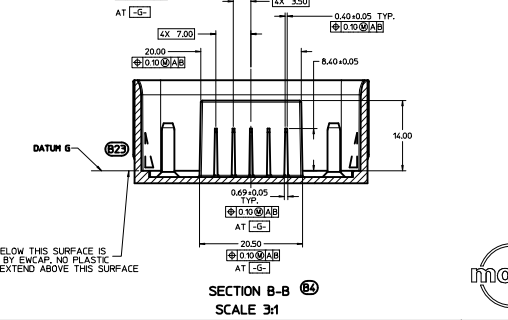
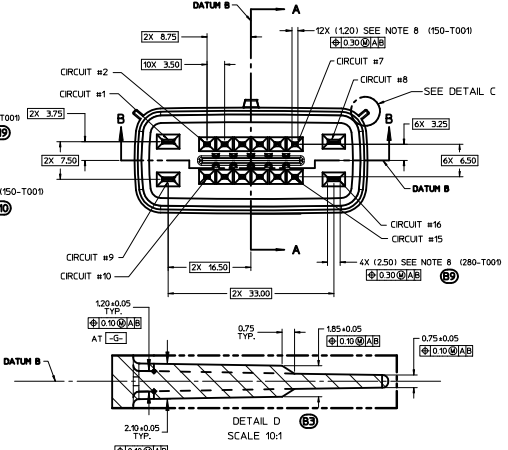
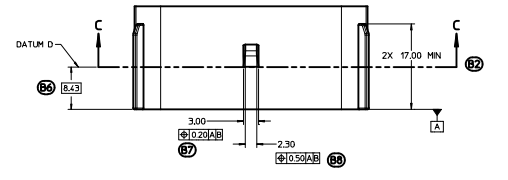
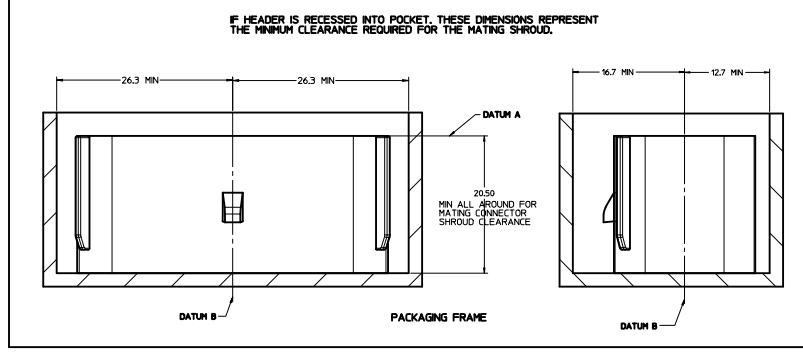
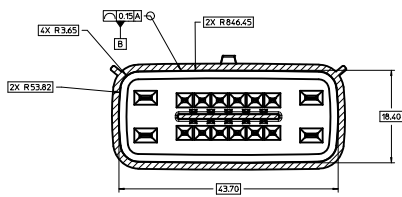


- NOTES: UNLESS OTHERWISE SPECIFIED
- DRAFT ANGLE PERMISSIBLE 0.25° MAXIMUM.
  - ALL DIMENSIONS SHOWN IN MILLIMETERS.
  - DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994
  - RADI ON ALL CORNERS SHOWN SHARP OR ALL UNSPECIFIED RADI 0.25 EXCEPT AS NOTED.
  - STANDARD COLORS FOR POLARIZATION (SEE CHART). 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 "SAEUSCAR-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.

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 PN	OPTION	MATING CONNECTOR COLOR



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



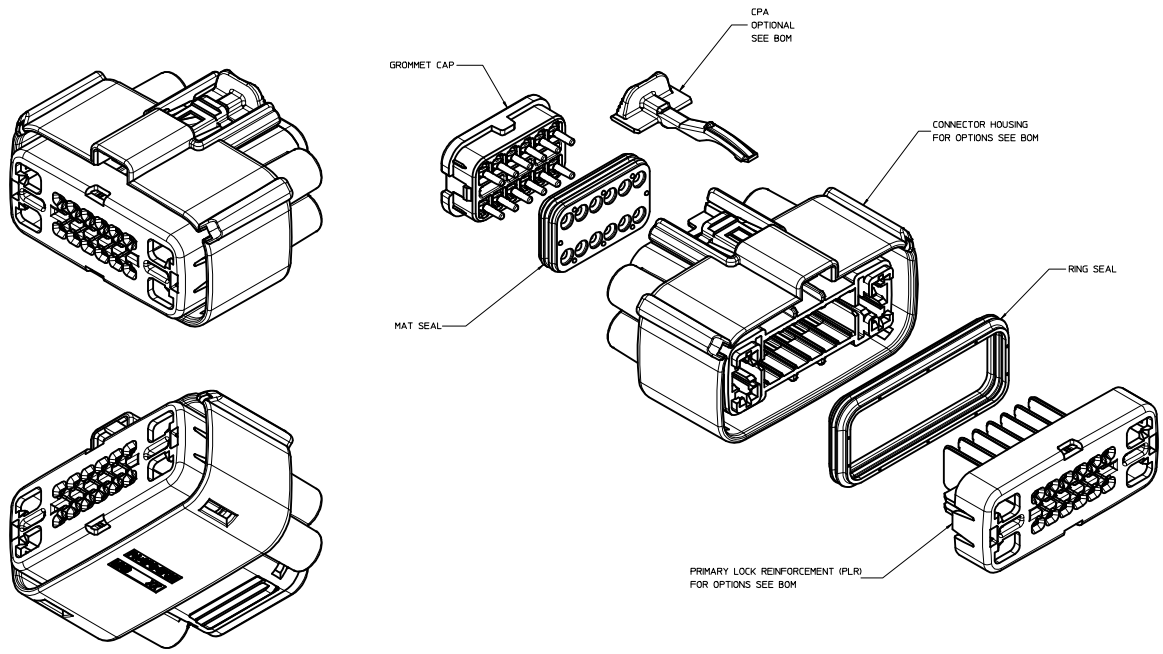
SCALE 1:1

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 AT TIP FOR 2.8 BLADE TERMINALS	1-14-11
088	B18	CHANGED 16X 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] AT [-A]	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] AT [-A]	5-04-10
088	B7	ADDED [0.20] AT [-A]	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

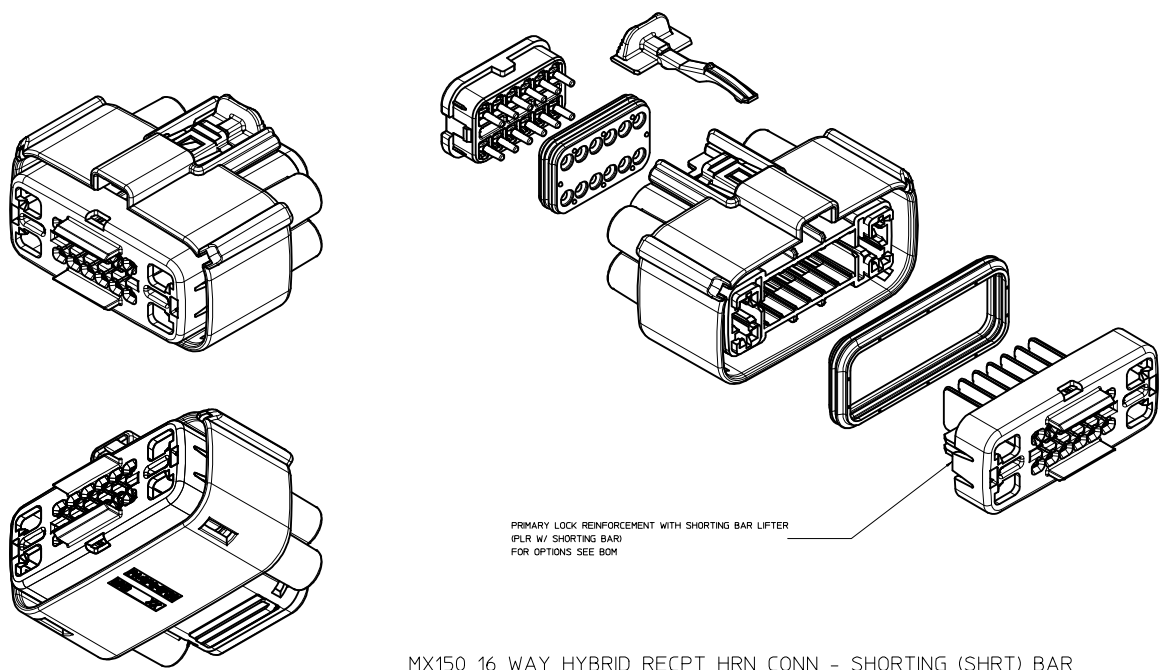
LET	REVISION RECORD	DATE	DWN	CHK			
TOLERANCES UNLESS OTHERWISE SPECIFIED							
DIMENSIONS ARE IN MILLIMETERS							
ANGLES $\pm 3^\circ$							
<h1>EWCAP</h1>							
DATE	3/1	DRAWN BY	K. CUNNINGHAM	CHECKED BY	V. KOSHY	DATE	1-14-11
TITLE							
DIRECT CONNECT INTERFACE							
16 WAY (2 X 8) 1.5 MM SEALED MALE							
SHEET	1 OF 1	DRAWING NUMBER	999-S-016-2-Z02	SCALE	AS SHOWN	REVISION LEVEL	B



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



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



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://ewcap.molex.com/teams/eng/>.  
-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 DRAWINGS 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.molect.com <http://www.molect.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-40000-5046
  - 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 9013715
  - 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

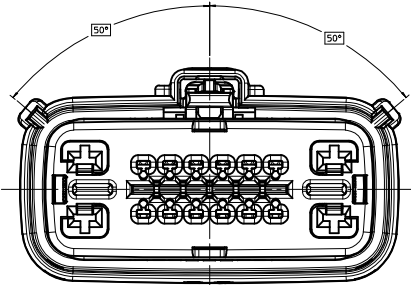
TYCO 2.8mm CABLE SEAL TERMINAL		
FORD P/N	FEMALE RECEPTACLE	GRIP SIZE
IFIT-14474-KA		12
IFIT-14474-JA		14
IFIT-14474-HA		16
IFIT-14474-GA		18
IFIT-14474-FA		20
IFIT-14474-EA		22

INSPECTION NUMBER LOG  
LAST NUMBER USED:  
ADDED:  
REMOVED:

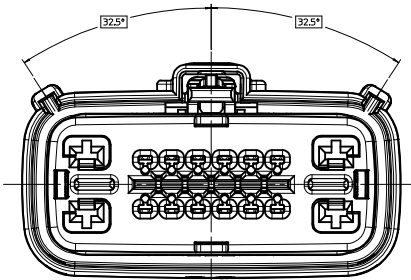
BU6	ADD NEW P/N 33476-218 33476-2188 33476-2189 33476-2190 33476-2191 33476-2192 33476-2193 33476-2194 33476-2195
BU5	ADD NEW P/N 33476-2185 33476-2186
BU4	ADD 33476-1608 33476-1609 PRODUCTION TOOL STATUS
BU3	ADD 33476-1603 33476-1604 PRODUCTION TOOL STATUS
BU2	ADD NEW P/N 33476-2184
BU1	UPDATED 2.8MM WIRE SIZE
BU	ADD NEW P/N 33476-2180 33476-2181 33476-2182 33476-2183
BT10	UPDATED WIRE SIZE
BT9	ADD NEW P/N 33476-2178 33476-2179
BT8	ADD NEW P/N 33476-2176 33476-2177 33476-2175
BT7	ADD 33476-2121 33476-2157 PRODUCTION TOOL STATUS
BT6	AND ADD NEW P/N 33476-2169 33476-2170 33476-2171 33476-2172 33476-2173 33476-2174 33476-2175
BT5	AND ADD NEW P/N 33476-2165 33476-2166 33476-2167 33476-2168
BT4	AND ADD NEW P/N 33476-2162 33476-2163
BT3	AND ADD NEW P/N 33476-2160 33476-2161
BT1	ADD LINK TO USCAR IN THE NOTES AND ADD NEW P/N 33476-2158
REV	DESCRIPTION

ENTER DESCRIPTION EC NO: JAU2015-1572 DATE: 2015/02/27 DRAWN BY: KUNNINGHAM CHECKED BY: DATE: APPROVED BY: DATE:	QUALITY SYMBOLS ▽=0 ▽=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	SCALE 3:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	TITLE MX150 16 WAY HYBRID RECPT SEALED ASSEMBLY	MATERIAL NO. SEE BOM	DOCUMENT NO. SD-33476-161	SHEET NO. 1 OF 7
	BU6	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	APPROVED BY: DATE:	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						

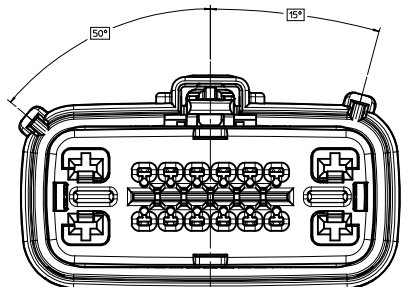
KEY CONFIGURATIONS



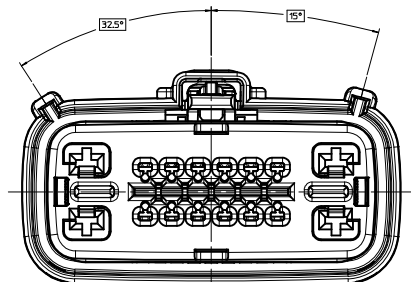
KEY A



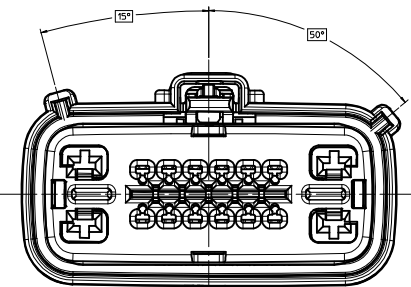
KEY E



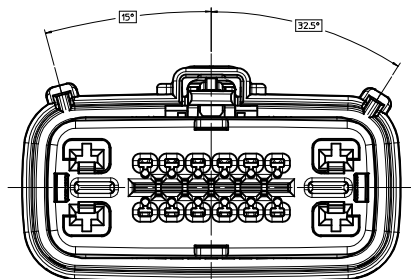
KEY B



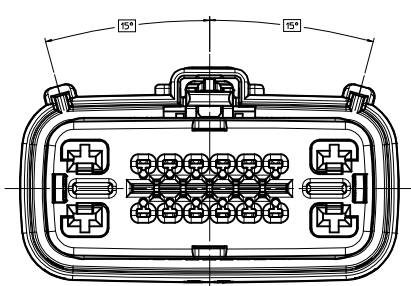
KEY F



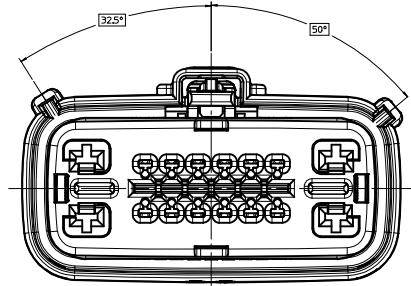
KEY C



KEY G



KEY D



KEY H

<b>ENTER DESCRIPTION</b> EC NO. UAU2015-1372 DRAWN BY 201510/27 KUNNINGHAM CHECKED BY APPROVED BY DATE BU6	<b>QUALITY SYMBOLS</b> ∇=0 ∇=0 ∇=0	<b>GENERAL TOLERANCES (UNLESS SPECIFIED)</b>		DIMENSION STYLE <b>MM ONLY</b>	SCALE <b>3:1</b>	DESIGN UNITS <b>METRIC</b>	THIRD ANGLE PROJECTION	
		mm	INCH	DRAWN BY KUNNINGHAM	DATE 2011/10/27	TITLE <b>MX150 16 WAY HYBRID RECP T SEALED ASSEMBLY</b>		
		4 PLACES ± .01	± .01	CHECKED BY	DATE	APPROVED BY		
		3 PLACES ± .01	± .01	APPROVED BY		DATE	MATERIAL NO. <b>SEE BOM</b>	
2 PLACES ± 0.1	± .01	MUST REMAIN WITHIN DIMENSIONS		DOCUMENT NO. <b>SD-33476-161</b>	SHEET NO. <b>2 OF 7</b>	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		









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	STATUS	
KEY B W/ CPA, LT GRAY	33476-2195												P		CPA	2	3					11	13	14	15				
KEY B W/ CPA, LT GRAY	33476-2194												P		CPA	2	3					11	12	13	14	15			
KEY B W/ CPA, LT GRAY	33476-2193												P		CPA	2	3							14	15				
KEY A W/ CPA, YELLOW	33476-2192									A			P		CPA	2	3								14	15			
KEY A W/ CPA, YELLOW	33476-2191									A			P		CPA	2									14	15			
KEY A, BLACK	33476-2190												P									11							
KEY A W/ CPA, BLACK	33476-2189												P		CPA		5	6	7	10	11	12	13						
KEY A W/ CPA, BLACK	33476-2188												P		CPA	2	3	4	5	6	7	10	11	12	13	14	15		
KEY B, LT, GRAY	33476-2187									B			P				4	6					13						
KEY A, BLACK	33476-2186												P			2	3	4	6			10	11	12	13	14	15		
KEY A, BLACK	33476-2185												P				4	6				11							
KEY D W/ PA, STONE GRAY	33476-2184												D		P														
KEY A W/ CPA, BLACK	33476-2183												P		CPA	2						6		10					
KEY B W/ CPA, LT GRAY	33476-2182												P																
KEY B W/ CPA, LT GRAY	33476-2181												P		CPA	2	3	6	7	10	11	12	13						
KEY B W/ CPA, LT GRAY	33476-2180												P		CPA	2	3					11	12	13					
KEY B W/ CPA, LT GRAY	33476-2179												P		CPA	3													
KEY A, BLACK	33476-2178												P																
KEY B W/ CPA, LT GRAY	33476-2177												P		CPA	3	5					10	11	12	13	14			
KEY A W/ CPA, BLACK	33476-2176												P		CPA							7		12	13	14	15		
KEY B W/ CPA, LT GRAY	33476-2175												P		CPA														
KEY A W/ CPA, BLACK	33476-2174												P		CPA	2	4	5	7										
KEY A W/ CPA, BLACK	33476-2173												P		CPA							6	7						
KEY B, LT, GRAY	33476-2172									B			P																
KEY C, DK, GRAY	33476-2171												C		P							3	4	6	7	10	11	13	15
KEY C W/ CPA, DK GRAY	33476-2170												C		P							3	4	6	7	10	11	13	15
KEY B W/ CPA, LT, GRAY	33476-2169									B			C		P							CPA	2	3					
KEY A, BLACK	33476-2168												P		CPA											13			
KEY A, BLACK	33476-2167												P		CPA	2	3					10	11	13					
KEY A, BLACK	33476-2166												P		CPA							7		13					
KEY A, BLACK	33476-2165												P		CPA		4	5	6	7			12	13	14	15			
KEY B, LT, GRAY	33476-2164									B			P			2	3	4	5	6	7								
KEY B W/ CPA, LT, GRAY	33476-2163									B			P		CPA	2	3	4	5	6	7								
KEY A, BLACK	33476-2162												P		CPA														
KEY A, YELLOW	33476-2161												A		P														
KEY C W/ CPA, DK GRAY	33476-2160												C		P														
KEY A, BLACK	33476-2159												P			2													
KEY A, BLACK	33476-2158												P			2	3	4	5	7		11							
KEY D, STONE GRAY	33476-2157												D		P														
KEY A, BLACK	33476-2156												P			2	4						10	11					
KEY A, BLACK	33476-2155												P			2	4												
KEY A W/ CPA, BLACK	33476-2154												P		CPA	2	3	4	5	6	10	11	12	14	15				
KEY A, BLACK	33476-2153												P		CPA							6		11	12	14	15		
KEY A, BLACK	33476-2152												P			2	3	4	5	7									
KEY A, BLACK	33476-2151												P			2	3	4	5	6	10	11	12	14	15				
KEY A W/ CPA, BLACK	33476-2150												P		CPA														
KEY A, BLACK	33476-2149												P			3	5					10	11						
KEY A W/ CPA, BLACK	33476-2148												P		CPA	2	3	4	5	6	10	11	12	14	15				
KEY A W/ CPA, BLACK	33476-2147												P		CPA	2	3	4	5	7									
KEY A W/ CPA, BLACK	33476-2146												P		CPA							6	10	11	12	14	15		
KEY B, LT, GRAY	33476-2145									B			P			2	3	4	5	6	7	10	11	12	13	14	15		
KEY A W/ CPA, BLACK	33476-2144												P		CPA	2	3	4											
KEY A, BLACK	33476-2143												P																
KEY A, BLACK	33476-2142												P																
KEY A, BLACK	33476-2140												P			2	3	4											
KEY A, BLACK	33476-2138												P			2													
KEY A, BLACK	33476-2132												P			3	5												
KEY A, BLACK	33476-2131												P			2	4	5											
KEY A, BLACK	33476-2126												P			2													
KEY A, BLACK	33476-2125												P			2	4	5	7										
KEY C, DK, GRAY	33476-2121												C		P														
KEY A, BLACK	33476-2120												P																
KEY A, BLACK	33476-2119												P																
KEY A, BLACK	33476-2118												P			2	3												
KEY A, BLACK	33476-2117												P																
KEY A, BLACK	33476-2116												P			2	3												
KEY A, BLACK	33476-2115												P																
KEY A, BLACK	33476-2113												P																
KEY A, BLACK	33476-2112												P			2	3	4	6										
KEY A W/ CPA, BLACK	33476-2111												P			2	3	4	5	6	10	11	12	13	14	15			

ASSEMBLY TERMINAL  
 CAVITY WITH A NUMBER INDICATES BLOCKED TERMINAL POSITION  
 CAVITY WITHOUT A NUMBER INDICATES OPEN TERMINAL POSITION

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 FLR	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

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

<b>ENTER DESCRIPTION</b> REC NO: UAU2015-1372 DRAWN BY: DREWITE DATE: 2015/10/27 APPROVED BY: JAFER-KOUSHI DATE: 2015/03/11 REV: BU6	QUALITY SYMBOLS ∇=0 ∇=1 ∇=2	GENERAL TOLERANCES (UNLESS SPECIFIED) mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.1 ± --- 
--	--------------------------------------	--