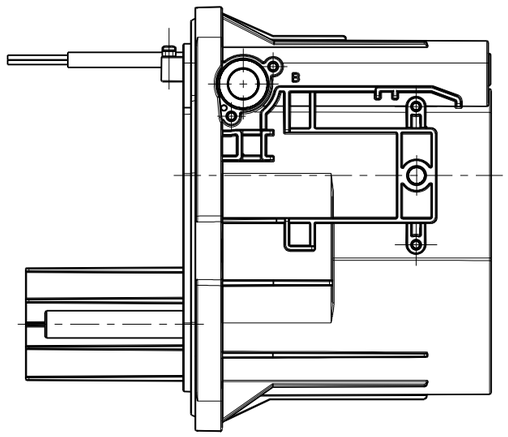
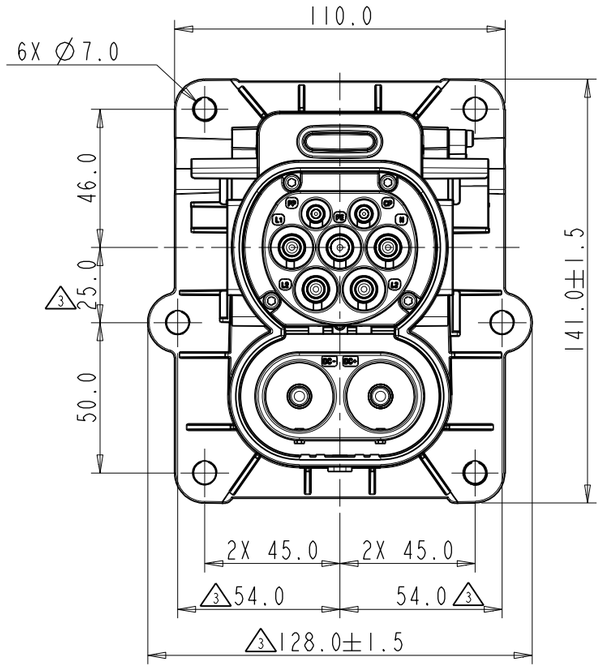
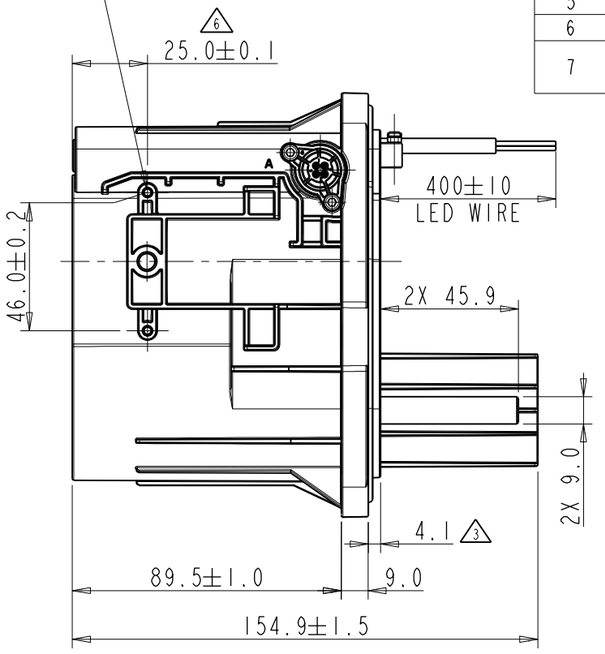
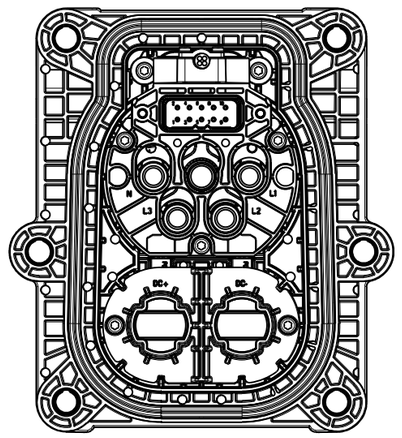
C-HVCOCF05XXX

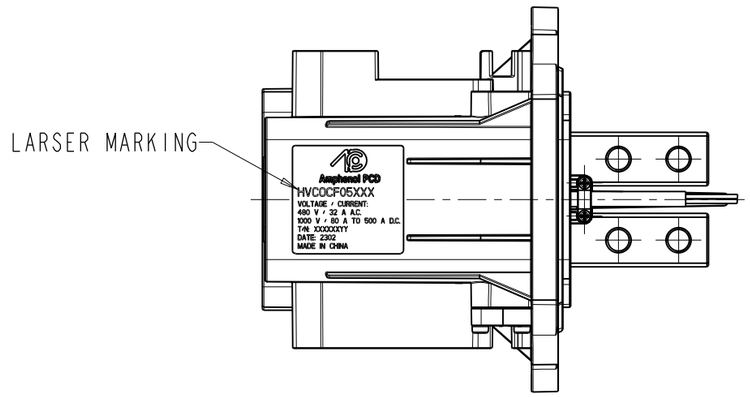
REV	ECN	DESCRIPTION	DATE	MODIFIED
2		CHANGE INSTALLATION DIMENSIONS	Feb-08-2023	.
3		CHANGE BACK TO ORIGINAL DIMENSIONS ADD PLANENESS OF MOUNTING PANEL UPDATE INFO OF TEMPERATURE SENSORS	Mar-03-2023	
4		REMOVE 4-PIN CONNECTOR, AND CHG DESIGN	Apr-21-2023	.
5		CHG ACTUATOR P/N, ADD NOTES	May-16-2023	
6		CHG DIMENSION	May-19-2023	.
7	R7552N-1	CORRECT MARKING CONTENT REMARK, CHG CONTENTS OF NOTE 14 IN TABLE 1	Aug-16-2024	

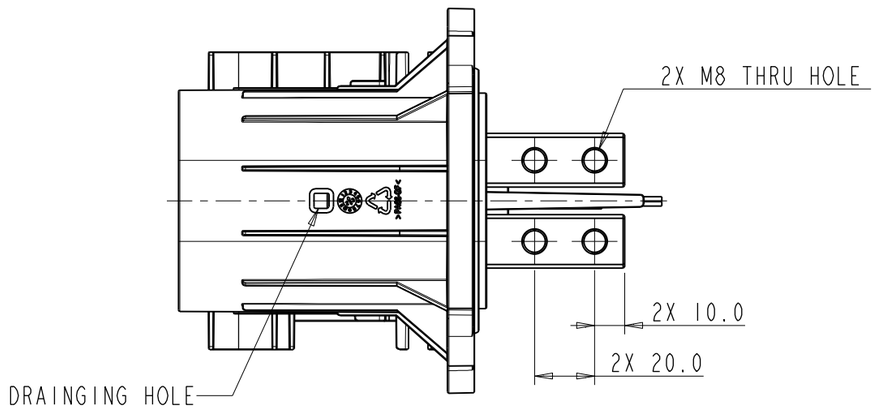












LASER MARKING CONTENTS

△1
HVCOCF05XXX
VOLTAGE / CURRENT
480 V / 32 A A.C.
1000 V / 80 A TO 500 A D.C.
T/N: XXXXXXYY
DATE: 2302
MADE IN CHINA

HVCOCF05XXX: VEHICLE INLET P/N, SEE TABLE 6.
THE PARAMETER VALUES OF VOLTAGE AND CURRENT ARE SHOWN IN TABLE 6.
XXXXX: WORK ORDER.
YY: PRODUCTION BATCH NUMBER FOR A WORK ORDER.
2302: DATE OF MANUFACTURE, YYWW.

DIMENSIONS	TOLERANCES	PROJECTION		TITLE
ANSI Y14.5M UNITS: MM Pro/E FILE	.X ±0.5 .XX ±0.05 ANGLES ±2°		ENGR Jan-11-2023	CCS2 VEHICLE INLET CONNECTED TO BUSBAR
ORIGINAL	THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION WHICH IS THE CONFIDENTIAL PROPERTY OF Amphenol PCD Shenzhen Co. Ltd Amphenol PCD Shenzhen Co. Ltd RESERVES THE RIGHT TO CLARIFY THIS DRAWING		CHKD APPD	SIZE A3 · DWG NO. C-HVCOCF05XXX · REV 7 SCALE: 1:2 · SHEET 1 OF 6

C-HVCOCF05XXX
C-HVCOCF05XXX

TABLE 1 SPECIFICATION AND REQUIREMENTS

NOTE	DESCRIPTION	SPECIFICATION OR REQUIREMENT	
1	HOUSING MATERIAL	SHELL: PA66+GF, UL94 V-0, f1, BLACK COLOR. LED COVER: PC, UL94 V-0, f1, WHITE COLOR.	✦
2	RUBBER MATERIAL	SILICONE RUBBER, UL94 HB	✦
3	TERMINAL MATERIAL	DC/AC/PE/CP/PP: COPPER ALLOY, PLATING SLIVER. OTHER SIGINAL TERMINAL: COPPER ALLOY, PLATING TIN.	✦
4	CABLE SPEC	COMPLIANT WITH LV216, SEE TABLE 7	
5	MAX. RATING CURRENT	SEE TABLE 6 AND TABLE 7	✦
6	MAX. RATING VOLTAGE	SIGNAL: 30 VDC AC: 250 V FOR 1 PHASE, 480 V FOR 3 PHASES DC: 1000 V	✦
7	DIELECTRIC WITHSTAND VOLTAGE	SIGNAL: 500 V A.C. / 60 S AC: 2000 V A.C. / 60 S DC: 3000 V A.C. / 60 S	✦
8	INSULATION RESISTANCE (NORMAL CLIMATE)	MIN. 100 MΩ	✦
9	OPERATING AMBIENT TEMPERATURE	-30 °C TO +40 °C	
10	MAX. WORKING TEMPERATURE	90 °C	◎
11	TEMPERATURE SENSOR TYPE	NTC OR PT1000 FOR AC CHARGING, PT1000 FOR DC CHARGING SPEC OF TEMPERATURE SENSORS ARE SHOWN IN TABLE 2 AND 4.	
12	MOUNTING TORQUE FOR INLET	9±1 N.m	◎
13	MOUNTING TORQUE FOR ST2.9X10(12)	0.50±0.025 N.m	◎
△7 14	MOUNTING TORQUE FOR SCREW ST2.2	0.25+0.02 N.m, FIX LED WIRE	◎
15	DEGREE OF PROTECTION	PLUGGED IN: IP44 WITH LIDS: IP55 CONNECTOR ENCLOSURE: IP67	✦
16	MATING CYCLES (UNLOADED)	10,000 CYCLES	◎
17	NEUTRAL SALT SPRAY TEST	240H, NOT OCCUR RED CORROSION.	
18	IEC STANDARD	REFER TO IEC 62196-1,2,3	
19	CHARGING MODE	MODE 2/3/4	
20	PACKING	ALL COMPONENTS ARE PACKED SEPARATELY	
21	ROHS COMPLIANCE	YES	✦
22	RECOMMENDED HOLE LAYOUT IN MOUNTING PANEL	SEE FIGURE 1	
23	CONNECTING METHOD FOR TERMINALS	AC/PE: CRIMP DC: LUG OR BUSBAR, M8, TIGHTENING TORQUE 13.4±1.5 N.m	◎
24	WIRING DIAGRAM FOR INLET	SEE FIGURE 2	
25	WIRING DIAGRAM FOR LED INDICATOR LIGHT	SEE FIGURE 3, WORKING VOLTAGE: 12V	
26	SUITABLE SIGINAL CONNECTOR	NEED ORDER SEPARATELY, PART NUMBERS ARE SHOWN IN TABLE 6.	

✦ CRITICAL CHARACTERISTICS 关键特性
◎ IMPORTANT CHARACTERISTICS 重要特性

FIGURE 1 RECOMMENDED HOLE LAYOUT IN MOUNTING PANEL

RECOMMENDED MIN. WALL THICKNESS: MORE THAN 6 mm
TOLERANCES: ±0.1 mm,
△3 PLANENESS: 0.1 mm.

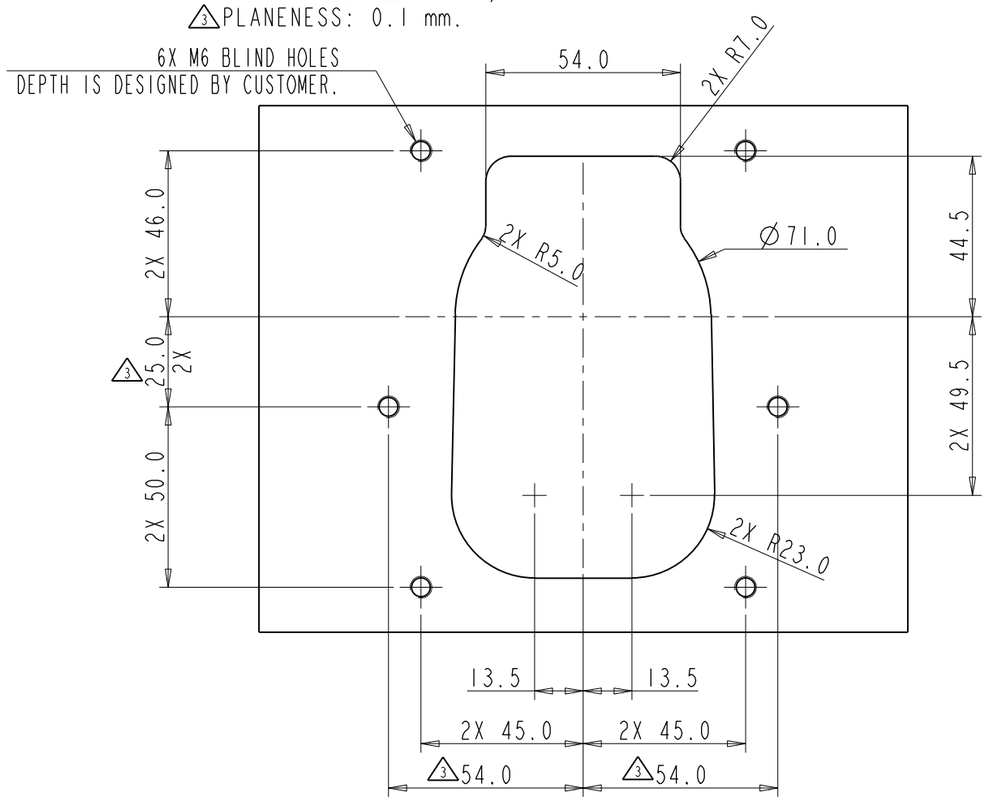
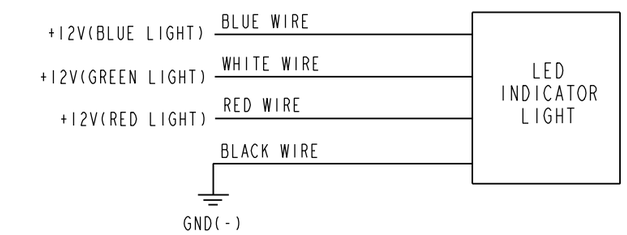


FIGURE 3 WIRE DIAGRAM FOR LED INDICATOR LIGHT



SIZE	DWG NO.	REV
A3	C-HVCOCF05XXX	7
	SCALE: 1:2	SHEET 2 OF 6

C-HVCOCF05XXX
C-HVCOCF05XXX

TABLE 2 NTC TEMPERATURE SENSOR

PARAMETER	SPECIFICATION AND REQUIREMENT
RESISTANCE VALUE AT 25°C	10KΩ
TOLERANCE ON R_{25}-VALUE	±1%
OPERATING TEMPERATURE RANGE AT ZERO POWER	-40 °C TO +105 °C 3
$B_{25°C/85°C}$-VALUE	3960K 3
TOLERANCE ON $B_{25°C/85°C}$-VALUE	±1% 3
RESPONSE TIME(63.2%) 25°C TO 85°C STIRRED AIR (FOR INFO)(THERMAL TIME CONSTANT τ)	≈8 s 3
DISSIPATION FACTOR δ IN STILL AIR (FOR INFO)	3.0 mW/K 3
MAXIMUM POWER DISSIPATION AT 25°C	125 mW 3
MEASURED TEMPERATURE DIFFERENCE 3	WHEN CHAGRING AT RATING CURRENT AND AT HIGH TEMPERATURE STAGE, THE TEMPERATURE MEASURED BY THE TEMPERATURE SENSOR IS LESS 5°C THAN THE ACTUAL TEMPERATURE. 3
R-T VALUE	REFER TO R-T INDEXING TABLE IN TABLE 3
$T(R_{NTC})$=90 °C 3 PLEASE CONSIDER THE TEMPERATURE DEVIATION VALUE.	THE CHARGE CURRENT MUST BE REDUCED IN ORDER TO PREVENT FURTHER INCREASE OF TEMPERATURE AT THE CONTACTS.
$T(R_{NTC})$=100 °C 3 PLEASE CONSIDER THE TEMPERATURE DEVIATION VALUE.	CHARGING PROCESS HAS TO BE SHUT DOWN!

TABLE 4 PT1000 TEMPERATURE SENSOR

PARAMETER	SPECIFICATION AND REQUIREMENT
STANDARD	DIN EN 60751
TOLERANCE	CLASS 2B(R_0:±0.24%)
OPERATING TEMPERATURE RANGE	-40 °C TO +105 °C 4
TEMPERATURE COEFFICIENT	TCR=3850 ppm/K
MEASURING CURRENT	0.1 TO 0.3 mA
SELF HEATING	0.8 K/mW at 0°C
REACTION TIME	<3 s TBD
MEASURED TEMPERATURE DIFFERENCE 3	WHEN CHAGRING AT RATING CURRENT AND AT HIGH TEMPERATURE STAGE, THE TEMPERATURE MEASURED BY THE TEMPERATURE SENSOR IS LESS THAN THE ACTUAL TEMPERATURE: 7°C FOR DC LIQUID-COOLED CHARGING; 10°C FOR DC NON LIQUID-COOLED CHARGING; 3
R-T VALUME	REFER TO R-T INDEXING TABLE IN TABLE 5
$T(R_{PT1000})$=90 °C 3 PLEASE CONSIDER THE TEMPERATURE DEVIATION VALUE.	THE CHARGE CURRENT MUST BE REDUCED IN ORDER TO PREVENT FURTHER INCREASE OF TEMPERATURE AT THE CONTACTS.
$T(R_{PT1000})$=100 °C 3 PLEASE CONSIDER THE TEMPERATURE DEVIATION VALUE.	CHARGING PROCESS HAS TO BE SHUT DOWN!

TABLE 3 R-T INDEXING TABLE FOR NTC, UNIT: KΩ 3

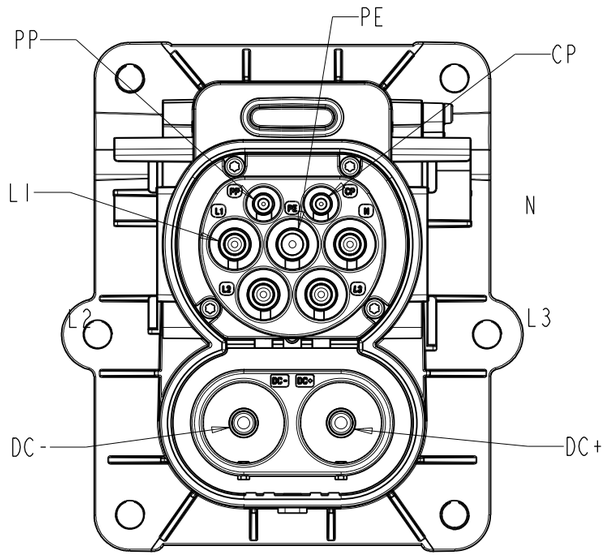
Temp.(°C)	0	+1	+2	+3	+4	+5	+6	+7	+8	+9
-40	347.116	324.819	304.079	284.781	266.817	250.089	234.504	219.980	206.438	193.808
-30	182.023	171.022	160.750	151.154	142.187	133.803	125.963	118.627	111.762	105.333
-20	99.312	93.671	88.382	83.424	78.772	74.407	70.309	66.462	62.847	59.450
-10	56.257	53.254	50.428	47.770	45.267	42.910	40.689	38.597	36.624	34.764
0	33.009	31.353	29.790	28.313	26.919	25.602	24.356	23.179	22.065	21.012
10	20.015	19.071	18.177	17.330	16.527	15.767	15.045	14.362	13.712	13.096
20	12.512	11.957	11.429	10.928	10.452	10.000	9.569	9.160	8.770	8.399
30	8.046	7.710	7.390	7.085	6.794	6.517	6.253	6.001	5.760	5.531
40	5.312	5.103	4.903	4.713	4.530	4.356	4.190	4.030	3.878	3.732
50	3.593	3.460	3.332	3.210	3.093	2.980	2.873	2.770	2.671	2.576
60	2.486	2.399	2.315	2.235	2.158	2.084	2.013	1.945	1.879	1.816
70	1.756	1.698	1.642	1.588	1.536	1.486	1.439	1.392	1.348	1.305
80	1.264	1.225	1.186	1.150	1.114	1.080	1.047	1.015	0.985	0.955
90	0.927	0.899	0.873	0.847	0.822	0.798	0.775	0.753	0.732	0.711
100	0.691	0.671	0.652	0.634	0.617	0.600	0.583	0.567	0.552	0.537
110	0.523	0.509	0.495	0.482	0.469	0.457	0.445	0.434	0.423	0.412
120	0.401	-	-	-	-	-	-	-	-	-

TABLE 5 R-T INDEXING TABLE FOR PT1000, UNIT: Ω

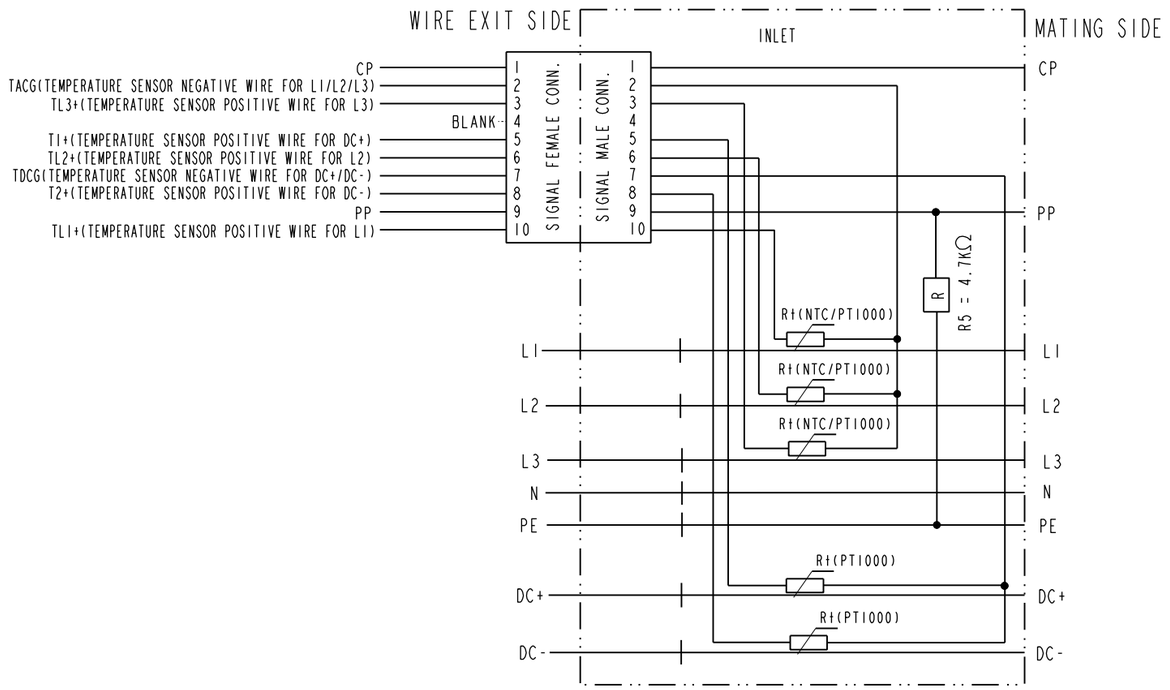
Temp.(°C)	0	+1	+2	+3	+4	+5	+6	+7	+8	+9
-50	803.08	807.05	811.02	814.98	818.95	822.91	826.88	830.84	834.80	838.76
-40	842.72	846.67	850.63	854.58	858.54	862.49	866.44	870.39	874.33	878.28
-30	882.22	886.17	890.11	894.05	897.99	901.93	905.87	909.80	913.74	917.67
-20	921.60	925.54	929.47	933.39	937.32	941.25	945.17	949.10	953.02	956.94
-10	960.86	964.78	968.70	972.62	976.53	980.45	984.36	988.27	992.18	996.09
0	1000.00	1003.91	1007.81	1011.72	1015.62	1019.53	1023.43	1027.33	1031.23	1035.13
10	1039.02	1042.92	1046.81	1050.71	1054.60	1058.49	1062.38	1066.27	1070.16	1074.04
20	1077.93	1081.81	1085.70	1089.58	1093.46	1097.34	1101.22	1105.10	1108.97	1112.85
30	1116.72	1120.59	1124.47	1128.34	1132.21	1136.07	1139.94	1143.81	1147.67	1151.53
40	1155.40	1159.26	1163.12	1166.98	1170.84	1174.69	1178.55	1182.40	1186.25	1190.11
50	1193.96	1197.81	1201.66	1205.50	1209.35	1213.19	1217.04	1220.88	1224.72	1228.56
60	1232.40	1236.24	1240.08	1243.91	1247.75	1251.58	1255.41	1259.25	1263.08	1266.90
70	1270.73	1274.56	1278.38	1282.21	1286.03	1289.85	1293.67	1297.49	1301.31	1305.13
80	1308.95	1312.76	1316.58	1320.39	1324.20	1328.01	1331.82	1335.63	1339.43	1343.24
90	1347.02	1350.85	1354.65	1358.45	1362.25	1366.05	1369.85	1373.65	1377.44	1381.23
100	1385.03	1388.82	1392.61	1396.40	1400.19	1403.98	1407.76	1411.55	1415.33	1419.11
110	1422.90	1426.68	1430.46	1434.23	1438.01	1441.79	1445.56	1449.33	1453.11	1456.88
120	1460.65	1464.42	1468.18	1471.95	1475.72	1479.48	1483.24	1487.01	1490.77	1494.53

C-HVC0CF05XXX
C-HVC0CF05XXX

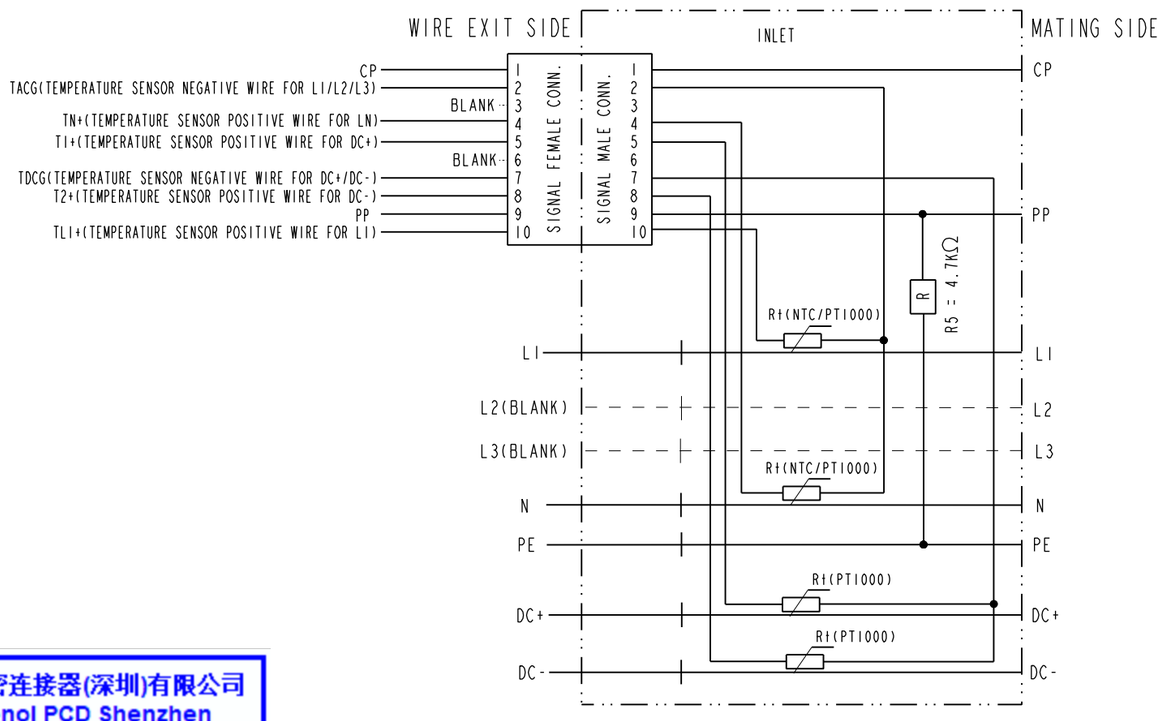
FIGURE 2 WIRING DIAGRAM FOR INLET



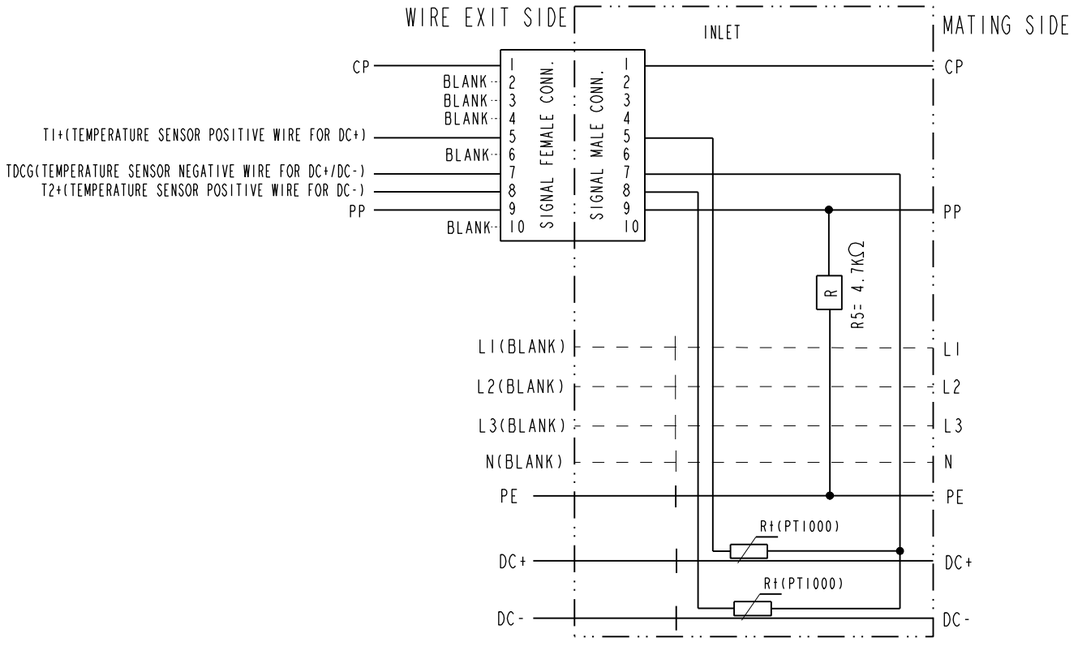
3-PHASE AC CHARGING AND DC CHARGING



1-PHASE AC CHARGING AND DC CHARGING



ONLY DC CHARGING



SIZE	DWG NO.	REV
A3	C-HVCOCF05XXX	7
	SCALE: 3:5	SHEET 4 OF 6

C-HVCOCF05XXX
C-HVCOCF05XXX

TABLE 6 PRODUCT LIST
XXX IN THE PART NUMBER IS DESIGNATED BY THE MANUFACTURER.
WHEN DC CHARGING CURRENT EXCEEDS 300A, LIQUID-COOLED CHARGING IS RECOMMENDED.

P/N OF VEHICLE INLET	AC PHASE NUMBER	AC CONDUCTOR SIZE mm^2	AC MAX. RATING VOLTAGE V	AC MAX. RATING CURRENT A	DC MAX. RATING VOLTAGE V	DC MAX. RATING CURRENT A	AC TEMPERATURE SENSOR	DC TEMPERATURE SENSOR	LED VOLTAGE V	MOUNTING DIRECTION OF ACTUATOR	PART NO. OF SUITABLE SIGNAL FEMALE CONNECTOR
HVCOCF0501DL HVCOCF0501DR	3	6	480	32	1000	80 TO 500	NTC	PT1000	12	L: LEFT R: RIGHT	P08B003426
HVCOCF0502DL HVCOCF0502DR	3	16	480	63	1000	80 TO 500	NTC	PT1000	12	L: LEFT R: RIGHT	P08B003426
HVCOCF0503DL HVCOCF0503DR	1	6	250	32	1000	80 TO 500	NTC	PT1000	12	L: LEFT R: RIGHT	P08B003427
HVCOCF0504DL HVCOCF0504DR	1	16	250	63	1000	80 TO 500	NTC	PT1000	12	L: LEFT R: RIGHT	P08B003427
HVCOCF0505DL HVCOCF0505DR	NONE	NONE	NONE	NONE	1000	80 TO 500	NONE	PT1000	12	L: LEFT R: RIGHT	P08B003428
HVCOCF0506PL HVCOCF0506PR	3	6	480	32	1000	80 TO 500	PT1000	PT1000	12	L: LEFT R: RIGHT	P08B003426
HVCOCF0507PL HVCOCF0507PR	3	16	480	63	1000	80 TO 500	PT1000	PT1000	12	L: LEFT R: RIGHT	P08B003426
HVCOCF0508PL HVCOCF0508PR	1	6	250	32	1000	80 TO 500	PT1000	PT1000	12	L: LEFT R: RIGHT	P08B003427
HVCOCF0509PL HVCOCF0509PR	1	16	250	63	1000	80 TO 500	PT1000	PT1000	12	L: LEFT R: RIGHT	P08B003427
HVCOCF0510L HVCOCF0510R	3	6	480	32	1000	80 TO 500	NTC	PT1000	NONE	L: LEFT R: RIGHT	P08B003426
HVCOCF0511L HVCOCF0511R	3	16	480	63	1000	80 TO 500	NTC	PT1000	NONE	L: LEFT R: RIGHT	P08B003426
HVCOCF0512L HVCOCF0512R	1	6	250	32	1000	80 TO 500	NTC	PT1000	NONE	L: LEFT R: RIGHT	P08B003427
HVCOCF0513L HVCOCF0513R	1	16	250	63	1000	80 TO 500	NTC	PT1000	NONE	L: LEFT R: RIGHT	P08B003427
HVCOCF0514L HVCOCF0514R	NONE	NONE	NONE	NONE	1000	80 TO 500	NONE	PT1000	NONE	L: LEFT R: RIGHT	P08B003428
HVCOCF0515L HVCOCF0515R	3	6	480	32	1000	80 TO 500	PT1000	PT1000	NONE	L: LEFT R: RIGHT	P08B003426
HVCOCF0516L HVCOCF0516R	3	16	480	63	1000	80 TO 500	PT1000	PT1000	NONE	L: LEFT R: RIGHT	P08B003426
HVCOCF0517L HVCOCF0517R	1	6	250	32	1000	80 TO 500	PT1000	PT1000	NONE	L: LEFT R: RIGHT	P08B003427
HVCOCF0518L HVCOCF0518R	1	16	250	63	1000	80 TO 500	PT1000	PT1000	NONE	L: LEFT R: RIGHT	P08B003427

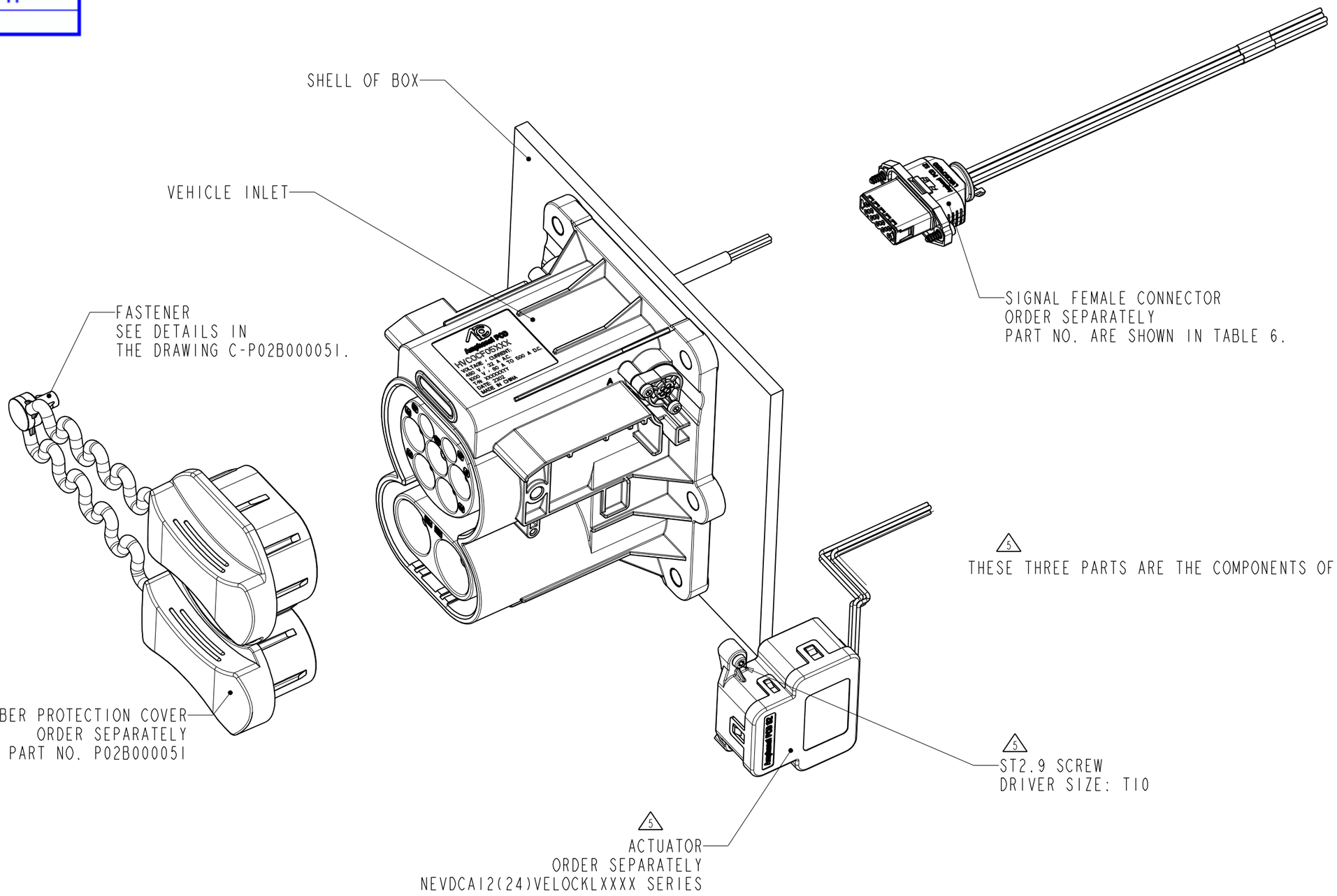
TABLE 7 CABLE SPEC (SHIELDED CABLE OR NON-SHIELDED CABLE) △4

CABLE APPLIED	CONDUCTOR SIZE mm^2	MAX. O.D. OF CABLE mm	MAX. RATING CURRENT A
AC CABLE	6	6.25±0.25	32
	16	9.9±0.3	63
DC CABLE (OPTIONAL)	70	N/A	200
	95	N/A	300
	120	N/A	400
	150	N/A	500
PE CABLE	25	9.7±0.3	N/A
SIGNAL CABLE IN SIGNAL CONNECTOR	0.75	N/A	2
SIGNAL CABLE OF LED AND ACTUATOR	0.5	N/A	1

C-HVCOCF05XXX
C-HVCOCF05XXX

SIZE	DWG NO.	REV
A3	C-HVCOCF05XXX	7
	SCALE: 1:2	SHEET 5 OF 6

OTHER PARTS ASSEMBLED WITH THE INLET △4



△5 THESE THREE PARTS ARE THE COMPONENTS OF VEHICLE INLET.

C-HVCOCF05XXX

C-HVCOCF05XXX

SIZE	DWG NO.	REV
A3	C-HVCOCF05XXX	7
	SCALE: 1:2	SHEET 6 OF 6