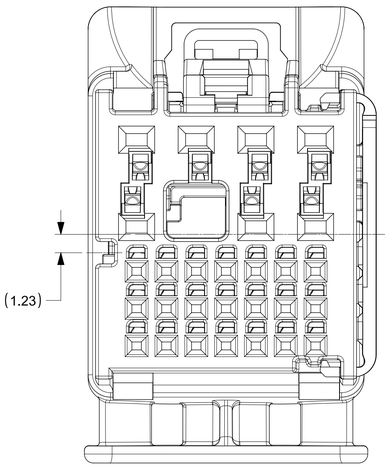
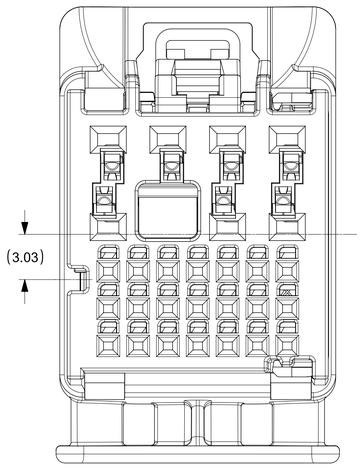
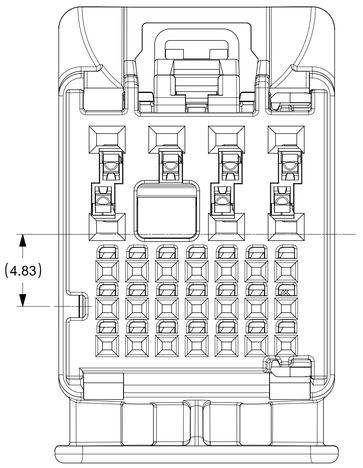


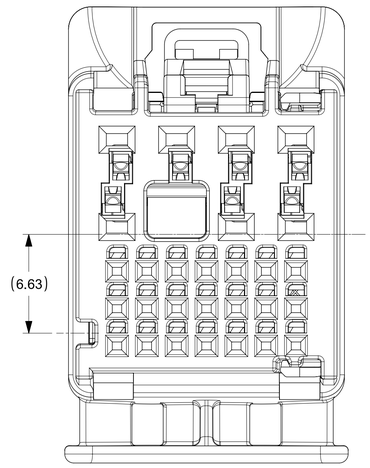
28WAY CONNECTOR ASSY
KEY 1
P/N 1600140001



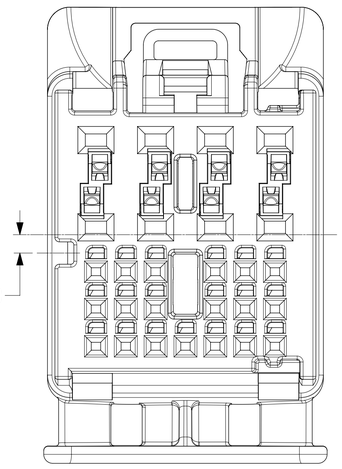
28WAY CONNECTOR ASSY
KEY 2
P/N 1600140002



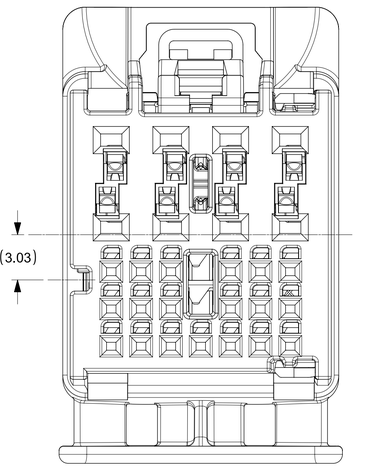
28WAY CONNECTOR ASSY
KEY 3
P/N 1600140003



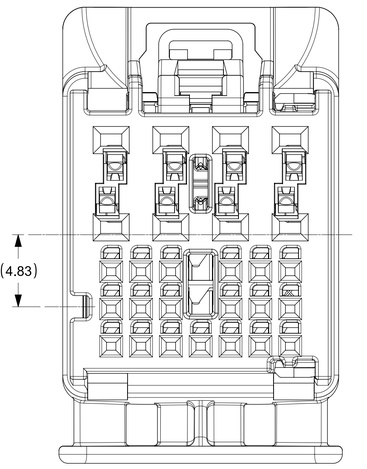
28WAY CONNECTOR ASSY
KEY 4
P/N 1600140004



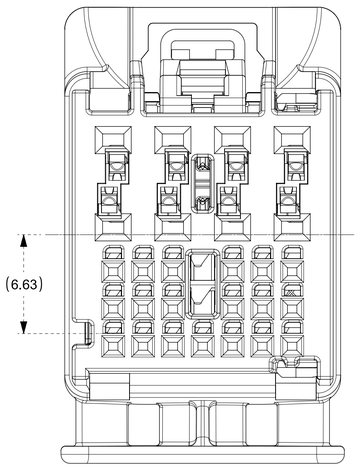
27WAY CONNECTOR ASSY
KEY 1
P/N 1600290001



27WAY CONNECTOR ASSY
KEY 2
P/N 1600290002

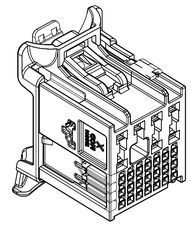


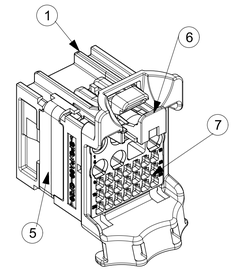
27WAY CONNECTOR ASSY
KEY 3
P/N 1600290003



27WAY CONNECTOR ASSY
KEY 4
P/N 1600290004

PART NUMBER	PLATING	SUPPLIER	WIRE GAGE (mm2)	TERMINAL FAMILY	WIRE SPECIFICATION
200096-0101	TIN PLATING	MOLEX	0.35	TAK FAMILY (0.5 mm)	VW 60306 or GMW 15626 (SEE APPLICATION SPECIFICATION FOR MORE DETAILS)
200096-0201		MOLEX	0.13		
2272196-2		TE	0.35	Generation 50 Locking Lance (0.5mm)	SAE/ J1128 THIN WALL INSULATION GMW 15626 INSULATION TYPE FLR (REGULAR THIN WALL)
2272196-1			0.13		
35072403		DELPHI	0.35 - 0.5	TAXI TERM OCS 1.2	
35072404			0.75 - 0.8		
35072405			0.8 - 1.0		
35072406			1.25 - 1.5		
SMSA-A031T-M1.2		JST	0.5 - 0.75	MSA 1.2mm TERMINAL	
SMSA-A041T-M1.2			1.0 - 1.5		





NOTES: VALID UNLESS OTHERWISE SPECIFIED

27WAY/28WAY ARE DEPOPULATED VARIANTS OF THE 29WAY

1. GENERAL:
a. APPLICATION SPECIFICATION SEE: AS-160014-001
b. PRODUCT SPECIFICATION SEE: PS-160014-001
c. PACKAGING SPECIFICATION PER MOLEX DRAWING: PK-31302-266
d. PARTS MUST BE IN COMPLIANCE TO MOLEX CHEMICAL SUBSTANCES FOR PRODUCTS AND PACKAGING SPECIFICATION: ES-40000-5016
e. DATA MUST BE SUBMITTED UNDER THE MOLEX PART NUMBER TO IMDS (COMPANY ID#13255)

2. DESIGN - MATERIALS:
a. SEE BOM TABLE

3. DESIGN - GEOMETRY:
a. ALL GRAPHIC DATA IS BASIC (NO TOLERANCE) AND MUST BE TAKEN FROM THE DATA FILE AT ITS LATEST REVISION.
b. PRODUCT DESIGN MODEL NUMBER(S): SEE BOM TABLE
c. GEOMETRIC DIMENSIONS AND TOLERANCES PER ASME Y14.5M-2009
d. EDGES AND UNDIMENSIONED DETAILS PER ISO13715
e. CORNERS SHOWN AS SHARP TO BE R 0.2 MAX.
f. MARKED TEXT TO INCLUDE RECYCLING CODE, CAVITY ID, VENDOR IDENTIFICATION, AND CUSTOMER MATERIAL NUMBER.
1. LASER ETCHED DATE CODE
1ST THROUGH 2ND DIGIT = CALENDAR YEAR
3RD THROUGH 5TH DIGIT = "DAY #" OF YEAR
6TH THROUGH 7TH DIGIT = HOUR OF DAY
8TH THROUGH 9TH DIGIT = MINUTE OF HOUR
10TH THROUGH 11TH DIGIT = SECOND OF MINUTE

4. DESIGN - MANUFACTURING:
a. VISUAL DEFECTS SHALL MEET COSMETIC STANDARD PS-45499-002 (Class B)

B3	UPDATED DELPHI 1.2 TERMINAL PNS
B2	UPDATED WIRE GAGE RANGE OF 1.20MM TERMINAL HTGUO 02/20/2019
B1	REV BLOCK CORRECTION JJOYA 1/22/2018
B	ADDED VIEWS FOR 27WAY AND UPDATED BOM JJOYA 12/19/2017
A1	SAP # 10816434 VYARAPPA 03/23/2017
A	UAU2017-0137 SAP # 10789287 JCONDON 08/13/2016
7	UAU2016-1182 SAP # 10762453 JCONDON 02/08/2016
6	UAU2015-1899 SAP # 10698159 JCONDON 06/17/2015
5	UAU2015-1606 SAP # 10685685 JCONDON 04/23/2015
4	UAU2015-0824 SAP # XXXXXX JCONDON 12/05/2014
3	UAU2014-1923 SAP # XXXXXXXX BSCUDDER 05/19/2014
2	UAU2014-1726 SAP # XXXXXXXX CBOWDEN 10/22/2013
1	UAU2014-0633 SAP # XXXXXXXX KDEKOSKI 10/09/2013

MOLEX ASSEMBLY PART NO.'S	CIRCUIT COUNT	KEY	OUTER SHROUD COLOR	COMPONENTS						
				OUTER SHROUD KEY 1	OUTER SHROUD KEY 2	OUTER SHROUD KEY 3	OUTER SHROUD KEY 4	INNER HOUSING	ISL	CPA
				SPS/PA66-GF20	SPS/PA66-GF20	SPS/PA66-GF20	SPS/PA66-GF20	SPS/PA66-GF20	SPS-GF30	PA66-GF50
				1600140501	1600140502	1600140503	1600140504	1600140701	1600140601	1600140703
1600140001	28	1	DARK GRAY	1				STONE GRAY	1	1
1600140002	28	2	LT GREEN A		1			STONE GRAY	1	1
1600140003	28	3	LT GRAY			1		STONE GRAY	1	1
1600140004	28	4	BLACK				1	STONE GRAY	1	1
				1600290501	1600290502	1600290503	1600290504	1600290701	1600290601	1600140703
1600290001	27	1	BLACK	1				DARK GRAY	1	1
1600290002	27	2	LT GREEN B		1			DARK GRAY	1	1
1600290003	27	3	LT BLUE B			1		DARK GRAY	1	1
1600290004	27	4	PURPLE C				1	DARK GRAY	1	1

DOCUMENT STATUS	P1	RELEASE DATE	2019/08/13 14:53:52

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

DIMENSION UNITS: mm
SCALE:
GENERAL TOLERANCES (UNLESS SPECIFIED)
ANGULAR TOL ± 3.0 °
4 PLACES ±
3 PLACES ±
2 PLACES ± 0.3
1 PLACE ± 0.3
0 PLACES ± 0.3
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

CURRENT REV DESC: SEE TABLE

EC NO: 622293
DRWN: HTGUO02 2019/08/13
CHK'D: JCONDON 2019/08/13
APPR: JCONDON 2019/08/13
INITIAL REVISION:
DRWN: VYARAPPA 2017/02/06
APPR: KDEKOSKI 2017/03/23

THIRD ANGLE PROJECTION
DRAWING: D-SIZE
SERIES: 160014

molex

28WAY STAK50H HYBRID CONNECTOR ASSEMBLY

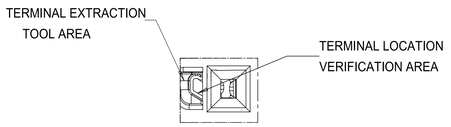
PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
SD-160014-0001	PSD	000	B3

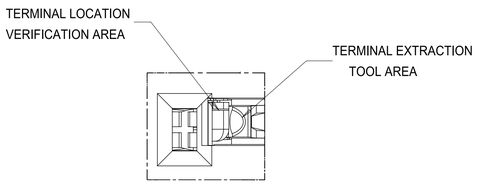
MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
SEE CHART	GENERAL MARKET	1 OF 2

PCREC7_master.ltr.prt.rnd
DATE: 2019/08/13
DATE_DISPLAY=0

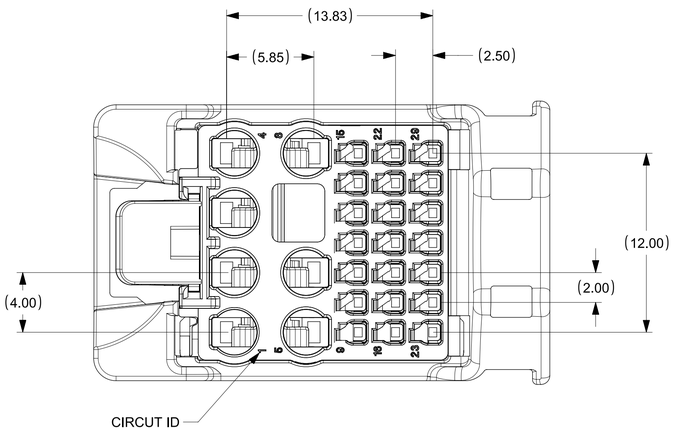
NOTE: 28WAY CONNECTOR VARIANT SHOWN.
DIMENSIONS APPLY TO ALL CONNECTOR VARIANTS OF 29WAY

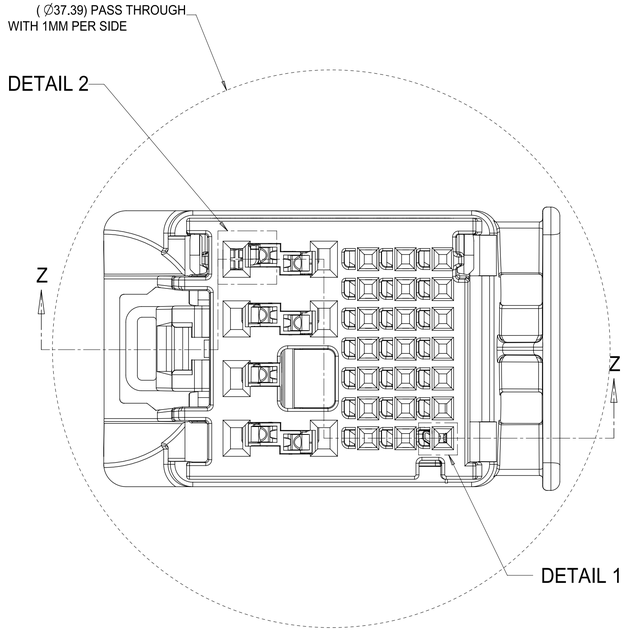


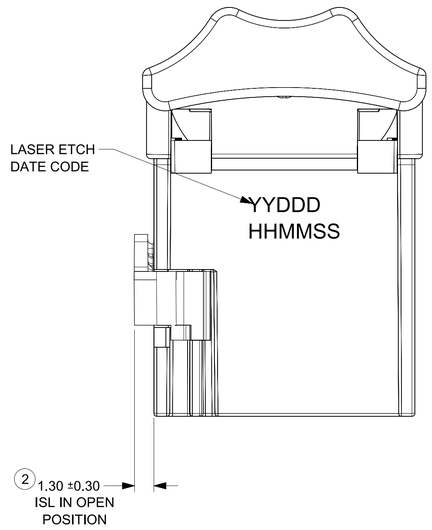
DETAIL 1
SCALE 10:1

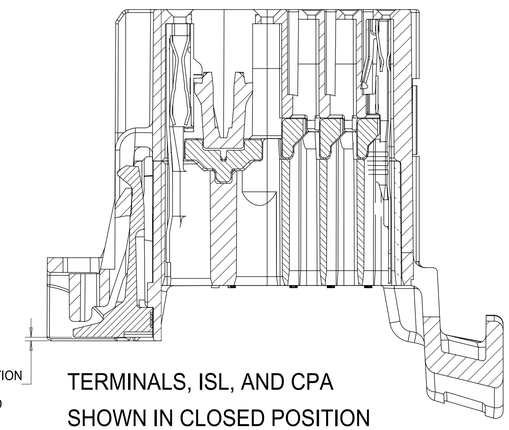


DETAIL 2
SCALE 10:1



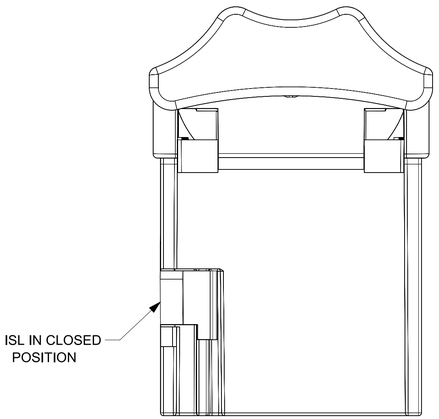


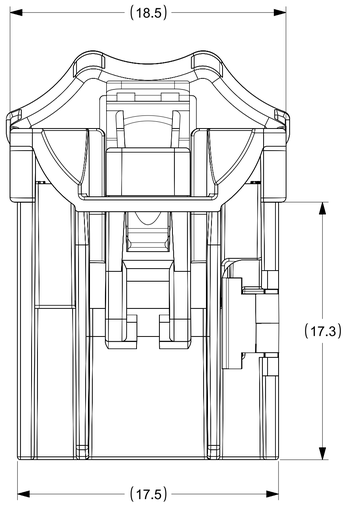


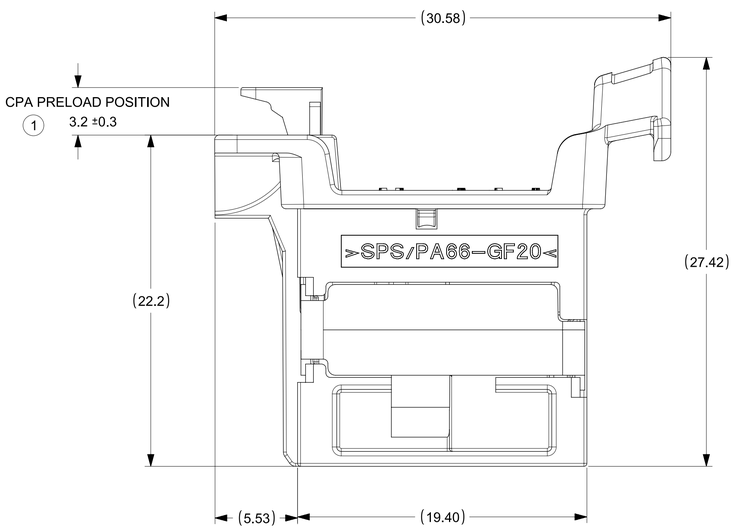


TERMINALS, ISL, AND CPA
SHOWN IN CLOSED POSITION

SECTION Z-Z







THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

DIMENSION UNITS	mm
SCALE	
GENERAL TOLERANCES (UNLESS SPECIFIED)	
ANGULAR TOL	± 3.0 °
4 PLACES	±
3 PLACES	±
2 PLACES	± 0.3
1 PLACE	± 0.3
0 PLACES	± 0.3
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	

CURRENT REV DESC: SEE TABLE

EC NO:	622293	
DRWN:	HTGUO02	2019/08/13
CHK'D:	JCONDON	2019/08/13
APPR:	JCONDON	2019/08/13
INITIAL REVISION:		
DRWN:	VYARAPPA	2017/02/06
APPR:	KDEKOSKI	2017/03/23

THIRD ANGLE PROJECTION | DRAWING: D-SIZE | SERIES: 160014

molex

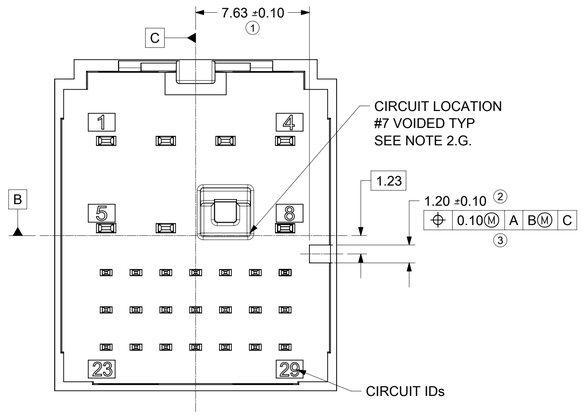
28WAY STAK50H HYBRID
CONNECTOR ASSEMBLY

PRODUCT CUSTOMER DRAWING

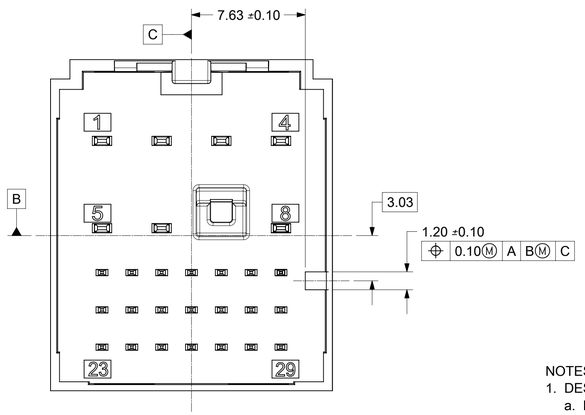
DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
SD-160014-0001	PSD	000	B3

MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
SEE CHART	GENERAL MARKET	2 OF 2

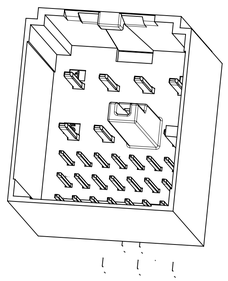
DOCUMENT STATUS	P1	RELEASE DATE	2019/08/13 14:53:52

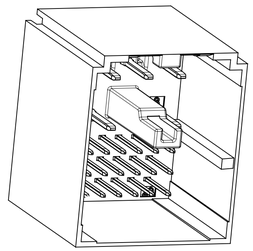


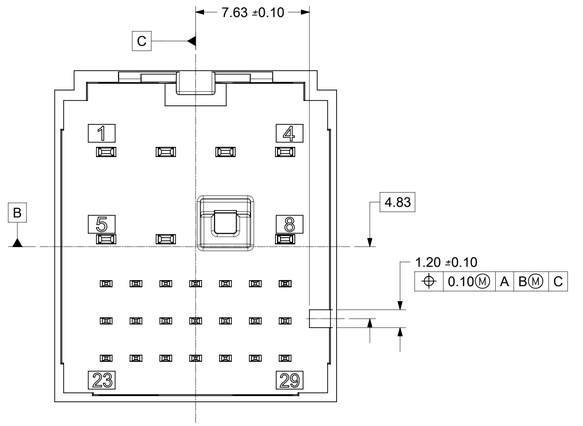
INTERFACE KEY #1
MATING CONNECTOR COLOR; DARK GRAY



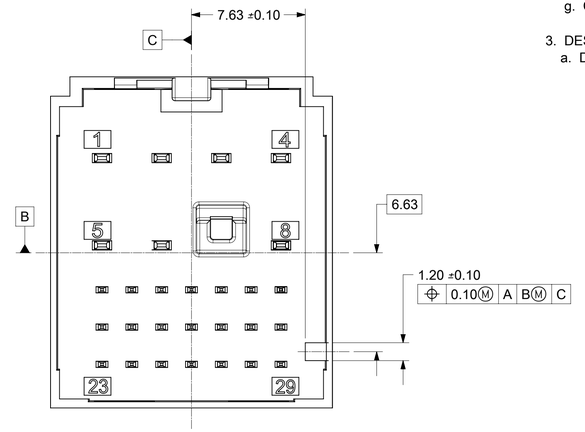
INTERFACE KEY #2
MATING CONNECTOR COLOR; LT GREEN A







INTERFACE KEY #3
MATING CONNECTOR COLOR; LIGHT GRAY



INTERFACE KEY #4
MATING CONNECTOR COLOR; BLACK

NOTES: VALID UNLESS OTHERWISE SPECIFIED

1. DESIGN - MATERIALS:
   a. RESIN MATERIAL: PBT+GF30 OR SPS+GF30 OR EQUIVALENT
   b. PIN/BLADE MATERIAL: ACCORDING TO USCAR DRAWING EWCAP-001 NOTE B2.
   c. PLATING: ACCORDING TO USCAR DRAWING EWCAP-001 TIN REFLOW WITH UNDERPLATE.
   d. PIN GEOMETRY ACCORDING TO USCAR DRAWING EWCAP-001 (120-T002 & 050-T001)
   e. DEVIATION TO EWCAP-001 ACCEPTABLE IF PERFORMANCE (ELECTRICAL/MECHANICAL) IS SHOWN TO BE EQUAL OR BETTER AS REQUIRED BY VALIDATION TESTING.

2. DESIGN - GEOMETRY:
   a. ALL GRAPHIC DATA IS BASIC (NO TOLERANCE) AND MUST BE TAKEN FROM THE DATA FILE AT ITS LATEST REVISION.
   b. PRODUCT DESIGN MODEL NUMBER(S): SEE BOM TABLE
   c. GEOMETRIC DIMENSIONS AND TOLERANCES PER ASME Y14.5M-2009
   d. GENERAL TOLERANCES:
      LINEAR: PER DIN 16901 LINEAR CODE B FOR PRECISION ENGINEERING
      ANGULAR: ± 3°
   e. EDGES AND UNDIMENSIONED DETAILS PER ISO13715
   f. CORNERS SHOWN AS SHARP TO BE R 0.2 MAX.
   g. CIRCUIT LOCATION #7 VOIDED FOR 28WAY INTERFACE

3. DESIGN - MANUFACTURING:
   a. DRAFT TO BE WITHIN TOLERANCE.

REV	DESCRIPTION
B1	ADDED BALLOONS JCONDON 07/31/2018
B	REMOVED 0.2MM FROM CONNECTOR LOCK TAB FEATURE
A3	NOTE 1.E. ADDED JCONDON 11/13/2017
A2	NX-REMASTERING SAP # 10867412
A1	UAU2016-1133 SAP # 10762453 JCONDON 02/02/2016
A	UAU2015-1973 SAP # 10701371 JCONDON 06/30/2015
6	UAU2015-1446 SAP # 10681629 JCONDON 03/25/2015
5	UAU2015-1212 SAP # 10674908 JCONDON 02/06/2015
4	UAU2015-0634 SAP # 10661788 JCONDON 10/22/2014
3	UAU2014-1679 SAP # XXXXXXXX BSCUDDER 04/28/2014
2	UAU2014-1221 SAP # XXXXXXXX MYOUNG01 01/21/2014
1	UAU2014-0715 SAP # XXXXXXXX MYOUNG01 11/14/2013

DOCUMENT STATUS	P1	RELEASE DATE	2018/08/03 19:41:28

SYMBOLS
▽A = 0
▽C = 0
▽P = 0
▽S = 0
▼ = 0
▽V = 0
☒ = 0
■ = 0
▽ = 0

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

DIMENSION UNITS	SCALE
mm	5:1

GENERAL TOLERANCES (UNLESS SPECIFIED)

ANGULAR TOL	± °
4 PLACES	±
3 PLACES	±
2 PLACES	±
1 PLACE	±
0 PLACES	±

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

SEE NOTES

CURRENT REV DESC: ADD DIMENSION BALLOONS

EC NO: 602204
DRWN: JCONDON 2018/07/31
CHK'D: JCONDON 2018/08/03
APPR: MVANSLAMBROU 2018/08/03

INITIAL REVISION:
DRWN: MYOUNG01 2013/11/14
APPR: KDEKOSKI 2014/01/02

THIRD ANGLE PROJECTION | DRAWING: D-SIZE | SERIES: 160014

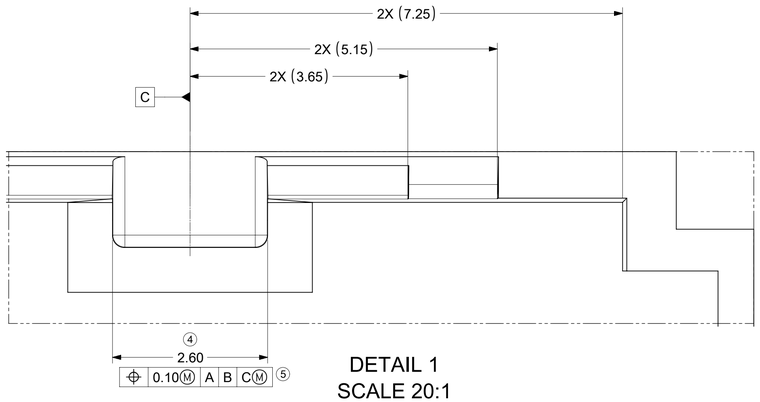
molex

28WAY STAK50H
INTERFACE DRAWING

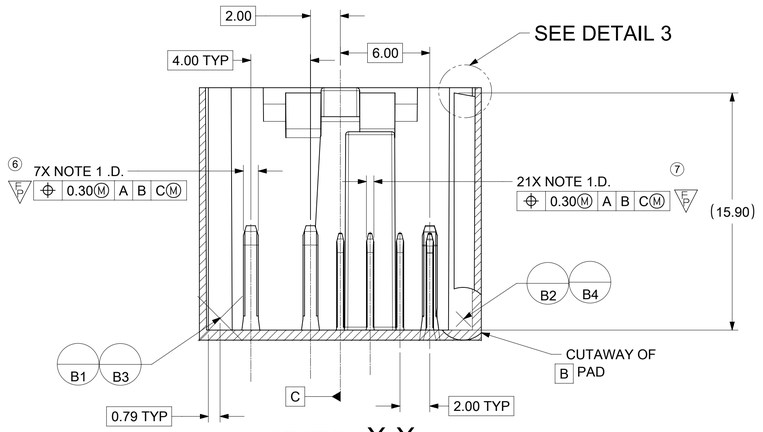
PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
SD-160014-002	PSD	001	B1

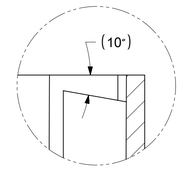
MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
	GENERAL MARKET	1 OF 3



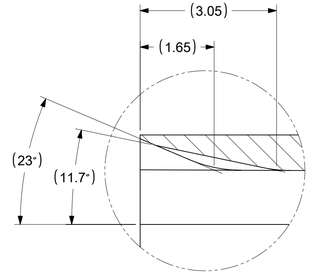
DETAIL 1
SCALE 20:1



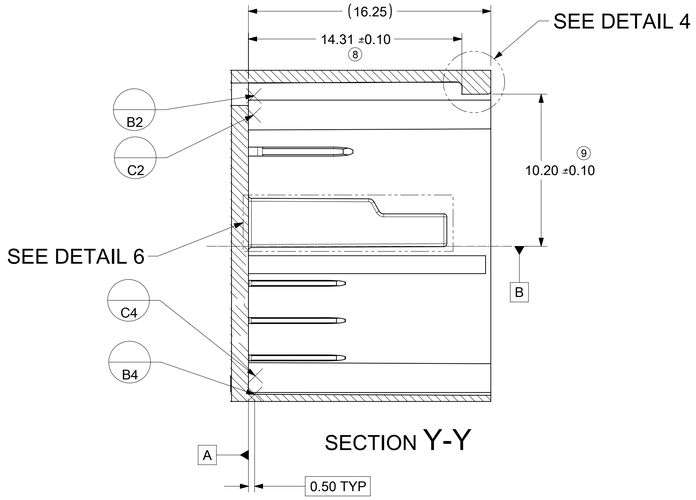
SECTION X-X



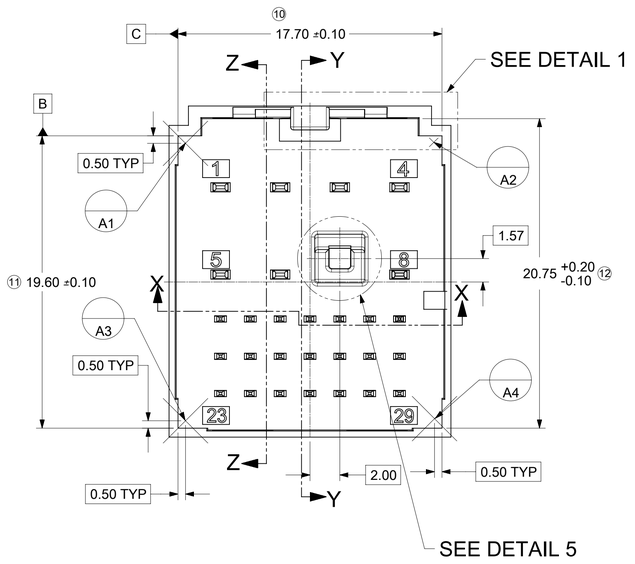
DETAIL 3
SCALE 15:1

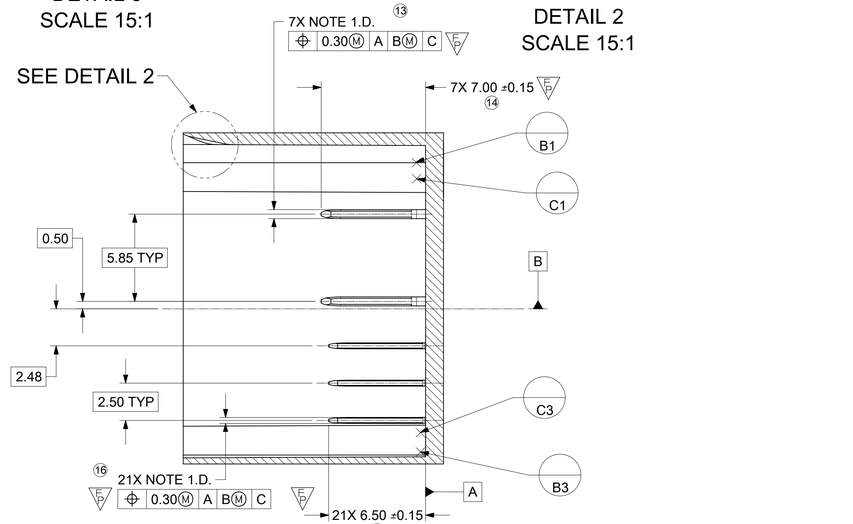


DETAIL 2
SCALE 15:1

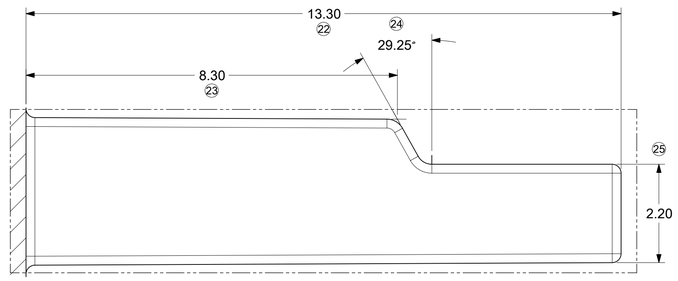


SECTION Y-Y

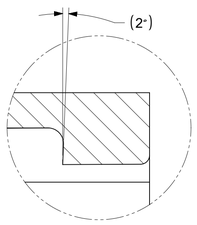




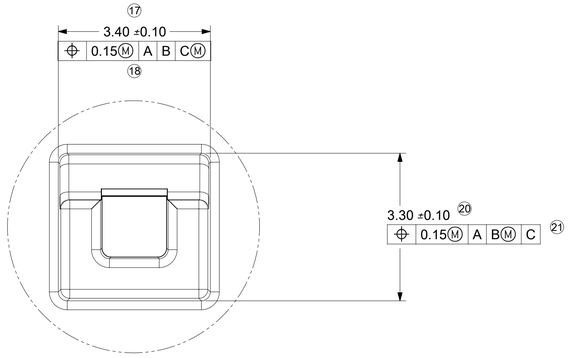
SECTION Z-Z



DETAIL 6
SCALE 15:1



DETAIL 4
SCALE 15:1



DETAIL 5
SCALE 15:1

SYMBOLS	
A = 0	
C = 0	
D = 0	
S = 0	
= 0	
F = 0	
= 0	
= 0	
= 0	

DIMENSION UNITS	SCALE
mm	5:1
GENERAL TOLERANCES (UNLESS SPECIFIED)	
ANGULAR TOL ± °	
4 PLACES ±	
3 PLACES ±	
2 PLACES ±	
1 PLACE ±	
0 PLACES ±	
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

CURRENT REV DESC: ADD DIMENSION BALLOONS

EC NO: 602204
DRWN: JCONDON 2018/07/31
CHK'D: JCONDON 2018/08/03
APPR: MVANSLAMBROU 2018/08/03

INITIAL REVISION:
DRWN: MYOUNG01 2013/11/14
APPR: KDEKOSKI 2014/01/02

SEE NOTES

THIRD ANGLE PROJECTION | DRAWING: D-SIZE | SERIES: 160014

molex

28WAY STAK50H
INTERFACE DRAWING

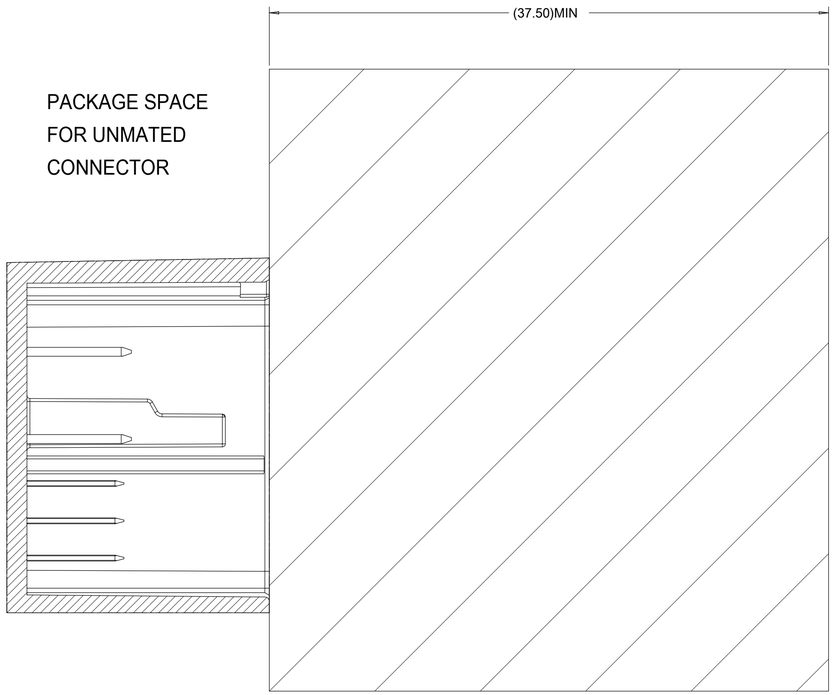
PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
SD-160014-002	PSD	001	B1

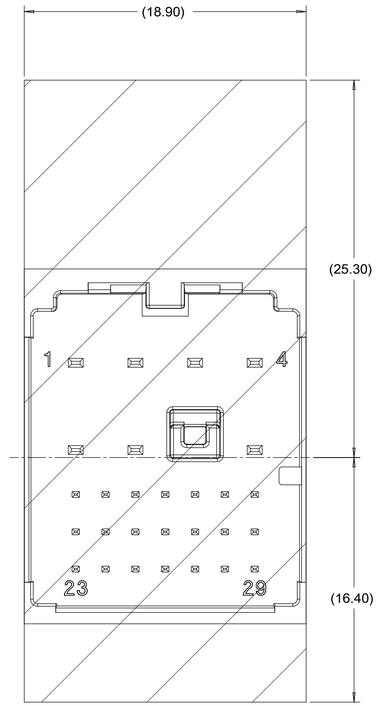
MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
	GENERAL MARKET	2 OF 3

DOCUMENT STATUS	P1	RELEASE DATE	2018/08/03 19:41:28

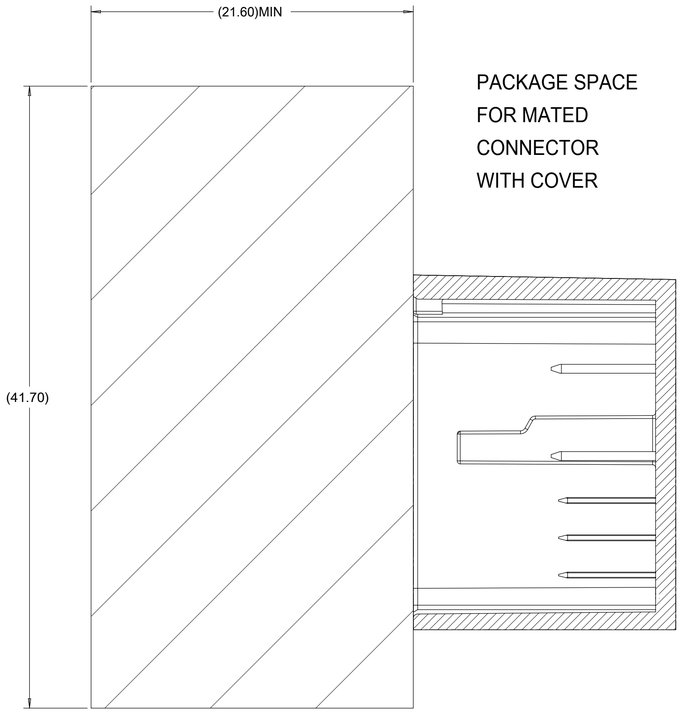
PACKAGE SPACE
FOR UNMATED
CONNECTOR



PACKAGE SPACE
FOR CONNECTOR



PACKAGE SPACE
FOR MATED
CONNECTOR
WITH COVER



SYMBOLS	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION			
A = 0	DIMENSION UNITS: mm	SCALE: 5:1	CURRENT REV DESC: ADD DIMENSION BALLOONS	molex
E = 0	GENERAL TOLERANCES (UNLESS SPECIFIED)			28WAY STAK50H INTERFACE DRAWING
B = 0	ANGULAR TOL ± °		EC NO: 602204	
S = 0	4 PLACES ±		DRWN: JCONDON 2018/07/31	PRODUCT CUSTOMER DRAWING
= 0	3 PLACES ±		CHK'D: JCONDON 2018/08/03	
C = 0	2 PLACES ±		APPR: MVANSLAMBROU 2018/08/03	DOCUMENT NUMBER: SD-160014-002 | DOC TYPE: PSD | DOC PART: 001 | REVISION: B1
= 0	1 PLACE ±		INITIAL REVISION:	
= 0	0 PLACES ±		DRWN: MYOUNG01 2013/11/14	
= 0	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		APPR: KDEKOSKI 2014/01/02	
V = 0	THIRD ANGLE PROJECTION	DRAWING: D-SIZE	SERIES: 160014	MATERIAL NUMBER | CUSTOMER: GENERAL MARKET | SHEET NUMBER: 3 OF 3

SEE NOTES

DOCUMENT STATUS	P1	RELEASE DATE	2018/08/03 19:41:28