

**PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION**

**Part Number:** [0330122021](#)  
**Status:** **Active**  
**Overview:** [mx150 sealed connector system](#)  
**Description:** MX150™ Female Terminal, Tin (Sn) Plating, 14-16 AWG, Right Reel Payoff, Large Polarization Rib, Contact Material Thickness 0.30mm (.012")

**Documents:**

[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

**General**

Product Family	Crimp Terminals
Series	<a href="#">33012</a>
Comments	Right Reel Payoff, Large Polarization Rib
Crimp Quality Equipment	Yes
Overview	<a href="#">mx150 sealed connector system</a>
Product Name	MX150™

**Physical**

Gender	Female
Material - Metal	High Performance Alloy (HPA)
Material - Plating Mating	Tin
Material - Plating Termination	Tin
Packaging Type	Reel
Plating min: Mating (µin)	20.00
Plating min: Mating (µm)	0.500
Plating min: Termination (µin)	20.00
Plating min: Termination (µm)	0.50
Termination Interface: Style	Crimp or Compression
Wire Insulation Diameter	2.60mm (.102") max.
Wire Size AWG	14, 16
Wire Size mm²	1.5

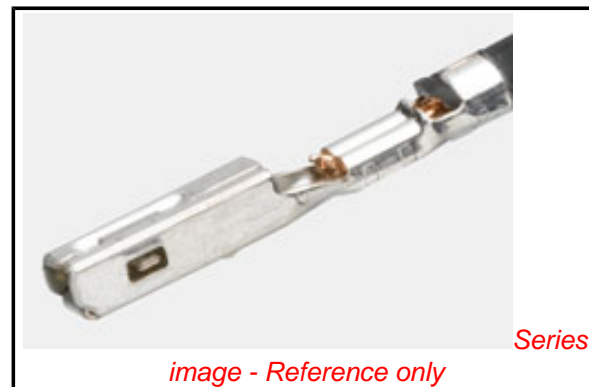
**Electrical**

Current - Maximum per Contact	22A
Voltage - Maximum	250V

**Material Info**

**Reference - Drawing Numbers**

Sales Drawing	SD-33012-002
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Series

*image - Reference only*

**EU RoHS**

**ELV and RoHS Compliant**  
**REACH SVHC**  
**Contains SVHC: No**  
**Halogen-Free Status**

**China RoHS**



**Need more information on product environmental compliance?**

Email [productcompliance@molex.com](mailto:productcompliance@molex.com)  
 For a multiple part number RoHS Certificate of Compliance, [click here](#)

Please visit the [Contact Us](#) section for any non-product compliance questions.

**Search Parts in this Series**

[33012Series](#)

**Use With**

[33472](#) Dual Row Housing, [33476](#) Hybrid Housing, [33471](#) Single Row Housing

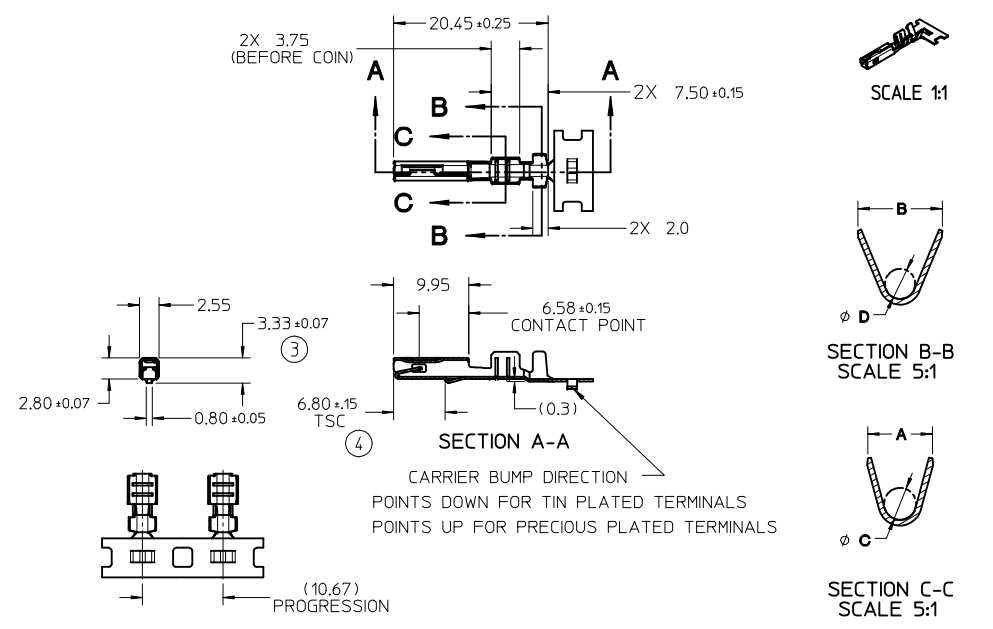
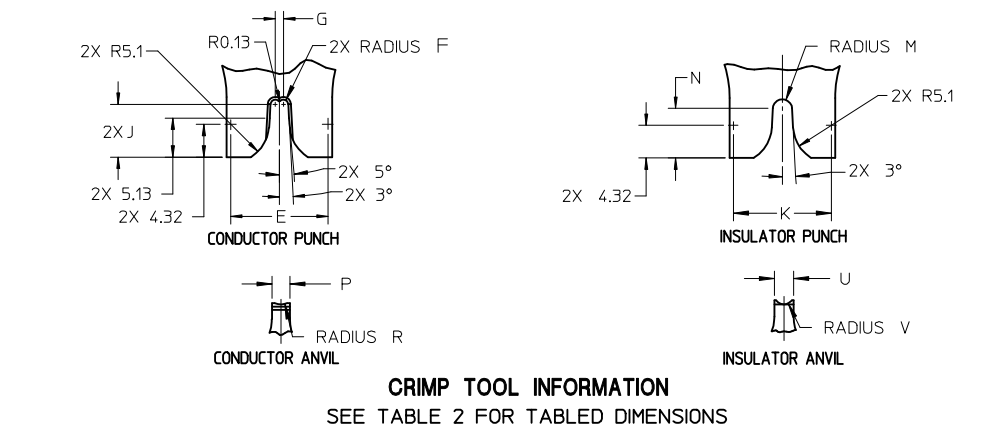
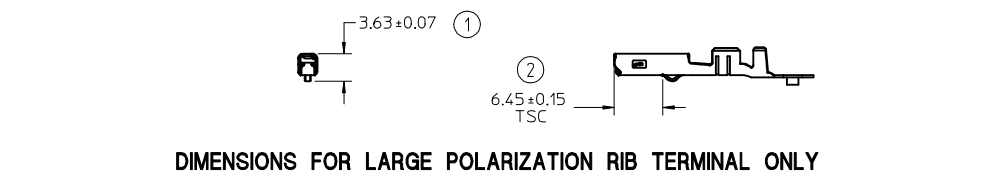
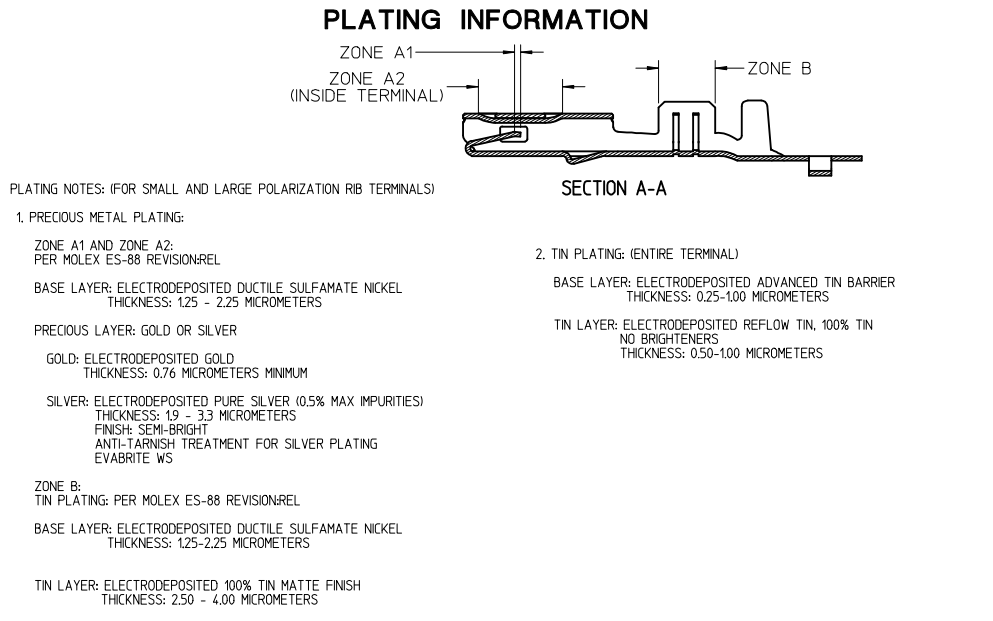
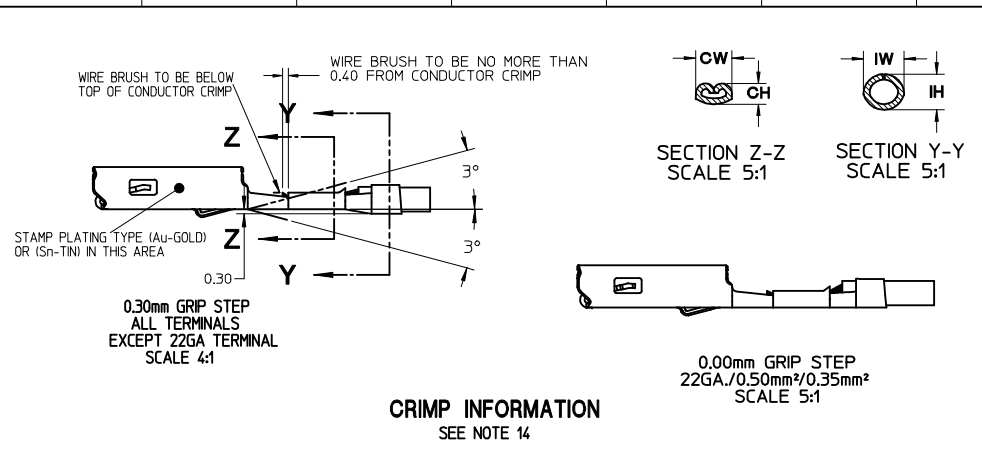
**Application Tooling | FAQ**

*Tooling specifications and manuals are found by selecting the products below. Crimp Height Specifications are then contained in the Application Tooling Specification document.*

**Global**

Description	Product #
Manual Extraction Tool	<a href="#">0638131500</a>
Hand Crimp Tool, 14-16AWG	<a href="#">0638115900</a>
Hand Crimp Tool, Metric 1.00 and 1.50	<a href="#">0638116100</a>

**PLEASE CHECK [WWW.MOLEX.COM](http://WWW.MOLEX.COM) FOR LATEST PART INFORMATION**



- NOTES: (UNLESS OTHERWISE SPECIFIED)
- MATING TERMINAL SHOWN ON SD-33000-001
  - MATERIAL: ASTM B422, UNS C19025, HR04 THICKNESS: 0.30 mm ± 0.01 TEMPER: FULL HARD (REF) TENSILE: 496 MIN MPA PLATING: SEE PLATING NOTES ABOVE
  - MEETS PERFORMANCE SPECIFICATION FOR CABLE TO TERMINAL ELECTRICAL CRIMPS PER SAE/USCAR-21 (8/2001)
  - MEETS PERFORMANCE STANDARD FOR AUTOMOTIVE ELECTRICAL CONNECTOR SYSTEMS FOR SAE/USCAR-2, REV. 4 (TEMP CLASS 3) (4/2001)
  - MEETS ELECTRICAL CONNECTION SYSTEM DESIGN SPECIFICATION (SDS) REV.11 (5/2002)
  - MEETS FIELD CORRELATED LIFE TEST (FCLT) PER SAE/USCAR-20 (11/2001)
  - MEETS WIRING COMPONENT DESIGN GUIDELINES SAE/USCAR-12 REV 2 (12/2001)
  - TSC ON A DIMENSION TO BE INTERPRETED AS DISTANCE TO A THEORETICAL SHARP CORNER AS IF THE RADIUS WERE NOT PRESENT
  - DRAWING CONFORMS TO AVP-(T401/T406)-001 REVISION A DATED 2/16/99
  - REFERENCE 97B5-14474-AAB FOR LARGE POLARIZATION RIB CAVITY SPECIFICATION
  - INSERTION FORCE (TIN) AVG. FROM PV TESTING = 3.8N LARGE POLARIZATION RIB 3.5N SMALL POLARIZATION RIB (REFERENCE)
  - ALL DIMENSIONS EXCEPT ①, ②, ③ & ④ ARE COMMON TO BOTH SMALL AND LARGE POLARIZATION RIB TERMINALS
  - REFERENCE PK-31300-516 FOR REEL DIRECTION
  - REFERENCE CS-33012-002 FOR ADDITIONAL CRIMP INFORMATION

ENTER DESCRIPTION EC NO: UAU2010-0107 DRAWN BY: DRWINKFERGUSON CHKD BY: DHIR APPR: BMOSER 2009/08/19 2009/08/20	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE 2:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
		mm	INCH	DRAWN BY L. PULLIAM	DATE 2005/06/21	TITLE MX150 RECEPTACLE TERMINAL			
B1	REV	4 PLACES	± .005	± .005	CHECKED BY A. DHIR	DATE 2005/06/21	MOLEX MOLEX INCORPORATED		
		3 PLACES	± 0.10	± 0.10	APPROVED BY B. MOSER	DATE 2005/06/22			
		2 PLACES	± 0.3	± 0.3	MATERIAL NO. SEE TABLE		DOCUMENT NO. SD-33012-002	SHEET NO. 1 OF 5	
		1 PLACE	± 3°	± 3°	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				

TABLE 1 - TERMINAL CRIMP DIM. REFERENCE 9

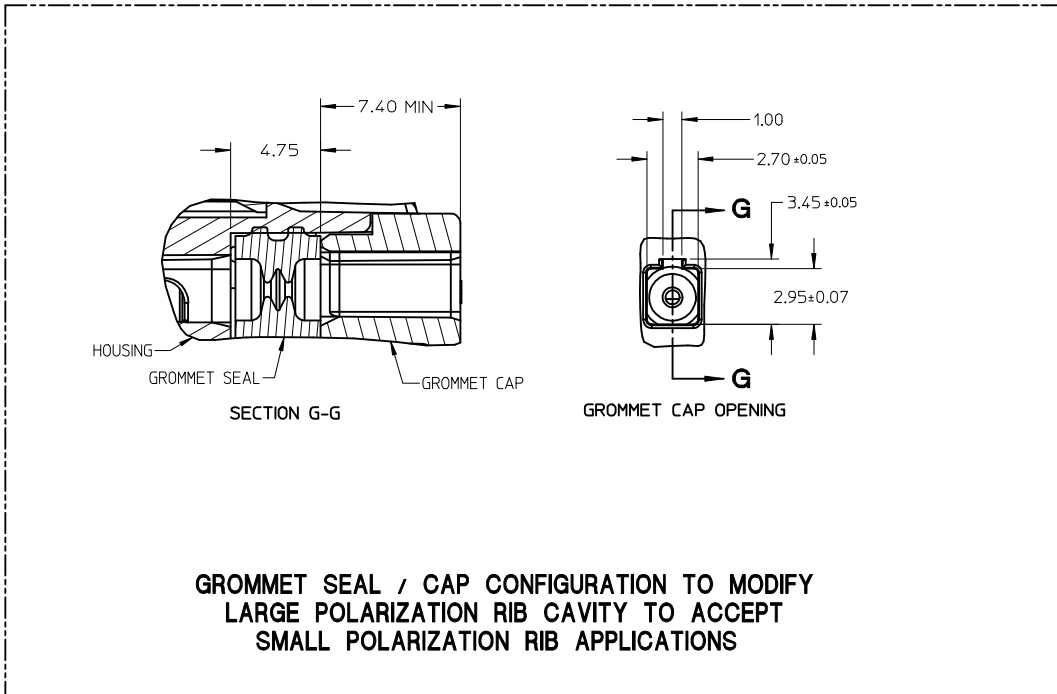
J	SMALL POLARIZATION RIB		PLATING	WIRE SIZE (awg)	WIRE SPECIFICATION	CONDUCTOR CH (SEC Z-Z) $\pm 0.05$ mm	CONDUCTOR CW (SEC Z-Z) $\pm 0.10$ mm	INSULATOR IH (SEC Y-Y) $\pm 0.10$ mm	INSULATOR IW (SEC Y-Y) $\pm 0.10$ mm	WIRE PULL FORCE (N)
	RIGHT PAYOFF	LEFT PAYOFF								
	RIGHT PAYOFF	LEFT PAYOFF								
33012-2001	33012-3001	7C3T-14474-EA	TIN	14	MIL-123A MIL-135A1	1.65 1.65	2.45 2.45	2.90 2.70	2.75 2.60	268 268
				16	MIL-123A	1.35	2.45	2.40	2.60	222
				18	MIL-123A	1.25	2.15	2.00	2.30	157
33012-2002	33012-3002	7C3T-14474-DA	TIN	18	SAE J1128 (IGXL) MIL-123A	1.25 1.15	2.15 2.15	2.40 1.90	2.60 2.10	158 128
				20	HIFLON WIRE <sup>1</sup> SAE J1128 (IGXL)	1.15 1.15	2.15 2.15	1.90 2.00	2.10 2.30	135 105
33012-2003	33012-3003	7C3T-14474-CA	TIN	22	MIL-123A	1.00	1.60	1.85	1.90	88
33012-2001	33012-3001	7C3T-14474-EA	TIN	2.00mm <sup>2</sup>	JASO D 611 (AVSSI)	1.60	2.45	2.90	2.75	231
				1.50mm <sup>2</sup>	MIL-126A1	1.40	2.45	2.60	2.60	257
				1.00mm <sup>2</sup>	MIL-126A1	1.30	2.15	2.00	2.30	211
33012-2002	33012-3002	7C3T-14474-DA	TIN	0.75mm <sup>2</sup>	MIL-126A1	1.25	2.15	1.95	2.10	142
				0.50mm <sup>2</sup>	MIL-126A1	1.10	1.60	1.80	1.90	111
33012-2003	33012-3003	7C3T-14474-CA	TIN	0.50mm <sup>2</sup>	JASO D 611 (AVSSI)	1.10	1.60	1.85	1.90	125
33012-2003*	33012-3003*	7C3T-14474-CA*	TIN	0.35mm <sup>2</sup>	WSK-1A348-A2	0.95	1.60	1.70	1.90	50
33001-2003	33001-3003	7C3T-14474-HA	GOLD	14	MIL-123A	1.65	2.45	2.90	2.75	268
				16	MIL-135A1	1.65	2.45	2.70	2.60	268
				18	MIL-123A	1.35	2.45	2.40	2.60	222
				20	MIL-123A	1.25	2.15	2.00	2.30	157
				20	SAE J1128 (IGXL)	1.25	2.15	2.40	2.60	158
				20	MIL-123A	1.15	2.15	1.90	2.10	128
				20	HIFLON WIRE <sup>1</sup>	1.15	2.15	1.90	2.10	135
				20	SAE J1128 (IGXL)	1.15	2.15	2.00	2.30	105
33001-2005	33001-3005	7C3T-14474-FA	GOLD	22	MIL-123A	1.00	1.60	1.85	1.90	88
33001-2003	33001-3003	7C3T-14474-HA	GOLD	2.00mm <sup>2</sup>	JASO D 611 (AVSSI)	1.60	2.45	2.90	2.75	231
				1.50mm <sup>2</sup>	MIL-126A1	1.40	2.45	2.60	2.60	257
				1.00mm <sup>2</sup>	MIL-126A1	1.30	2.15	2.00	2.30	211
33001-2004	33001-3004	7C3T-14474-GA	GOLD	0.75mm <sup>2</sup>	MIL-126A1	1.25	2.15	1.95	2.10	142
				0.50mm <sup>2</sup>	MIL-126A1	1.10	1.60	1.80	1.90	111
33001-2005	33001-3005	7C3T-14474-FA	GOLD	0.50mm <sup>2</sup>	JASO D 611 (AVSSI)	1.10	1.60	1.85	1.90	125
33001-2005*	33001-3005*	7C3T-14474-FA*	GOLD	0.35mm <sup>2</sup>	WSK-1A348-A2	0.95	1.60	1.70	1.90	50
33001-4001	33001-5001	7U5T-14474-UA	SILVER**	14	MIL-123A	1.65	2.45	2.90	2.75	268
				16	MIL-135A1	1.65	2.45	2.70	2.60	268
				16	MIL-123A	1.35	2.45	2.40	2.60	222
				18	MIL-123A	1.25	2.15	2.00	2.30	157
33001-4002	33001-5002	7U5T-14474-TA	SILVER**	18	SAE J1128 (IGXL)	1.25	2.15	2.40	2.60	158
				20	MIL-123A	1.15	2.15	1.90	2.10	128
				20	HIFLON WIRE <sup>1</sup>	1.15	2.15	1.90	2.10	135
				20	SAE J1128 (IGXL)	1.15	2.15	2.00	2.30	105
33001-4003	33001-5003	7U5T-14474-SA	SILVER**	22	MIL-123A	1.00	1.60	1.85	1.90	88
33001-4001	33001-5001	7U5T-14474-UA	SILVER**	2.00mm <sup>2</sup>	JASO D 611 (AVSSI)	1.60	2.45	2.90	2.75	231
				1.50mm <sup>2</sup>	MIL-126A1	1.40	2.45	2.60	2.60	257
				1.00mm <sup>2</sup>	MIL-126A1	1.30	2.15	2.00	2.30	211
33001-4002	33001-5002	7U5T-14474-TA	SILVER**	0.75mm <sup>2</sup>	MIL-126A1	1.25	2.15	1.95	2.10	142
33001-4003	33001-5003	7U5T-14474-SA	SILVER**	0.50mm <sup>2</sup>	MIL-126A1	1.10	1.60	1.80	1.90	111
33001-4003*	33001-5003*	7U5T-14474-SA*	SILVER**	0.35mm <sup>2</sup>	JASO D 611 (AVSSI)	1.10	1.60	1.85	1.90	125
				0.35mm <sup>2</sup>	WSK-1A348-A2	0.95	1.60	1.70	1.90	50

LARGE POLARIZATION RIB											
RIGHT PAYOFF	LEFT PAYOFF										
33001-4023	33001-5023	7U5T-14474-NA	SILVER**	0.50mm <sup>2</sup>	MIL-126A1	JASO D 611 (AVSSI)	1.10	1.60	1.80	1.90	111
33001-4023*	33001-5023*	7U5T-14474-NA*	SILVER**	0.35mm <sup>2</sup>	WSK-1A348-A2	0.95	1.60	1.70	1.90	125	50

<sup>1</sup>HIFLON WIRE:  
CORE WIRE: STAINLESS STEEL, SUS #0.14, 7 STRANDS  
SURROUNDING WIRE: NICKEL (NI) PLATED COPPER (CU) #0.14, 30 STRANDS  
INSULATOR: PTFE

\* 0.35mm<sup>2</sup> WIRE MUST NOT BE USED IN MX150 SEALED CONNECTOR SYSTEMS

\*\* SILVER PLATED TERMINALS NOT TO BE USED IN CONNECTOR SYSTEMS WITH CIRCUIT COUNTS HIGHER THAN 8 DUE TO HIGHER CONNECTOR MATE/UNMATE FORCE



**GROMMET SEAL / CAP CONFIGURATION TO MODIFY  
LARGE POLARIZATION RIB CAVITY TO ACCEPT  
SMALL POLARIZATION RIB APPLICATIONS**

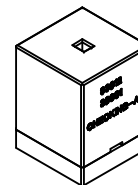
ENTER DESCRIPTION  
EC NO: UAU2010-0107  
DRINKWATERGUSON 2009/08/18  
CHKD-A:DHIR 2009/08/19  
APPR:BMOSER 2009/08/20

QUALITY SYMBOLS	DESCRIPTION
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▽=0	

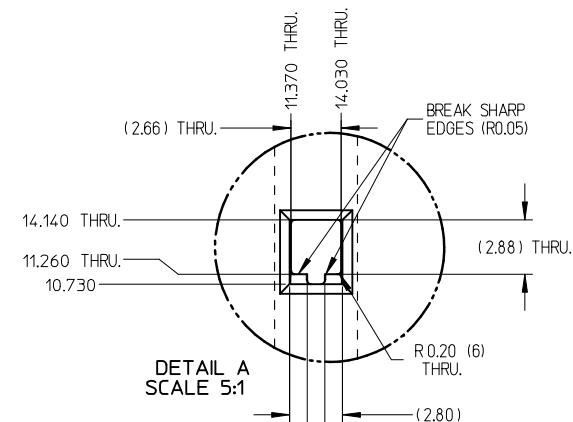
GENERAL TOLERANCES (UNLESS SPECIFIED)	
mm	INCH
4 PLACES ± ---	± ---
3 PLACES ± 0.005	± ---
2 PLACES ± 0.10	± ---
1 PLACE ± 0.3	± ---
ANGULAR ± 3°	

DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
MM ONLY			METRIC	
DRAWN BY	DATE	TITLE		
L. PULLIAM	2005/06/21	MX150 RECEPTACLE TERMINAL		
CHECKED BY	DATE			
A. DHIR	2005/06/21			
APPROVED BY	DATE			
B. MOSER	2005/06/22			
MATERIAL NO.	DOCUMENT NO.	SHEET NO.		
SEE TABLE	SD-33012-002	2 OF 5		
SIZE	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION			

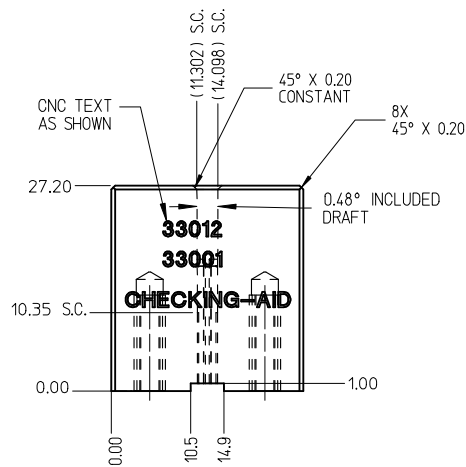
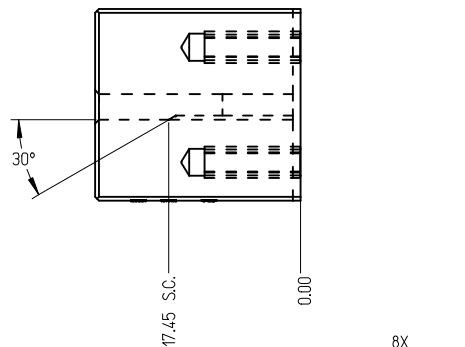
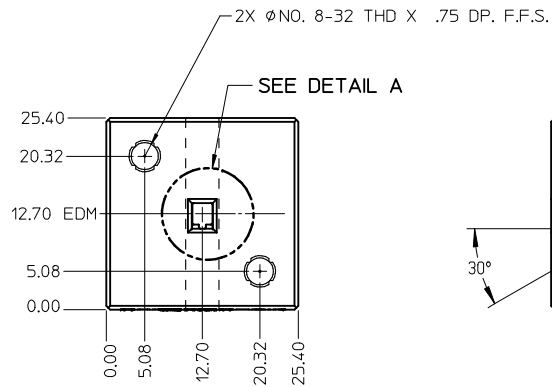
THIS CHECKING - AID IS FOR SMALL POLARIZATION RIB TERMINALS ONLY



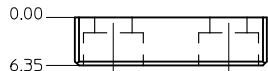
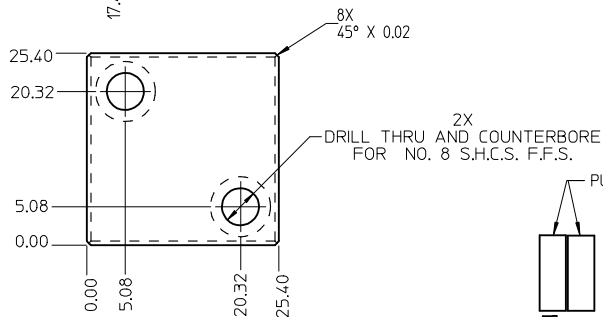
CHECKING - AID ASSEMBLY  
SCALE 1:1



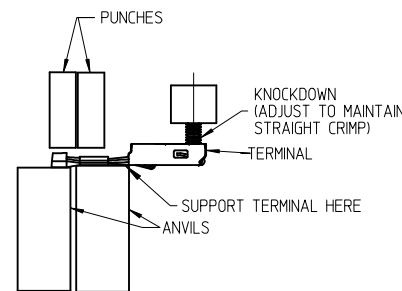
DETAIL A  
SCALE 5:1



CHECKING - AID  
UPPER



CHECKING - AID  
LOWER



CRIMP REQUIREMENTS:

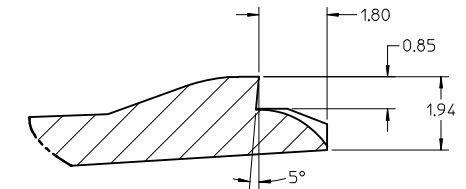
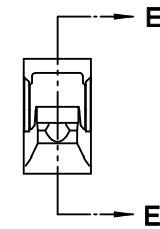
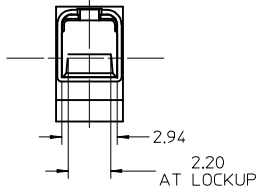
1. CRIMP STRAIGHTNESS MUST BE MAINTAINED  
USE A KNOCKDOWN TOOL LOCATED AS SHOWN  
TERMINAL BOX MUST NOT BE DEFORMED
2. AFTER CRIMPING, THE CRIMPED TERMINAL (AND UP TO 5 mm OF WIRE PAST THE INSULATOR CUTOFF TAB) MUST FIT FREELY INTO THE CHECKING-AID SHOWN ON THIS PAGE
3. FOR OTHER MECHANICAL REQUIREMENTS ON CRIMPED TERMINALS, REFER TO SAE/USCAR-21 (5-13-02) SECTIONS 4.2 (VISUAL INSPECTION), 4.2 (CROSS SECTION ANALYSIS) AND 4.4 (CONDUCTOR CRIMP PULLOUT FORCE)

UPPER & LOWER  
CHECKING-AID  
A2 TOOL STEEL  
HARDEN & GRIND  
ROCKWELL "C" 56-58

<b>ENTER DESCRIPTION</b> EC NO: UAU2010-0107 DRINKFERGUSON 2009/08/18 CHKDA:DHIR 2009/08/19 APPR:BMOSER 2009/08/20	<b>QUALITY SYMBOLS</b> ▽=0 ▽=0	<b>GENERAL TOLERANCES (UNLESS SPECIFIED)</b>		<b>DIMENSION STYLE</b> MM ONLY	<b>SCALE</b> 2:1	<b>DESIGN UNITS</b> METRIC	THIRD ANGLE PROJECTION
		4 PLACES ± mm 3 PLACES ± 0.005 2 PLACES ± 0.10 1 PLACE ± 0.3	INCH ± --- ± --- ± --- ± ---	DRAWN BY L. PULLIAM	DATE 2005/06/21	CHECKED BY A. DHIR	DATE 2005/06/21
<b>REV</b> B1	<b>DESCRIPTION</b>	ANGULAR ± 3 °		MATERIAL NO. SEE TABLE	DOCUMENT NO. SD-33012-002	MOLEX INCORPORATED	
				SIZE C	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		SHEET NO. 3 OF 5



- NOTES: UNLESS OTHERWISE SPECIFIED
1. TOLERANCES: LINEAR  $\pm 0.10$   
ANGULAR  $\pm 3^\circ$
  2. ALL DRAFT WITHIN TOLERANCE.
  3. MAX RADII ON ALL CORNERS SHOWN SHARP: 0.10
  4. MAX FLASH PERMISSIBLE: 0.1
  5. EJECTOR PIN MARKS PERMISSIBLE IF FLUSH TO 0.25 BELOW SURFACE.
  6. MATERIAL: HOUSING/FINGER SPECIFICATION ENGINEERED FOR MATERIAL WITH THE FOLLOWING PROPERTIES:  
A. FLEXURAL MODULUS = 4,500 TO 9,400 MPa  
PER ASTM TEST D790  
B. ELONGATION AT YIELD = 2.3% OR BETTER  
PER ASTM TEST D638 TYPE V
  7. CAVITY SPEC FOR USE ONLY WITH MOLEX RECEPTACLE  
TERMINAL PART NUMBERS SPECIFIED ELSEWHERE ON THIS  
DRAWING

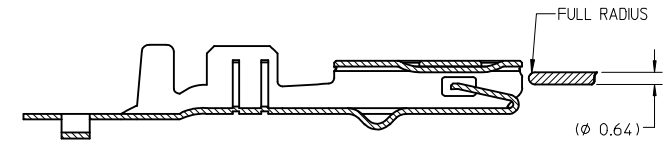
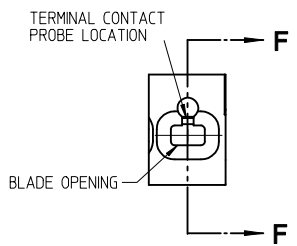


DETAIL Z  
SCALE 20:1



SECTION F-F

RECEPTACLE CAVITY ASSEMBLED VIEWS  
FOR SMALL POLARIZATION RIB APPLICATIONS  
FIG. 1



SECTION D-D  
FOR LARGE POLARIZATION RIB APPLICATIONS  
FIG. 2

PROBING DOWN THE  
THROAT MUST USE  
THIS TERMINAL PROBE

PROBE PIN DETAILS:  
MANUFACTURER: LONE STAR INDUSTRIAL  
PART NUMBER: LS054R-403-N-4.6  
PIN DIAMETER: 0.025 IN (0.64mm)  
TIP SHAPE: SPHERICAL  
TEL: 915-779-7255

PREFERRED PROBING LOCATION  
IS NOT ON SPRING MEMBER

IF ELECTRICAL CONTINUITY PROBE  
TOUCHES SPRING MEMBER USE  
PROBING AS SHOWN IN FIG. 2

REV	DESCRIPTION	DATE	BY	CHKD	APPD
B1	ENTER DESCRIPTION	2009/08/18	L. PULLIAM	A. DHIR	B. MOSER
	EC NO: UAU2010-0107	2009/08/19			
	DRWN: KFERGUSON	2009/08/19			
	CHKD: A. DHIR	2009/08/20			
	APPD: B. MOSER	2009/08/20			

QUALITY SYMBOLS
▽=0
▽=0

GENERAL TOLERANCES (UNLESS SPECIFIED)	
mm	INCH
4 PLACES ± 0.10	± 0.004
3 PLACES ± 0.005	± 0.0002
2 PLACES ± 0.10	± 0.004
1 PLACE ± 0.3	± 0.012
ANGULAR ± 3°	

DIMENSION STYLE	
MM ONLY	
DRAWN BY	DATE
L. PULLIAM	2005/06/21
CHECKED BY	DATE
A. DHIR	2005/06/21
APPROVED BY	DATE
B. MOSER	2005/06/22
MATERIAL NO.	
SEE TABLE	
SIZE	
C	

SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
5:1	METRIC	☉
MX150 RECEPTACLE TERMINAL		
MOLEX INCORPORATED		
DOCUMENT NO.	SHEET NO.	
SD-33012-002	4 OF 5	

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