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ELECTRONICS

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Jameco Part Number 800884

FEATURES AND SPECIFICATIONS

Features and Benefits

- Sizes 2 to 25 circuits
- Positive latch secures housing to locking crown of mating header or panel mount
- Anti-entanglement/overstress ribs prevent discrete wires from catching under latch during harness manufacturing and storage
- Front ribs prevent contact damage when unmating the connector from a header; the housing cannot be twisted off pins

Physical

Housing: Black glass-filled polyester, UL 94V-0
Operating Temperature: -40 to +105°C



2.54mm (.100") Pitch

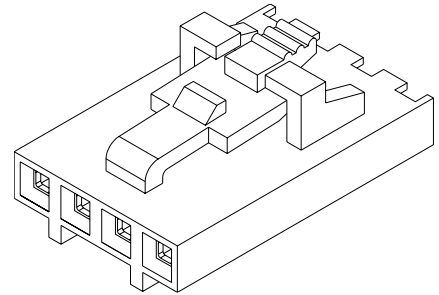
SL™

Crimp Housing

70066

Single Row

Version G, Positive Latch



2.54mm (.100") Pitch

Reference Information

Product Specification: PS-70058

Packaging: Bag

UL File No.: E29179

CSA File No.: LR19980

Mates With: 70018, 70107A/B, 70541, 70543, 70545,

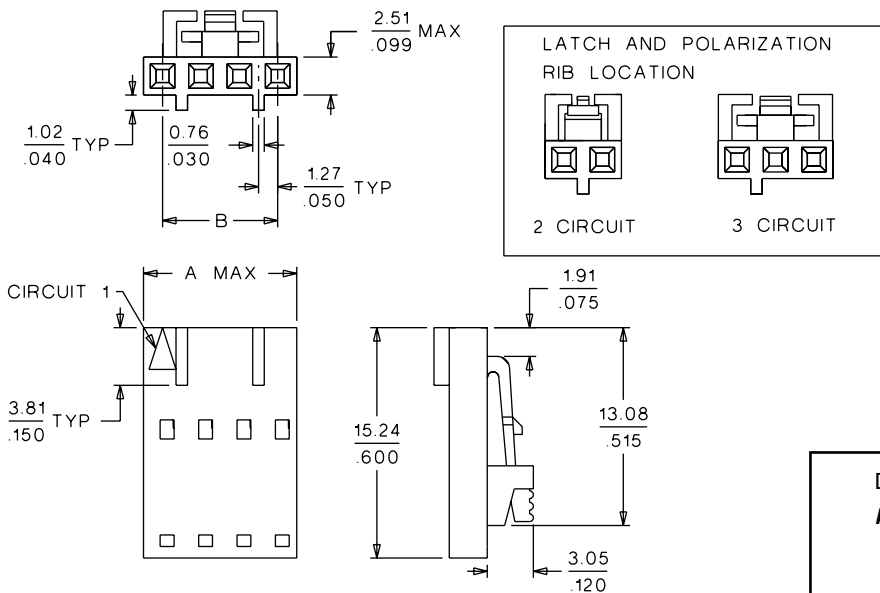
70551, 70553, 70555 and 70634


Use With: 70058 and 71851 crimp terminals

Designed In: Inches

CATALOG DRAWING (FOR REFERENCE ONLY)

Not For Use With C-Grid III™ Components



Delivered on a carrier with 20 pieces per strip.
Actual Size  **Universal Polarizing Pin 40713-1**
Order No. 15-04-0292

ORDERING INFORMATION AND DIMENSIONS

Circuits	Order No.	Dimension	
		A	B
2	• 50-57-9402	5.05 (.199)	2.54 (.100)
3	• 50-57-9403	7.59 (.299)	5.08 (.200)
4	• 50-57-9404	10.13 (.399)	7.62 (.300)
5	• 50-57-9405	12.67 (.499)	10.16 (.400)
6	• 50-57-9406	15.21 (.599)	12.70 (.500)
7	• 50-57-9407	17.75 (.699)	15.24 (.600)
8	• 50-57-9408	20.29 (.799)	17.78 (.700)
9	• 50-57-9409	22.83 (.899)	20.32 (.800)
10	• 50-57-9410	25.37 (.999)	22.86 (.900)
11	• 50-57-9411	27.91 (1.099)	25.40 (1.000)
12	• 50-57-9412	30.45 (1.199)	27.94 (1.100)
13	• 50-57-9413	32.99 (1.299)	30.48 (1.200)

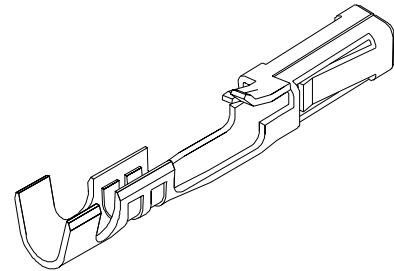
Circuits	Order No.	Dimension	
		A	B
14	• 50-57-9414	35.53 (1.399)	33.02 (1.300)
15	• 50-57-9415	38.07 (1.499)	35.56 (1.400)
16	• 50-57-9416	40.61 (1.599)	38.10 (1.500)
17	• 50-57-9417	43.15 (1.699)	40.64 (1.600)
18	• 50-57-9418	45.69 (1.799)	43.18 (1.700)
19	• 50-57-9419	48.23 (1.899)	45.72 (1.800)
20	• 50-57-9420	50.77 (1.999)	48.26 (1.900)
21	• 50-57-9421	53.31 (2.099)	50.80 (2.000)
22	• 50-57-9422	55.85 (2.199)	53.34 (2.100)
23	• 50-57-9423	58.39 (2.299)	55.88 (2.200)
24	• 50-57-9424	60.93 (2.399)	58.42 (2.300)
25	• 50-57-9425	63.47 (2.499)	60.96 (2.400)

• US Standard Product, available through Molex franchised distributors



PRODUCT SPECIFICATION

“SL CRIMP TERMINAL”



1.0 SCOPE

This specification covers the crimp terminal #70058-**** used with the single row fully stackable connector housing #70066-****, and the dual row fully stackable connector housing #70450-****.

2.0 PRODUCT DESCRIPTION

SERIES 70058 TERMINAL

2.1 Product is available in single row 2-25 circuits, on (2.54) .100” centers, or dual row 4-50 circuits on (2.54) .100 x (2.54) .100 centers.

2.2 Connector assemblies will mate with the following:

2.2.1 (0.64) .025” square or round pins assembled directly into P.C. board on .100 centers.

2.2.2 Shrouded or unshrouded single or dual-row wafers, with (0.64) .025 square or round pins.

2.2 Connectors are stackable end to end, side to side on (2.54) .100” center pins with option “A” housing only.

2.2.1 Polarizing ribs available on front of housing for use with headers, or on back for use with interim clip assemblies, housing #70066-**** only.

2.2.2 Active latch with polarizing ribs, for use with headers, housing #70066-**** only.

2.3 Maximum mating pin height to be (8.13) .320”, minimum pin height to be (5.08) .200”. Pin height, measured from top of wafers or P.C. board, to top of pin.

REVISION: F	ECR/ECN INFORMATION: EC No: UDT2002-1319 DATE: 2002 / 04 / 30	TITLE: PRODUCT SPECIFICATION FOR SL CRIMP TERMINAL SERIES 70058	SHEET No. 1 of 8
DOCUMENT NUMBER: PS-70058	CREATED / REVISED BY: ACHAMMER	CHECKED BY: BRINKMAN	APPROVED BY: BRINKMAN



PRODUCT SPECIFICATION

"SL CRIMP TERMINAL"

2.4 Connector assembly will accept wire range from 36 to 20 AWG. Refer to the table below for the wire gage, wire requirements, and crimp height.

WIRE GAGE (AWG)	CRIMP HEIGHT	WIRE TYPE
30	.027" to .029"	Stranded, Stranded
28	.030" to .032"	Tinned, Stranded Top Coated
26	.031" to .033"	1.52mm/.060in Maximum Insulation Diameter
24	.033" to .035"	Stranded, Stranded Tinned, Stranded Top
22	.033" to .035"	Coated 1.63mm/.064in Maximum Insulation Diameter
20	.033" to .035"	Stranded 0.5mm ² /.0078in ² Maximum Conductor Area. PVC Insulation, 1.70mm/.067in Maximum Diameter

REVISION: F	ECR/ECN INFORMATION: EC No: UDT2002-1319 DATE: 2002 / 04 / 30	TITLE: PRODUCT SPECIFICATION FOR SL CRIMP TERMINAL SERIES 70058	SHEET No. 2 of 8
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PRODUCT SPECIFICATION

“SL CRIMP TERMINAL”

3.0 RECOGNIZED AGENCY APPROVALS

3.1 Underwriters Laboratories: UL #E29179.

3.2 Canadian Standards Associations: CSA #LR19980.

4.0 MECHANICAL SPECIFICATIONS

4.1 Materials

4.1.1 Housing #70066-**** and #70450-**** is molded of black G.F. polyester 94V-0.

4.1.2 Terminal 70058-**** is a high strength copper alloy.

4.1.2.1 Finish .000200 min. electro-tin plate over .000100 min. copper plate overall.

4.1.2.2 Finish .000015 min. gold plate in selected area over .000050 min. nickel overall, with .000075 min. electro-tin lead (90/10) in selected area.

4.1.2.3 Finish .000030 min. gold in selected area over .000050 min. nickel plate overall, with .000075 min. electro-tin/lead (90/10) in selected area.

4.1.2.4 For special finish requirements, consult Molex marketing as to availability, cost and lead time.

4.2 Terminal Pull-Out Force, from Housing:

Must withstand gradual applied force of 4 pounds for 15 seconds.

4.3 Insulating Materials:

Temperature rating -40°C to +105°C

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PRODUCT SPECIFICATION

“SL CRIMP TERMINAL”

4.4 Insertion/Withdrawal Forces:

AVERAGE INSERTION AND WITHDRAWAL FORCES *

PLATING TYPE	AFTER 1 CYCLE		AFTER 10 CYCLES		AFTER 25 CYCLES		AFTER 50 CYCLES	
	INSERTION FORCE	WITHDRAWAL FORCE	INSERTION FORCE	WITHDRAWAL FORCE	INSERTION FORCE	WITHDRAWAL FORCE	INSERTION FORCE	WITHDRAWAL FORCE
TIN	.32 lbf	.26 lbf	.23 lbf	.27 lbf	.24 lbf	.25 lbf	No	No
4.4.1	1.4 N	1.2 N	1.0 N	1.2 N	1.1 N	1.1 N	Data	data
GOLD	.34 lbf	.18 lbf	.27 lbf	.15 lbf	No	No	.25 lbf	.14 lbf
4.4.4	1.5 N	0.8 N	1.2 N	0.7 N	Data	Data	1.1 N	0.6 N

*Steel gage pins used to perform test:

Insertion Gage Pin: .0260+.0000-.0001

Withdrawal Gage Pin: .0240+.0001-.0000

4.4.1 “Tin” Plating System: .000200 Min. Tin over .000100 Min. copper

4.4.2 “Gold” Plating System: .000030 Min. Gold over .000050 Min. nickel

5.0 ELECTRICAL/ENVIRONMENTAL SPECIFICATIONS:

5.1 The following performance criteria is based on grouped, sequential testing.

5.2 All contact resistance values measured at 20 millivolts max. open circuit voltage and 5-15 milliamperes using the 4 point dry circuit method, with a Hewlett-Packard Milliohmeter, Model #4328A.

5.3 All tin contact systems cycled 1, 5 & 25 times prior to grouped sequential testing, using (0.64) .025” square pins with .000200 min. tin over .000100 min. copper.

All gold contact systems cycled 1, 25 & 50 times prior to grouped sequential testing, using (0.64) .025” square pins with .000030 min. gold over .000050 min. nickel.

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PRODUCT SPECIFICATION

“SL CRIMP TERMINAL”

5.4 Group I Sequence: Mated Environment

	Test/Specifications	Test Severity/Duration
5.4.1	Thermal Shock IEC 68-2-14	-40°C to +105°C 30 minute dwell at each temperature is one cycle. 10 cycles
5.4.2	Thermal Aging Mil. Std. -202F, 108A	+105°C for 10 days
5.4.3	Cyclic Humidity Mil. Std. -202F, 106D without cold dip	Temperature cycles between +25°C to +65°C at 96% R.H. for 240 hours.
5.4.4	Flowers of Sulphur	Exposed to sulphur vapors for 24 hours at +65°C.
5.4.5	Contact Resistance not to exceed 15 milliohms, total	

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<u>DOCUMENT NUMBER:</u> PS-70058	<u>CREATED / REVISED BY:</u> ACHAMMER	<u>CHECKED BY:</u> BRINKMAN	<u>APPROVED BY:</u> BRINKMAN



PRODUCT SPECIFICATION

"SL CRIMP TERMINAL"

5.5 Group II Sequence: Un-Mated Environment:

	Test/Specifications	Test Severity/Duration
5.5.1	Thermal Shock IEC 68-2-14	-40°C to +105°C 30 minute dwell at each temperature is one cycle. 10 cycles
5.5.2	Thermal Aging Mil. Std. -202F, 108A	+105°C for 10 days
5.5.3	Steady State Humidity Mil. Std. -202F, 103B Condition A	+40°C at 96% R.H. for 10 days
5.5.4	Flowers of Sulphur IEC 69-2-42	Exposed to sulphur vapors for 24 hours at +65°C
5.5.5	Mate once, contact resistance not to exceed 15 milliohms, total	

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PRODUCT SPECIFICATION

“SL CRIMP TERMINAL”

5.6 Group III Sequence: Mated Environment Gold Contact System

	Test/Specifications	Test Severity/Duration
5.6.1	Steady State Humidity, Mil. Std. -202F, 103B Condition A	+40°C at 96% R.H. for 10 days.
5.6.2	Salt Spray Mil. Std. -202F 101D, Condition A	96 hours at +35°C, 5% sodium chloride
5.6.3	Physical Shock Mil. Std. -202F 213B	½ Sine Wave, 50G, 11MS pulse 3 shocks per axis for 240 hours.
5.6.4	Vibration Mil. Std. -202F, 201A	10-55-10 HZ, 1 minute cycles for 2 hours in each axis. .03 inch excursion, 10G.
5.6.5	Contact resistance not to exceed 15 milliohms, total	

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PRODUCT SPECIFICATION

“SL CRIMP TERMINAL”

5.7 Group IV Sequence: Mated Electrical

	Test/Specifications	Test Severity/Duration
5.7.1	Steady State Humidity, Mil. Std. -202F, 103B Condition A	+40°C at 96% R.H. for 10 days.
5.7.2	Temperature Rise	Increase current to achieve 30°C rise above ambient. Dwell for 48 hours at that current.
5.7.3	Current Ratings:	30 Awg - 0.7A 36 Awg - 0.21A 28 Awg - 1.2A 34 Awg - 0.32A 26 Awg - 1.8A 32 Awg - .045A 24 Awg - 3.0A 22 Awg - 3.0A

5.8 Insulation Resistance: Per Mil. Std. 202, Method 302, Condition B. Resistance measured after sequence 5.5.1 thru 5.5.5 to be no less than 10K megohms.

5.9 Dielectric Strength: AC voltage increased until breakdown.

Voltage measured after sequence 5.5.1 thru 5.5.5 to be no less than 600 volts AC R.M.S. for 1 minute at sea level to 5,000 feet.

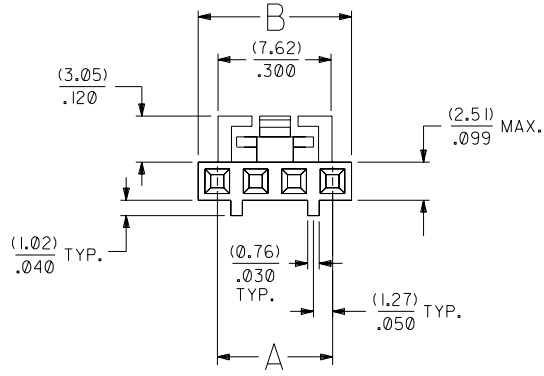
5.10 Capacitance: Less than 1.2 pico-farads.

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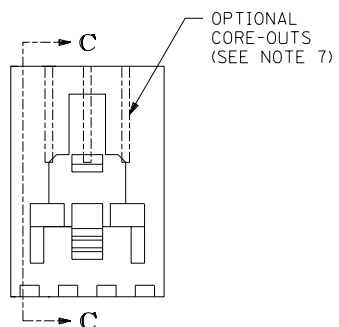
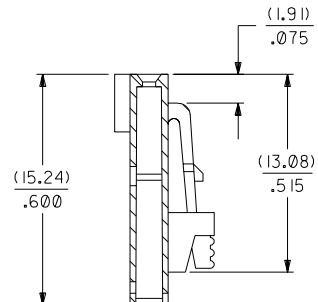
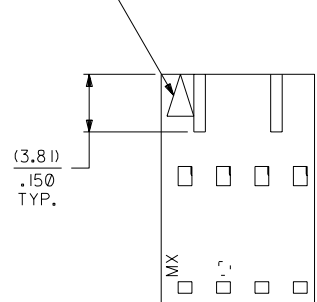
NOTES:

1. MATERIAL: G.F. POLYESTER, 94V-0, COLOR: BLACK
2. HOUSING MAY BE USED WITH TERMINAL NUMBERS 70058 AND 71851.
3. REFER TO CHART FOR AVAILABLE CIRCUIT SIZES.
4. HOUSINGS TO BE USED WITH (0.64)/.025 SQUARE OR ROUND PINS.
5. HOUSINGS ARE STACKABLE END-TO-END ON (2.54)/.100 CENTERS.
6. REFER TO MOLEX PRODUCT SPECIFICATIONS PS-70058, PS-71851, AND MOLEX APPLICATION SPECIFICATION SD-70400.
7. PARTS MAY OR MAY NOT BE SUPPLIED WITH EXTERIOR CORE-OUT CONFIGURATION. REFER TO MOLEX DRAWING NUMBER SD-70066-**** FOR OPTIONAL HOUSING DETAILS.
8. DIMENSIONS ARE SHOWN FOR REFERENCE ONLY.
9. PACKAGE PER PK-70066-100.

CKT. SIZE	EDP. NO.	ENG. NO.	A ± (0.10) -.004	B MAX.
2	50-57-9402	70066-0176	(2.54) .100	(5.05) .199
3	50-57-9403	70066-0177	(5.08) .200	(7.59) .299
4	50-57-9404	70066-0178	(7.62) .300	(10.13) .399
5	50-57-9405	70066-0179	(10.16) .400	(12.67) .499
6	50-57-9406	70066-0180	(12.70) .500	(15.21) .599
7	50-57-9407	70066-0181	(15.24) .600	(17.75) .699
8	50-57-9408	70066-0182	(17.78) .700	(20.29) .799
9	50-57-9409	70066-0183	(20.32) .800	(22.83) .899
10	50-57-9410	70066-0184	(22.86) .900	(25.37) .999
11	50-57-9411	70066-0185	(25.40) 1.000	(27.91) 1.099
12	50-57-9412	70066-0186	(27.94) 1.100	(30.45) 1.199
13	50-57-9413	70066-0187	(30.48) 1.200	(32.99) 1.299
14	50-57-9414	70066-0188	(33.02) 1.300	(35.53) 1.399
15	50-57-9415	70066-0189	(35.56) 1.400	(38.07) 1.499
16	50-57-9416	70066-0190	(38.10) 1.500	(40.61) 1.599
17	50-57-9417	70066-0191	(40.64) 1.600	(43.15) 1.699
18	50-57-9418	70066-0192	(43.18) 1.700	(45.69) 1.799
19	50-57-9419	70066-0193	(45.72) 1.800	(48.23) 1.899
20	50-57-9420	70066-0194	(48.26) 1.900	(50.77) 1.999
21	50-57-9421	70066-0195	(50.80) 2.000	(53.31) 2.099
22	50-57-9422	70066-0196	(53.34) 2.100	(55.85) 2.199
23	50-57-9423	70066-0197	(55.88) 2.200	(58.39) 2.299
24	50-57-9424	70066-0198	(58.42) 2.300	(60.93) 2.399
25	50-57-9425	70066-0199	(60.96) 2.400	(63.47) 2.499

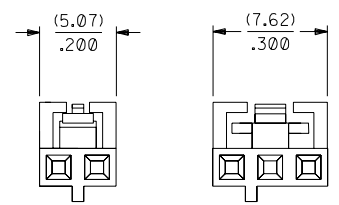


CIRCUIT NO. 1 IDENTIFICATION



SECTION C-C

OPTION "G"



LATCH AND POLARIZATION RIB LOCATION

4 THROUGH 25 CIRCUIT HOUSINGS ARE AS SHOWN IN MAIN BODY OF DRAWING

DIMENSIONS SHOWN (METRIC) INCH UNLESS OTHERWISE SPECIFIED TOLERANCES: ANGULAR ± 1/2°		MFG. SH. REV.	
3 PLACE ± .007 2 PLACE ± ± 0.18 1 PLACE ± ±		REVISIONS ONLY ON CAD SYSTEM	
DRAG WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		TITLE: HOUSING, CONNECTOR (2.54)/.100 GRID STACKABLE SINGLE ROW	
DRWG. BY: RS APP'D. BY: RL		PART NO.: SEE CHART SD-70066-0176-0199 SHEET NO.: 1 OF 1 DATE: 03/28/86	
LTR. REVISIONS		LTR. REVISIONS	