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Jameco Part Number 230279



PRODUCT SPECIFICATION

.093 SERIES PLUG AND RECEPTACLE POWER CONNECTORS

1.0 SCOPE

This Product Specification covers the 5.03 mm (.198 inch) centerline connector series using pin and socket terminals terminated with 14 to 24 AWG wire using crimp technology with tin plating.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER(S)

<u>PRODUCT NAME</u>	<u>SERIES NUMBER</u>
Plug Housing, 1-circuit	1619-1P
Receptacle Housing, 1-circuit	1619-1R
Plug Housing, 2-circuit	1545-P*
Receptacle Housing, 2-circuit	1545-R*
Plug Housing, 3-circuit	1396-P*
Receptacle Housing, 3-circuit	1396-R*
Plug Housing, 4-circuit (in-line)	1490-P*
Receptacle Housing, 4-circuit (in-line)	1490-R*
Plug Housing, 4-circuit (2 x 2)	2163-P*
Receptacle Housing, 4-circuit (2 x 2)	2163-R*
Plug Housing, 5-circuit	1653-P*
Receptacle Housing, 5-circuit	1653-R*
Plug Housing, 6-circuit	1261-P*
Receptacle Housing, 6-circuit	1261-R*
Plug Housing, 9-circuit	1292-P*
Receptacle Housing, 9-circuit	1292-R*
Plug Housing, 12-circuit	1360-P*
Receptacle Housing, 12-circuit	1360-R*
Socket Terminal, 14-18 AWG	1189
Pin Terminal, 14-18 AWG	1190
Socket Terminal, 18-22 AWG	1380
Pin Terminal, 18-22 AWG	1381
Socket Terminal, 22-24 AWG	2870
Pin Terminal, 22-24 AWG	2871
Socket Terminal, 14-18 AWG, (P-B)	4550
Socket Terminal, 18-22 AWG, (P-B)	2151

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

Housings are molded of UL 94V-2 rated PA66.

Terminals are tin-plated brass or phosphor-bronze.

See appropriate sales drawings for additional information on dimensions, materials, platings and markings.

<u>REVISION:</u> A	<u>ECR/ECN INFORMATION:</u> EC No: UCR#2002-0324 DATE: 2001 / 10 / 04	<u>TITLE:</u> PRODUCT SPECIFICATION STANDARD .093 SERIES PLUGS & RECEPTACLES	<u>SHEET No.</u> 1 of 3
<u>DOCUMENT NUMBER:</u> PS-43660-9999	<u>CREATED / REVISED BY:</u> BWIRKUS 10/4/01	<u>CHECKED BY:</u> BWIRKUS 10/4/01	<u>APPROVED BY:</u> SFRY 10/5/01



PRODUCT SPECIFICATION

2.3 SAFETY AGENCY APPROVALS

UL File #E29179
CSA File #E29179
TUV License #R75107

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

See the appropriate sales drawings for necessary referenced documents and specifications.

4.0 RATINGS

4.1 VOLTAGE

250 Volts AC (RMS)

4.2 CURRENT AND APPLICABLE WIRES

AWG	Circuit Size	Amps
14	3	14
14	9	11
18	3	10
18	9	7
22	3	7
22	9	5

4.3 TEMPERATURE

Operating: - 55°C to + 105°C

5.0 PERFORMANCE

5.1 ELECTRICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	Contact Resistance (Low Level)	Mate connectors: apply a maximum voltage of 20 mV and a current of 20 mA. (Measurement locations in Section 7.0)	10 milliohms MAXIMUM [initial]
2	Dielectric Withstanding Voltage	Mate connectors: apply a voltage of 2000 VAC for 1 minute between adjacent terminals and between terminals to ground.	No breakdown; current leakage < 500 mA
3	Temperature Rise (via Current Cycling)	Mate connectors, measuring the temperature rise at 60 minute intervals during 96 hours of steady state at rated current; followed by 240 hours of current cycling (45 minutes ON and 15 minutes OFF per hour) with measurements made during last 5 minute period of each ON cycle; followed by 96 hours of steady state at rated current with measurements taken at 60 minute intervals.	Temperature rise: +30°C MAXIMUM

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5.2 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
4	Connector Mate and Unmate Forces	Mate and unmate connector (male to female) at a rate of 25 ± 6 mm ($1 \pm \frac{1}{4}$ inch) per minute for a total of 25 cycles. Initial mate forces to be measured. Unmate forces to be measured after 25 cycles.	15.6 N (3.5 lbf) MAXIMUM insertion force 4.4 N (1 lbf) MINIMUM withdrawal force
5	Terminal Retention Force (in Housing)	Axial pullout force on the terminal in the housing at a rate of 25 ± 6 mm ($1 \pm \frac{1}{4}$ inch) per minute.	89 N (20 lbf) MINIMUM retention force
6	Wire Pullout Force (Axial)	Apply an axial pullout force on the wire at a rate of 25 ± 6 mm ($1 \pm \frac{1}{4}$ inch).	MINIMUM pullout forces: 14 AWG 178 N (40 lbf) 16 AWG 156 N (35 lbf) 18 AWG 133 N (30 lbf) 20 AWG 89 N (20 lbf) 22 AWG 62 N (14 lbf) 24 AWG 36 N (8 lbf)
7	Terminal Insertion Force (into Housing)	Apply an axial insertion force on the terminal at a rate of 25 ± 6 mm ($1 \pm \frac{1}{4}$ inch).	22N (5 lbf) MAXIMUM insertion force

5.3 ENVIRONMENTAL REQUIREMENTS

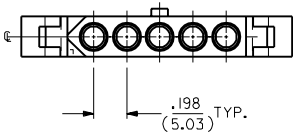
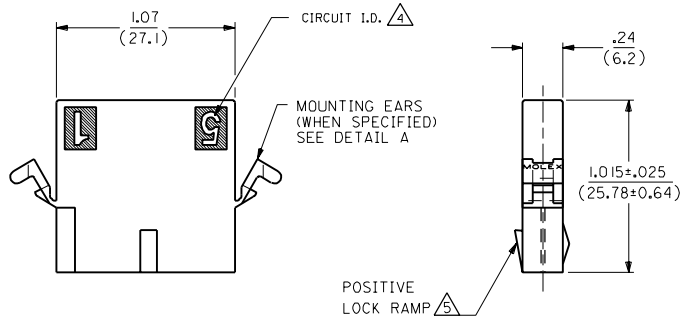
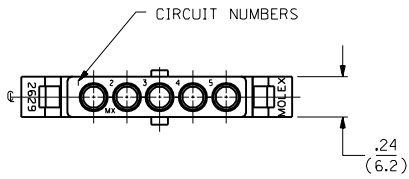
ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
8	Thermal Cycling	Mate connectors; expose to temperature cycling between -25°C and 70°C for 500 cycles with a dwell time of 30 minutes at each extreme. Measurements to be taken initially and after every 100 cycles.	10 milliohms MAXIMUM (change from initial) & Visual: No Damage

6.0 PACKAGING

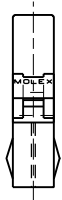
Parts shall be packaged to protect against damage during handling, transit and storage. See the appropriate sales drawings for additional information on packaging requirements.

REVISION: A	ECR/ECN INFORMATION: EC No: UCR#2002-0324 DATE: 2001 / 10/ 04	TITLE: PRODUCT SPECIFICATION STANDARD .093 SERIES PLUGS & RECEPTACLES	SHEET No. 3 of 3
DOCUMENT NUMBER: PS-43660-9999	CREATED / REVISED BY: BWIRKUS 10/4/01	CHECKED BY: BWIRKUS 10/4/01	APPROVED BY: SFRY 10/5/01

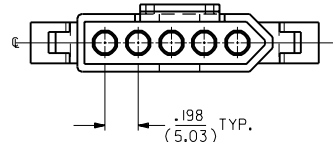
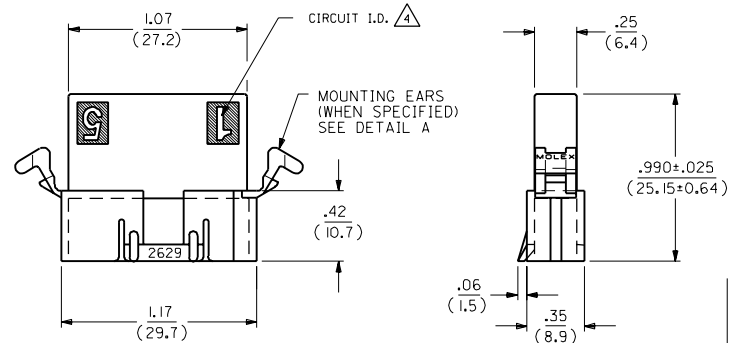
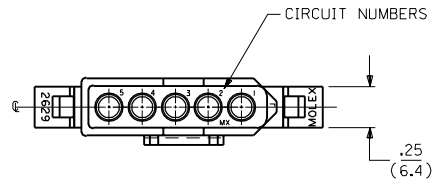
RECEPTACLE



VIEW OF RECEPTACLE VERSION
WITH PASSIVE LOCK RAMPS



PLUG



J	REVISED PER ECN # U61508 05/31/96 CM
I	X-REMOVE -R2 ECN # U6 1080 3-6-96 RW
K	ADD PASSIVE LOCKS ECN # U5 0529 11-30-94 RW
J	ADD -P2 W/EDP # ECR U3 0450 GC 4/1/93 RW
I	X-REMOVE ECR U2 1105 GC 1/29/92 RW
HI	ADD -C MAT'L PER ECR U2 0741 GC 5/7/92 RW
H	REVISE PER ECR U1 2237 GC 1/9/92 RW
G	REVISED & REDRAWN ECR # UB1801 KBW 02-03-89 RW

DIMENSIONS SHOWN METRIC (INCH)		UNLESS OTHERWISE SPECIFIED TOLERANCES: ANGULAR ± DDB		TITLE	
INCH	METRIC	.093/(2.36) HOUSINGS PLUG & RECEPTACLE			
3 PLACE ± .010	---	5 CIRCUIT ± .198/(5.03)C			
2 PLACE ± .014	± 0.25	MOLEX INCORPORATED			
1 PLACE ---	± 0.35	L15LEJLL 60532 U.S.A.			
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		PART NO.		SHEET NO. DATE	
		SEE CHART		1 OF 2 2/3/89	
DRWG. BY: KBW		CHKD. BY: RW		DIV. SD-2629-	
APP'D. BY: RAS		SCALE: 2:		SIZE: CP	

PLUG		RECEPTACLE	
ORDER NO	ENG NO	ORDER NO	ENG NO
03-09-2057	2629-P1	03-09-1057	2629-R1
PRELIMINARY	2629-P	PRELIMINARY	2629-R
		03-09-1054	2629-R2

LEGEND:

2629 - * * * * *

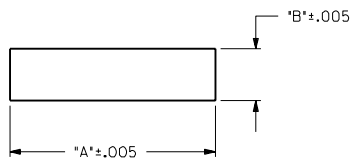
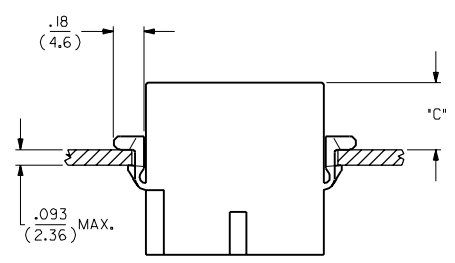
TYPE: _____
P = PLUG
R = RECEPTACLE

PLUG FEATURES: _____
BLANK = WITH PREBENT EARS
1 = WITHOUT EARS

RECEPTACLE FEATURES: _____
BLANK = WITH PREBENT EARS, WITH POSITIVE LOCK RAMP
1 = WITHOUT EARS, WITH POSITIVE LOCK RAMP
2 = WITHOUT EARS, WITH PASSIVE LOCK RAMPS

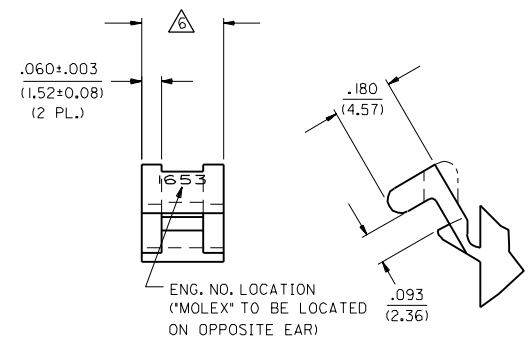
COLOR: _____
BLANK = NATURAL COLOR
AM = AMBER BK = BLACK BU = BLUE
BN = BROWN GY = GRAY GN = GREEN
OR = ORANGE RD = RED YW = YELLOW

MATERIAL: _____
BLANK = NYLON TYPE 66, 94V-2 PER SMES-128-A-*



RECOMMENDED PANEL OPENING

HOUSING	DIM. *A*	DIM. *B*	*C* PREBENT EAR
PLUG	1.33/(33.78)	.42/(10.67)	.40/(10.1)
RECEPT.	1.23/(31.24)	.31/(7.87)	.42/(10.6)



- NOTES:
- MOLEX PRODUCT SPEC 02-09 APPLIES.
 - 2629-P* (PLUG) WILL ACCEPT 2629-R* 5 CIRCUIT RECEPTACLES OR 1490-R* 4 CIRCUIT RECEPTACLE.
 - ACCEPTS MOLEX .093 SERIES TERMINALS.
- ⚠️ CIRCUIT I.D. NUMBERS ON HOUSING APPEAR ON PARTS FROM TOOLS BUILT AFTER 1/6/92.
 - ⚠️ LOCK RAMP ON THIS SIDE OF PART AVAILABLE IN EITHER A POSITIVE LOCK RAMP OR PASSIVE LOCK RAMP STYLE.
 - ⚠️ FOR DIMENSION, SEE SHEET 1.

DETAIL A
.093/(2.36) PREBENT MOUNTING EAR
(SCALE 4:1)

I SEE SHEET 1		DIMENSIONS SHOWN (METRIC) INCH		▽ = 0 ▽ = 0		REVISE ONLY ON CAD SYSTEM	
K SEE SHEET 1		UNLESS OTHERWISE SPECIFIED TOLERANCES ANGULAR ± DMS		TITLE		.093/(2.36) HOUSINGS PLUG & RECEPTACLE	
J SEE SHEET 1		INCH METRIC		FILE NAME		SD-2629-*	
I SEE SHEET 1		3 PLACE ± .010 ---		SHEET NO.		2	
HI SEE SHEET 1		2 PLACE ± .014 ± 0.25		DATE		2/ 3/89	
H SEE SHEET 1		1 PLACE --- ± 0.35		PART NO.		MOLEX INCORPORATED	
G SEE SHEET 1		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		U.S.A.		2	
LTR. REVISIONS		LTR. REVISIONS		DRAWN BY		KBW	
				ENK'D BY		RW	
				SCALE		2: 1	
				APP'D. BY		RAS	

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

SEE CHART
SD-2629-*

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CP C