

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

**Part Number:** [0330001002](#)  
**Status:** **Active**  
**Overview:** [mx150 sealed connector system](#)  
**Description:** MX150™ Male Terminal, Tin (Sn) Plating, 16-20 AWG, Left Reel Payoff, Contact Material Thickness 0.30mm (.012")

**Documents:**

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

**General**

Product Family	Crimp Terminals
Series	<a href="#">33000</a>
Comments	Left Reel Payoff
Crimp Quality Equipment	Yes
Overview	<a href="#">mx150 sealed connector system</a>
Product Name	MX150™

**Physical**

Gender	Male
Material - Metal	High Performance Alloy (HPA)
Material - Plating Mating	Tin
Material - Plating Termination	Tin
Packaging Type	Reel
Plating min: Mating (µin)	20
Plating min: Mating (µm)	0.5
Plating min: Termination (µin)	20
Plating min: Termination (µm)	0.5
Termination Interface: Style	Crimp or Compression
Wire Insulation Diameter	2.60mm (.102") max.
Wire Size AWG	16, 18, 20
Wire Size mm²	0.75, 1.00

**Electrical**

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

**Material Info**

**Reference - Drawing Numbers**

Sales Drawing	SD-33000-001
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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**

[33000Series](#)

**Use With**

[33482](#) Dual Row Housing, [33481](#) Single Row Housing, [33486](#) Hybrid 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.*

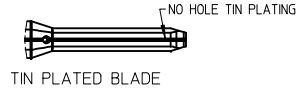
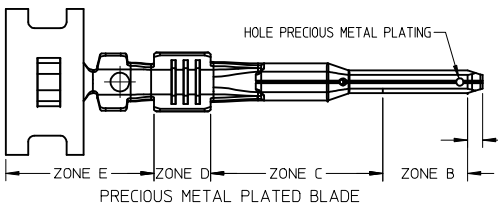
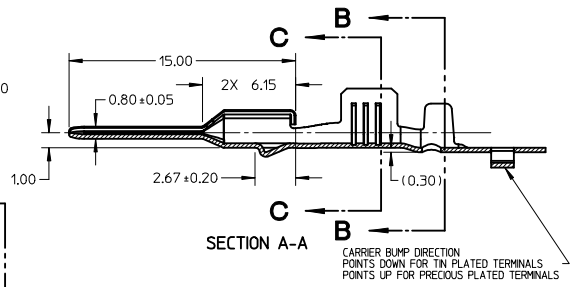
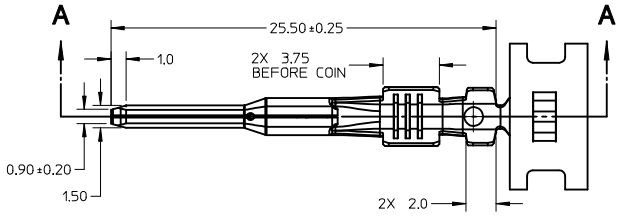
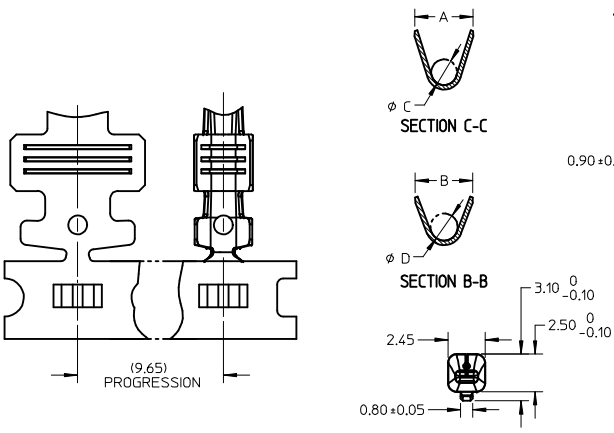
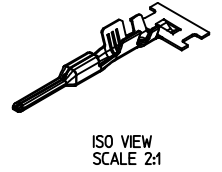
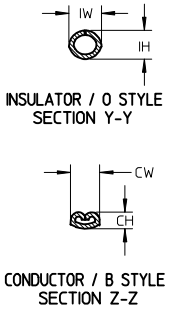
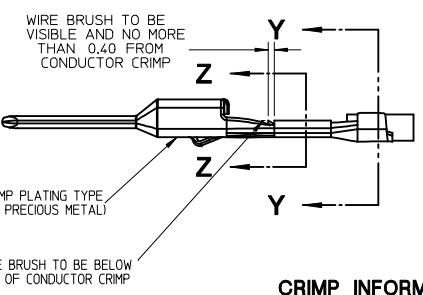
**Global**

Description	Product #
FineAdjust™ Applicator for MX150™ Terminals - 16 AWG	<a href="#">0639000300</a>
FineAdjust™ Applicator for MX150™ Terminals - 18 AWG	<a href="#">0639000400</a>

FineAdjust™	<u>0639000500</u>
Applicator for MX150™ Terminals - 20 AWG	
Hand Crimp Tool, 14-16AWG	<u>0638112400</u>
Hand Crimp Tool, 18-22AWG	<u>0638112600</u>
FineAdjust™	<u>0638653100</u>
Applicator, 16AWG	
FineAdjust™	<u>0638653200</u>
Applicator, 18AWG	

This document was generated on 05/27/2010

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PLATING NOTES:

1. PRECIOUS METAL PLATED TERMINAL:

1.1 GOLD PLATING:

ZONE A: SHALL BE COMPLETELY COVERED WITH NICKEL TO PREVENT EXPOSED BASE METAL REDUCED GOLD THICKNESS FROM ZONE B PERMITTED

ZONE B: PRECIOUS METAL PLATING PER MOLEX PLATING SPECIFICATION ES-88

BASE LAYER: ELECTRODEPOSITED DUCTILE SULFAMATE NICKEL THICKNESS: 1.25 - 2.25 MICROMETERS

GOLD LAYER: ELECTRODEPOSITED GOLD THICKNESS: 0.76 MICROMETERS MINIMUM

ZONE C: SHALL BE COMPLETELY COVERED WITH NICKEL TO PREVENT EXPOSED BASE METAL REDUCED PLATING THICKNESS FROM ZONE B AND ZONE D PERMITTED

ZONE D: TIN PLATING PER MOLEX PLATING SPECIFICATION ES-88

BASE LAYER: ELECTRODEPOSITED DUCTILE SULFAMATE NICKEL THICKNESS: 1.25 - 2.25 MICROMETERS

TIN LAYER: ELECTRODEPOSITED 100% TIN, MATTE FINISH THICKNESS: 2.5 - 4.0 MICROMETERS

ZONE E: SHALL BE COMPLETELY COVERED WITH NICKEL TO PREVENT EXPOSED BASE METAL REDUCED THICKNESS FROM ZONE D PERMITTED

1.2 SILVER PLATING:

ZONE A: SHALL BE COMPLETELY COVERED WITH NICKEL TO PREVENT EXPOSED BASE METAL REDUCED SILVER THICKNESS FROM ZONE B PERMITTED

ZONE B: SILVER PLATING

BASE LAYER: ELECTRODEPOSITED DUCTILE SULFAMATE NICKEL THICKNESS: 1.25 - 2.25 MICROMETERS

SILVER LAYER: ELECTRODEPOSITED PURE SILVER (0.5% MAX IMPURITIES) THICKNESS: 1.9 - 3.3 MICROMETERS FINISH: SEMI BRIGHT

ANTI-TARNISH: TREATMENT FOR SILVER PLATED TERMINAL - EVABRITE WS

ZONE C: SHALL BE COMPLETELY COVERED WITH NICKEL TO PREVENT EXPOSED BASE METAL REDUCED PLATING THICKNESS FROM ZONE B AND ZONE D PERMITTED

ZONE D: TIN PLATING PER MOLEX PLATING SPECIFICATION ES-88

BASE LAYER: ELECTRODEPOSITED DUCTILE SULFAMATE NICKEL THICKNESS 1.25 - 2.25 MICROMETERS

TIN LAYER: ELECTRODEPOSITED 100% TIN, MATTE FINISH THICKNESS 2.5 - 4.0 MICROMETERS

ZONE E: SHALL BE COMPLETELY COVERED WITH NICKEL TO PREVENT EXPOSED BASE METAL REDUCED THICKNESS FROM ZONE D PERMITTED

2. TIN PLATED TERMINAL (ENTIRE TERMINAL)

BASE LAYER: ELECTRODEPOSITED ADVANCED TIN BARRIER THICKNESS 0.25 - 1.00 MICROMETERS

TIN LAYER: ELECTRODEPOSITED REFLOW TIN, 100% TIN, NO BRIGHTENERS THICKNESS 0.50 - 1.00 MICROMETERS

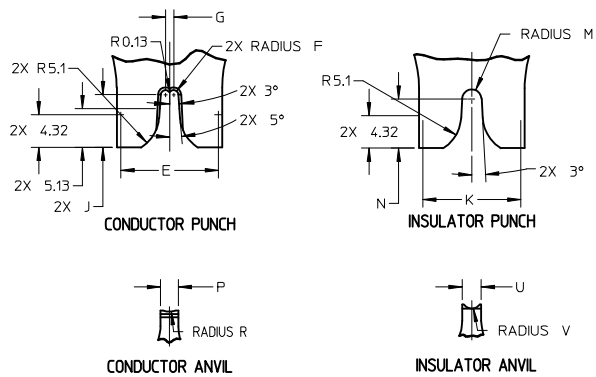
GENERAL NOTES: (UNLESS OTHERWISE SPECIFIED)

- MATING TERMINAL SHOWN ON SD-33012-002
- MATERIAL: ASTM B422, UNS C19025, HR04 THICKNESS: 0.30 mm +0.01 TEMPER: FULL HARD (REF) TENSILE: 496-572 MPA PLATING: SEE PLATING NOTES
- MEETS CRIMP PERFORMANCE SPECIFICATION SAE/USCAR-21 (RELEASED: 08/25/01)
- MEETS PERFORMANCE STANDARD FOR AUTOMOTIVE ELECTRICAL CONNECTOR SYSTEMS SAE/USCAR-2 REV 3 (APRIL 2001)
- MEETS FIELD CORRELATED LIFE TEST SAE/USCAR-20 (NOVEMBER 2001)
- MEETS WIRING COMPONENT DESIGN GUIDELINES SAE/USCAR-12 REV 2 (DECEMBER 2001)
- MEETS ELECTRICAL CONNECTION SYSTEM DESIGN SPECIFICATION (SDS) REV 11 (5/2002)
- REFERENCE PK-31300-516 FOR REEL DIRECTION
- REFERENCE CS-33000-001 FOR ADDITIONAL CRIMP INFORMATION

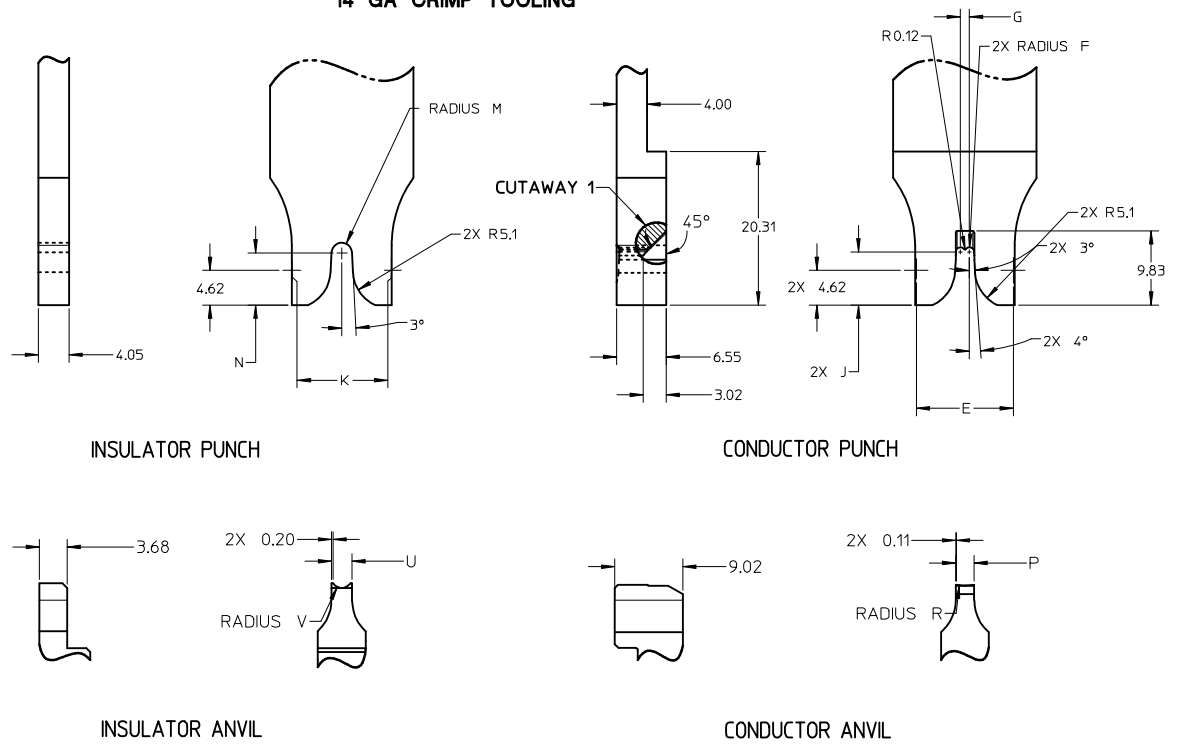
ENTER DESCRIPTION EC NO: UAU2010-0107 DRAWN BY: DRINKFERGUSON 2009/08/18 CHKD BY: A.DHIR 2009/08/19 APPR: BMOSER 2009/08/20	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE 4:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
		mm	INCH	DRAWN BY L.PULLIAM	DATE 2006/01/31	TITLE MX150 15MM BLADE TERMINAL				
REV C10	DESCRIPTION	4 PLACES ± ---	± ---	CHECKED BY A.DHIR	DATE 2006/02/01	MOLEX MOLEX INCORPORATED DOCUMENT NO. SD-33000-001				
		3 PLACES ± ---	± ---	APPROVED BY B.MOSER	DATE 2006/02/02					
		2 PLACES ± 0.1	± ---	MATERIAL NO. SEE TABLE		SHEET NO. 1 OF 5		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		
		1 PLACE ± 0.3	± ---	ANGULAR ± 3 °						



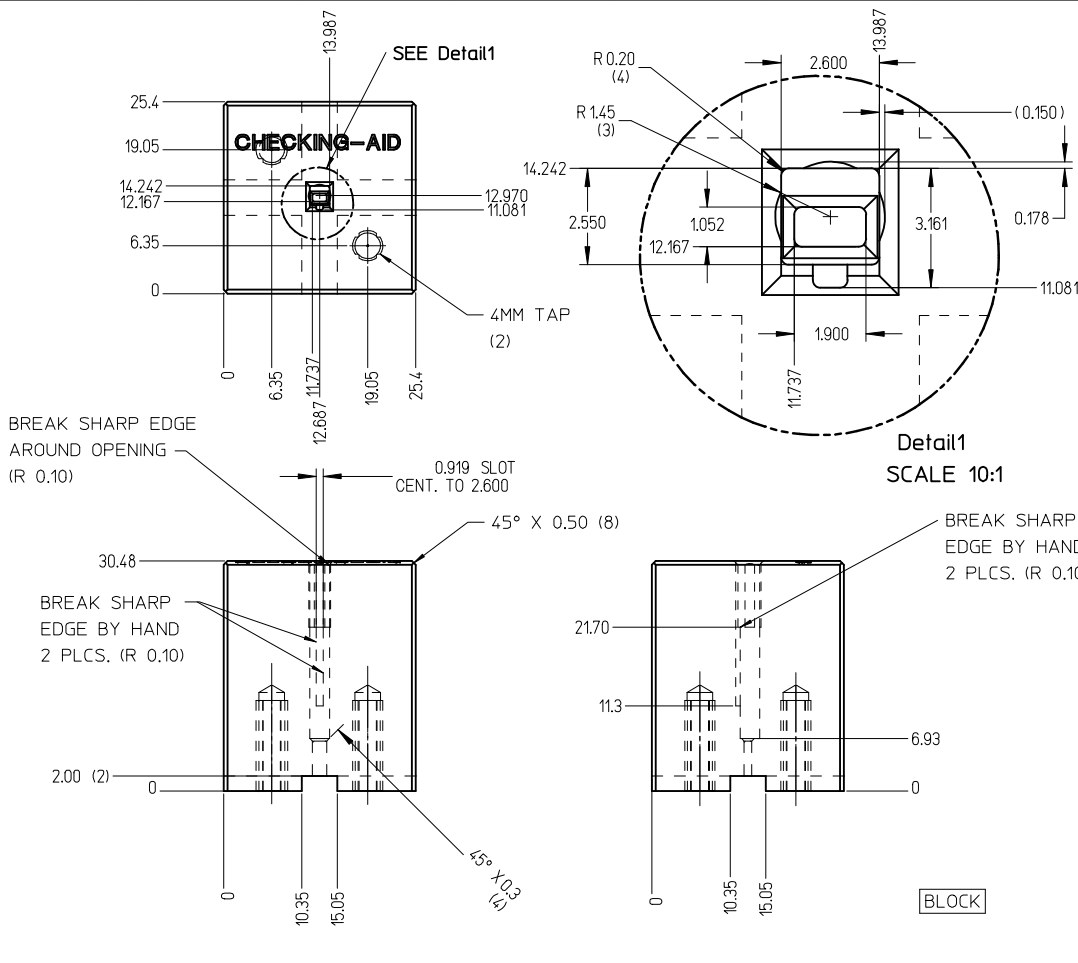
**CRIMP TOOL INFORMATION  
EXCEPT 14 GA**



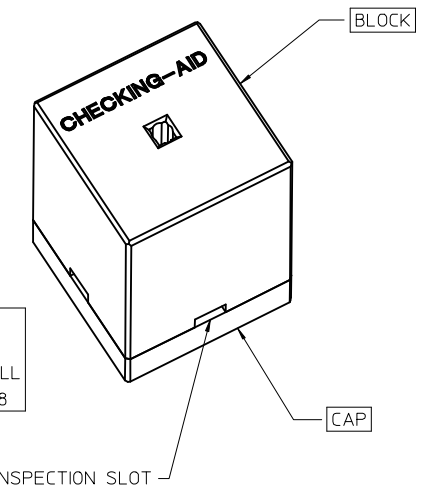
**14 GA CRIMP TOOLING**



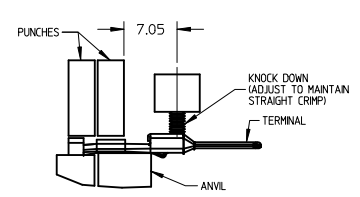
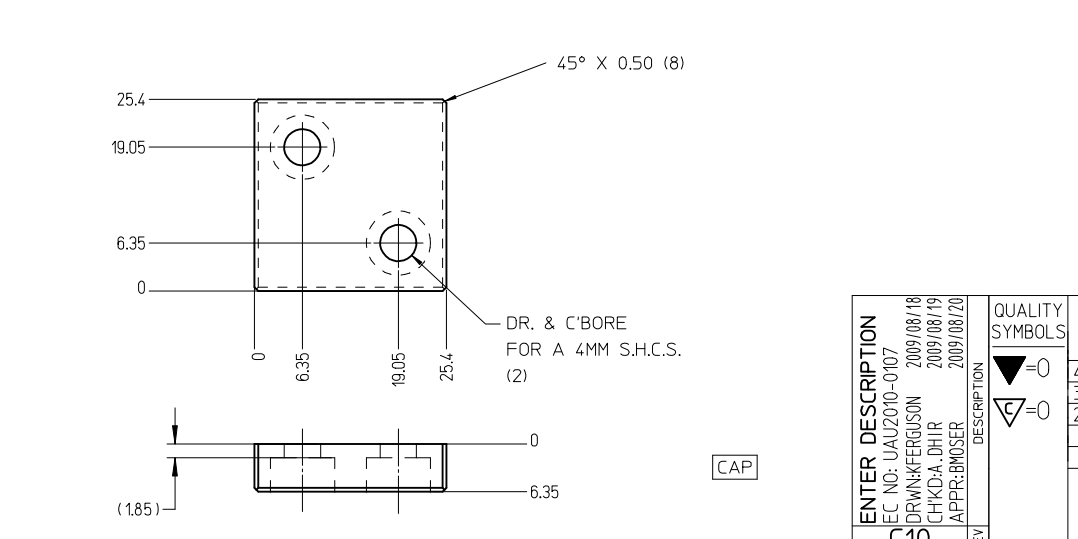
<b>ENTER DESCRIPTION</b> EC NO: UAU2010-0107 DRWNG:FERGUSON 2009/08/18 CHKD:A.DHIR 2009/08/19 APPR:BMOSER 2009/08/20 REV	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED) <table border="1"> <tr> <th></th> <th>mm</th> <th>INCH</th> </tr> <tr> <td>4 PLACES</td> <td>± .005</td> <td>± .0004</td> </tr> <tr> <td>3 PLACES</td> <td>± .008</td> <td>± .0003</td> </tr> <tr> <td>2 PLACES</td> <td>± 0.1</td> <td>± .004</td> </tr> <tr> <td>1 PLACE</td> <td>± 0.3</td> <td>± .012</td> </tr> </table>		mm	INCH	4 PLACES	± .005	± .0004	3 PLACES	± .008	± .0003	2 PLACES	± 0.1	± .004	1 PLACE	± 0.3	± .012	DIMENSION STYLE <b>MM ONLY</b> DRAWN BY DATE L.PULLIAM 2006/01/31 CHECKED BY DATE A.DHIR 2006/02/01 APPROVED BY DATE B.MOSER 2006/02/02	SCALE <b>2:1</b> DESIGN UNITS <b>METRIC</b> THIRD ANGLE PROJECTION	TITLE <b>MX150 15MM BLADE TERMINAL</b>	MATERIAL NO. <b>SEE TABLE</b>	DOCUMENT NO. <b>SD-33000-001</b>	SHEET NO. <b>3 OF 5</b>
		mm	INCH																				
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C10		ANGULAR ± 3°																					



CHECKING-AID  
 2 PIECE ASM. A2 TOOL STEEL  
 HARDEN & GRIND TO A ROCKWELL  
 HARDNESS "C" SCALE OF 56-58

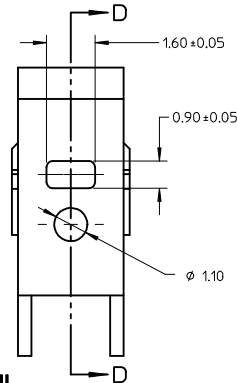
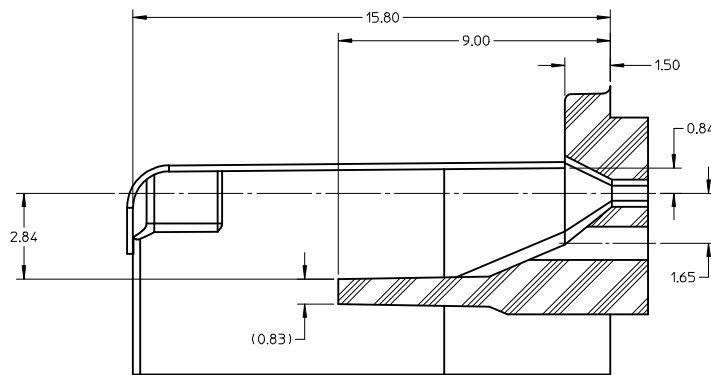
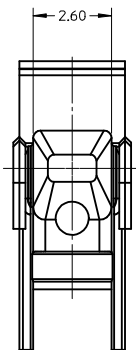


CHECKING AID TOLERANCE	
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.XX	= .03
.X	= .3

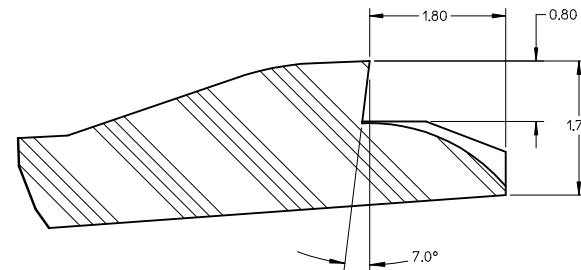
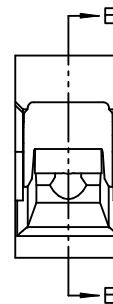
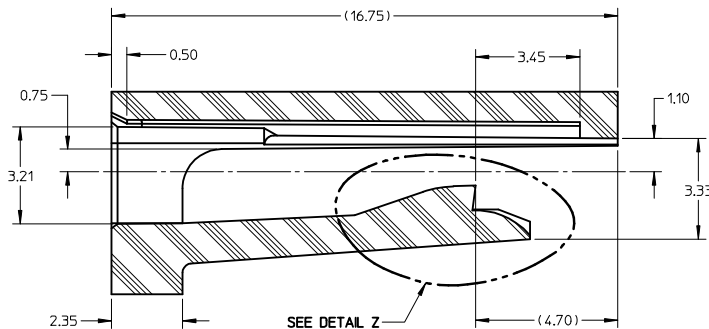
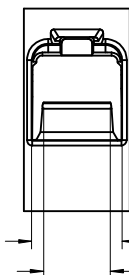


- CRIMP REQUIREMENTS:
1. CRIMP STRAIGHTNESS MUST BE MAINTAINED. USE A KNOCKDOWN TOOL LOCATED AS SHOWN. TERMINAL BOX MUST NOT BE DEFORMED
  2. AFTER CRIMPING, THE TERMINAL AND WIRE MUST FIT FREELY INTO THE CHECKING AID 33000-700. PROPER INSERTION DEPTH IS MET WHEN BLADE TIP STOPS ON CAP. SLOTS PROVIDED TO VISUALLY INSPECT STOPPAGE OF PIN TIP.
  3. FOR OTHER MECHANICAL REQUIREMENTS ON CRIMPED TERMINALS, REFER TO SAE/USCAR-21 (5-13-02) SECTIONS 4.2 (VISUAL INSPECTION), 4.3 (CROSS SECTION ANALYSIS) AND 4.4 (CONDUCTOR CRIMP PULLOUT FORCE)

<b>ENTER DESCRIPTION</b> EC NO: UAU2010-0107 DRWNG:FERGUSON 2009/08/18 CHKD:A.DHIR 2009/08/19 APPR:BMOSER 2009/08/20 REV:	<b>QUALITY SYMBOLS</b> ▽=0 ▽=0	<b>GENERAL TOLERANCES (UNLESS SPECIFIED)</b> <table border="1"> <tr><th></th><th>mm</th><th>INCH</th></tr> <tr><td>4 PLACES</td><td>± .005</td><td>± .0001</td></tr> <tr><td>3 PLACES</td><td>± .003</td><td>± .0001</td></tr> <tr><td>2 PLACES</td><td>± 0.1</td><td>± .004</td></tr> <tr><td>1 PLACE</td><td>± 0.3</td><td>± .012</td></tr> </table>		mm	INCH	4 PLACES	± .005	± .0001	3 PLACES	± .003	± .0001	2 PLACES	± 0.1	± .004	1 PLACE	± 0.3	± .012	<b>DIMENSION STYLE</b> MM ONLY	<b>SCALE</b> 2:1	<b>DESIGN UNITS</b> METRIC	THIRD ANGLE PROJECTION
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<b>DESCRIPTION</b> C10	<b>ANGULAR</b> ± 3°	<b>DRAWN BY</b> L.PULLIAM 2006/01/31	<b>DATE</b> 2006/01/31	<b>CHECKED BY</b> A.DHIR 2006/02/01	<b>DATE</b> 2006/02/01	<b>MOLEX INCORPORATED</b> MX150 15MM BLADE TERMINAL															
<b>MATERIAL NO.</b> SEE TABLE	<b>DOCUMENT NO.</b> SD-33000-001	<b>APPROVED BY</b> B.MOSER 2006/02/02	<b>DATE</b> 2006/02/02	<b>MOLEX INCORPORATED</b>	<b>MOLEX INCORPORATED</b>	<b>SHEET NO.</b> 4 OF 5															
<b>SIZE</b> C	<b>THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION</b>																				

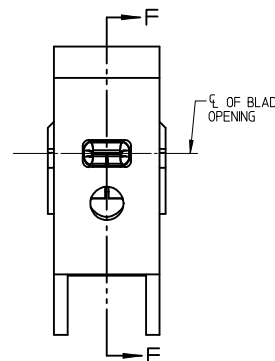
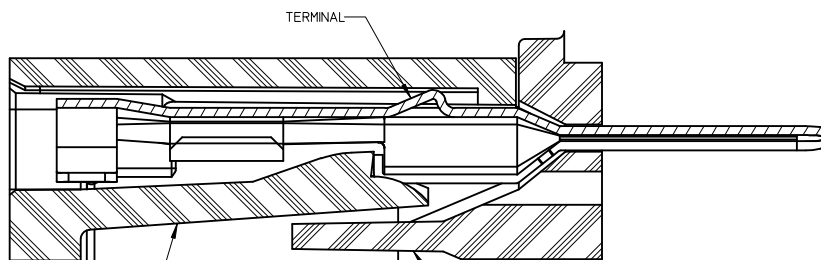
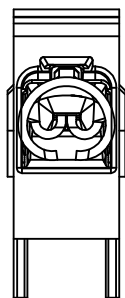


SECTION D-D TPA/INSERT DETAIL



DETAIL Z SCALE 20:1

SECTION E-E HOUSING DETAIL



BLADE TERMINAL HOUSING CAVITY SECTION F-F TPA/INSERT CAVITY

BLADE CAVITY ASSEMBLY VIEWS

NOTES: (UNLESS OTHERWISE SPECIFIED)

1. TOLERANCES: LINEAR  $\pm 0.10$   
ANGULAR  $3^\circ$
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 BLADE TERMINAL PART NUMBERS (EXCEPT P/N'S FOR UNSEALED APPLICATIONS) SPECIFIED ELSEWHERE ON THIS DRAWING

<b>ENTER DESCRIPTION</b> EC NO: UAU2010-0107 DRAWN BY: DRINKFERGUSON 2009/08/18 CHKD BY: A.DHIR 2009/08/19 APPR: B.MOSER 2009/08/20 REV: C10	<b>QUALITY SYMBOLS</b>  	<b>GENERAL TOLERANCES (UNLESS SPECIFIED)</b>		<b>DIMENSION STYLE</b> MM ONLY	<b>SCALE</b> 8:1	<b>DESIGN UNITS</b> METRIC	THIRD ANGLE PROJECTION
		4 PLACES $\pm 0.1$ 3 PLACES $\pm 0.15$ 2 PLACES $\pm 0.2$ 1 PLACE $\pm 0.3$	mm INCH	DRAWN BY: L.PULLIAM DATE: 2006/01/31 CHECKED BY: A.DHIR DATE: 2006/02/01 APPROVED BY: B.MOSER DATE: 2006/02/02	<b>TITLE</b> MX150 15MM BLADE TERMINAL		
		ANGULAR $\pm 3^\circ$		<b>MATERIAL NO.</b> SEE TABLE	<b>DOCUMENT NO.</b> SD-33000-001	<b>SHEET NO.</b> 5 OF 5	
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