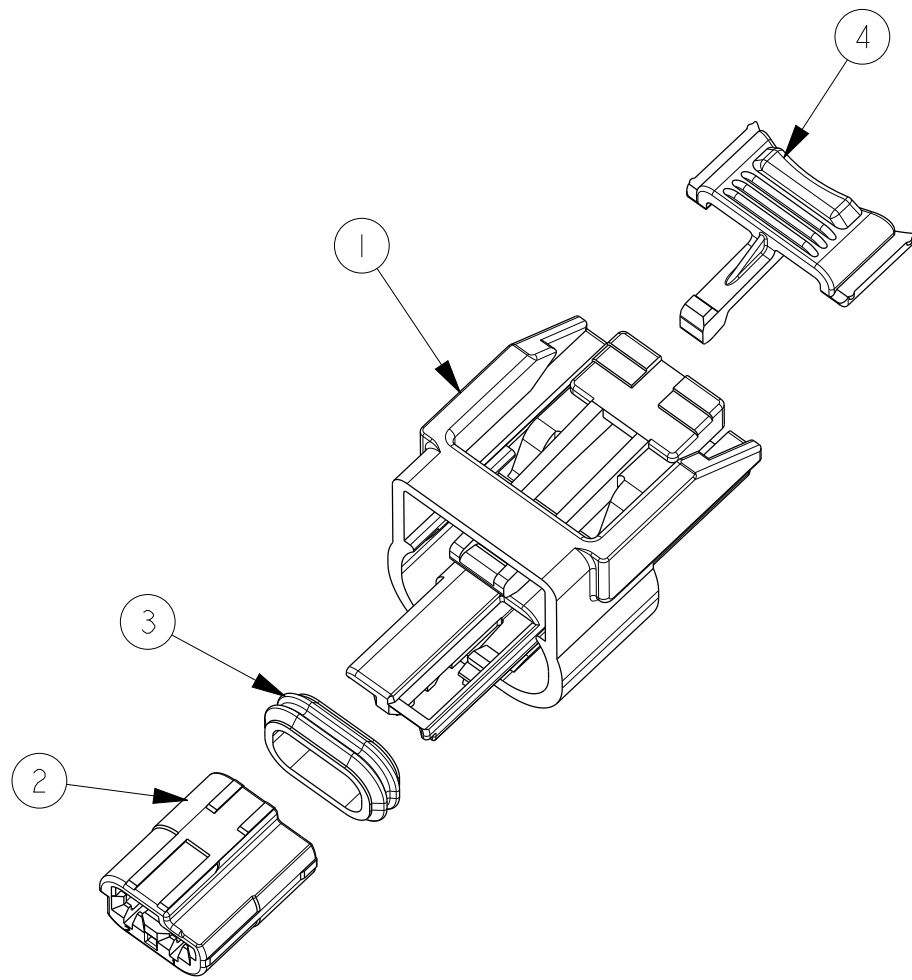


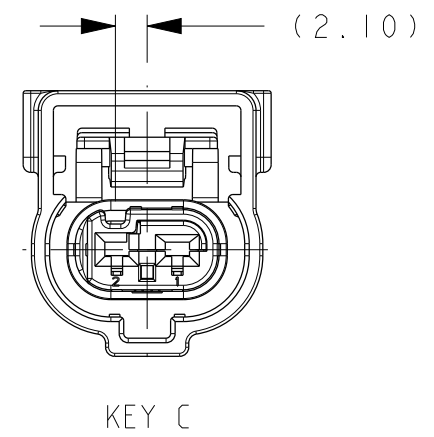
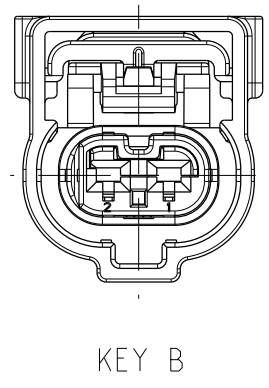
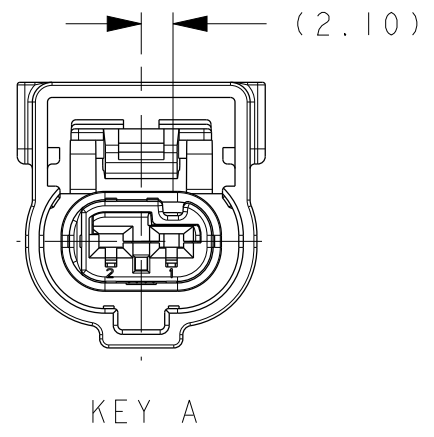
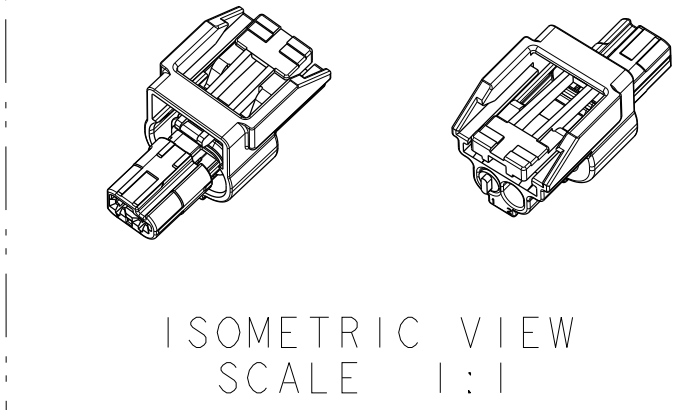
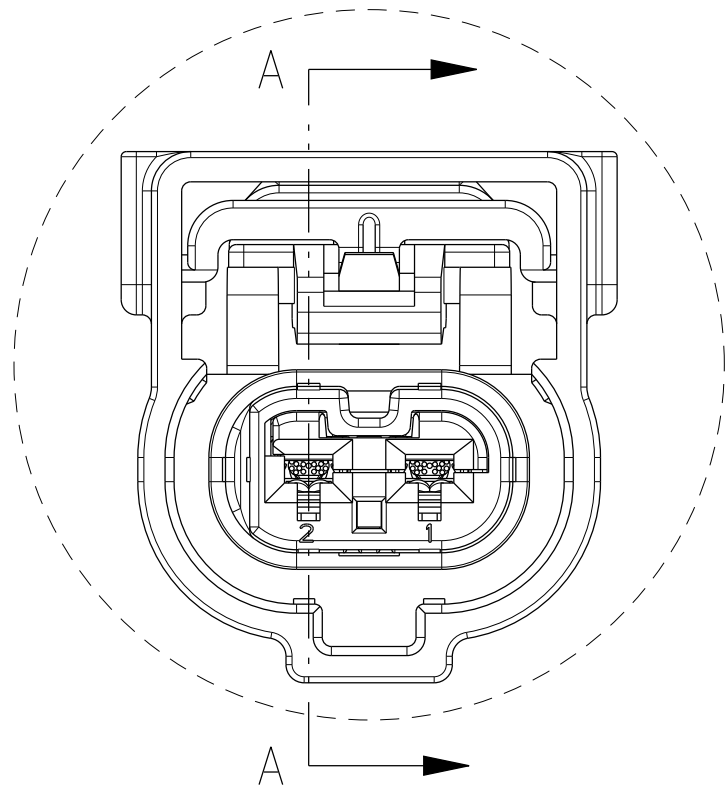
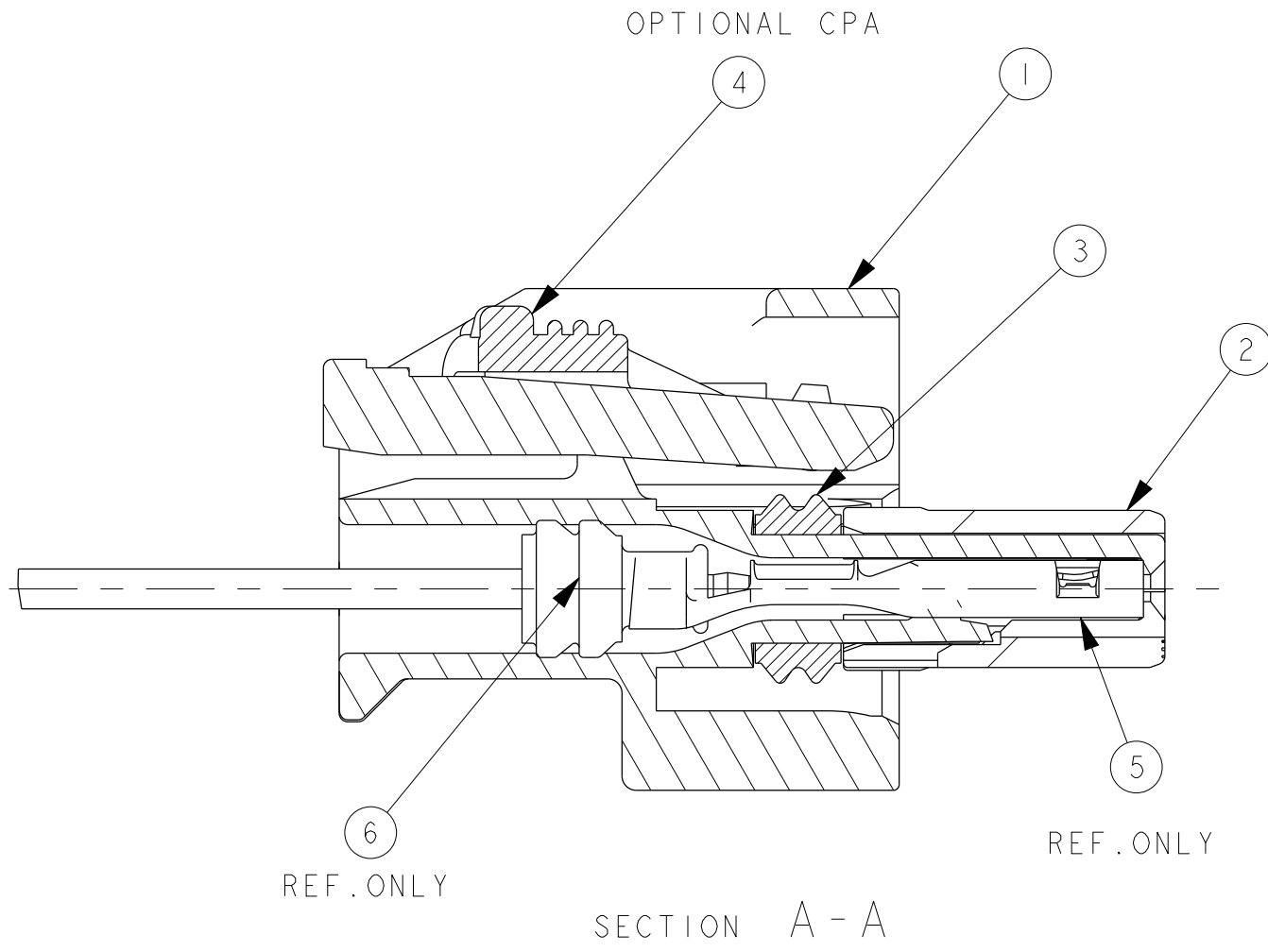
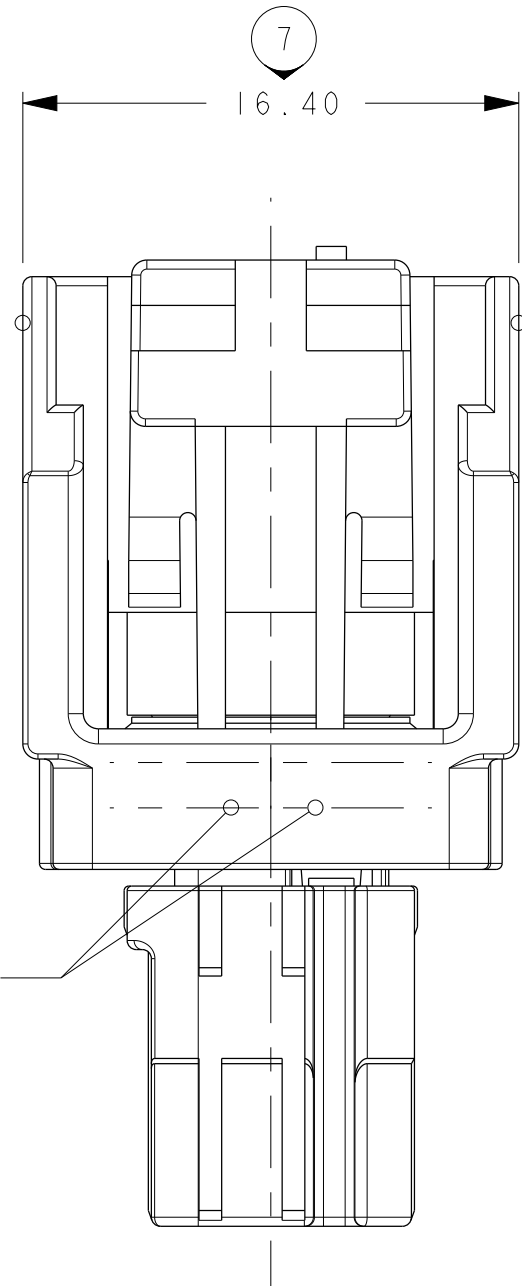
		16		15		14		13			
ASSEMBLY PART NUMBER CHART											
PART NUMBERS					KEY OPTION	COLOR	COMPONENTS				
DELPHI	REV	MVL	REV	INSULATOR (HOUSING)			TPA (BLUE)	RING SEAL (GREEN)	CPA (RED) (OPTIONAL)		
				ITEM 1			ITEM 2	ITEM 3	ITEM 4		
					PA66 GF35	PA66 GF35	SILICONE	PA66 GF35			
M	I3806231	01	F495100	A	A	BLACK	S106100	S506100	C895100	N/A	
	I3848932	01	F595100	A	B	LT GRAY	S206100	S606100			
	I5532568	01	F695100	A	C	DK GRAY	S306100	S706100			
	I3973607	02	F460400	B	A	BLACK	S106100	S506100			
	I33511726	02	F560400	B	B	LT GRAY	S206100	S606100	F752210		
I33511727	02	F660400	B	C	DK GRAY	S306100	S706100				

APPLICABLE COMPONENTS CHART									
ITEM NO.	DESCRIPTION	PLATING OR COLOR	SUPPLIER		DELPHI NUMBER	GRIP CODE	WIRE SIZE	INSULATION DIAMETER RANGE	MATERIAL/SPEC NO
			NAME	NUMBER					
5	I.20 SYSTEM TERMINAL	TIN	MVL	54001864	I3576990	I8	18-16 AWG 0.75-1.25mm ²	1.70mm-2.41mm	COPPER ALLOY / NA
	I.20 SYSTEM TERMINAL	TIN	MVL	54002006	I3806233	20	22-20 AWG 0.35-0.50mm ²	1.20mm-1.90mm	COPPER ALLOY / NA
	I.20 SYSTEM TERMINAL	TIN/SILVER	MVL	54001866	I3587331	I8	18-16 AWG 0.75-1.25mm ²	1.70mm-2.41mm	COPPER ALLOY / NA
	I.20 SYSTEM TERMINAL	TIN/SILVER	MVL	54002007	I5521522	20	22-20 AWG 0.35-0.50mm ²	1.20mm-1.90mm	COPPER ALLOY / NA
	I.20 SYSTEM TERMINAL	SILVER	MVL	F731400	I3805376	I8	18-16 AWG 0.75-1.25mm ²	1.70mm-2.41mm	COPPER ALLOY / NA
	I.20 SYSTEM TERMINAL	SILVER	MVL	F931400	I3805375	20	22-20 AWG 0.35-0.50mm ²	1.20mm-1.90mm	COPPER ALLOY / NA
	I.20 SYSTEM TERMINAL	GOLD	MVL	54001863	I3579640	I8	18-16 AWG 0.75-1.25mm ²	1.70mm-2.41mm	COPPER ALLOY / NA
	I.20 SYSTEM TERMINAL	GOLD	MVL	54002005	I3827658	20	22-20 AWG 0.35-0.50mm ²	1.20mm-1.90mm	COPPER ALLOY / NA
6	I.20 SYSTEM CABLE SEAL ROUND	RUST RED	MVL (QSR)	C528010 (A-0419)	I3898958	X	18-16 AWG 1.00-1.25mm ²	1.90mm-2.41mm	SILICONE
	I.20 SYSTEM CABLE SEAL ROUND	GREEN	MVL (QSR)	(A-0419C)	33402838		22-20 AWG 0.50-0.75mm ²	1.40mm-1.90mm	SILICONE
	I.20 SYSTEM CABLE SEAL ROUND	TAN	MVL (QSR)	C073510 (A-0419B)	33511987		0.35mm ²	1.20mm-1.40mm	SILICONE
7	I.20 SYSTEM SEAL PLUG	GREEN	MVL (QSR)	C628010 (A-0412)	I3898957	OPTIONAL AS REQUIRED			SILICONE



EXPLODED VIEW
(OPTIONAL CPA SHOWN)
SCALE 2:1

(ASSEMBLY DATE CODE &
PART NUMBER APPLIED
IN THIS LOCATION)



NOTES:

- 1) VALIDATED TO SAE/USCAR-2 REV 5
- 2) VALIDATED TO THE FOLLOWING TEMP, VIBRATION, AND SEALING CLASSES:
 - GMW3191 SECTION 4.28 V4 T4 (155°C) WITH GOLD OR SILVER TERMINALS
 - SAE/USCAR-2 V3 T4 (150°C) WITH GOLD OR SILVER TERMINALS
 - SAE/USCAR-2 V3 T3 (125°C) / V2 T4 (150°C) WITH TIN/SILVER TERMINALS
 - SAE/USCAR-2 V2 T3 (125°C) WITH TIN TERMINALS
 - SAE/USCAR-2 SEALING S3 T4 (150°C) (ISO16750 9K EQUIVALENT)
- 3) CONNECTOR MAY BE USED WITH THE FOLLOWING TERMINALS:
 - DELPHI APEX I.2 TERMINALS LISTED IN THE APPLICABLE COMPONENTS CHART ON THIS DRAWING WITH WIRE SIZES DEFINED IN NOTE 4.
 - SEE DELPHI DRAWING C18001-1-2-CUST FOR SPECIFIC TERMINAL DETAILS AND CRIMPING REQUIREMENTS
 - PLATING OF TERMINALS AND MATING DEVICE BLADES MUST BE COMPATIBLE
- 4) CONNECTOR SYSTEM VALIDATED TO USCAR-2 REQUIREMENTS WITH THE FOLLOWING RANGE OF WIRE SIZES AND TYPES IN CONJUNCTION WITH APPROPRIATE COMPONENTS FOUND IN THE "APPLICABLE COMPONENTS" CHART:
 - AWG - WIRE SIZES: 22AWG - 16AWG
INSULATION DIAMETER: 1.50mm MIN - 2.41mm MAX
WIRE TYPE: MIL123-A, MS-8288, MS-9502 OR EQUIVALENT (STRUCTURE AND PROPERTIES ACCORDING TO SAE J1128)
 - METRIC - WIRE SIZES: 0.35mm² - 1.25mm²
INSULATION DIAMETER: 1.20mm MIN - 2.30mm MAX
WIRE TYPE: FLR2X, FLR9X OR EQUIVALENT (STRUCTURE AND PROPERTIES ACCORDING TO ISO 6722)

CONTACT DELPHI ENGINEERING REGARDING USE OF OTHER WIRE SIZES AND/OR TYPES

WIRE AND INSULATION TYPE MUST BE APPROPRIATE FOR TEMPERATURE CLASS & APPLICATION ENVIRONMENT

- 5) CONNECTOR IS MATE COMPATIBLE WITH DEVICES WHICH CONFORM WITH THE FOLLOWING USCAR INTERFACE SPECIFICATIONS:
 - 120-S-002-1-201 (WITH EWCAP-001 TYPE 120-T BLADES)
 - 120-S-002-1-202 (WITH EWCAP-001 TYPE 120-T BLADES)
- 6) ANNUAL QUALITY REQUIREMENTS:
 - IT IS PERMISSIBLE TO PERFORM CONTINUOUS CONFORMANCE PER DELPHI SPECIFICATION #AQA-001 INSTEAD OF ANNUAL LAYOUT AND ANNUAL PV REQUIREMENTS OF ISO TS16949 AND SAE/USCAR-2 REV 5. FOR TERMINAL TO CONNECTOR AND TPA TO CONNECTOR ONLY.
- 7) SOURCE ID, MOLD & CAVITY ID SIGNIFIES TOOL OWNERSHIP, FOR REFERENCE
- 8) (K) INDICATES IN-PROCESS INSPECTION FOR MANUFACTURING DIMENSIONS OR SPECIFICATIONS.

ECN-13-01299	APP	CHRT	ADDED GREEN CABLE SEAL 33402838, REMOVED BLUE CABLE SEAL 54200391/I3576991
ECN-13-01227	-	-	ECO 423850 - UPDATE VIEWS FOR DESIGN IMPROVEMENT TO CPA F752210, DELPHI P/N'S ADDED FOR MVL P/N'S, REVISED NOTE 2 - UPDATE PERFORMANCE DATA FOR TIN/SILVER PLATING
ECN-12-01302	-	-	UPDATE CPA IN ASSY VIEWS
ECN-12-01227	PART BOM	-	F695100 COLOR WAS BROWN, F660400 COLOR WAS BROWN
ECN-12-01227	APP	CHRT	ADD PART NUMBER C073510, ADD 0.35MM & 22GA WIRE INFO
ECN-12-00892	-	-	NOTES REVISE NOTE 4 WITH 0.35mm & 22GA INFO
ECN-NO.	ZONE	CHANGE DESCRIPTION	
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APEX I.2			
TOLERANCES	±0.1	±2*	MATERIAL : SEE CHART
CONTRACTOR N.	SEE NOTE 5		
DO NOT MEASURE DRAWING			
DATE	NAME	TITLE	
2013/09/20	Frank HOLLER	PROJECT	2W SensoMate 12 Assembly
2013/12/05	Matt MAJOR	PROJECT	12MM USCAR INTERFACE
2013/12/05	Suzanne DIAN	ESR NO.	CAT. NO.
2013/12/05	Jeff CAMPBELL	FILE NAME	DOCUMENT UNDER PDS CONTROL NO MODIFICATION ALLOWED OUTSIDE
DELPHI	DELPHI PACKARD ELECTRICAL/ELECTRONIC ARCHITECTURE	ECO Loc. Code	AN
3RD ANGLE	DIMENSION IN MILLIMETERS	DRAWING NUMBER	REV.
PCC0682863	D	PCC0682863	
STATE	PART NUMBER	REVISION	
See Table			
CAD SYSTEM	PROJ. / ENG.	DWG SIZE	SHEET
	A1	1	1
			SCALE 4:1

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