MOLEX INCORPORATED
LISLE, ILL. 60532 U.S.A.

PRODUCT SPECIFICATION FOR .084/(2.13) DIAMETER SERIES CONNECTOR HOUSINGS AND TERMINALS

(HOT TIN PLATED TERMINALS ONLY)

1.0 Scope:
This specification covers the .250 inch (6.35mm) centerline tin plated connector series terminated to 14 to 20 AWG wire using crimp technology.

2.0 Product Description:
2.1 Product Name and Part Number

Product Name	Part Number
Housing, Plug, 1 circuit	42021-1*
Housing, Plug, 2 circuit	42021-2*
Housing, Plug, 3 circuit	42021-3*
Housing, Plug, 4 circuit	42021-4*
Housing, Plug, 6 circuit	42021-6*
Housing, Plug, 9 circuit	42021-9*
Housing, Plug, 12 circuit	42021-12*
Housing, Plug, 15 circuit	42021-15*
Housing, cap , 1 circuit	42022-1*
Housing, cap , 2 circuit	42022-2*
Housing, cap , 3 circuit	42022-3*
Housing cap , 4 circuit	42022-4*
Housing, cap , 6 circuit	42022-6*
Housing, cap , 9 circuit	42022-9*
Housing, cap , 12 circuit	42022-12*
Housing, cap , 15 circuit	42022-15*
Terminal, pin, tin plated	42023-1A1*
Terminal, socket, tin plated	42024-A1*

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.

3.1 Agency approvals:
UL file number: E29179
CSA file number: LR19980

DRWG. NO. PS-42022-0001

REV.	B1	B1	B1	B1	B1	B1
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FILE NAME PS42022X1	C = ▼ =	REVISE ONLY ON CAD SYSTEM	REV. B1
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DRWG. NO. PS-42022-0001

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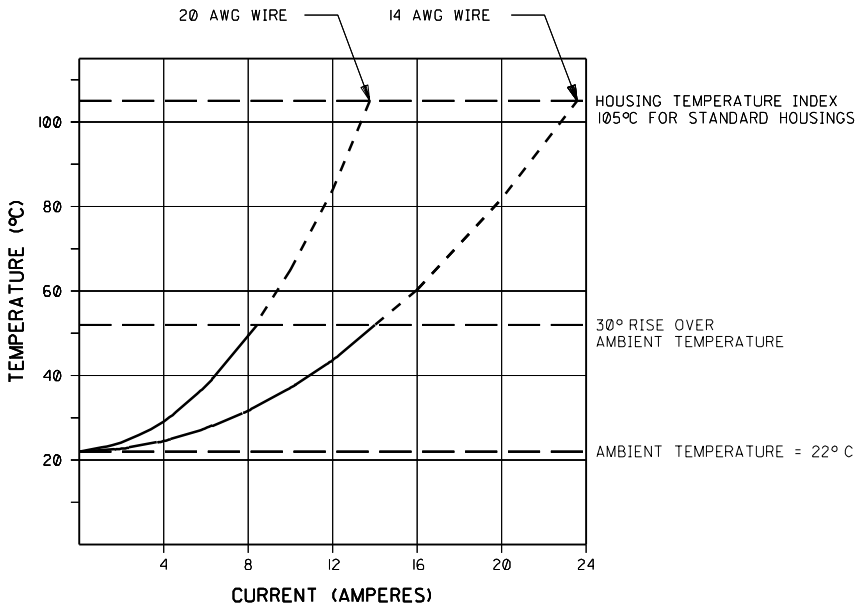
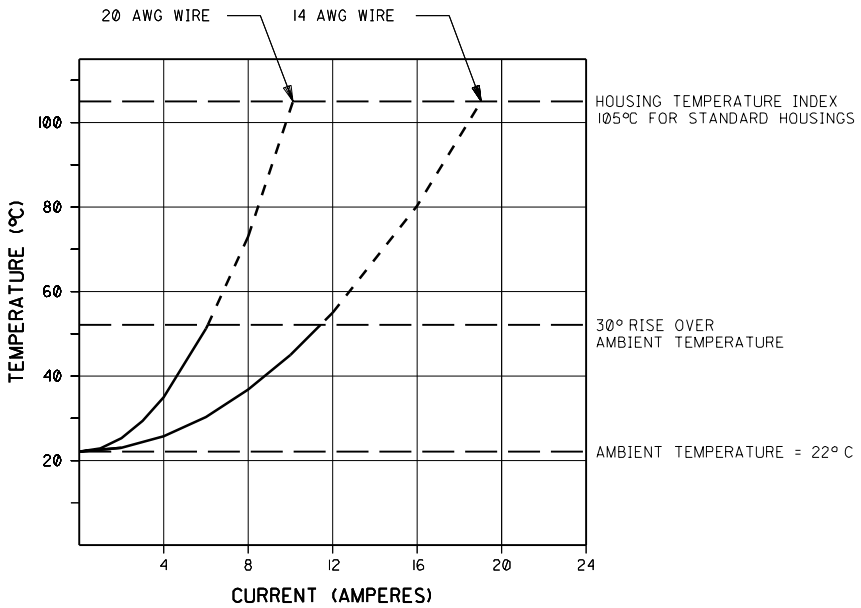
THESE GRAPHS SHOW TYPICAL (AVERAGE) PERFORMANCE



TEMPERATURE VERSUS CURRENT
FOR BRASS TERMINALS IN FOUR CIRCUIT HOUSINGS
ALL FOUR CIRCUITS CARRY THE INDICATED CURRENT
(VALUES ABOVE THE 30°C RISE ARE EXTRAPOLATED)



TEMPERATURE VERSUS CURRENT
FOR BRASS TERMINALS IN NINE CIRCUIT HOUSINGS
ALL NINE CIRCUITS CARRY THE INDICATED CURRENT
(VALUES ABOVE THE 30°C RISE ARE EXTRAPOLATED)

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4.0 Ratings:
4.1 Voltage: 600 Volts
4.2 Current and Applicable Wires:

ITEM	TEST CONDITION	REQUIREMENT
Temperature Rise	Mate the connectors and measure the contact temperature at the rated current load (IEC STD. 512-3)	Maximum Temperature of the terminal over ambient of 30 C (see sheet 2)

-See sheet 2 for typical temperature versus current curves
-14 to 20 AWG wire - Outside Insulation Diameter .130 inch (3.30mm) Maximum

4.3 Temperature: Operating - 55 C to + 105 C

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 100 mA (MIL-STD-1344A METHOD 3004.1)	3.5 milliohms Maximum (initial)
Insulation Resistance	Mate connectors with a voltage of 500 VDC between adjacent terminals. (MIL-STD-1344A METHOD 3003.1)	1000 Megohms Minimum (initial)
Dielectric Strength	Mate connectors with a voltage of 5000 VAC for 1 minute between adjacent terminals. (MIL-STD-1344A METHOD 3001.1)	No Breakdown

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5.2 Mechanical Performance

ITEM	TEST CONDITION	REQUIREMENT
Connector Insertion and Withdrawal	Insert and withdraw connectors at a rate of 0.5 inches per minute (12.7 mm per minute) (MIL-STD-1344A METHOD 2013.1)	MAX INSERTION 1.5 (per terminal, initial) Min WITHDRAWAL 0.5
Retention Force in Housing	Axial pull out force on the terminal in the housing at a rate of .5 inches per minute (12.7 mm per minute) (MIL-STD-1344A METHOD 2012.1)	15 lbf Minimum
Durability	Mate connectors up to 50 cycles at a maximum rate of 5 cycles per minute (MIL-STD-1344A METHOD 2016)	3.5 milliohm Max
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 (MIL-STD-1344A METHOD 2005.1) (TEST CONDITION I)	Appearance: No Damage Contact Resistance: 5.0 milliohm Maximum Discontinuity: 1 micro second Maximum
Mechanical Shock	50 G's with three shocks in each X-Y-Z axis (MIL-STD-1344A METHOD 2004.1) (TEST CONDITION A)	Appearance: No Damage Contact Resistance: 6 milliohm Maximum Discontinuity: 1 micro second Maximum
Wire Pullout Force (Axial)	Apply an axial pullout force on the wire at a rate of 1 +/- 1/4 inch per minute (25 +/- 6 mm per minute) (MIL-STD-1344A METHOD 2003.1)	AWG 14: 50 lbf; 16: 45 lbf; 18: 30 lbf; 20: 14 lbf
Terminal Insertion Force (Axial)	Apply an axial insertion force on the terminal at a rate of 1 +/- 1/4 inch per minute (25 +/- 6 mm per minute) (MIL-STD-1344A METHOD 2012.1)	2.0 lbf Maximum

DRWG. NO. PS-42022-0001

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5.2 Mechanical performance (continued):

ITEM	TEST CONDITION	REQUIREMENT
Plug latch strength	Mate connectors and pull apart until both latches break, record the maximum force.	Minimum 35.0 lbf
Panel retention for cap	Insert cap housing into panel cut out per the sales drawing requirements, push cap opposite the way it was assembled until the locking barbs break, record the maximum force.	Minimum 75.0 lbf

5.3 Environmental Performance

ITEM	TEST CONDITION	REQUIREMENT
Thermal Shock	Mate connectors exposed for 25 cycles of: Temperature Duration -55 +0/-3 C 30 minutes 85 +3/0 C 30 minutes (MIL-STD-1344A METHOD 1003.1) (TEST CONDITION A-1)	Appearance: No Damage Contact Resistance: 3.75 milliohm Maximum Dielectric strength: 5000 Vac for 1 minute
Humidity-temperature cycling	Mate connectors and expose to Temperature -humidity cycling between 25 c and 65 c at 95% RH, -10 c with with humidity not controlled (MIL-STD-1344A METHOD 1002.1) (TYPE II)	Appearance: No Damage Contact Resistance: 6.00 milliohm Maximum Dielectric Strength: 5000 VAC for 1 minute Insulation Resistance: 100 Megohms Minimum
Salt spray	Expose unmated connector assemblies to a salt spray concentration of 5% at 35 C for 48 hours. (MIL-STD-1344A METHOD 1001.1)	7.00 milliohm Maximum Dielectric Strength: 5000 VAC for 1 minute

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LTR.	REVISIONS
A	REMOVE "X" PER ECN# U10629 91/03/12 KBP
B	REVISED PER ECN# U10721 91/04/03 KBP

DRWG. NO. PS-42022-0001

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DRWG. NO. PS-42022-0001