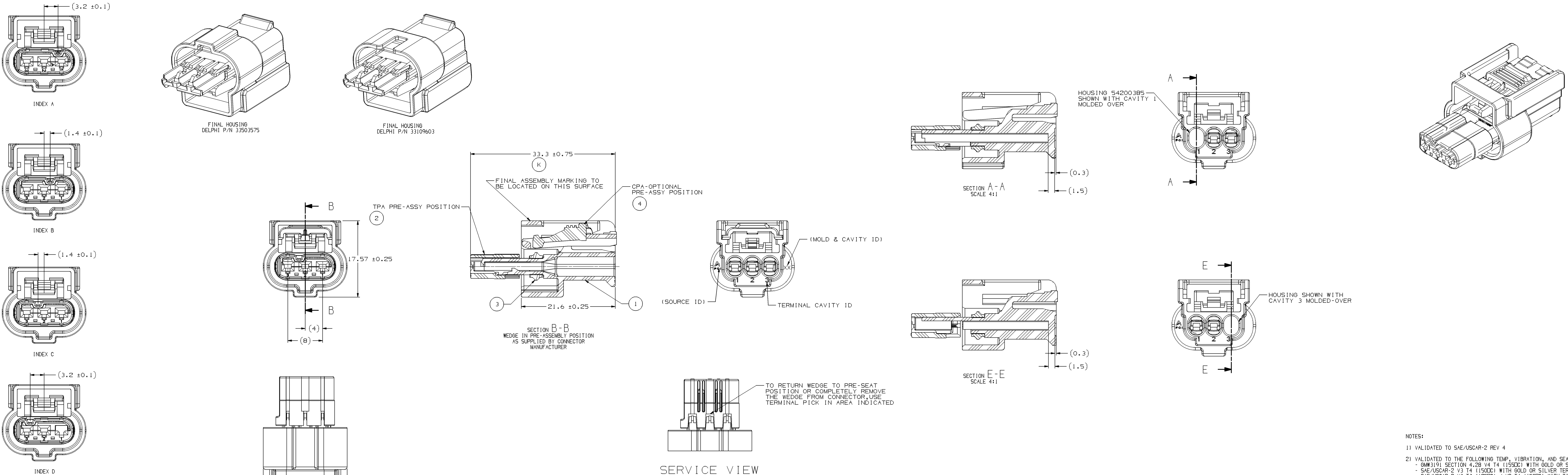




NOTES:

- 11 VALIDATED TO SAE/USCAR-2 REV 4
- 21 VALIDATED TO THE FOLLOWING TEMP, VIBRATION, AND SEALING CLASSES:
- BMW3191 SECTION 4.28 V4 T4 (1500C) WITH GOLD OR SILVER TERMINALS
 - SAE/USCAR-2 V3 T4 (1500C) WITH GOLD OR SILVER TERMINALS
 - SAE/USCAR-2 V3 T3 (1250C) / V2 T4 (1500C) WITH TIN/SILVER TERMINALS
 - SAE/USCAR-2 V2 T3 (1250C) WITH TIN TERMINALS
 - SAE/USCAR-2 SEALING 53 T4 (1500C) 115016750 9K EQUIVALENT
- 31 CONNECTOR MAY BE USED WITH THE FOLLOWING TERMINALS:
- DELPHI APEX 1.2 TERMINALS LISTED IN THE APPLICABLE COMPONENTS CHART ON THIS DRAWING WITH WIRE SIZES DEFINED IN NOTE 4.
 - SEE DELPHI DRAWING 018001-1-2-CUST FOR SPECIFIC TERMINAL DETAILS AND CRIMPING REQUIREMENTS
 - PLATING OF TERMINALS AND MATING DEVICE BLADES MUST BE COMPATIBLE
- 41 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: 0.5mm - 1.25mm
- 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
- 51 CONNECTOR IS MATE COMPATIBLE WITH DEVICES WHICH CONFORM WITH THE FOLLOWING USCAR INTERFACE SPECIFICATIONS:
- 120-S-003-1-Z01 (WITH EWCA-001 TYPE 120-T BLADES)
 - 120-S-003-1-Z02 (WITH EWCA-001 TYPE 120-T BLADES)
- 61 ANNUAL QUALITY REQUIREMENTS:
- IT IS PERMISSIBLE TO PERFORM CONTINUOUS CONFORMANCE PER DELPHI SPECIFICATION WMA-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.
- 71 SOURCE ID, MOLD & CAVITY ID SIGNIFIES TOOL OWNERSHIP, FOR REFERENCE OR SPECIFICATIONS.
- 91 FOR APPLICATION DATA SEE THE INDIVIDUAL APPLICATION DRAWINGS.

ITEM NO.	COMPONENT	MATERIAL
4	CPA	PA66 GF35
3	RING SEAL	SILICONE
2	TPA	PA66 GF35
1	HOUSING	PA66 GF35

33126400	01	AA	-	01	A					BLACK	33109603	-	33503735	54200386	33504635	54200392	33503756	F752210
13925686	01	AC	F177010	K	D	X				DK GRAY	33503578	54200385	33503737	54200389	33504635	54200392	33503756	F752210
33511474	01	AA	F600900	K	C					BROWN	33503577	54200384	33514705	54200388	33504635	54200392	33503756	F752210
13982959	01	AA	F500900	K	B					LT GRAY	33503576	54200383	33503736	54200387	33504635	54200392	33503756	F752210
13893234	01	AC	F519600	K	A					BLACK	33503575	54200382	33503735	54200386	33504635	54200392	33503756	F752210
13576035	01	AI	54200381	H	D	X				DK GRAY	33503578	54200385	33503737	54200389	33504635	54200392	N/A	N/A
33511473	01	AA	54200380	H	C					BROWN	33503577	54200384	33514705	54200388	33504635	54200392	N/A	N/A
13800877	01	AF	54200379	H	B					LT GRAY	33503576	54200383	33503736	54200387	33504635	54200392	N/A	N/A
33225996	01	AA	-	01	A			X		BLACK	33225995	-	33503735	54200386	33504635	54200392	N/A	N/A
13578335	01	AH	54200378	H	A					BLACK	33503575	54200382	33503735	54200386	33504635	54200392	N/A	N/A
DELPHI	REV	N/P	MVL	REV						COLOUR	DELPHI	MVL	DELPHI	MVL	DELPHI	MVL	DELPHI	MVL
PART NUMBERS					KEY OPTION	1	2	3		INSULATOR (HOUSING)			TPA (DK, BLUE)		RING SEAL (BURNT ORANGE)		CPA (RED)	

ITEM NO.	ITEM DESCRIPTION	PLATING OR COLOUR	SUPPLIER	DELPHI NUMBER	GRIP CODE	WIRE SIZE	INSULATION DIA	RANGE	MATERIAL/SPEC NO
7	1.20 SYSTEM CAVITY PLUG	GREEN	MVL (OSR)	13898957	-	OPTIONAL	OPTIONAL	-	SILICON
6	1.20 SYSTEM CABLE SEAL ROUND	TIN	MVL (OSR)	33511497	-	OPTIONAL	OPTIONAL	-	SILICON
5	1.20 SYSTEM CABLE SEAL ROUND	GREEN	MVL (OSR)	1A-0419C1	33402838	-	OPTIONAL	OPTIONAL	SILICON
6	1.20 SYSTEM CABLE SEAL ROUND	RUSTED RED	MVL (OSR)	13898958	-	OPTIONAL	OPTIONAL	-	SILICON
5	1.20 SYSTEM TERMINAL	GOLD	MVL	54002005	13827658	20	1.20mm - 1.90mm	-	COPPER ALLOY/NA
5	1.20 SYSTEM TERMINAL	SILVER	MVL	54001863	13579640	18	1.20mm - 2.41mm	-	COPPER ALLOY/NA
5	1.20 SYSTEM TERMINAL	SILVER	MVL	F931400	13805375	20	1.20mm - 1.90mm	-	COPPER ALLOY/NA
5	1.20 SYSTEM TERMINAL	SILVER	MVL	F731400	13805376	18	1.20mm - 2.41mm	-	COPPER ALLOY/NA
5	1.20 SYSTEM TERMINAL	TIN/SILVER	MVL	54002007	15521522	20	1.20mm - 1.90mm	-	COPPER ALLOY/NA
5	1.20 SYSTEM TERMINAL	TIN/SILVER	MVL	54001866	13587331	18	1.20mm - 2.41mm	-	COPPER ALLOY/NA
5	1.20 SYSTEM TERMINAL	TIN	MVL	54002006	13805373	20	1.20mm - 1.90mm	-	COPPER ALLOY/NA
5	1.20 SYSTEM TERMINAL	TIN	MVL	54001864	13576590	18	1.20mm - 2.41mm	-	COPPER ALLOY/NA

DIMENSION RANGE (MM)		THIRD ANGLE PROJECTION		DO NOT SCALE	
FROM	TO	SCALE	FRAME NO	SHEET NO	REV
10	20	1:1	1	2	1
20	30	1:2	1	2	1
30	40	1:3	1	2	1
40	50	1:4	1	2	1
50	60	1:5	1	2	1
60	70	1:6	1	2	1
70	80	1:8	1	2	1
80	90	1:10	1	2	1
90	100	1:12	1	2	1
100	120	1:15	1	2	1
120	150	1:20	1	2	1
150	200	1:25	1	2	1
200	300	1:30	1	2	1
300	500	1:40	1	2	1
500	1000	1:50	1	2	1
1000	1500	1:60	1	2	1
1500	2000	1:70	1	2	1
2000	3000	1:80	1	2	1
3000	5000	1:100	1	2	1
5000	10000	1:120	1	2	1
10000	15000	1:150	1	2	1
15000	20000	1:200	1	2	1
20000	30000	1:250	1	2	1
30000	50000	1:300	1	2	1
50000	100000	1:400	1	2	1
100000	150000	1:500	1	2	1
150000	200000	1:600	1	2	1
200000	300000	1:800	1	2	1
300000	500000	1:1000	1	2	1
500000	1000000	1:1200	1	2	1
1000000	1500000	1:1500	1	2	1
1500000	2000000	1:2000	1	2	1
2000000	3000000	1:2500	1	2	1
3000000	5000000	1:3000	1	2	1
5000000	10000000	1:4000	1	2	1
10000000	15000000	1:5000	1	2	1
15000000	20000000	1:6000	1	2	1
20000000	30000000	1:8000	1	2	1
30000000	50000000	1:10000	1	2	1
50000000	100000000	1:12000	1	2	1
100000000	150000000	1:15000	1	2	1
150000000	200000000	1:20000	1	2	1
200000000	300000000	1:25000	1	2	1
300000000	500000000	1:30000	1	2	1
500000000	1000000000	1:40000	1	2	1
1000000000	1500000000	1:50000	1	2	1
1500000000	2000000000	1:60000	1	2	1
2000000000	3000000000	1:80000	1	2	1
3000000000	5000000000	1:100000	1	2	1
5000000000	10000000000	1:120000	1	2	1
10000000000	15000000000	1:150000	1	2	1
15000000000	20000000000	1:200000	1	2	1
20000000000	30000000000	1:250000	1	2	1
30000000000	50000000000	1:300000	1	2	1
50000000000	100000000000	1:400000	1	2	1
100000000000	150000000000	1:500000	1	2	1
150000000000	200000000000	1:600000	1	2	1
200000000000	300000000000	1:800000	1	2	1
300000000000	500000000000	1:1000000	1	2	1
500000000000	1000000000000	1:1200000	1	2	1
1000000000000	1500000000000	1:1500000	1	2	1
1500000000000	2000000000000	1:2000000	1	2	1
2000000000000	3000000000000	1:2500000	1	2	1
3000000000000	5000000000000	1:3000000	1	2	1
5000000000000	10000000000000	1:4000000	1	2	1
10000000000000	15000000000000	1:5000000	1	2	1
15000000000000	20000000000000	1:6000000	1	2	1
20000000000000	30000000000000	1:8000000	1	2	1
30000000000000	50000000000000	1:10000000	1	2	1
50000000000000	100000000000000	1:12000000	1	2	1
100000000000000	150000000000000	1:15000000	1	2	1
150000000000000	200000000000000	1:20000000	1	2	1
200000000000000	300000000000000	1:25000000	1	2	1
300000000000000	500000000000000	1:30000000	1	2	1
500000000000000	1000000000000000	1:40000000	1	2	1
1000000000000000	1500000000000000	1:50000000	1	2	1
1500000000000000	2000000000000000	1:60000000	1	2	1
2000000000000000	3000000000000000	1:80000000	1	2	1
3000000000000000	5000000000000000	1:100000000	1	2	1
5000000000000000	10000000000000000	1:120000000	1	2	1
10000000000000000	15000000000000000	1:150000000	1	2	1
15000000000000000	20000000000000000	1:200000000	1	2	1
20000000000000000	30000000000000000	1:250000000	1	2	1
30000000000000000	50000000000000000	1:300000000	1	2	1
50000000000000000	100000000000000000	1:400000000	1	2	1
100000000000000000	150000000000000000	1:500000000	1	2	1
150000000000000000	200000000000000000	1:600000000	1	2	1
200000000000000000	300000000000000000	1:800000000	1	2	1
300000000000000000	500000000000000000	1:1000000000	1	2	1
500000000000000000	1000000000000000000	1:1200000000	1	2	1
1000000000000000000	1500000000000000000	1:1500000000	1	2	1
1500000000000000000	2000000000000000000	1:2000000000	1	2	1
2000000000000000000	3000000000000000000	1:2500000000	1	2	1
3000000000000000000	5000000000000000000	1:3000000000	1	2	1
5000000000000000000	10000000000000000000	1:4000000000	1	2	1
10000000000000000000	15000000000000000000	1:5000000000	1	2	1
15000000000000000000	20000000000000000000	1:6000000000	1	2	1
20000000000000000000	30000000000000000000	1:8000000000	1	2	1
30000000000000000000	50000000000000000000	1:10000000000	1	2	1
50000000000000000000	100000000000000000000	1:12000000000	1	2	1
100000000000000000000	150000000000000000000	1:15000000000	1	2	1
150000000000000000000	200000000000000000000	1:20000000000	1	2	1
200000000000000000000	300000000000000000000	1:25000000000	1	2	1
300000000000000000000	500000000000000000000	1:30000000000	1	2	1
500000000000000000000	1000000000000000000000	1:40000000000	1	2	1
1000000000000000000000	1500000000000000000000	1:50000000000	1	2	1
1500000000000000000000	2000000000000000000000	1:60000000000	1	2	1
200000000000					