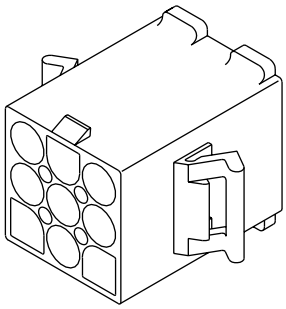
Jameco Part Number 794411

FEATURES AND SPECIFICATIONS

6.71mm (.264") Pitch .093" Pin and Socket Plug

3191



Features and Benefits

- Positive lock
- Fully isolated terminals
- Polarized housing assures proper mating
- Male and female terminals may be used in plug housing

Reference Information

Packaging: Bag
UL File No.: E29179
CSA File No.: LR19980
TUV License No.: R75107
Mates With: 3191 receptacle
Use With: Standard .093" terminal
Designed In: Inches

Electrical

Voltage: 600V
Current: 12.0A max.*
Dielectric Withstanding Voltage: 5000V AC rms

Mechanical

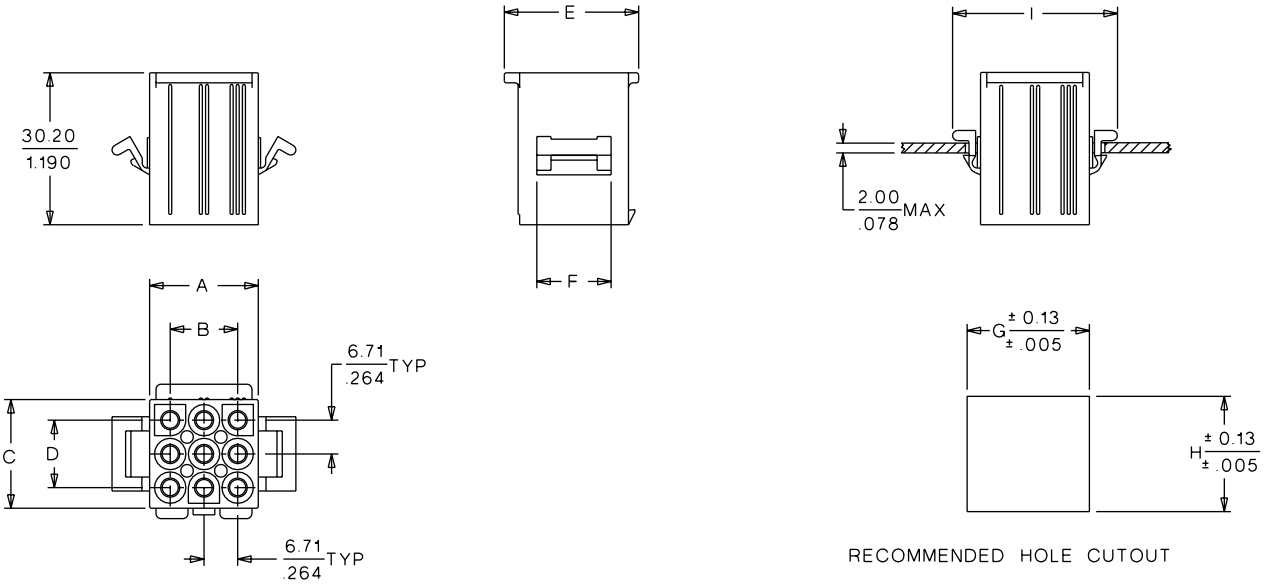
Contact Retention to Housing: 20 lb min.

Physical

Housing: Nylon, UL 94V-0 or 94V-2
Operating Temperature: -40 to +105˚C

* Depending on circuit size and wire gauge; please refer to product specifications

CATALOG DRAWING (FOR REFERENCE ONLY)



ORDERING INFORMATION AND DIMENSIONS

Circuits	Order No.				Amperes Per Circuit	Dimension							
	Panel Mount		Free Hanging			A	B	C	D	E	F	G	H
	94V-2	94V-0	94V-2	94V-0									
1	• 19-09-2018	• 19-09-2017	• 19-09-2019	• 19-09-2016	12	8.10 (.320)				11.15 (.439)	6.35 (.250)	12.30 (.484)	10.00 (.394)
2	• 19-09-2028	• 19-09-2027	• 19-09-2029	• 19-09-2026	12	14.90 (.590)	6.71 (.264)	8.10 (.320)		13.30 (.520)	8.20 (.320)	20.32 (.800)	9.27 (.365)
3	• 19-09-2038	• 19-09-2037	• 19-09-2039	• 19-09-2036	11	21.59 (.850)	13.42 (.528)	8.20 (.320)		13.30 (.520)	8.20 (.320)	25.90 (1.020)	10.00 (.394)
4	• 19-09-2048	• 19-09-2047	• 19-09-2049	• 19-09-2046	9	28.30 (1.110)	20.13 (.792)	8.20 (.320)		13.30 (.520)	8.20 (.320)	32.26 (1.270)	10.00 (.394)
6	• 19-09-2068	• 19-09-2067	• 19-09-2069	• 19-09-2066	9	21.60 (.850)	13.42 (.528)	14.90 (.590)	6.71 (.264)	19.96 (.790)	14.70 (.580)	26.60 (1.047)	17.30 (.681)
9	• 19-09-2098	• 19-09-2097	• 19-09-2099	• 19-09-2096	9	21.60 (.850)	13.42 (.528)	21.60 (.850)	13.42 (.528)	26.70 (1.050)	14.70 (.580)	26.62 (1.048)	23.09 (.909)
12	• 19-09-2128	• 19-09-2127	• 19-09-2129	• 19-09-2126	9	28.20 (1.110)	20.13 (.792)	22.10 (.870)	13.42 (.528)	26.70 (1.050)	14.70 (.580)	33.02 (1.300)	23.10 (.910)
15	• 19-09-2158	• 19-09-2157	• 19-09-2159	• 19-09-2156	9	35.10 (1.380)	26.84 (1.056)	22.10 (.870)	13.42 (.528)	26.70 (1.050)	14.70 (.580)	39.42 (1.552)	23.11 (.910)

• US Standard Product, available through Molex franchised distributors

PRODUCT SPECIFICATION

.093 SERIES HIGH CURRENT END-CARRIED TERMINALS

1.0 SCOPE

This Product Specification covers the .093 Series 6.71 mm (.264 inch) centerline (pitch) 3191 Series and the 5.03 mm (.198 inch) centerline Standard .093 Series connectors using.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT SERIES NUMBER AND DESCRIPTION

42477 / 42478 - .093 SERIES HIGH CURRENT, END-CARRIED CRIMP TERMINALS

3191 - .093 SERIES TYPE PLUG AND RECEPTACLE HOUSINGS

1261,1292, 1360.1375, 1396, 1490, 1545, 1619, 1951, 2163, 2629 - STANDARD .093 SERIES PLUG AND RECEPTACLE HOUSINGS

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

See the appropriate sales drawings of above series numbers for further information on dimensions, materials, platings and markings.

2.3 SAFETY AGENCY APPROVALS

UL File #E29179
CSA File #LR19980
TUV License #R75107

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

MIL-STD-1344A
UL 1682

4.0 RATINGS

4.1 VOLTAGE

600 Volts AC (RMS) for 3191 Series
250 Volts AC (RMS) for Standard .093 Series

4.2 CURRENT AND APPLICABLE WIRES

AWG	Amps	Outside Insulation Diameter
14	17	3.56 mm (.140 inch)
18	12	2.79 mm (.110 inch)

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	**Contact Resistance of Wire Termination (Low Level)**	Terminate the applicable wire to the terminal and measure wire using a voltage of **20** mV and a current of **100** mA. (Measurement locations in Section 7.0)	**2** milliohms MAXIMUM [initial]
3	**Dielectric Withstanding Voltage**	Mate connectors: apply a voltage of **5000** VAC for the 3191 Series, **2000** VAC for the .093 Series for **1** minute between adjacent terminals and between terminals to ground.	No breakdown; current leakage < **5** mA
4	**Temperature Rise (via Current Cycling)**	Mate connectors: measure the temperature rise at the rated current, subjecting the connector to : **96** hours of continuous current, followed by **240** hours of current cycling (**45** minutes ON and **15** minutes OFF per hour).	Temperature rise: **+30**°C MAXIMUM

5.2 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
5	**Terminal Insertion Force**	Insert terminal into housing until fully locked at a rate of **25 ± 6** mm (**1 ± ¼** inch) per minute.	**22.2** N (**5** lbf) MAXIMUM insertion force
6	**Connector Mate and Unmate Forces**	Mate and unmate connector (male to female) at a rate of **25 ± 6** mm (**1 ± ¼** inch) per minute.	**15.6** N (**3.5** lbf) MAXIMUM insertion force **6.7** N (**1.5** lbf) MINIMUM [initial] withdrawal force
7	**Terminal Retention Force (in Housing)**	Axial pullout force on the terminal in the housing at a rate of **25 ± 6** mm (**1 ± ¼** inch) per minute.	**89.0** N (**20** lbf) MINIMUM retention force
8	**Durability**	Mate connectors up to **{25** cycles for tin (non-noble) plating OR **250** cycles for gold (noble) plating**}** at a maximum rate of **5** cycles per minute prior to Environmental Tests.	**10** milliohms MAXIMUM (change from initial)
9	**Vibration (Random)**	Subject mated connectors to vibration with an amplitude of **1.52** mm (**.060** inch) peak to peak; a sweep of 10-55-10 hertz in 1.0 min.; and a duration of 2.0 hours in the ±X,±Y,±Z axes.	**10** milliohms MAXIMUM (change from initial) & Discontinuity < **1** microsecond

5.2 MECHANICAL REQUIREMENTS (CONTINUED)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
10	**Shock (Mechanical)**	Subject mated connectors to 3 shocks at **50** g's with ½ sine wave (11 milliseconds) shocks in the ±X,±Y,±Z axes (**18** shocks total).	**10** milliohms MAXIMUM (change from initial]) & Discontinuity < **1** microsecond
11	**Wire Pullout Force (Axial)**	Apply an axial pullout force on the wire at a rate of **25 ± 6** mm (**1 ± ¼** inch).	******* N (******* lbf) MINIMUM pullout force **{**Recommended minimum value: 75% of tensile strength of the wire**}**
12	**Wire Pullout Force (Right Angle)**	Apply a right angle pullout force on the wire at a rate of **25 ± 6** mm (**1 ± ¼** inch).	MINIMUM pullout force: **18 AWG: 89** N (**20** lbf) **16 AWG: 133** N (**30** lbf) **14 AWG: 267** N (**60** lbf) **{**Recommended minimum value: 75% of tensile strength of the wire**}**
13	**Terminal Insertion Force (into Housing)**	Apply an axial insertion force on the terminal at a rate of **25 ± 6** mm (**1 ± ¼** inch).	**22** N (**5** lbf) MAXIMUM insertion force

5.3 ENVIRONMENTAL REQUIREMENTS

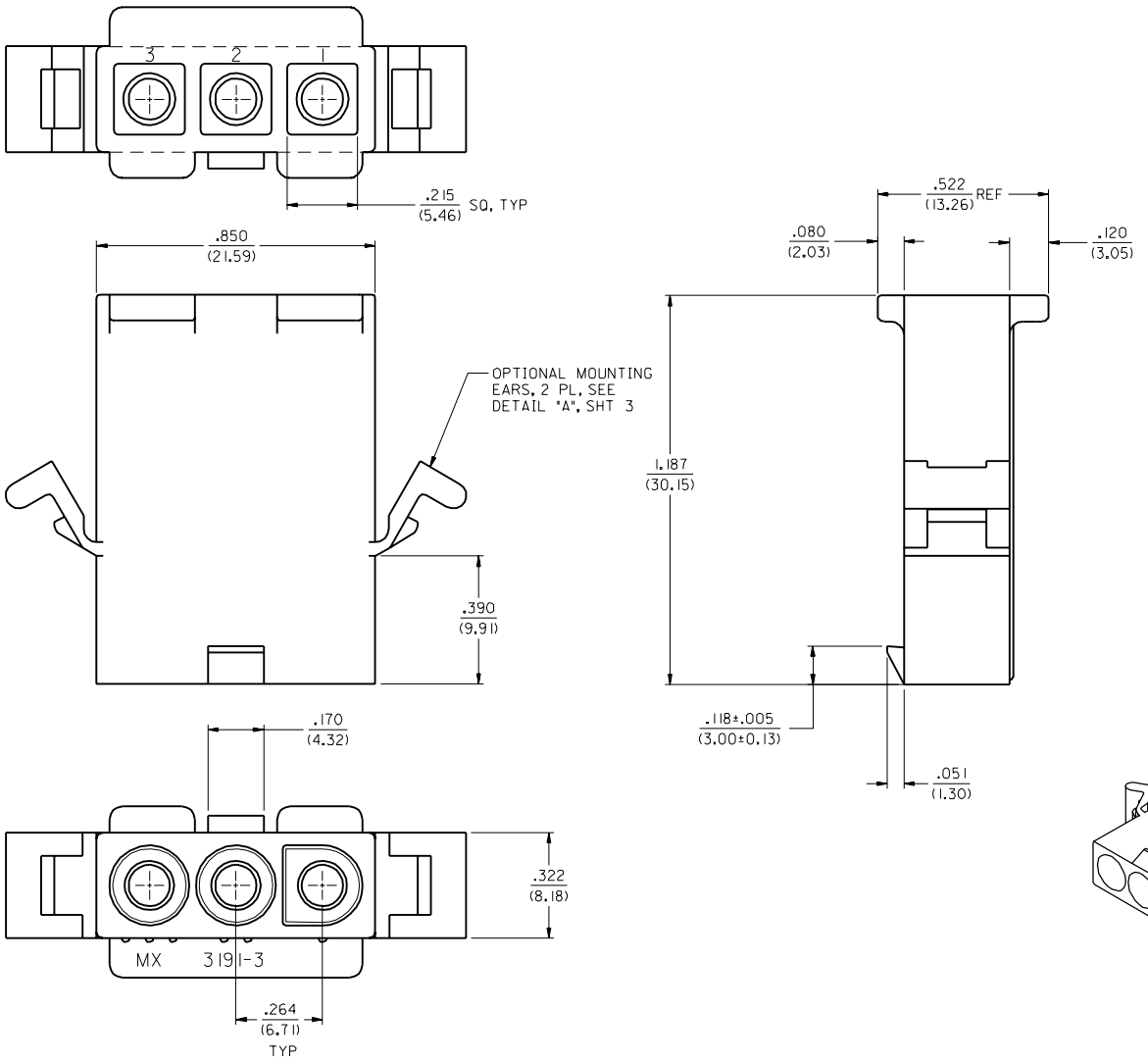
ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
14	**Shock (Thermal)**	Mate connectors; expose to **10** cycles of: Temperature °C — Duration (Minutes) **-40 +0/-3** — **30** **+25 ±10** — **5** MAXIMUM **+105 +3/-0** — **30** **+25 ±10** — **5** MAXIMUM	**10** milliohms MAXIMUM (change from initial) & Visual: No Damage
15	**Humidity (Cyclic)**	Expose mated connectors to a temperature cycles of **25 ± 3°**C at **95 ± 5**% relative humidity and **65 ± 3°**C at **50 ± 5**% relative humidity; dwell time of **1.0** hour; ramp time of **0.5** hours for **240** hours.	**10** milliohms MAXIMUM (change from initial) & Dielectric Withstanding Voltage: No Breakdown at **500** VAC & Insulation Resistance: **1000** Megohms MINIMUM & Visual: No Damage
16	**Salt Spray**	Mate connectors: Duration: **96** hours exposure; Atmosphere: salt spray from a **5**% solution; Temperature: **35 +1/-2°**C	**10** milliohms MAXIMUM (change from initial) & Visual: No Damage

5.3 ENVIRONMENTAL REQUIREMENTS (continued)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
17	**Thermal Aging**	Mate connectors; expose to: **240** hours at **105 ± 2°**C	**10** milliohms MAXIMUM (change from initial]) & Visual: No Damage
18	**Humidity (Steady State)**	Mate connectors: expose to a temperature of **40 ± 2°**C with a relative humidity of **90-95**% for **240** hours.	**10** milliohms MAXIMUM (change from initial) & Dielectric Withstanding Voltage: No Breakdown at **500** VAC & Insulation Resistance: **1000** Megohms MINIMUM & Visual: No Damage

6.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage.



3	J5			
2	J5	J5	REDRAWN ON CAD ECR U6 0734 GC 1/8/96	RW
1	J5			
~~MFG.~~ SH.	REV.	LTR.	REVISIONS	

DIMENSIONS SHOWN (METRIC) INCH

UNLESS OTHERWISE SPECIFIED TOLERANCES: ANGULAR ± 1/2°

	INCH	METRIC
3 PLACE	± .010	---
2 PLACE	± .015	± 0.25
1 PLACE	---	± 0.38

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

▽ = 0 ▼ = 0 REVISE ONLY ON CAD SYSTEM

TITLE: .093/(2.36) HOUSING PLUG AND RECEPTACLE 3 CKT., .264/(6.71) CTRS.

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

SHEET NO. 1 of 3 | DATE 1/ 8/96

PART NO. SEE CHART | DRWG. NO. SD-3191-3•

DRWG. BY	CHK'D. BY	FILE NAME	DIV.	SIZE
GC	RW	S31913X1.DGN	CP	C
APP'D. BY RAS	SCALE 4 : 1			

NO P.S.

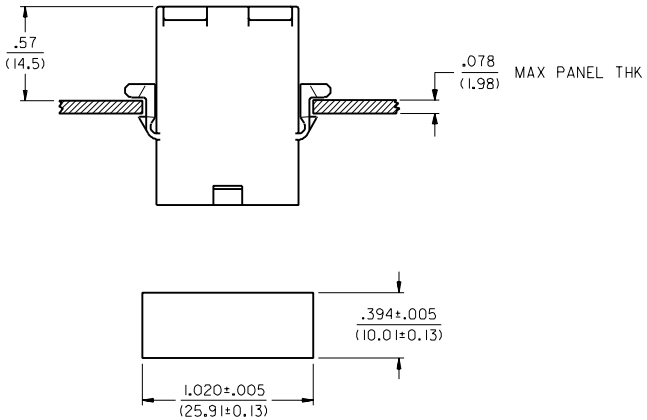
PLUG	
PART NO.	ENG. NO.
19-09-2038	3191-3P
19-09-2039	3191-3P1
19-09-2037	3191-3P-201
19-09-2036	3191-3P1-201
19-09-1038	3191-3PIRD
19-09-3032	3191-3PRD
19-09-3033	3191-3PBU

RECEPTACLE	
PART NO.	ENG. NO.
19-09-1039	3191-3R1
19-09-1036	3191-3R1-201
19-09-3030	3191-3RIRD

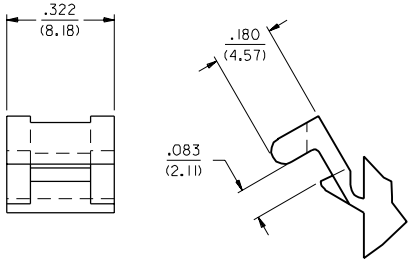
LEGEND

3191-3****-*

- CIRCUIT SIZE
- P = PLUG, R = RECEPTACLE
- EARS: BLANK = WITH PREBENT EARS (PLUG ONLY), 1 = WITHOUT EARS
- COLOR: BLANK = NATURAL COLOR
  AM=AMBER BK=BLACK BU=BLUE
  BN=BROWN GY=GRAY GN=GREEN
  OR=ORANGE RD=RED YW=YELLOW
  COLORS AVAILABLE ONLY IN 94V-2 MATERIAL
- MATERIAL: BLANK=NYLON TYPE 6/6,94V-2, 201=NYLON TYPE 6/6, 94V-0



RECOMMENDED HOLE CUTOUT



DETAIL "A"
PREBENT MOUNTING EAR
(SCALE 4:1)

LTR.	REVISIONS	LTR.	REVISIONS
		J5	SEE SHEET 1

DIMENSIONS SHOWN (METRIC) INCH
UNLESS OTHERWISE SPECIFIED TOLERANCES: ANGULAR ± 1/2°

	INCH	METRIC
3 PLACE	± .010	---
2 PLACE	± .015	± 0.25
1 PLACE	---	± 0.38

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DRWG. BY GKC | CHK'D. BY RW | APP'D. BY RAS | SCALE --:--

▽ = 0 ▼ = 0 REVISE ONLY ON CAD SYSTEM

TITLE: .093/(2.36) HOUSINGS PLUG AND RECEPTACLE 3 CKT. @ .264/(6.71) CTRS.

MOLEX INCORPORATED LISLE,ILL. 60532 U.S.A. | SHEET NO. 3 | DATE 1/8/96

PART NO. SEE CHART | DRWG. NO. SD-3191-3*

FILE NAME 5319SX3.DGN

DIV. CP | SIZE C

NO P.S.