Jameco Part Number 792706

3.96mm (.156") Pitch KK® Crimp Terminal

6838/7258/6438 Trifurcon™

FEATURES AND SPECIFICATIONS

Features and Benefits

- Complete line of terminal crimping equipment available (see Application Tooling section of this catalog)
- Accommodates 18 to 26 AWG
- Trifurcon design provides 3 distinct points of contact
- Ideal choice where high shock or vibration exists
- For low current/voltage, Gold is recommended
- Phosphor Bronze recommended for rated current

Reference Information

Product Specification: PS-40-02
Packaging: Bag or reel
Tooling Information: See crimp tooling section
Use With: 6442 and 41695 crimp terminal housings
Designed In: Inches

Electrical

Voltage: 250V AC max.
Current:

AWG	18	20	22	24	26
Phosphor Bronze (A) max.	7.00	6.25	5.50	5.00	4.50
Brass (A) max.	5.00	4.75	4.50	4.25	4.00

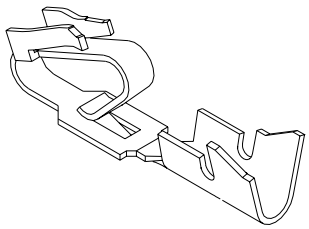
Contact Resistance: 6mΩ max.
Dielectric Withstanding Voltage: 1500V AC
Insulation Resistance: 50K MΩ min.

Mechanical

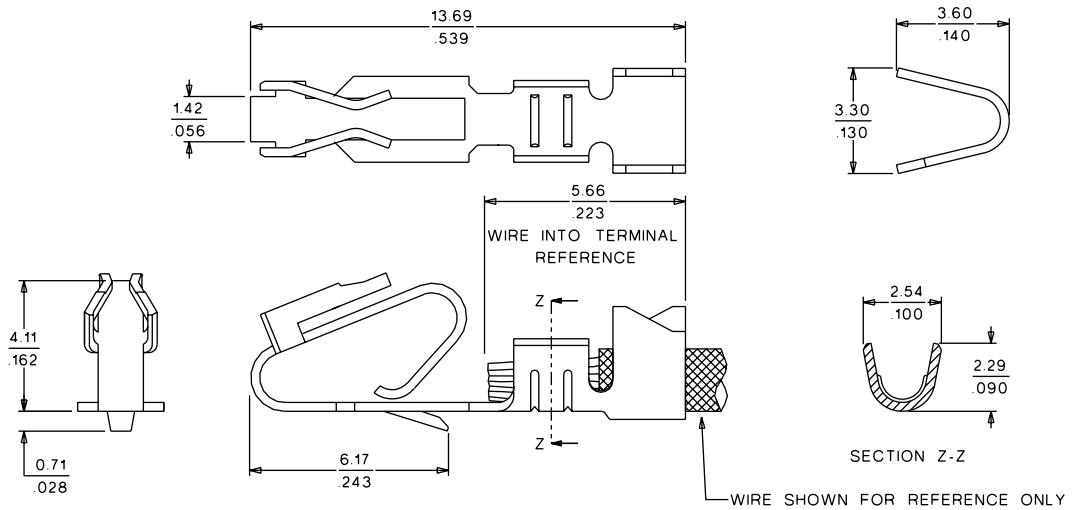
Contact Insertion Force: 1.8kg (4 lb) max.
Contact Retention to Housing: 3.6kg (8 lb) min.
Wire Pull-Out Force: 20 lb max./18 AWG
Normal Force: 0.75kg (1.65 lb)
Durability: 25 cycles max.

Physical

Contact: Brass or Phosphor Bronze
Plating: See Table
Operating Temperature: Phosphor Bronze—0 to +75˚C
Brass—0 to +50˚C



CATALOG DRAWING (FOR REFERENCE ONLY)



Note: 6838 shown

ORDERING INFORMATION AND DIMENSIONS

Wire Size AWG	Insulation OD	Series	Material	Order No.					
				Tin Plating		Gold Plating		Select Gold Plating	
				Bag	Reel	Bag	Reel	Bag	Reel
18-20	2.79 (.110) max.	6838	Phosphor Bronze	• 08-52-0113	• 08-52-0112	• 08-58-0189	• 08-58-0187	• 08-58-0111	• 08-58-0110
18-20	2.79 (.110) max.	6838	Brass	08-50-0189	08-50-0187				
22-26	1.65 (.065) max.	7258	Phosphor Bronze	• 08-52-0125	• 08-52-0124	• 08-56-0124	• 08-56-0123	• 08-65-0122	• 08-65-0121
22-26	1.65 (.065) max.	7258	Brass	08-50-0185	08-50-0183				
18-20	2.41 (.095) max.	6438	Brass	08-50-0165	08-50-0164	08-56-0139	08-56-0137	08-56-0133	08-56-0135

• US Standard Product, available through Molex franchised distributors

PRODUCT SPECIFICATION

1.0 SCOPE

This Product Specification covers the 3.96 mm (.156 inch) centerline (pitch) Trifurcon Connectors terminated with 18 to 26 AWG wire using crimp technology when mated with 1.14mm (.045) square pin headers.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBERS

Crimp Terminals: 6838, 7258
Crimp Housings: 41695, 6442
Headers: 41771, 41772, 41791, 41792, 42471, 42472, 42491, 42492, 41661, 41662, 41671,
Other products conforming to this specification are noted on the individual drawings.

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

Terminal Material: Brass or Phos. Bronze (for Max performance use phos bronze material.)
Housing: Nylon or Polyester
Pins: Brass or Phos. Bronze
For more information on dimensions, materials, and plating see the individual drawings.

2.3 SAFETY AGENCY APPROVALS

UL File Number …..... E29179
CSA ……..LR19980

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

None

4.0 RATINGS

4.1 VOLTAGE

250 Volts AC (RMS) {or 176 Volts DC}

4.2 CURRENT

(Current is dependent on connector size, contact material, plating, ambient temperature, printed circuit board characteristics and related factors. Actual current rating is application dependent and should be evaluated for each application.)

Wire Awg	Amps (Max) With Brass	Amps (Max) With Phos Bronze	Wire Insulation Dia
18	5.00	7.00	See terminal drawings
20	4.75	6.25	See terminal drawings
22	4.50	5.50	See terminal drawings
24	4.25	5.00	See terminal drawings
26	4.00	4.50	See terminal drawings

4.3 TEMPERATURE (ambient + 30^{0}C temp rise)

	Brass	Phos Bronze
Operating Temperature	0^{0}C to +50^{0}C	0^{0}C to +75^{0}C
Non Operating Temperature	-40^{0}C to +105^{0}C	-40^{0}C to +105^{0}C

5.0 PERFORMANCE

5.1 ELECTRICAL REQUIREMENTS

DESCRIPTION	TEST CONDITION	REQUIREMENT
Contact Resistance (Low Level)	Mate connectors: apply a maximum voltage of 20 mV and a current of 100 mA.	6 milliohms MAXIMUM [initial]
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.	2 milliohms MAXIMUM [initial]
Insulation Resistance	Unmate & unmount connectors: apply a voltage of 500 VDC between adjacent terminals and between terminals to ground.	50 K Megohms MINIMUM
Dielectric Withstanding Voltage	Unmate connectors: apply a voltage of {two times the rated voltage plus 1000 volts} VAC for 1 minute between adjacent terminals and between terminals to ground.	No breakdown
Capacitance	Measure between adjacent terminals at 1 MHz.	1.2 picofarads MAXIMUM
Temperature Rise (via Current Cycling)	Mate connectors: measure the temperature rise at the rated current after: 1) 96 hours (steady state) 2) 240 hours (45 minutes ON and 15 minutes OFF per hour) 3) 96 hours (steady state)	Temperature rise: +30°C MAXIMUM

5.2 MECHANICAL REQUIREMENTS

DESCRIPTION	TEST CONDITION	REQUIREMENT
Connector Mate and Unmate Forces	Per circuit when mated to an .045 Sq. pin. Mate and unmate connector (male to female) at a rate of 25 ± 6 mm (1 ± ¼ inch) per minute.	10.0 N (2.25 lbf) MAXIMUM insertion force & 3.7 N (0.84 lbf) MINIMUM withdrawal force
Terminal Insertion Force (into Housing)	Apply an axial insertion force on the terminal at a rate of 25 ± 6 mm (1 ± ¼ inch). (Forces will change with platings and materials.)	17.8 N (4.0 lbf) MAXIMUM insertion force
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. (Forces will change with platings and materials.)	35.6 N (8.0 lbf) MINIMUM withdrawal force
Durability	Mate connectors up to 25 cycles at a maximum rate of 10 cycles per minute prior to Environmental Tests.	10 milliohms MAXIMUM (change from initial)
Vibration (Random)	Mate connectors and vibrate per EIA 364-28, test condition VII.	10 milliohms MAXIMUM (change from initial) & Discontinuity < 1 microsecond
Shock (Mechanical)	Mate connectors and shock 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
Wire Pullout Force (Axial)	Apply an axial pullout force on the wire at a rate of 25 ± 6 mm (1 ± ¼ inch). (For maximum performance use molex application tooling with stranded tinned copper wire)	18 awg = 89 N (20 lbf) 20 awg = 66 N (15 lbf) 22 awg = 53 N (12 lbf) 24 awg = 35 N (8 lbf) 26 awg = 22 N (5 lbf)
Normal Force	Apply a perpendicular force.	7.34 N (748 grams) average

5.3 ENVIRONMENTAL REQUIREMENTS

DESCRIPTION	TEST CONDITION	REQUIREMENT
Shock (Thermal)	Mate connectors; expose to 5 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
Thermal Aging	Mate connectors; expose to: 96 hours at 105 ± 2°C	10 milliohms MAXIMUM (change from initial]) & Visual: No Damage
Humidity (Steady State)	Mate connectors: expose to a temperature of 40 ± 2°C with a relative humidity of 90-95% for 96 hours. Note: Remove surface moisture and air dry for 1 hour prior to measurements.	10 milliohms MAXIMUM (change from initial) & Dielectric Withstanding Voltage: No Breakdown at 500 VAC & Insulation Resistance: 1000 Megohms MINIMUM & Visual: No Damage
Solderability	Per SMES-152	Solder coverage: 95% MINIMUM (per SMES-152)
Solder Resistance	Dip connector terminal tails in solder: Solder Duration: 5 ± 0.5 seconds; Solder Temperature: 230 ± 5°C	Visual: No Damage to insulator material
Salt Spray	Mate connectors: Duration: 48 hours exposure; Atmosphere: salt spray from a 5% solution; Temperature: 35 +1/-2°C	10 milliohms MAXIMUM (change from initial) & Visual: No Damage

6.0 PACKAGING

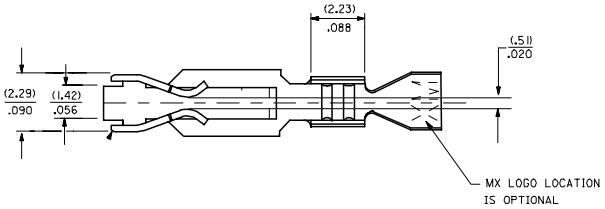
Parts shall be packaged to protect against damage during handling, transit and storage.

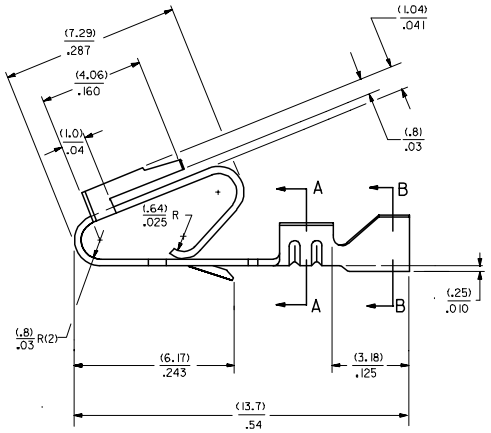
7.0 GAGES AND FIXTURES

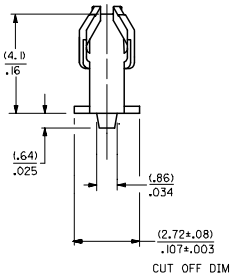
8.0 OTHER INFORMATION

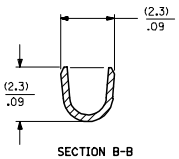
NOTES

2. CRIMP FOR 22 TO 26 GA. WIRE WITH MAX. INSULATION DIA.OF (1.65)/.065
3. PLATINGS CONFORM TO MOLEX ENG.STD. SDES-88.
4. DIMENSIONS GIVEN ACROSS CENTERLINES ARE SYMMETRICAL ABOUT THOSE CENTERLINES WITHIN HALF THE TOTAL TOLERANCE.
5. PARTS CONFORM TO PRODUCT SPECIFICATION PS-40-02.

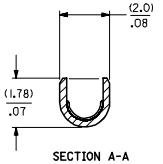








SECTION B-B



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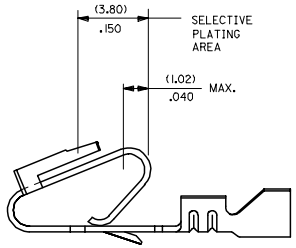


SELECTIVE PLATING AREA

7258-•(•)•

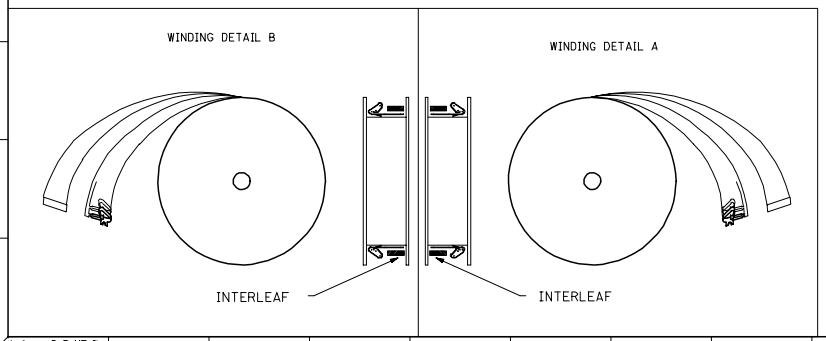
FORM
BLANK= CHAIN PER DETAIL B
A=CHAIN PER DETAIL A
L= LOOSE

MAT'L. (.27)±.0106 THK
BLANK=BRASS
A=PHOS. BRONZE

PLATING PER SDES- 88

(909) • OVERALL HOT TIN DIP: .00254 MICROMETERS MIN.
(558) SELECT GOLD: .00076 MICROMETERS MIN.
OVERALL GOLD FLASH: .00005 MICROMETERS MIN.
OVERALL NICKEL UNDERPLATE: .00127 MICROMETERS MIN.
(561) SELECT GOLD: .00076 MICROMETERS MIN.
OVERALL NICKEL UNDERPLATE: .00127 MICROMETERS MIN.

*THE PRIMARY SHIPPING CARTON WILL BE LABELED "COMPLIANT TO RoHS DIRECTIVE 2002/95/EC AND ELV ANNEX II OF DIRECTIVE 2000/53/EC." CARTONS WITHOUT THIS LABEL MAY CONTAIN PRODUCT WITH TIN-LEAD PLATING.



CHANGE TO ME10
EC NO: UCP2005-0964
DRWN: ADRATNOL 2004/11/19
CHKD: SAMEC 2004/11/19
APPR: MMARGULIS 2004/11/19
DESCRIPTION
REV
T1

QUALITY SYMBOLS
▼=0
▽=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± .010
2 PLACES	± 0.25	± .014
1 PLACE	± 0.36	± ---
ANGULAR ±1/2°		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: IN/MM
SCALE: ---
DESIGN UNITS: INCH
THIRD ANGLE PROJECTION

DRAWN BY: JJS	DATE: 12/03/87	TITLE: TRIFURCON TERMINAL CRIMP TYPE, .156 CENTERS 22 TO 26 AWG
CHECKED BY: PATEL	DATE: 12/03/87	
APPROVED BY: LENZ	DATE: 12/03/87	MOLEX INCORPORATED
MATERIAL NO.: SEE CHART	DOCUMENT NO.: SD-7258	SHEET NO.: 1 OF 2

SIZE: D

7258-(*)*

PART NO.	ENG. NO
08-50-0183	7258-(P909)
08-50-0185	7258-(P909)L
08-56-0181	7258-(503)
08-56-0182	7258-(503)L
08-50-0283	7258-(P909)A

7258-A(*)*

PART NO.		ENG. NO	
08-04-0001		7258-A(999)	
08-65-0121	*	7258-A(P561)	ES-276-P561
08-65-0122	*	7258-A(P561)L	
08-56-0123	*	7258-A(P558)	MAKE FROM
08-56-0124	*	7258-A(P558)L	7258-A(P561)
		7258-A(561)	
		7258-A(561)L	
08-52-0124	*	7258-A(P909)	
08-52-0125	*	7258-A(P909)L	
08-65-0126		7258-A(P555)	ES-276-P555
08-65-0127		7258-A(P555)L	
08-58-0133		7258-A(550)	MAKE FROM
08-58-0134		7258-A(550)L	7258-A(P555)

PART NO.	ENG. NO

PART NO.	ENG. NO (SUFFIX ONLY)

PART NO.	ENG. NO (SUFFIX ONLY)	VOID CKT.

PART NO.	ENG. NO (SUFFIX ONLY)	VOID CKT.

COLUMN NO. 1	CON'T. IN COLUMN NO.	SHEET NO.

COLUMN NO. 2	CON'T. IN COLUMN NO.	SHEET NO.

COLUMN NO. 3	CON'T. IN COLUMN NO.	SHEET NO.

COLUMN NO. 4	CON'T. IN COLUMN NO.	SHEET NO.

COLUMN NO. 4	CON'T. IN COLUMN NO.	SHEET NO.

COLUMN NO. 4	CON'T. IN COLUMN NO.	SHEET NO.

CHANGE TO ME10
EC NO: UCP2005-0964
DRWN: ADRATNOL 2004/11/19
CHKD: SAMEC 2004/11/19
APPR: MARGILLIS 2004/11/19
DESCRIPTION
REV
T1

QUALITY SYMBOLS
▼=0
▽=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± ---	± ---
1 PLACE	± ---	± ---
ANGULAR ±1/2°		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: IN/MM
SCALE: ---
DESIGN UNITS: INCH
THIRD ANGLE PROJECTION

DRAWN BY: JJS DATE: 12/07/87
CHECKED BY: PATEL DATE: 12/07/87
APPROVED BY: LENZ DATE: 12/07/87

TITLE: TRIFURCON TERMINAL CRIMP TYPE

molex MOLEX INCORPORATED

MATERIAL NO.: SEE CHART
DOCUMENT NO.: SD-7258
SHEET NO.: 2
SIZE: D