

The subject products should meet the following requirements.

1. Electrical Performance

	Item	Test Condition	Requirement
1-1	Rated voltage and current		AC 250V 7A DC 250V 7A
1-2	Contact resistance	Mate connectors measure by Dry Circuit, 20mV max., 10mA.	10 mΩ max.
1-3	Dielectric strength	When applied AC 1500V 1 minute between adjacent terminals or ground	No change
1-4	Insulation resistance	When applied DC 500V between adjacent terminals or ground	1000 MΩ min.

2. Mechanical Performance

	Item	Test Condition	Requirement	
2-1	Insertion force	Mating speed : 25±3mm/minute	See para 6	
2-2	Extraction force	Disengaging speed : 25±3mm/minute	See para 6	
2-3	Duability	When mated up to 30 cycles by the rate of 10 cycles per minute	Contact resistance	20 mΩ max.
			Insertion extraction force	See para 6
2-4	Terminal retention force	Pull speed : 25±3mm/minute	2.0 kg Min.	
2-5	Terminal strength	When applied a load of 500gw, 1 minute	No damage	

3. Environmental Performance

	Item	Test Condition	Requirement	
3-1	Temperature rise	When carried the rated current	30 °C max.	
3-2	Vibration	1.5mm, 10-55-10Hz/min., each 2 hrs. for X, Y & Z directions, applying 1mA-DC current	Contact resistance	20 mΩ max.
			Discontinuity	1 μsec. max.
			Appearance	No damage
3-3	Shock	50G, each 3 times for X, Y, Z directions, applying 1mA-DC current	Discontinuity	1 μsec. max.
			Appearance	No damage

REV. C

	Item	Test Condition	Requirement	
3-4	Solderability	Soldering time : $3 \pm 0.5$ sec. Soldering pot : $230 \pm 5$ °C	Min. 3/4 of immersed area	
3-5	Resistance to soldering heat	Soldering time : $5 \pm 0.5$ sec. Soldering pot : $260 \pm 5$ °C	No damage	
3-6	Heat resistance	$105 \pm 2$ °C, 96 hours	Contact resistance	20 mΩ max.
			Appearance	No damage
3-7	Humidity	Temperature : $40 \pm 2$ °C Relative Humidity: 90~95% Duration : 96 hours Measurement must be taken within 30 minutes after tested	Contact resistance	20 mΩ max.
			Dielectric strength	To pass para 1-3
			Insulation resistance	100 MΩ min.
			Appearance	No damage
3-8	Temperature cycling ( 5 cycles )	One cycle consists of (1) $-55 \pm 3$ °C, 30 minutes (2) Room temp. 10~15 minutes (3) $105 \pm 2$ °C, 30 minutes (4) Room temp. 10~15 minutes	Contact resistance	20 mΩ max.
			Appearance	No damage
3-9	Salt Spray	Temperature: $35 \pm 2$ °C Solution : $5 \pm 1$ % Spray time : $48 \pm 4$ hours Measurement must be taken after water rinse.	Contact resistance	20 mΩ max.
			Appearance	No significant corrosion
3-10	SO <sub>2</sub> Gas	24 hours in sulfur dioxide gas (SO <sub>2</sub> ) $50 \pm 5$ ppm at $40 \pm 2$ °C	Contact resistance	20 mΩ max.

4. Ambient Temperature Range :  $-40$  °C ~  $105$  °C\*

\* : Including terminal temperature rise.

5. Construction, Dimension and Material : Specified by the attached drawing.

REV.C



## 6. Insertion and Extraction Force

No of Ckt.	Insertion Force (kgf, max.)			Extraction Force (kgf, min.)		
	1st	6th	30th	1st	6th	30th
2	6.5	5.5	5.5	1.0	0.8	0.8
3	8.5	7.5	7.5	1.5	1.2	1.2
4	10.5	9.5	9.5	2.0	1.6	1.6
5	13.0	12.0	12.0	2.5	1.9	1.9
6	15.0	13.5	13.5	2.9	2.3	2.3
7	17.0	15.5	15.5	3.4	2.7	2.7
8	19.0	17.5	17.5	3.8	3.1	3.1
9	21.0	19.5	19.5	4.2	3.5	3.5
10	23.0	21.5	21.5	4.6	3.9	3.9
11	25.0	23.5	23.5	5.0	4.3	4.3
12	27.0	25.5	25.5	5.4	4.7	4.7

Mated with Molex parts No.  
5 2 3 9 - N (5167/5168T, TL, PBT, PBTL)

No of Ckt.	Insertion Force (kgf, max.)			Extraction Force (kgf, min.)		
	1st	6th	30th	1st	6th	30th
2	4.4	3.6	3.6	0.6	0.5	0.5
3	5.6	4.8	4.8	0.9	0.7	0.7
4	6.8	6.0	6.0	1.2	0.9	0.9
5	8.0	7.2	7.2	1.5	1.1	1.1
6	9.2	8.4	8.4	1.8	1.3	1.3
7	10.4	9.6	9.6	2.1	1.5	1.5
8	11.6	10.8	10.8	2.4	1.7	1.7
9	12.8	12.0	12.0	2.7	1.9	1.9
10	14.0	13.2	13.2	3.0	2.1	2.1
11	15.2	14.4	14.4	3.3	2.3	2.3
12	16.4	15.6	15.6	3.6	2.5	2.5

Mated with Molex parts No.  
5 1 9 5 - N (5194/5225T, TL)