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	Engineering Number
housing, plug and receptacle	42179
terminal, socket, 10 - 14 AWG	1901
terminal, pin, 10 - 14 AWG	1900
terminal, socket, 16 - 18 AWG	2047
terminal, pin, 16 -18 AWG	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:

	Circuit Size		
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

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

5.0 Performance Specifications

5.1 Electrical Performance

ITEM	TEST CONDITION	REQUIREMENT
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

ITEM	TEST CONDITION	REQUIREMENT
Terminal Engagement and Dis-engagement	Insert and withdraw terminals at a rate of 1 +/- 1/4 inch per minute (25 +/- 3mm per minute)	Avg Engagement 5.75 lbf (2.6 kgf) Avg Dis-engagement 3.4 lbf (1.53 kgf)
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)	30.0 lbf (13.6 kgf) Minimum
Wire Pullout Force (Axial)	Apply an axial pullout force on the wire at a rate of 1 +/- 1/4 inch per minute (25 +/- 3 mm per minute)	AWG Pullout Force 10 78 lbf(35.4 kgf) 12 70 lbf(31.7 kgf) 14 50 lbf(22.7 kgf) 16 45 lbf(20.4 kgf) 18 30 lbf(13.6 kgf)

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

5.2 Mechanical Performance (continued)

ITEM	TEST CONDITION	REQUIREMENT
Terminal Insertion Force (Axial)	Apply an axial insertion force on the terminal at a rate of 1 +/- 1/4 inch per minute (25 +/- mm per minute)	9.25 lbf (4.2 kgf)Max
Durability	Mate connectors up to 25 cycles at a maximum rate of 10 cycles per minute	20 milliohm Max change from Initial
Vibration	Amplitude: .060" (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 Shock	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 Environmental Performance

ITEM	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	Mate connectors exposed for 96 hours at 105 +/- 2 C	Appearance: No Damage Contact Resistance: 20 milliohm Maximum change from Initial

PRELIMINARY PRODUCT SPECIFICATION
42178 PLUG AND RECEPTACLE, .125 DIA TERMINALS

5.3 Environmental Performance (continued)

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

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

MOLEX INCORPORATED

LISLE, ILL. 60532 U.S.A.

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

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

DRWG. NO. PSX-42179
REV.
SHT.

SHT. 5
REV. 1

DRWG. NO. PSX-42179