCB -operating speed 25 mm/ min.
11) CONNECTOR RETENTION FORCE TO PRINTED CIRCUIT BOARD	F ≥ 900 N	Applied a force on header perpendicular to PCB -operating speed 25 mm/ min.
12) PIN RETENTION FORCE IN HEADER	F≥ 25 N	-operating speed 25 mm/ min.
13) SALT SPRAY RESISTANCE	-Visual examination Any corrosion spot on contacts - milliVolt drop within the limits at new	Na Cl 5% Duration: 96 hrs
14) KESTERNICH	-Visual examination -milliVolt drop 100% more than the values at new	4 cycles as follows: -8 hrs under industrial atmosphere -16 hrs ambient temperature

For additional performances on counterpart connectors and contacts see Product Specifications 108-20182 and 108-18030.

TEST SEQUENCE

TEST TYPE	A	B	C	D	E	F	G					
1) VISUAL EXAMINATION	1,6	1,4	1,5	1,6	1,3	1,5	1,5					
2) THERMAL. CYCLES	3											
3) ACCELERATED AGEING	4											
4) VOLTAGE DROP	2,5		2,4			2,4	2,4					
5) INSULATION RESISTENCE		2										
6) DIELECTRIC BREAKDOWN		3										
7)RANDOM VIBRATION			3									
8)CONN.MATING FORCE				4								
9)CONN.UNMATING FORCE				5								
10)INSERT. FORCE TO PCB				2								
11)RETENT. FORCE TO PCB				3								
12)PIN RETENTION FORCE					2							
13)SALT SPRAY						3						
14)KESTERNICH							3					

FIGURE 1

Random vibration test for car body