CABLINE®-UY

Part No. Plug: 20857-0**T-01-# Receptacle: 20854-0**E-02-#

Test Report

Product Specification no. PRS-2634

Rev.	ECN	Date	Prepared by	Checked by	Approved by
4	T26023	April 20, 2026	R. Minohara	T. Tanigawa	T. Masunaga
3	T23052	October 23, 2023	W. Lau	Y. Shimizu	M. Takemoto
2	T22026	January 28, 2022	S. Yamaguchi	T. Tanigawa	H. Ikari
1	T20025	March 13, 2020	Y. Fukumoto	-	T. Yamauchi

1. Purpose

To evaluate the performance of CABLINE-UY Connector in accordance with PRS-2634.

2. Specimen

Plug: 20857-0**T-01-#
Plug Housing Ass'y: 20907-0**E-01-#
Plug Ground Contact: 3568-0**1-#
Receptacle: 20854-0**E-02-#

3. Test Sequence

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

4. Result

See Table 2-1 to 2-7, Graph 1 to 18. For the details of the testing conditions and requirements, see PRS-2634.
The "n" in the tables show the number of measurement points.

5. Conclusion

All the specimens met the requirements of PRS-2634.

Table.1 Test Sequence and Sample Quantity

Test Item	Group										
	A	B	C	D	E	F	G	H	J	K	L
Contact Resistance	2,6	1,3,5	1,5	1,3	1,3	1,5	1,3	1,3			
Insulation Resistance			2,6		2,6	2,6					
D. W. Voltage			3,7		3,7	3,7					
Temperature rising											1
Mating Force	1,5										
Unmating Force	3,7										
Durability	4										
Cable Retention Force	8										
Vibration		2									
Shock		4									
Thermal Shock			4								
High Temperature Life				2							
Humidity (Steady State)					4						
Humidity (Cycling)						4					
Salt Water Spray							2				
H2S Gas								2			
Solder ability									1		
Soldering Heat Resistance										1	
Specimen Quantity.	5 pcs.	5 pcs.	5 pcs.	5 pcs.	5 pcs.	5 pcs.	5 pcs.	5 pcs.	10 pcs.	10 pcs.	5 pcs.

※Numbers indicate sequence in which tests are performed.

Table.2-1 Test result

Test Item	Measurements			Spec.	Set	n	Data					Judge
							AVG (X)	MAX.	MIN	s	X±3s	
A Group Durability	Contact Resistance (mΩ)		Initial	AWG#42 700mΩ MAX.	5	50	669.042	674.40	664.10	2.687	677.103	Pass
			After 30cycles	AWG#42 ΔR=40mΩMAX.	5	50	0.032	4.70	-3.80	2.027	6.113	Pass
	Ground Resistance (mΩ)	5P	Initial	60mΩ MAX.	5	5	28.920	29.64	28.52	0.434	30.222	Pass
			After 30cycles	ΔR=40mΩMAX.	5	5	2.610	4.03	1.35	1.111	5.943	Pass
		10P	Initial	60mΩ MAX.	5	5	26.198	27.22	24.88	0.978	29.132	Pass
			After 30cycles	ΔR=40mΩMAX.	5	5	1.802	4.05	0.28	1.650	6.752	Pass
	Insertion Force (N)	5P	Initial	30.0N MAX.	5	-	14.656	16.77	12.35	1.922	20.422	Pass
			After 30cycles		5	-	6.546	7.45	5.83	0.771	8.859	Pass
		10P	Initial		5	-	15.598	16.61	14.86	0.738	17.812	Pass
			After 30cycles		5	-	5.766	6.10	5.54	0.252	6.522	Pass
	Withdrawal Force (N)	5P	Initial	5.0N MIN.	5	-	9.450	11.07	8.40	1.176	5.922	Pass
			After 30cycles	3.0N MIN.	5	-	4.736	5.30	4.27	0.442	3.410	Pass
		10P	Initial	5.0N MIN.	5	-	11.266	12.93	9.89	1.248	7.522	Pass
			After 30cycles	3.0N MIN.	5	-	5.662	5.89	5.51	0.157	5.191	Pass
	Cable Retention Force	5P	Initial	2.45N MIN.	5	5	34.196	35.07	32.55	1.026	31.118	Pass
		10P		4.90N MIN.	5	5	35.736	37.78	31.40	2.558	28.062	Pass

Table.2-2 Test result

Test Item	Measurements			Spec.	Set	n	Data					Judge
							AVG (X)	MAX.	MIN	s	X±3s	
B Group Vibration ↓ Shock	Contact Resistance (mΩ)		Initial	AWG#42 700mΩ MAX.	5	50	662.368	672.10	657.00	3.908	674.092	Pass
			After Vibration	AWG#42 ΔR=40mΩMAX.	5	50	-0.350	4.60	-7.30	2.482	7.096	Pass
			After Shock		5	50	0.024	4.70	-5.30	2.120	6.384	Pass
	Ground Resistance (mΩ)	5P	Initial	60mΩ MAX.	5	5	32.256	32.920	31.710	0.445	33.591	Pass
			After Vibration	ΔR=40mΩMAX.	5	5	-0.978	0.630	-2.780	1.343	3.051	Pass
			After Shock		5	5	-1.730	-0.740	-2.630	0.814	0.712	Pass
		10P	Initial	60mΩ MAX.	5	5	27.326	28.12	26.46	0.599	29.123	Pass
			After Vibration	ΔR=40mΩMAX.	5	5	-0.606	0.44	-1.86	1.070	2.604	Pass
			After Shock		5	5	-1.106	0.34	-3.16	1.369	3.001	Pass
	Discontinuity		During Vibration	1μs MAX.	5	-	No discontinuity					Pass
			During Shock		5	-	No discontinuity					Pass
	Appearance		After Vibration	No abnormality adversely affecting the performance shall occur.	5	-	No abnormality					Pass
			After Shock				No abnormality					Pass

Table.2-3 Test result

Test Item	Measurements			Spec.	Set	n	Data					Judge
							AVG (X)	MAX.	MIN	s	X±3s	
C Group Thermal Shock	Contact Resistance (mΩ)		Initial	AWG#42 700mΩ MAX.	5	50	668.258	674.70	661.10	3.609	679.085	Pass
			After Testing	AWG#42 ΔR=40mΩMAX.	5	50	5.478	13.20	-1.70	3.617	16.329	Pass
	Ground Resistance (mΩ)	5P	Initial	60mΩ MAX.	5	5	31.438	31.900	30.770	0.440	32.758	Pass
			After Testing	ΔR=40mΩMAX.	5	5	7.074	7.820	6.100	0.635	8.979	Pass
		10P	Initial	60mΩ MAX.	5	5	26.594	27.460	25.570	0.718	28.748	Pass
			After Testing	ΔR=40mΩMAX.	5	5	6.708	7.840	5.840	0.848	9.252	Pass
	Appearance			No abnormality adversely affecting the performance shall occur.	5	-	No abnormality					Pass
D Group High Temperature Life	Contact Resistance (mΩ)		Initial	AWG#42 700mΩ MAX.	5	50	659.882	668.60	648.40	6.724	680.054	Pass
			After Testing	AWG#42 ΔR=40mΩMAX.	5	50	5.316	19.50	-13.70	6.698	25.410	Pass
	Ground Resistance (mΩ)	5P	Initial	60mΩ MAX.	5	50	31.278	32.810	30.120	1.263	35.067	Pass
			After Testing	ΔR=40mΩMAX.	5	50	5.104	6.960	2.950	1.681	10.147	Pass
		10P	Initial	60mΩ MAX.	5	50	27.656	30.050	25.890	1.753	32.915	Pass
			After Testing	ΔR=40mΩMAX.	5	50	5.348	7.130	4.130	1.092	8.624	Pass
	Appearance			No abnormality adversely affecting the performance shall occur.	5	-	No abnormality					Pass

Table.2-4 Test result

Test Item	Measurements			Spec.	Set	n	Data					Judge
							AVG (X)	MAX.	MIN	s	X±3s	
E Group	Contact Resistance (mΩ)		Initial	AWG#42 700mΩ MAX.	5	50	656.742	672.90	643.50	7.437	679.053	Pass
			After Testing	AWG#42 ΔR=40mΩMAX.	5	50	3.128	13.60	-7.80	5.545	19.763	Pass
	Ground Resistance (mΩ)	5P	Initial	60mΩ MAX.	5	50	30.878	31.550	30.550	0.393	32.057	Pass
			After Testing	ΔR=40mΩMAX.	5	50	4.396	5.610	2.780	1.198	7.990	Pass
		10P	Initial	60mΩ MAX.	5	50	27.052	27.570	26.470	0.398	28.246	Pass
			After Testing	ΔR=40mΩMAX.	5	50	3.568	5.650	1.830	1.454	7.930	Pass
Humidity (Steady State)	Insulation Resistance		Initial	500MΩ MIN.	5	5	5.05×10^3MΩ MIN.					Pass
			After Testing	100MΩ MIN.	5	5	4.60×10^3MΩ MIN.					Pass
	Dielectric Strength		Initial	No creeping discharge, flashover, or insulator breakdown shall occur.	5	5	No abnormality					Pass
			After Testing				No abnormality					Pass
	Appearance			No abnormality adversely affecting the performance shall occur.	5	-	No abnormality					Pass

Table.2-5 Test result

Test Item	Measurements			Spec.	Set	n	Data					Judge
							AVG (X)	MAX.	MIN	s	X±3s	
F Group Humidity (Cycling)	Contact Resistance (mΩ)		Initial	AWG#42 700mΩ MAX.	5	50	667.652	672.60	661.80	3.118	677.006	Pass
			After Testing	AWG#42 ΔR=40mΩMAX.	5	50	2.040	11.20	-6.40	3.628	12.924	Pass
	Ground Resistance (mΩ)	5P	Initial	60mΩ MAX.	5	50	33.470	34.630	32.260	0.952	36.326	Pass
			After Testing	ΔR=40mΩMAX.	5	50	-1.068	0.300	-1.560	0.779	1.269	Pass
		10P	Initial	60mΩ MAX.	5	50	28.254	30.040	26.990	1.134	31.656	Pass
			After Testing	ΔR=40mΩMAX.	5	50	-1.054	1.210	-4.040	1.898	4.640	Pass
	Insulation Resistance		Initial	500MΩ MIN.	5	5	1.7×10^4MΩ MIN.					Pass
			After Testing	100MΩ MIN.	5	5	1.2×10^4MΩ MIN.					Pass
	Dielectric Strength		Initial	No creeping discharge, flashover, or insulator breakdown shall occur.	5	5	No abnormality					Pass
			After Testing				No abnormality					Pass
	Appearance			No abnormality adversely affecting the performance shall occur.	5	-	No abnormality					Pass

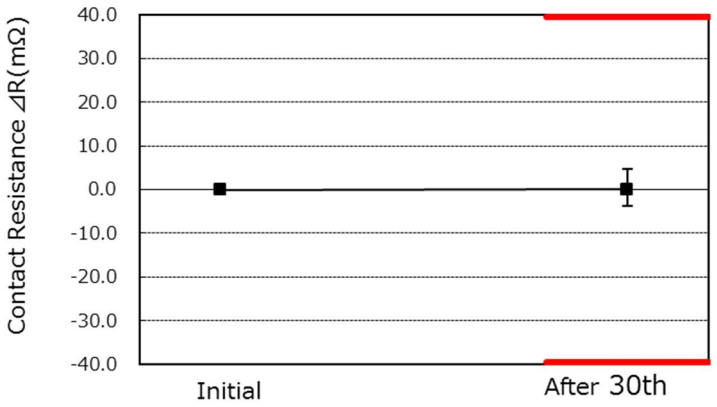
Table.2-6 Test result

Test Item	Measurements			Spec.	Set	n	Data					Judge
							AVG (X)	MAX.	MIN	s	X±3s	
G Group Salt Water Spray	Contact Resistance (mΩ)		Initial	AWG#42 700mΩ MAX.	5	50	662.064	669.10	657.10	3.145	671.499	Pass
			After Testing	AWG#42 ΔR=40mΩMAX.	5	50	6.070	13.00	-2.70	4.513	19.609	Pass
	Ground Resistance (mΩ)	5P	Initial	60mΩ MAX.	5	50	31.628	32.020	30.920	0.433	32.927	Pass
			After Testing	ΔR=40mΩMAX.	5	50	-0.514	0.040	-0.910	0.451	0.839	Pass
		10P	Initial	60mΩ MAX.	5	50	28.280	29.100	27.700	0.581	30.023	Pass
			After Testing	ΔR=40mΩMAX.	5	50	-0.180	1.000	-1.500	1.003	2.829	Pass
	Appearance			No abnormality adversely affecting the performance shall occur.	5	-	No abnormality					Pass
H Group H_2S Gas	Contact Resistance (mΩ)		Initial	AWG#42 700mΩ MAX.	5	50	668.716	674.30	664.00	2.540	676.336	Pass
			After Testing	AWG#42 ΔR=40mΩMAX.	5	50	4.504	15.20	-3.60	4.871	19.117	Pass
	Ground Resistance (mΩ)	5P	Initial	60mΩ MAX.	5	50	29.400	30.150	27.920	0.973	32.319	Pass
			After Testing	ΔR=40mΩMAX.	5	50	2.596	4.240	1.200	1.219	6.253	Pass
		10P	Initial	60mΩ MAX.	5	50	27.198	28.220	25.880	0.978	30.132	Pass
			After Testing	ΔR=40mΩMAX.	5	50	2.876	3.540	1.410	0.900	5.576	Pass
	Appearance			No abnormality adversely affecting the performance shall occur.	5	-	No abnormality					Pass

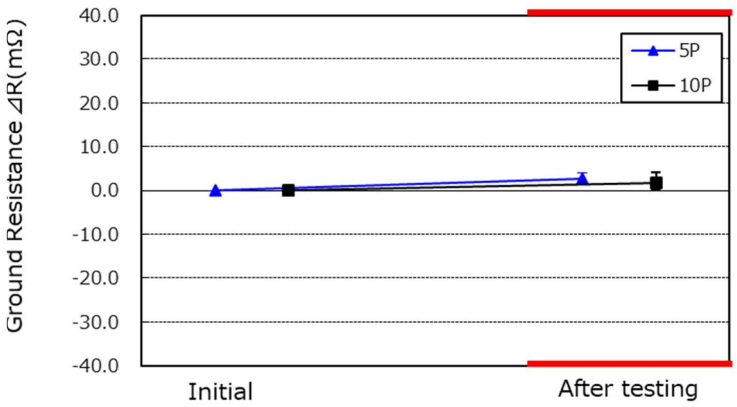
Table.2-7 Test Result

Test Item	Measurements	Spec.	Set	n	Data					Judge
					AVG (X)	MAX.	MIN	s	X±3s	
J Group Solderability	Appearance	More than 95% soldered	10	-	100%					Pass
K Group Soldering Heat Resistance	Appearance	No deformation nor defect adversely affecting the performance occur.	10	-	No abnormality					Pass
L Group Temperature Rising	AWG#42 0.35A/Contact	ΔT=30℃ MAX.	5	5	ΔT=27.8℃ MAX.					Pass

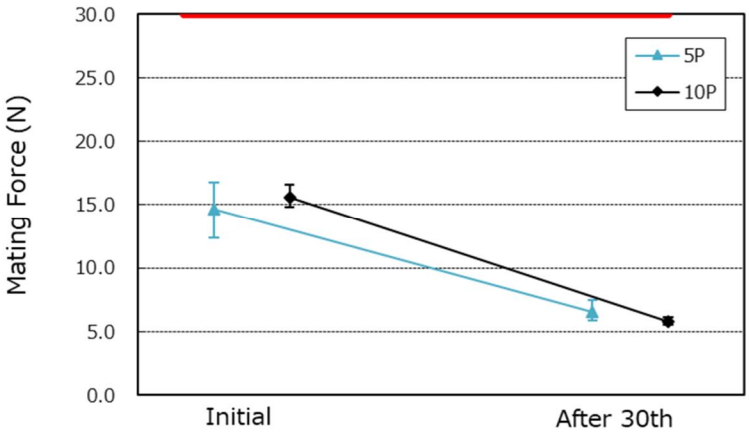
*The Temperature Rising Test is a result when applied ratings current (0.35A/contact) between the neighboring contacts for 10pos. (With the whole connector 3.5A.)



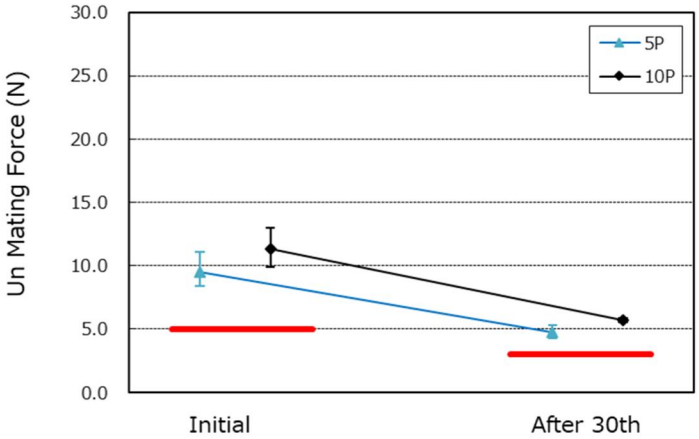
Graph.1 Durability : Contact Resistance



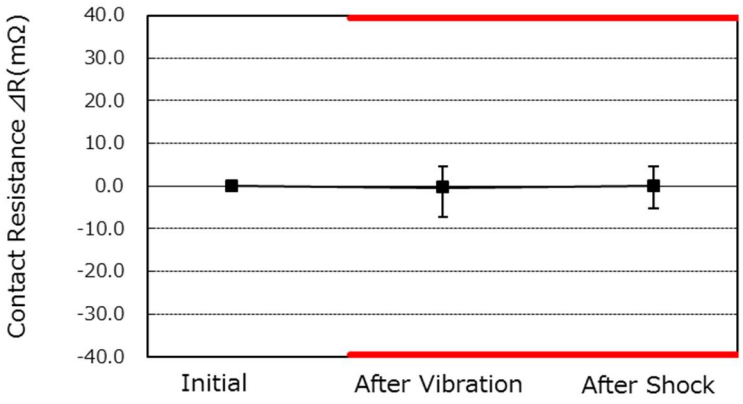
Graph.2 Durability : Ground Resistance



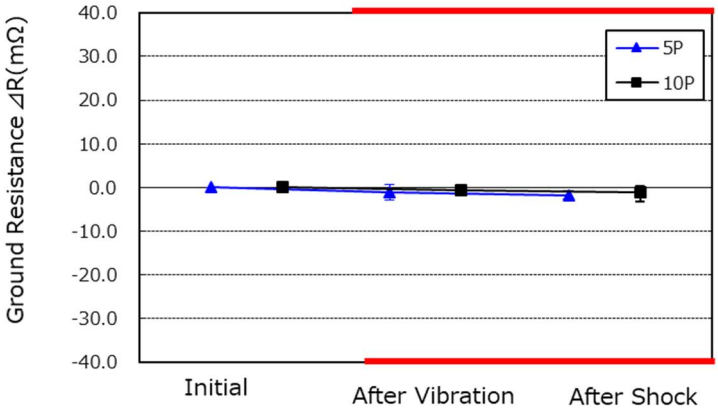
Graph.3 Durability : Mating force



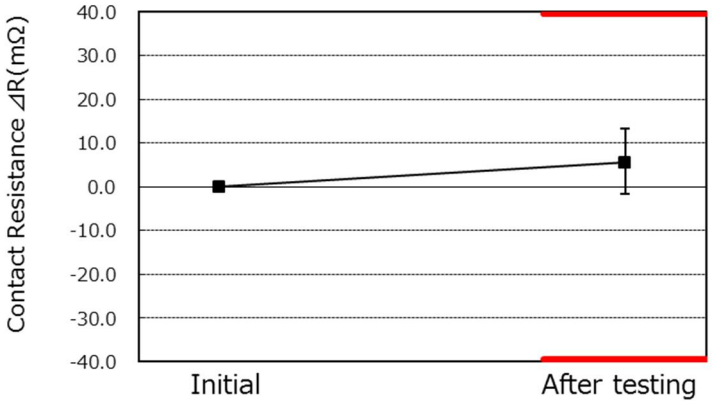
Graph.4 Durability : Unmating force



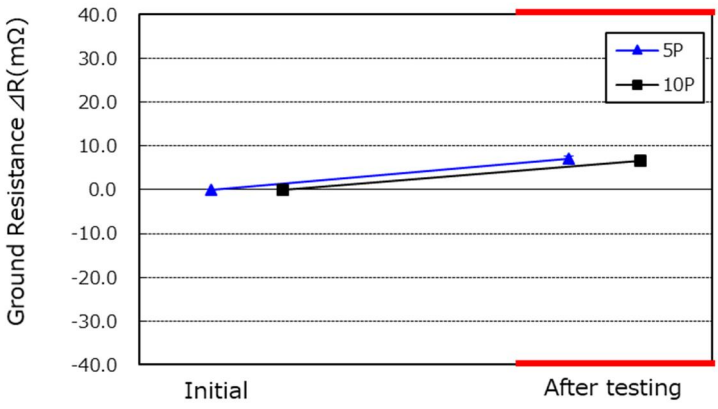
Graph.5 Vibration & Shock : Contact Resistance



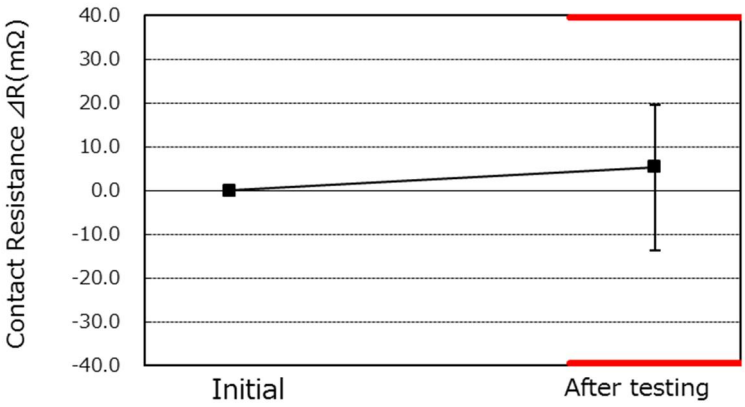
Graph.6 Vibration & Shock : Ground Resistance



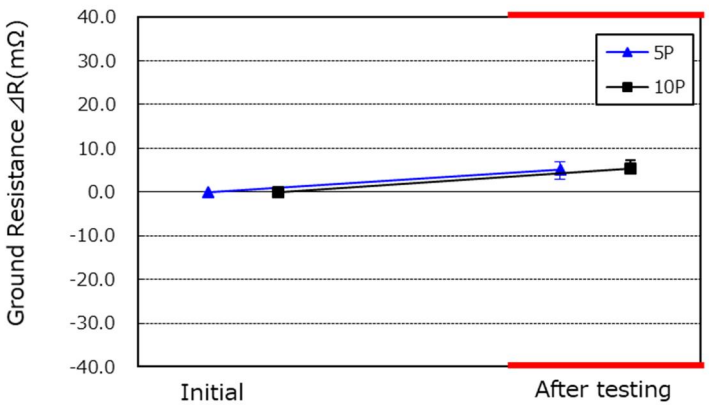
Graph.7 Thermal Shock : Contact Resistance



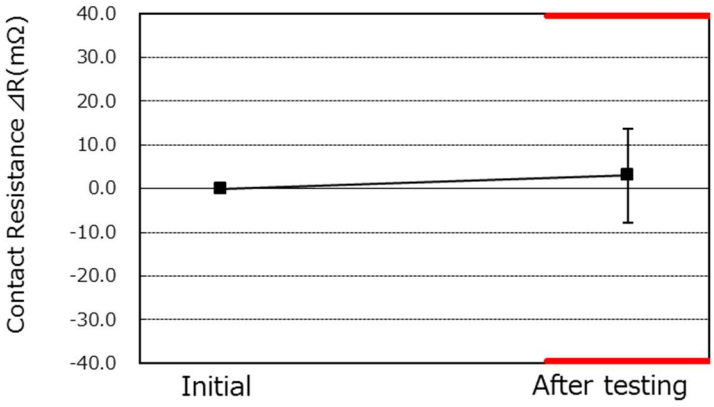
Graph.8 Thermal Shock : Ground Resistance



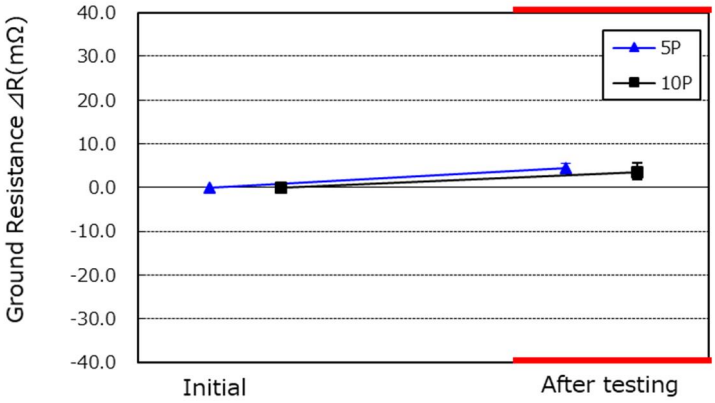
Graph.9 High Temperature Life : Contact Resistance



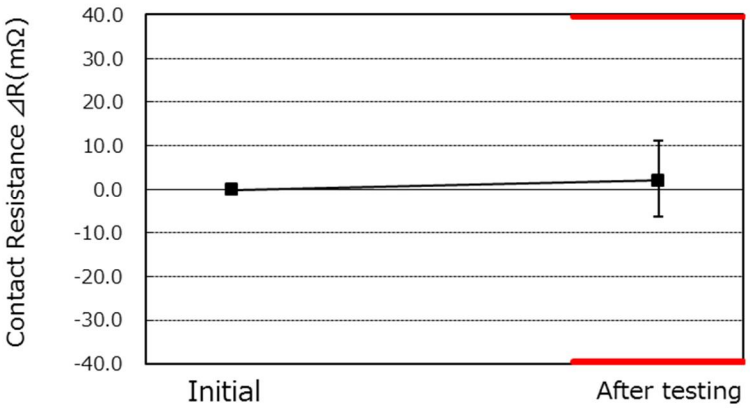
Graph.10 High temperature Life : Ground Resistance



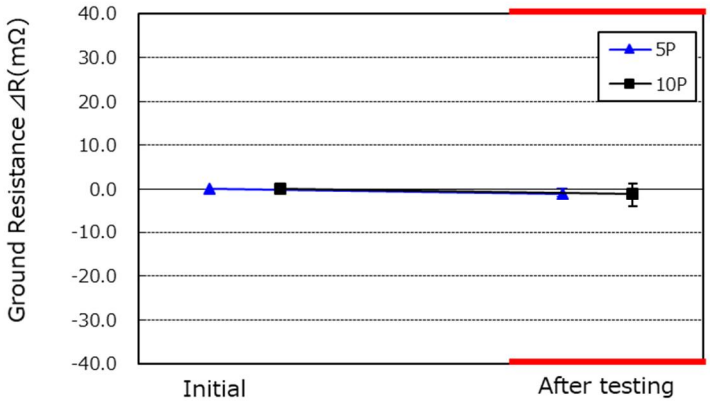
Graph.11 Humidity(Steady State) : Contact Resistance



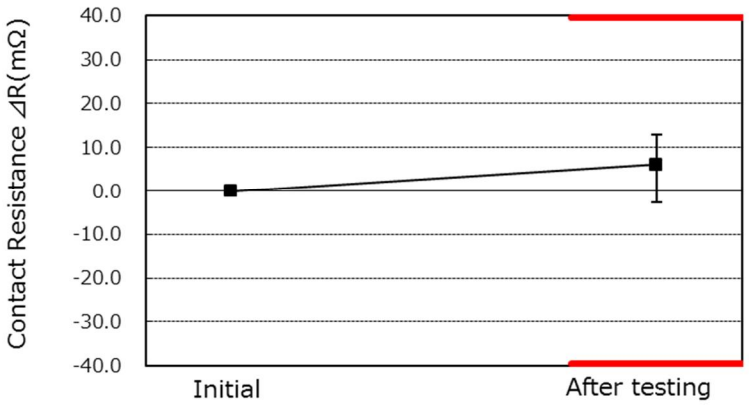
Graph.12 Humidity(Steady State) : Ground Resistance



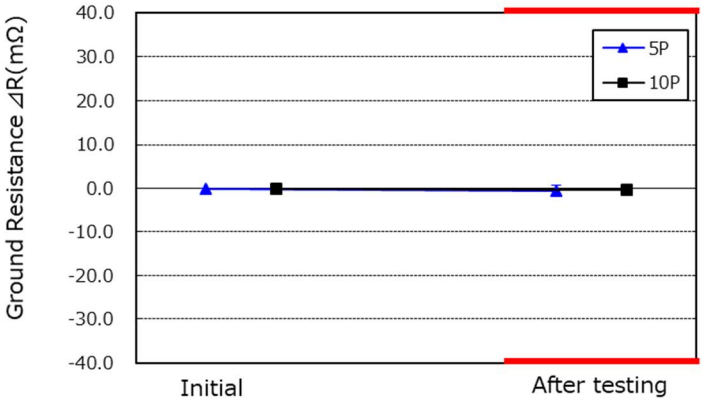
Graph.13 Humidity(Cycling) : Contact Resistance



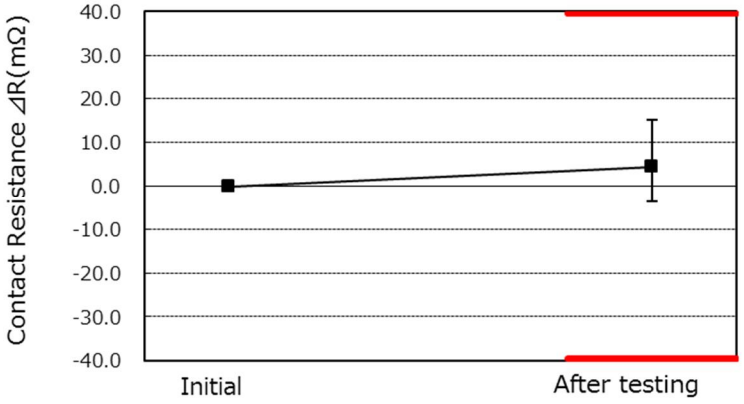
Graph.14 Humidity(Cycling) : Ground Resistance



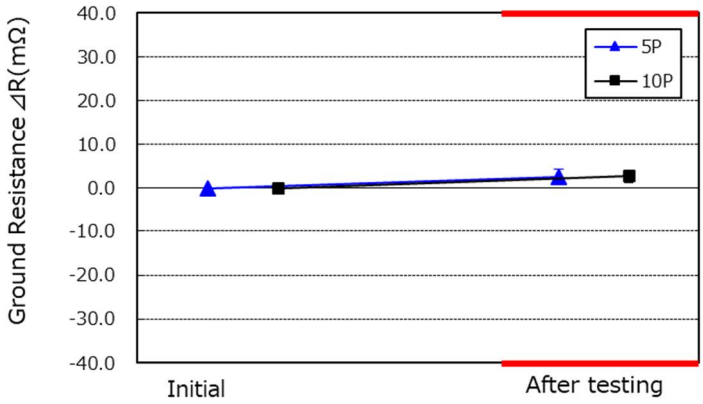
Graph.15 Salt Water Spray : Contact Resistance



Graph.16 Salt Water Spray : Ground Resistance



Graph.17 H_2S Gas : Contact Resistance



Graph.18 H_2S Gas: Ground Resistance