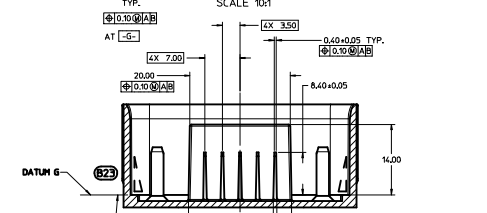
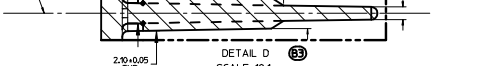
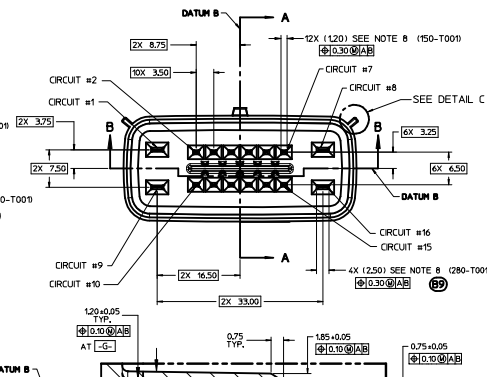
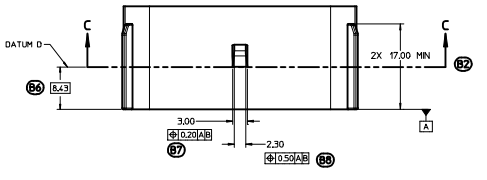
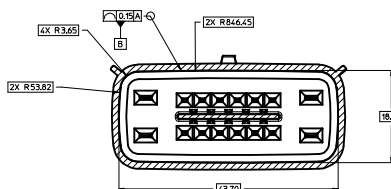


SCALE 5:1



999-S-016-2-H01	H	YELLOW
999-S-016-2-G01	G	YELLOW
999-S-016-2-F01	F	YELLOW
999-S-016-2-E01	E	YELLOW
999-S-016-2-D01	D	BLACK
999-S-016-2-C01	C	DARK GRAY
999-S-016-2-B01	B	GREY
999-S-016-2-A01	A	BLACK
EWCAP PIN	OPTION	MATING CONNECTOR COLOR



- NOTES: UNLESS OTHERWISE SPECIFIED
- DRAFT ANGLE PERMISSIBLE 0.25° MAXIMUM.
  - ALL DIMENSIONS SHOWN IN MILLIMETERS.
  - DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994
  - RADI ON ALL CORNERS SHOWN SHARP OR ALL UNSPECIFIED RADI 0.25 EXCEPT AS NOTED.
  - STANDARD COLORS FOR POLARIZATION (SEE CHART). DEVIATION REQUIRES APPROVAL OF AUTHORIZED PERSON.
  - A FULL SHROUD ON THE MATING CONNECTOR IS REQUIRED TO INSURE THAT THE CONNECTOR-HEADER POLARIZATION FEATURES (OPTIONS A THRU H) WILL FUNCTION. THE SHROUD ALSO PREVENTS SCOOP DAMAGE TO THE HEADER PINS. REFER TO SAE/J593-12 CONNECTOR DESIGN GUIDE LINES FOR ADDITIONAL INFORMATION.
  - REFER TO USCAR/EWCAP PART LIST AS FOUND ON WEBSITE <http://www.uscarteams.org>

8 FOR BLADE TERMINAL DESIGN INFORMATION SEE EWCAP DWG. # EWCAP-001

9 THIS IS A 100% CAD GENERATED PART. THE CAD MATHEMATICAL DATA IS THE MASTER FOR THIS PART. FOR DIMENSIONAL OR ANY INFORMATION NOT SHOWN ON THIS DRAWING, ANALYZE THE CAD MODEL.

CONSTRUCTION BELOW THIS SURFACE IS NOT CONTROLLED BY EWCAP. NO PLASTIC FEATURES MAY EXTEND ABOVE THIS SURFACE

IF HEADER IS RECESSED INTO POCKET, THESE DIMENSIONS REPRESENT THE MINIMUM CLEARANCE REQUIRED FOR THE MATING SHROUD.

088	B23	ADDED DRAFT DIRECTION SYMBOL	3-25-11
088	B22	ADDED REF DIMENSION FOR LATCH HEIGHT	3-11-11
088	B21	REMOVED THE WORD "OPTION" AT VIEW OF BACK ANGLE	3-11-11
088	B20	CHANGED FROM 175 TO 180	3-11-11
088	B19	ADDED 4X (0.805) AT BASE AND (0.360) AT TIP FOR 2.8 BLADE TERMINALS	1-14-11
088	B18	CHANGED 6X TO 12X FOR THE 15 BLADE TERMINALS	1-14-11
088	B17	UPDATED CONNECTOR COLORS	1-14-11
088	B16	ADDED -G-	5-04-10
088	B15	REMOVED 0.10 ±0.05	5-04-10
088	B14	REMOVED SHORTING BAR NOTE	5-04-10
088	B13	UPDATED NOTE 8 REMOVED REV F	5-04-10
088	B12	ADDED NOTE 9	5-04-10
088	B11	ADDED DIM 1.35±0.10/-0.20 MEASURED AT 2.9 FROM [-A-] ALL AROUND	5-11-10
088	B10	ADDED SEE NOTE 8	5-04-10
088	B9	2.50 WAS 2.80. ADDED (280-T001)	5-11-10
088	B8	ADDED 0.50 ±0.05	5-04-10
088	B7	ADDED 0.20 ±0.05	5-04-10
088	B6	ADDED DIM 8.43	5-04-10
088	B5	ADDED SEC C-C	5-04-10
088	B4	UPDATED SEC B-B	5-04-10
088	B3	ADDED DETAIL D	5-04-10
088	B2	ADDED SEC C-C	5-04-10
088	B1	ADDED DIM 0.70±0.15 ALL AROUND	5-04-10
088	B	RELEASED	5-04-10

LET	REVISION RECORD	DATE	DWN	CHK
TOLERANCES UNLESS OTHERWISE SPECIFIED		DIMENSIONS ARE IN		MILLIMETERS
ANGLES		±3°		
X ±0.2		XX ±0.10		

**EWCAP**

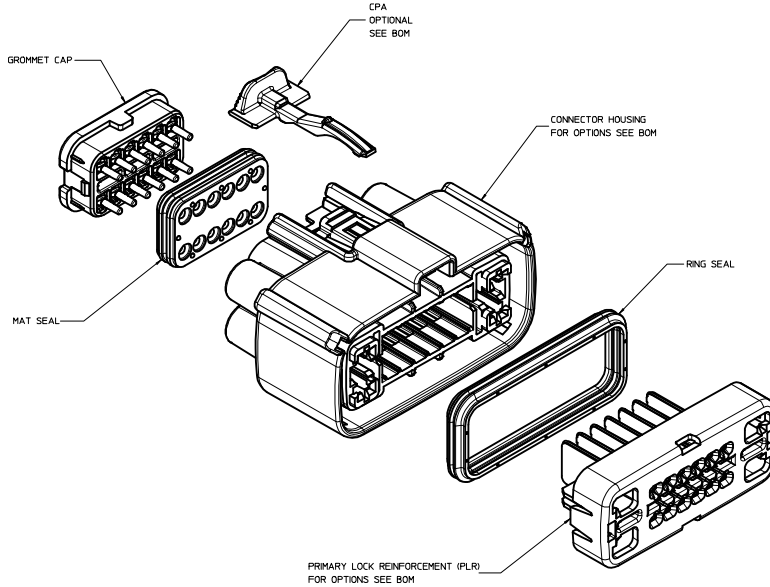
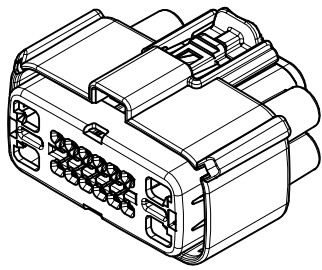
SCALE 3:1 DRAWN BY K. CUNNINGHAM CHECKED BY V. KOSHY DATE 1-14-11

TITLE DIRECT CONNECT INTERFACE 16 WAY (2 X 8) 1.5 MM SEALED MALE

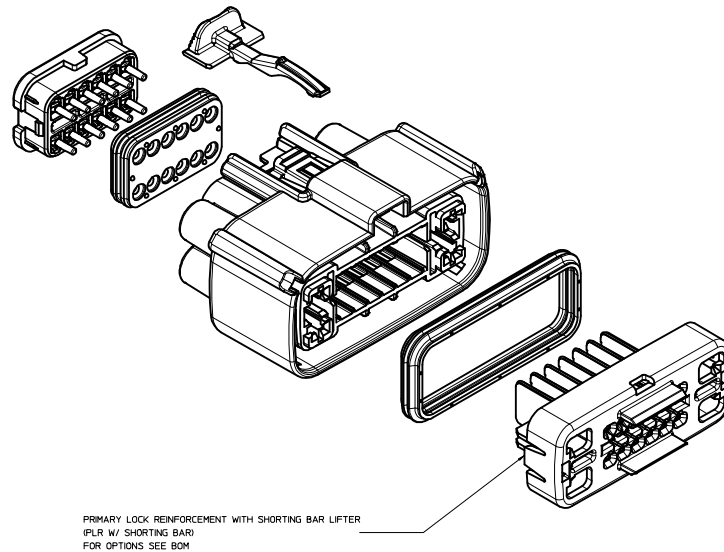
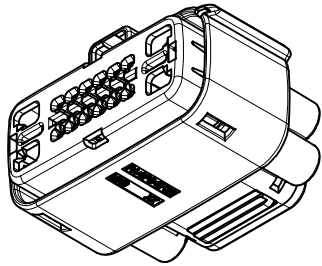
SHEET 1 OF 1 DRAWING NUMBER 999-S-016-2-Z02 DATE 1-14-11

SCALE 3:1

MOLEX



MX150 16 WAY HYBRID RECPT HRN CONN - STANDARD (STD)



PRIMARY LOCK REINFORCEMENT WITH SHORTING BAR LIFTER (PLR W/ SHORTING BAR) FOR OPTIONS SEE BOM

MX150 16 WAY HYBRID RECPT HRN CONN - SHORTING (SHRT) BAR UNLESS COMPONENT NOTED, SEE STANDARD ASSEMBLY

TABLE OF CONTENTS	
SHEET NO.	SHEET DESCRIPTION
1	NOTES
2	KEY CONFIGURATIONS
3	RECEPTACLE SEALED ASSEMBLY
4-7	BOM

NOTES: VALID UNLESS OTHERWISE SPECIFIED

1. GENERAL:
  - a. APPLICATION SPECIFICATION SEE: AS-33472-100  
CONTAINS: PRODUCT INTRODUCTION, PRODUCT SUMMARY, CONNECTOR ASSEMBLY, PACKAGING INFORMATION, CONNECTOR MATING, SERVICE INSTRUCTIONS, ELECTRICAL CONTINUITY CHECKING, CRIMPING, AND TROUBLESHOOTING.  
-STANDARD (NON-SHRT) CONFIGURATIONS DESIGNED TO MATE WITH DEVICE CONNECTION AS SPECIFIED IN DRAWING EWCAP 999-S-016-2-202. AVAILABLE AT <http://www.molex.com/connector/teams>  
-STANDARD (NON-SHRT) CONFIGURATIONS AND SHORTING BAR CONFIGURATIONS DESIGNED TO MATE WITH BLADE HOUSING ASSEMBLY SPECIFIED IN DRAWING SD-33486-161.  
-FOR 15mm RECEPTACLE TERMINALS TO BE USED WITH THIS ASSEMBLY. SEE MOLEX DRAWING SD-33012-002.  
-15mm TERMINALS TO BE USED WITH WIRE WITH DIAMETER RANGE OF 1.4mm TO 2.69mm.  
-FOR 2.8mm RECEPTACLE TERMINALS TO BE USED WITH THIS ASSEMBLY SEE TABLE.  
-2.8mm TERMINALS TO BE USED WITH WIRE WITH DIAMETER RANGE OF 1.50mm TO 3.30mm.  
-ASSEMBLY SHIPPED WITH PLR AND CPA IN PRE-LOCK POSITION (SEE SECTION 2-2 PRE-LOCK).  
IN THE EVENT THAT THE PLR IS FOUND IN THE SEATED (FINAL LOCK) POSITION, REFER TO MOLEX SPECIFICATION PS-34646-001. AVAILABLE AT www.molex.com <http://www.molex.com>.  
-ASSEMBLY CONFORMS TO SAE/USCAR-2 REV.4 WITH THE FOLLOWING EXCEPTIONS:  
ENGAGEMENT FORCE TO MOVE CPA FROM PRE-LOCK TO FINAL LOCK POSITION WHEN UNMATED: 40N MIN.  
DISENGAGEMENT FORCE TO MOVE CPA FROM FINAL LOCK TO PRE-LOCK POSITION: 3N MIN. 40N MAX.  
-TERMINAL INSERTION FORCE FOR WIRE DIAMETER ABOVE 2.5mm NOT EXCEEDING 2.69mm SHALL NOT EXCEED 40 NEWTONS.
  - b. PRODUCT SPECIFICATION SEE: PS-33476-000  
CONTAINS: PRODUCT INTRODUCTION, PRODUCT SUMMARY, RATINGS (CURRENT, TEMPERATURE, SEALING, AND FLAMMABILITY), AND PRODUCT VALIDATION.
  - c. PACKAGING SPECIFICATION PER MOLEX DRAWING: PK-30907-895
  - d. PARTS MUST BE IN COMPLIANCE TO MOLEX CHEMICAL SUBSTANCES FOR PRODUCTS SPECIFICATION: ES-40000-5016
  - e. DATA MUST BE SUBMITTED UNDER THE MOLEX PART NUMBER TO IMDS (COMPANY ID:13259)
  - f. FOR INFORMATION ON 16 WAY HYBRID RECEPT HRN ASSY WITH CLIPSLOT SEE E-33476-181

2. DESIGN - MATERIALS:
  - a. SEE BOM TABLE
3. DESIGN - GEOMETRY:
  - a. THIS IS A 100% CAD GENERATED PART. THE CAD MATHEMATICAL DATA IS THE MASTER FOR THIS PART. FOR DIMENSIONAL OR ANY INFORMATION NOT SHOWN ON THIS DRAWING, ANALYZE THE CAD MODEL.
  - b. GEOMETRIC DIMENSIONS AND TOLERANCES PER ASME Y14.5M - 1994
  - c. EDGES AND UNDIMENSIONED DETAILS PER ISO13715
  - d. CORNERS SHOWN AS SHARP TO BE R 0.2 MAX.
  - e. LETTERING SHALL BE 0.15 MAX RAISED IN 0.25 MAX RECESS PAD. THIS INCLUDES RECYCLING CODE, CAVITY ID, VENDOR IDENTIFICATION, AND CUSTOMER MATERIAL NUMBER.
  - f. VISUAL DEFECTS SHALL MEET COSMETIC STANDARD PS-45499-002 (CLASS B)
  - g. LASER MARKING: TBD

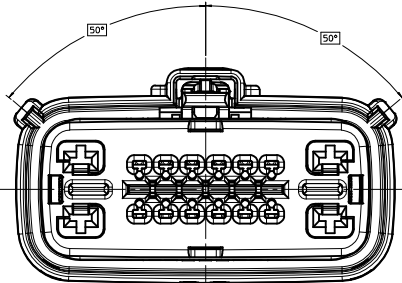
TYCO 2.8mm CABLE SEAL TERMINAL		
FORD P/N	FEMALE RECEPTACLE	GRIP SIZE
IFIT-14474-KA		12
IFIT-14474-JA		14
IFIT-14474-HA		16
IFIT-14474-GA		18
IFIT-14474-FA		20
IFIT-14474-EA		22

INSPECTION NUMBER LOG  
LAST NUMBER USED:  
ADDED:  
REMOVED:

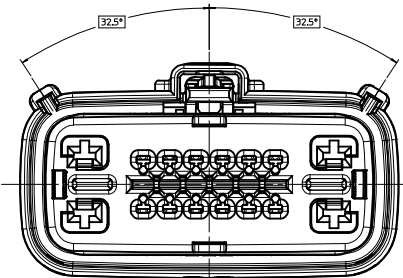
BX	UPDATED TO PLANNED OBSOLESCENCE	
BW	ADD NEW P/N 33476-4043 THRU 33476-4046	
BV10	ADD NEW P/N 33476-4042	
BV9	ADD NEW P/N 33476-4041	
BV8	ADD NEW P/N 33476-4037 33476-4038 33476-4039 33476-4040	
BV7	ADDED NEW P/N 33476-4023 33476-4024 33476-4025 33476-4026 33476-4027 33476-4028 33476-4029 33476-4030 33476-4031 33476-4032 33476-4033 33476-4034 33476-4035 33476-4036	
	BV6	ADD NEW P/N 33476-4022
	BV5	ADD NEW P/N 33476-4016 33476-4017 33476-4018 33476-4019 33476-4020 33476-4021
	BV4	ADD NEW P/N 33476-4014 33476-4015
	BV3	ADD NEW P/N 33476-4012 33476-4013
BV2	ADD NEW P/N 33476-4011	
BV1	CHANGE PART NUMBER STATUS ADD NEW P/N 33476-4009 33476-4010 ADD NEW P/N 33476-4006 33476-4007	
BV	33476-4008	
REV	DESCRIPTION	

ENTER DESCRIPTION EC NO: JAU2016-0550 DRAWING P/N: 2015/0174 APP: WJW/SJW 2015/0178	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	SHEET NO. OF 8
	DESCRIPTION	mm INCH	MM ONLY	3:1	METRIC	⊙	
BX	DESCRIPTION	4 PLACES ± 0.1	DRAWN BY DATE	TITLE		MX150 16 WAY HYBRID RECPT SEALED ASSEMBLY	molex
	DESCRIPTION	3 PLACES ± 0.1	KCUNNINGHAM 2011/10/27	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX, INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION			
	DESCRIPTION	2 PLACES ± 0.1	CHECKED BY DATE	APPROVED BY DATE		SD-33476-161	
	DESCRIPTION	1 PLACE ± 0.3					
	DESCRIPTION	0 PLACE ±					
	DESCRIPTION	ANGULAR ± 3°	MATERIAL NO.	DOCUMENT NO.			
	DESCRIPTION	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	SEE BOM				

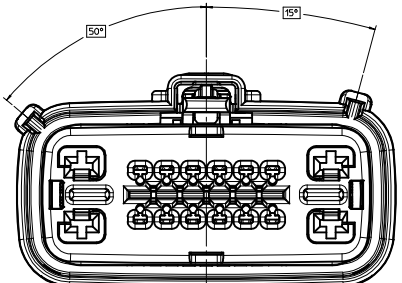
KEY CONFIGURATIONS



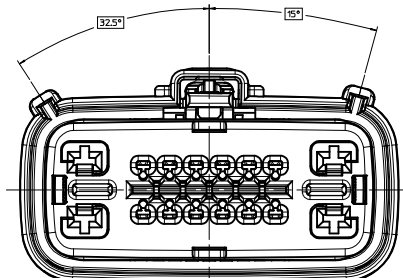
KEY A



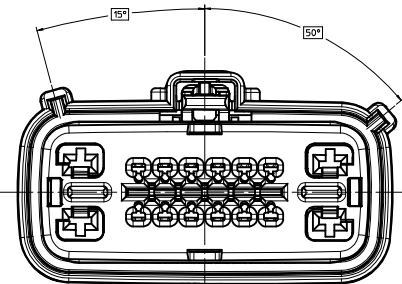
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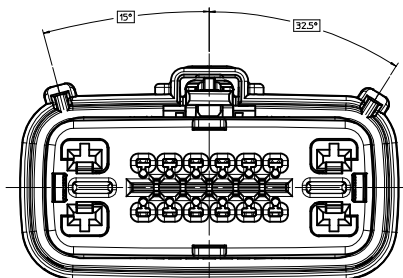
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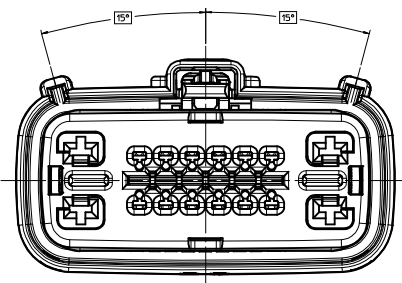
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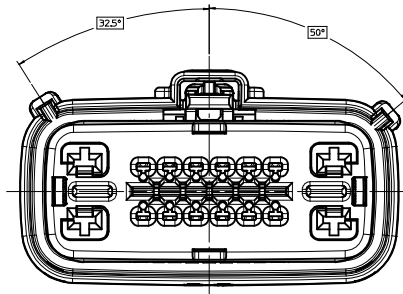
KEY C



KEY G



KEY D

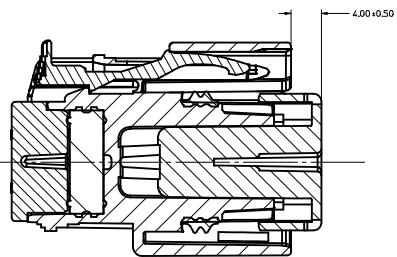
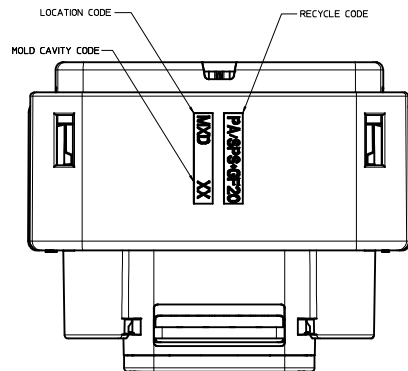
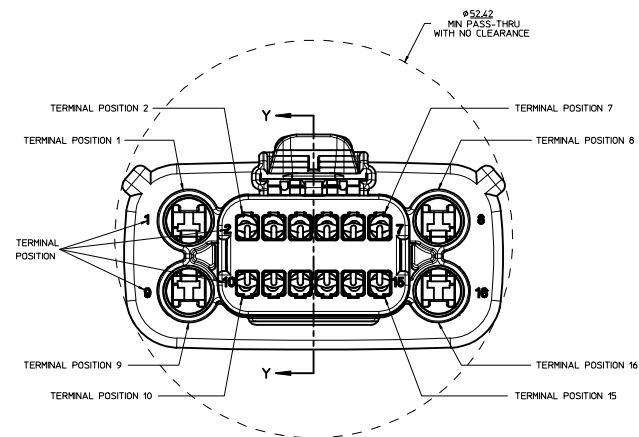
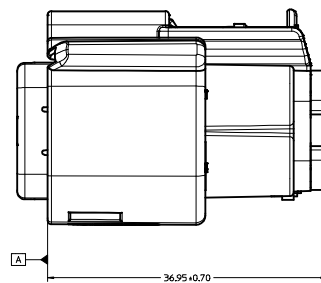
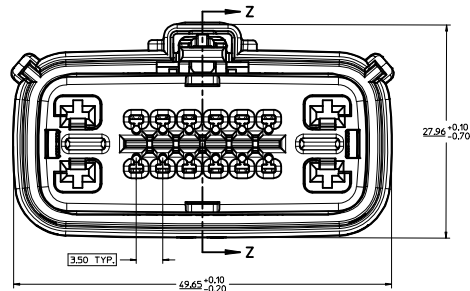
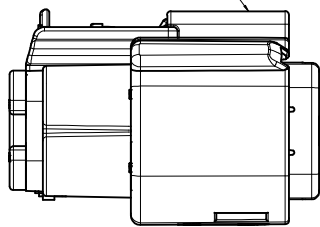


KEY H

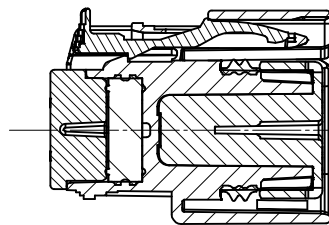
<b>ENTER DESCRIPTION</b> EC NO. UAU2016-0550 DRAWN BY: J. DUBROFF DATE: 2015/10/27 CHECKED BY: J. DUBROFF DATE: 2015/10/27 APPROVED BY: J. DUBROFF DATE: 2015/10/27 REV: BX	QUALITY SYMBOLS ▽=0 ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED) <table border="1"> <thead> <tr> <th></th> <th>mm</th> <th>INCH</th> </tr> </thead> <tbody> <tr> <td>4 PLACES</td> <td>± .005</td> <td>± .0005</td> </tr> <tr> <td>3 PLACES</td> <td>± .005</td> <td>± .0005</td> </tr> <tr> <td>2 PLACES</td> <td>± .01</td> <td>± .0005</td> </tr> <tr> <td>1 PLACE</td> <td>± .03</td> <td>± .0005</td> </tr> <tr> <td>0 PLACE</td> <td>± .05</td> <td>± .0005</td> </tr> </tbody> </table> ANGULAR ± 3° DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		mm	INCH	4 PLACES	± .005	± .0005	3 PLACES	± .005	± .0005	2 PLACES	± .01	± .0005	1 PLACE	± .03	± .0005	0 PLACE	± .05	± .0005	DIMENSION STYLE MM ONLY DRAWN BY: KCUNNINGHAM DATE: 2011/10/27 CHECKED BY: DATE: APPROVED BY: DATE:	SCALE: 3:1 DESIGN UNITS: METRIC THIRD ANGLE PROJECTION TITLE: MX150 16 WAY HYBRID RECPCT SEALED ASSEMBLY	MATERIAL NO.: SEE BOM DOCUMENT NO.: SD-33476-161	SHEET NO.: 2 OF 8
		mm	INCH																					
	4 PLACES	± .005	± .0005																					
	3 PLACES	± .005	± .0005																					
2 PLACES	± .01	± .0005																						
1 PLACE	± .03	± .0005																						
0 PLACE	± .05	± .0005																						
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION																								
molex																								
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION																								

RCPT. HRN. CONN.

OPTIONAL LASER MARKING ON THIS SURFACE  
SEE NOTE 3g.



PRIMARY LOCK REINFORCEMENT (PLR) SHOWN  
IN PRE-STAGED POSITION  
SECTION Z-Z



PRIMARY LOCK REINFORCEMENT (PLR) SHOWN  
IN FINAL-LOCK POSITION  
SECTION Y-Y

<b>ENTER DESCRIPTION</b> EC. NO. 0A02016-0550 DRAWING TITLE: 2015/10/27 0 PASSE-TRU APPROVED: 2015/10/27 REV.	QUALITY SYMBOLS ∇=0 ∇=0 ∇=0	GENERAL TOLERANCES (UNLESS SPECIFIED) mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.1 ± --- 1 PLACE ± 0.3 ± --- 0 PLACE ± ±	DIMENSION STYLE MM ONLY DRAWN BY DATE KCUNNINGHAM 2011/10/27 CHECKED BY DATE APPROVED BY DATE	SCALE 4:1 DESIGN UNITS METRIC THIRD ANGLE PROJECTION	TITLE MX150 16 WAY HYBRID RCPT SEALED ASSEMBLY	
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	MATERIAL NO. SEE BOM	DOCUMENT NO. SD-33476-161	SHEET NO. 3 OF 8	<b>molex</b>	
	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					
	SIZE E					











ASSEMBLY DESCRIPTION	ASSEMBLY PART NUMBER	A	B	C	D	E	F	G	H	A	C	D	P	PS	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
KEY A, BLACK	33476-4046														P								20	11	12					
KEY A, BLACK	33476-4045														P										11	12				
KEY A, BLACK	33476-4044														P	CPA							6	7	10	11	12	13	14	15
KEY A, BLACK	33476-4043														P	CPA														
KEY A, BLACK	33476-4042														P															
KEY A W/CPA, BLACK	33476-4041														P	CPA														
KEY A, BLACK	33476-4040														P								3							
KEY A, BLACK	33476-4039														P															
KEY A, BLACK	33476-4038														P								2	3						
KEY A, BLACK	33476-4037														P															
KEY A W/CPA, BLACK	33476-4036														P	CPA														
KEY A, BLACK	33476-4035														P								2	3						
KEY A, BLACK	33476-4034														P								2	3	4	5				
KEY A, BLACK	33476-4033														P								2							
KEY B, LT.GRAY	33476-4032														P								2							
KEY A W/CPA, BLACK	33476-4031														P	CPA														
KEY A, BLACK	33476-4030														P															
KEY A, BLACK	33476-4029														P															
KEY B, LT.GRAY	33476-4028														P															
KEY B, LT.GRAY	33476-4027														P															
KEY A, BLACK	33476-4026														P															
KEY A W/CPA, BLACK	33476-4025														P	CPA														
KEY A W/CPA, BLACK	33476-4024														P	CPA														
KEY A W/CPA, BLACK	33476-4023														P	CPA														
KEY A W/CPA, BLACK	33476-4022														P	CPA														
KEY A, BLACK	33476-4021														P															
KEY A, BLACK	33476-4020														P															
KEY A, BLACK	33476-4019														P															
KEY A, BLACK	33476-4018														P															
KEY A, BLACK	33476-4017														P															
KEY C W/CPA, DK GRAY	33476-4016														P	CPA														
ASSEMBLY DESCRIPTION	ASSEMBLY PART NUMBER	A	B	C	D	E	F	G	H	A	C	D	P	PS	CPA	2	3	4	5	6	7	10	11	12	13	14	15			
																BLOCKED TERMINAL														
																CAVITY WITH A NUMBER INDICATES BLOCKED TERMINAL POSITION														
																CAVITY WITHOUT A NUMBER INDICATES OPEN TERMINAL POSITION														
																STATUS														

PLANNED OBSOLESCENCE  
SEE DRAWING SD-34985-8002  
FOR REPLACEMENT P/N'S  
34985-XXXX

ABBREVIATION	COMPONENT
A	HOUSING KEY A
B	HOUSING KEY B
C	HOUSING KEY C
D	HOUSING KEY D
E	HOUSING KEY E
F	HOUSING KEY F
G	HOUSING KEY G
H	HOUSING KEY H
GC	GROMMET CAP
M	MAT SEAL
P	PLR, STANDARD
PS	PLR, SHRT BAR LIFTER
R	RING SEAL
CPA	CPA

DESCRIPTION	COLOR	MATERIAL
GROMMET CAP	BLACK	SPS/NYLON GF20
MAT SEAL	LIGHT BLUE	INHERENTLY LUBRICATED SILICONE
RING SEAL	GREEN	INHERENTLY LUBRICATED SILICONE
CPA	BRIGHT RED	PBT GF30
SHORTING BAR PLR	NATURAL	PBT GF15
STANDARD PLR	NATURAL	SPS/NYLON GF20
HOUSING KEYING OPTION D	STONE GRAY	SPS/NYLON GF20
HOUSING KEYING OPTION C	DARK GRAY	SPS/NYLON GF20
HOUSING KEYING OPTION A	YELLOW	SPS/NYLON GF20
HOUSING KEYING OPTION H	YELLOW	SPS/NYLON GF20
HOUSING KEYING OPTION G	BROWN	SPS/NYLON GF20
HOUSING KEYING OPTION F	LIGHT GRAY	SPS/NYLON GF20
HOUSING KEYING OPTION E	BLACK	SPS/NYLON GF20
HOUSING KEYING OPTION D	GREEN	SPS/NYLON GF20
HOUSING KEYING OPTION C	BROWN	SPS/NYLON GF20
HOUSING KEYING OPTION B	LIGHT GRAY	SPS/NYLON GF20
HOUSING KEYING OPTION A	BLACK	SPS/NYLON GF20

BOM/APPLICABLE COMPONENTS TABLE

<b>ENTER DESCRIPTION</b> EC NO: 0A02016-0050 DRAWING: 0101-1047 2015/10/27 APPROVED BY: [Signature] 2015/10/28 REV: BX	<b>QUALITY SYMBOLS</b> ∇=0 ∇=1 ∇=2	<b>GENERAL TOLERANCES (UNLESS SPECIFIED)</b> mm INCH 4 PLACES ± 0.1 ± 0.004 3 PLACES ± 0.1 ± 0.004 2 PLACES ± 0.1 ± 0.004 1 PLACE ± 0.1 ± 0.004 0 PLACE ± 0.1 ± 0.004	DIMENSION STYLE <b>MM ONLY</b> DRAWN BY: KCUNNINGHAM DATE: 2011/10/27 CHECKED BY: [Blank] DATE: [Blank]	SCALE: 2:1 DESIGN UNITS: METRIC THIRD ANGLE PROJECTION	TITLE: MX150 16 WAY HYBRID RECP/ SEALED ASSEMBLY	MATERIAL NO.: 999999999 DOCUMENT NO.: SD-33476-161 SHEET NO.: 8 OF 8
	ANGULAR ± 3° DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			APPROVED BY: [Blank] DATE: [Blank]		
	<b>molex</b>					
	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX, INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					