CABLINE®-CA IIP PLUS

Part No. Plug : 82065-*00B-0#, Receptacle : 20790-0**E-0##

Test Report

Product Specification no. PRS-2908

0	T24076	November 13, 2024	S.Shigekoshi	M.Muro	T.Masunaga
Rev.	ECN	Date	Prepared by	Checked by	Approved by

1. Purpose

To evaluate the performance of CABLINE-CA IIP PLUSConnector in accordance with PRS-2908.

2. Specimen

(1) CABLINE-CA IIP PLUS PLUG ASS'Y （Part No. 82065-*00B-0#）
(2) CABLINE-CA II PLUS RECEPTACLE ASS'Y （Part No. 20790-060E-0##）

3. Test Sequence

All the evaluations were performed in accordance with Table 1. Test Sequence.

4. Result

See Table 1 to 2-2, Graph 1 to 18. For the details of the testing conditions and requirements, see PRS-2908.
The “n” in the tables show the number of measurement points.

5. Conclusion

All the specimens met the requirements of PRS-2908.

Table.1 Test Sequence and Sample Quantity

Test Item	Group									
	A	B	C	D	E	F	G	H	I	J
Contact resistance	2,6		1,3,5	1,5	1,3	1,5	1,5,7	1,3	1,3	
Insulation resistance				2,6		2,6	2,8			
Dielectric withstanding voltage				3,7		3,7	3,9			
Temperature rising										1
Mating force	1,5									
Unmating force	3,7									
Durability	4						4			
Cable retention force	8									
Connector Lock		1								
Vibration			2							
Shock			4							
Thermal shock				4						
High temperature life					2					
Humidity (Steady State)						4				
Humidity (Cycling)							6			
Saltwater spray								2		
H_2S gas									2	
Specimen quantity.	5 pcs.	5 pcs.	5 pcs.	5 pcs.	5 pcs.	5 pcs.	5 pcs.	5 pcs.	5 pcs.	5 pcs.

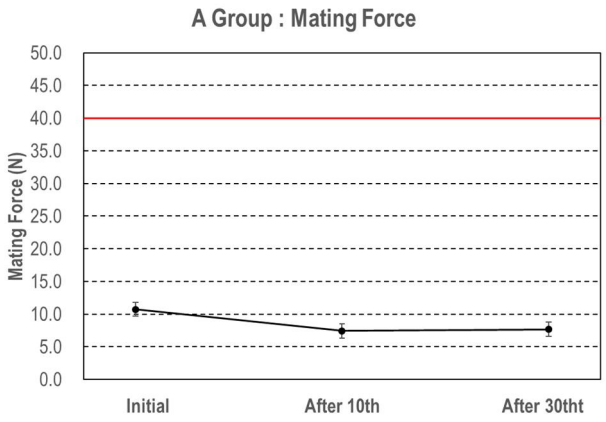
※Numbers indicate test sequences

Table.2-1 Test result

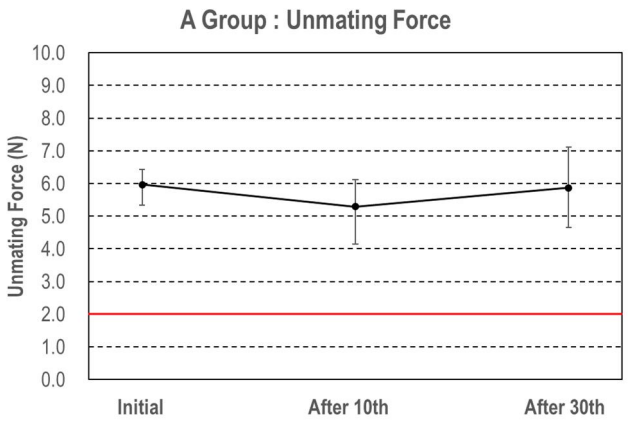
Test Item	Contents of Measurement			Specifications	Set	n	Data					Judge
							AVG.	MAX.	MIN.	s	AVG.±3s	
A Group Durability	Contact Resistance (mΩ)		Initial	AWG#38 380mΩ MAX.	5	210	320.411	339.81	306.16	6.820	340.871	Pass
			After Test	AWG#38 ΔR=40mΩ MAX.			2.135	12.29	-7.97	3.450	12.485	Pass
	GND Resistance (mΩ)		Initial	50mΩ MAX.	5	5	9.378	9.94	8.86	0.410	10.608	Pass
			After Test	ΔR=40mΩ MAX.			0.148	0.84	-0.54	0.490	1.618	Pass
	60P	Mating Force (N)	Initial	40.00N MAX.	5	5	10.730	11.33	10.04	0.600	12.530	Pass
			After Test				7.676	9.18	6.29	1.320	11.636	Pass
		Unmating Force (N)	Initial	2.00N MIN.	5	5	5.972	6.44	5.33	0.430	4.682	Pass
			After Test				5.870	7.11	4.66	1.010	2.840	Pass
		Cable Retention Froce		29.40N MIN	5	5	158.39N MIN.					Pass
B Group Connector Lock			Initial	The lock does not damage and cancel.	5	5	No Abnormality					Pass
C Group Vibration ↓ Shock	Contact Resistance (mΩ)		Initial	AWG#38 380mΩ MAX.	5	210	320.854	336.46	305.31	7.170	342.364	Pass
			After Vibration	AWG#38 ΔR=40mΩ MAX.			0.899	9.53	-7.22	3.120	10.259	Pass
			After Shock	AWG#38 ΔR=40mΩ MAX.			1.793	9.67	-5.80	2.650	9.743	Pass
	GND Resistance (mΩ)		Initial	50mΩ MAX.	5	5	9.112	9.75	8.18	0.610	10.942	Pass
			After Vibration	ΔR=40mΩ MAX.			-0.100	0.14	-0.30	0.210	0.530	Pass
			After Shock	ΔR=40mΩ MAX.			-0.156	0.06	-0.48	0.210	0.474	Pass
	Electrical discontinuity		During Vibration	1μsec. MAX.	5	5	No Electrical discontinuity					Pass
			During Shock				No Electrical discontinuity					Pass
	Appearance		After Vibration	No Abnormality adversely affecting the performance shall occur.	5	5	No Abnormality					Pass
			After Shock				No Abnormality					Pass
D Group Thermal Shock	Contact Resistance (mΩ)		Initial	AWG#38 380mΩ MAX.	5	210	316.414	334.20	300.47	6.660	336.394	Pass
			After Test	AWG#38 ΔR=40mΩ MAX.			2.402	12.13	-7.06	3.260	12.182	Pass
	GND Resistance (mΩ)		Initial	50mΩ MAX.	5	5	8.875	9.41	8.22	0.440	10.195	Pass
			After Test	ΔR=40mΩ MAX.			0.428	1.08	-0.05	0.490	1.898	Pass
E Group High temperature life	Contact Resistance (mΩ)		Initial	AWG#38 380mΩ MAX.	5	210	315.075	329.92	300.58	8.870	341.685	Pass
			After Test	AWG#38 ΔR=40mΩ MAX.			12.777	22.39	4.93	3.610	23.607	Pass
	GND Resistance (mΩ)		Initial	50mΩ MAX.	5	5	8.618	8.90	8.01	0.350	9.668	Pass
			After Test	ΔR=40mΩ MAX.			0.726	1.07	0.24	0.320	1.686	Pass

Table.2-2 Test result

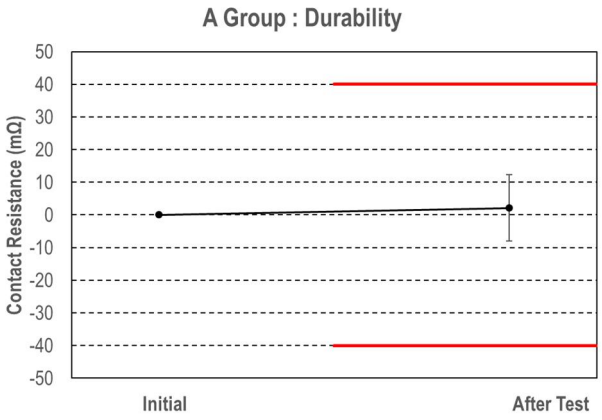
Test Item	Contents of Measurement		Specifications	Set	n	Data					Judge
						AVG.	MAX.	MIN.	s	AVG.±3s	
F Group Humidity (Steady state)	Contact Resistance (mΩ)	Initial	AWG#38 380mΩ MAX.	5	210	314.487	329.96	300.00	8.660	340.467	Pass
		After Test	AWG#38			2.781	8.85	-5.14	2.670	10.791	Pass
	GND Resistance (mΩ)	Initial	50mΩ MAX.	5	5	8.328	8.71	8.05	0.260	9.108	Pass
		After Test	ΔR=40mΩ MAX.			0.670	1.50	-0.05	0.640	2.590	Pass
	Insulation Resistance (MΩ)	Initial	1000MΩ MIN.	5	5	1.36×10⁶MΩ MIN.					Pass
		After Test	500MΩ MIN.			1.20×10⁴ MΩ MIN.					Pass
	D. W. Voltage	Initial	No creeping discharge, flashover, or insulator breakdown shall occur.	5	5	No Abnormality					Pass
		After Test				No Abnormality					Pass
G Group Humidity (Cycling)	Contact Resistance (mΩ)	Initial	AWG#38 380mΩ MAX.	5	210	315.562	329.95	300.18	8.700	341.662	Pass
		After Test	AWG#38 ΔR=40mΩ MAX.			3.069	9.51	-0.85	2.150	9.519	Pass
	GND Resistance (mΩ)	Initial	50mΩ MAX.	5	5	8.668	9.86	7.55	1.000	11.668	Pass
		After Test	ΔR=40mΩ MAX.			0.670	1.50	-0.05	0.640	2.590	Pass
	Insulation Resistance (MΩ)	Initial	1000MΩ MIN.	5	5	1.68×10⁶MΩ MIN.					Pass
		After Test	500MΩ MIN.			1.96×10³MΩ MIN.					Pass
	D. W. Voltage	Initial	No creeping discharge, flashover, or insulator breakdown shall occur.	5	5	No Abnormality					Pass
		After Test				No Abnormality					Pass
H Group Salt water spray	Contact Resistance (mΩ)	Initial	AWG#38 380mΩ MAX.	5	210	314.137	329.65	300.09	8.450	339.487	Pass
		After Test	AWG#38 ΔR=40mΩ MAX.			0.501	7.24	-8.04	2.940	9.321	Pass
	GND Resistance (mΩ)	Initial	50mΩ MAX.	5	5	8.474	8.87	8.17	0.300	9.374	Pass
		After Test	ΔR=40mΩ MAX.			0.584	0.98	-0.07	0.470	1.994	Pass
I Group H_2S gas	Contact Resistance (mΩ)	Initial	AWG#38 380mΩ MAX.	5	210	315.861	329.45	300.23	8.620	341.721	Pass
		After Test	AWG#38 ΔR=40mΩ MAX.			2.773	9.83	-3.96	2.570	10.483	Pass
	GND Resistance (mΩ)	Initial	50mΩ MAX.	5	5	8.626	8.88	8.17	0.300	9.526	Pass
		After Test	ΔR=40mΩ MAX.			0.846	1.43	0.24	0.440	2.166	Pass
	Appearance	After Test	No Abnormality adversely affecting the performance	5	5	No Abnormality					Pass
J Group Temperature Rising	AWG#38 0.4A/Contact		ΔT=30°C MAX.	5	5	ΔT=24.85°CMAX.					Pass



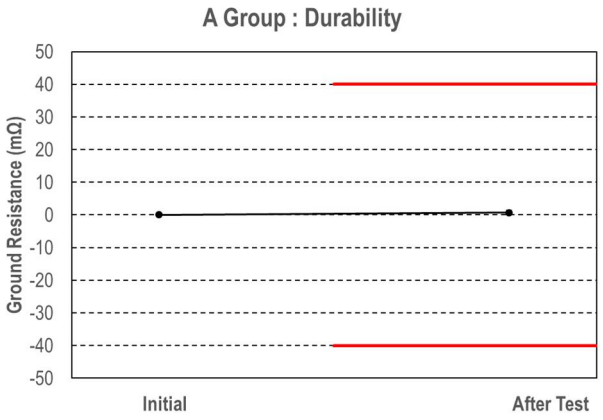
Graph.1



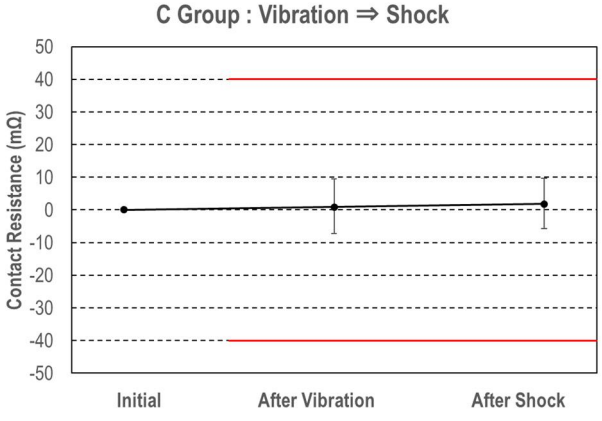
Graph.2



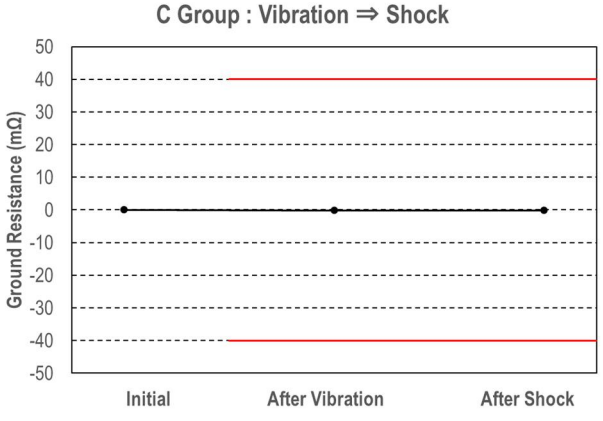
Graph.3



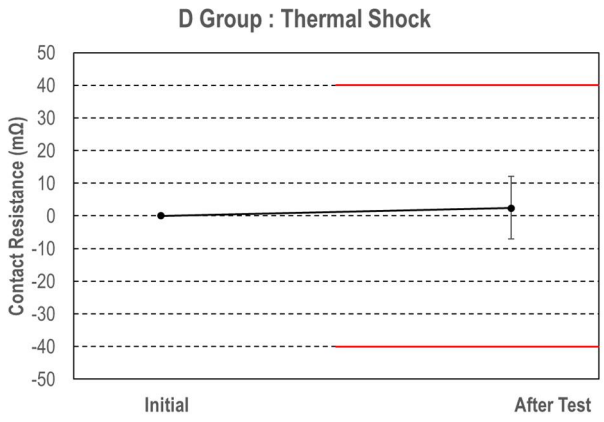
Graph.4



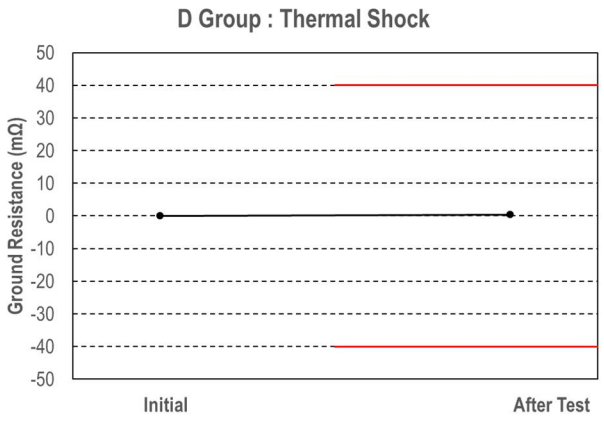
Graph.5



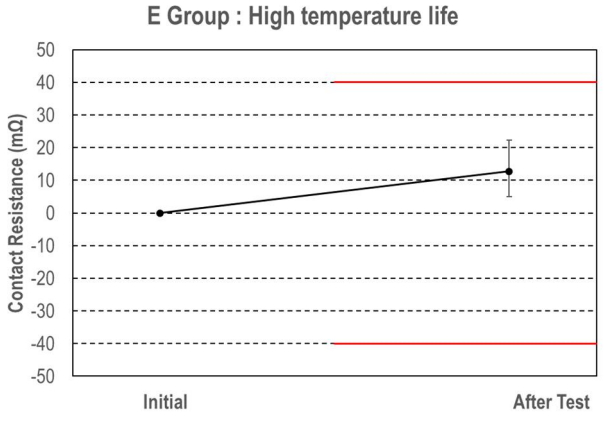
Graph.6



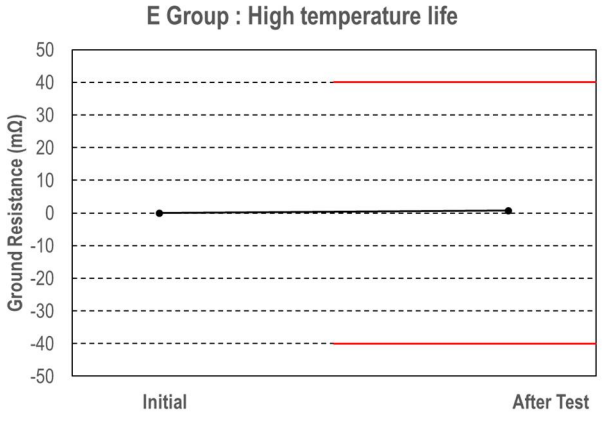
Graph.7



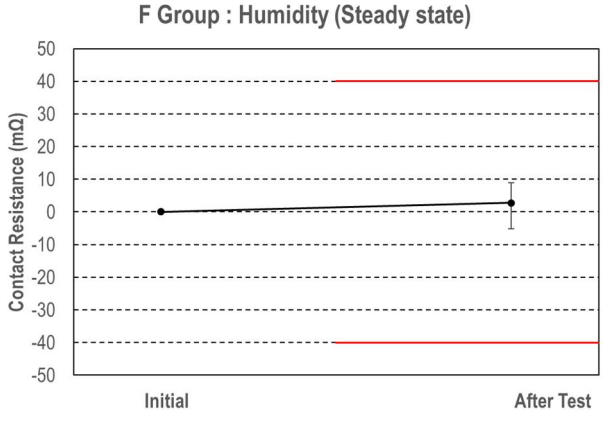
Graph.8



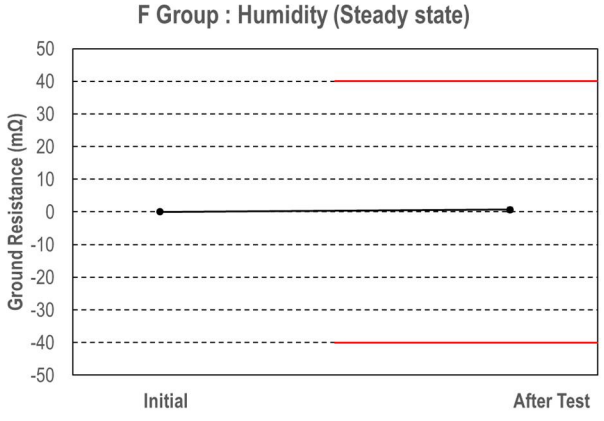
Graph.9



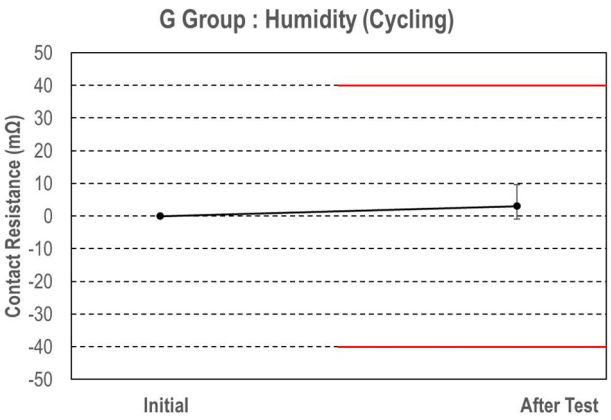
Graph.10



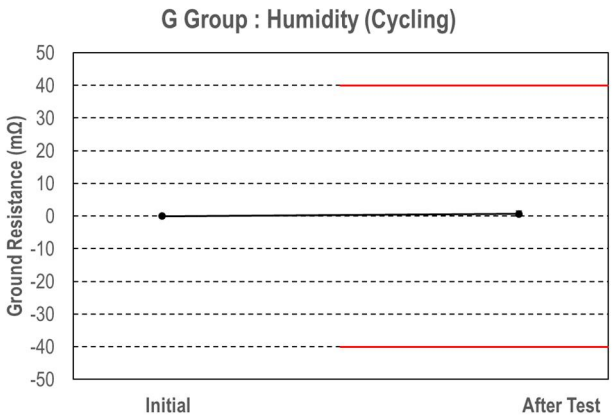
Graph.11



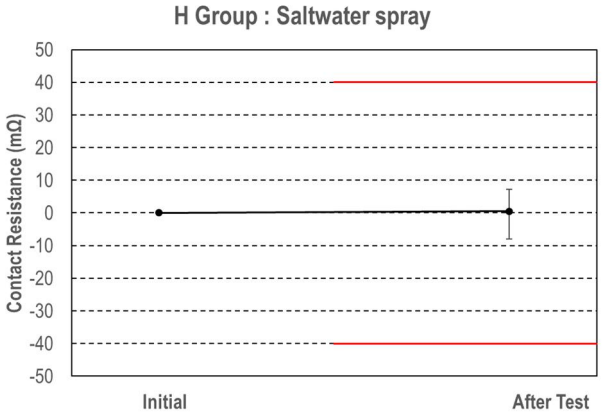
Graph.12



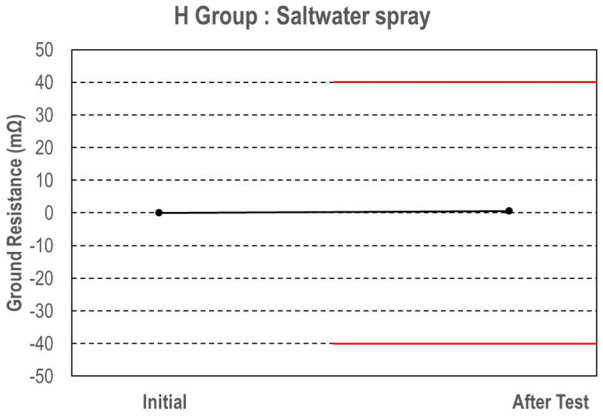
Graph.13



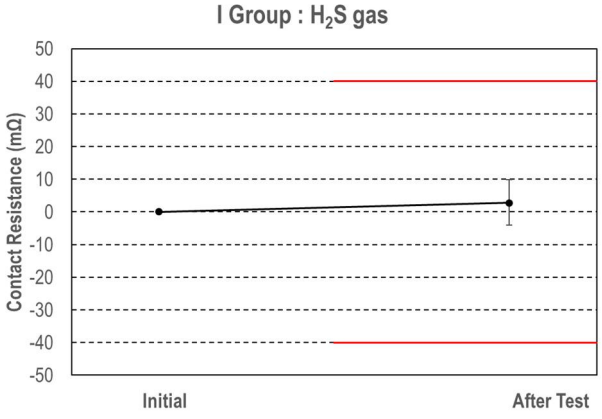
Graph.14



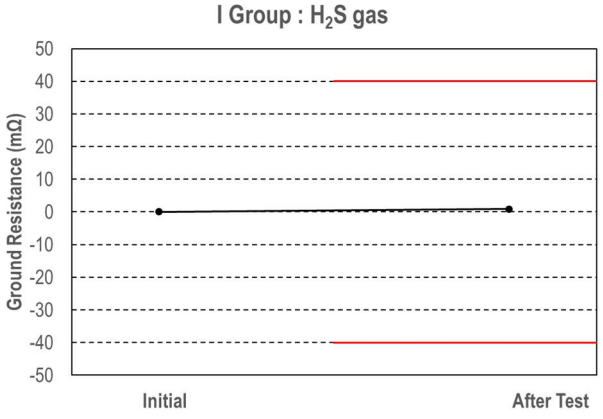
Graph.15



Graph.16



Graph.17



Graph.18