PRELIMINARY PRODUCT SPECIFICATION 42179 PLUG AND RECEPTACLE, .125 DIA TERMINALS

1.0 Scope:
This specification covers the .125 inch (3.18 mm)
diameter tin plated connector series terminated to
10 to 18 AWG wire using crimp technology.

2.0 Product Description:
2.1 Product Name and Engineering Number

Product Name
housing, plug and receptable
terminal, socket, 10 - 14 AWG
terminal, pin, 10 - 14 AWG
terminal, socket, 16 - 18 AWG
terminal, pin, 16 -18 AWG
Engineering Number
42179
1901
1902
1904
2047
2046

- 2.2 Materials, Platings and Markings See the appropriate Sales Drawings for information on materials, platings and markings
- 3.0 Applicable Documents and Specifications:
 See the Sales Drawings and the other sections of this
 Specification for the necessary referenced Documents and
 Specifications.
- 4.0 Ratings:
 - 4.1 Voltage: 600 Volts
 - 4.2 Current rating in amperes per circuit:

AWG 1,2,3,4 6,8 10,12 10 - 14 | 20 | TBD | TBD 16 - 18 | 12 | TBD | TBD

4.3 Temperature: Operating - 40 C to + 105 C Nonoperating - 40 C to + 125 C

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15	SHT.	1	2	3	4	5				13
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5.0 Performance Specifications 5.1 Electrical Performance

ITEM	TEST CONDITION	REQUIREHENT
Contact Resistance [Low Level]	Mate connectors with a maximum voltage of 20 mV and a current of 10 mA	10 milliohms Maximum
Insulation Resistance	Mate connectors with a voltage of 500 VDC between adjacent terminals and between terminals to ground	1000 Megohms Minimum
Dielectric Strength	Mate connectors with a voltage of 2200 VAC for 1 minute between adjacent terminals and between terminals and ground	No Breakdown

5.2 Mechanical Performance

1	ITEM	TEST CONDITION	RI	QUI REM	ent	
	Terminal Engagement and Dis- engagement	Insert and withdraw terminals at a rate of 1 +/- 1/4 inch per minute (25 +/- 3mm per minute)	5.75 Avg	g Enga 5 lbf () 6 Dis-e 1bf (1	2.6 kg ngager	gf) ment
	Retention Force in Housing	Axial pull out force on the terminal in the housing at a 1 +/- 1/4 inch per minute (25 +/- 3mm per minute)		lbf (1)		gf)
	Force	Apply an axial pullout force on the wire at a rate of 1 +/- 1/4 inch per minute (25 +/- 3 mm per minute)	10 7 12 7 14 5 16 4	Pullo 78 lbf(3 70 lbf(3 50 lbf(3 55 lbf(3	35.4 k 31.7 k 22.7 k 20.4 k	gf) gf) gf) gf)
PSX4217	REV. SHT.					PSX 421
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5.2 Mechanical Performance (continued)

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ITEM	TEST CONDITION	REQUIREMENT
Terminal Insertion Force (Axial)	Apply an axial insertion for on the terminal at a rate of 1 +/- 1/4 inch per minute (25 +/- mm per minute)	ce 9.25 lbf (4.2 kgf)Max
Durability	Mate connectors up to 25 cycles at a maximum rate of 3 cycles per minute	20 milliohn Max 10 change from Initial
Vibration	Amplitude: .080" (1.5 mm) peak to peak Sweep: 10-55-10 Hertz in one minute Duration: 2 hours in each X-Y-Z axis	Appearance: No Damage Contact Resistance: 20 milliohm Maximum change from Initial Discontinuity: 1 micro second Maximum
Mechanical Shook	50 G's with three shocks in each X-Y-Z axis	Appearance: No Damage Contact Resistance: 20 milliohm Maximum change from Initial Discontinuity: 1 micro second Maximum
5.3 Envir	conmental Performance	
ITEN	TEST CONDITION	REQUIREMENT
Thermal Shock	Mate connectors exposed for 5 cycles of: Temperature Duration -55 +0/-3 C 30 minutes +25 +/- 10 C 5 minutes Max * +105 +3/-0 C 30 minutes +25 +/- 10 C 5 minutes Max	Appearance: No Damage Contact Resistance: 20 milliohm Maximum change from Initial
Thermal Aging REV. SHT.	Mate connectors exposed for 96 hours at 105 +/- 2 C	Appearance: No Damage Contact Resistance: 20 milliohm Maximum change from Initial
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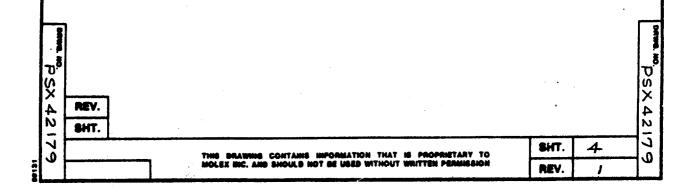
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5.3 Environmental Performance (continued)

REQUIREMENT TEST CONDITION ITEM Appearance: No Damage Mate connectors and expose Humidity to a Temperature of 65 +/-Contact Resistance: Steady 2 C with a Relative Humidity 20 milliohm Maximum State of 90 to 95% for 96 hours change from Initial Maximum Temperature of Mate the connectors and . Temperature the terminal of 30 C measure the contact Rise temperature at the rated above ambient current load

- 6.0 Packaging
 Parts shall be packaged to protect against damage during handling, transit, and storage. No Styrofoam shall be used in any packaging that comes in direct contact with the connectors.
- 7.0 Gages and Fixtures
- 8.0 Other Information
 - 8.1 Agency Approval and Listings

UL File # E29178 CSA File # 19980 VDE File # Applied For





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REV.	DESCRIPTION		DATE
1	Preliminary release. ERO #30476		10/3/90
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Direct Market			
REV.			
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