



The subject products should meet the following requirements.

### 1. Electrical Performance

	Item	Test Condition	Requirement
1-1	Rated voltage and current		AC 250V 3A DC 250V 3A
1-2	Contact resistance	Mate connectors measure by Dry Circuit, 20mV max., 10mA.	20 mΩ max.
1-3	Dielectric strength	When applied AC 1000V 1 minute between adjacent terminals or ground	No breakdown
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	40 mΩ max.
			Insertion extraction force	See para 6
2-4	Terminal retention force	Pull speed : 25±3mm/minute	1.0 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	40 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

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	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	40 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	40 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	40 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	40 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	40 mΩ max.

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

\* : Including terminal temperature rise.

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

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## 6. Insertion and Extraction Force

No of Ckt.	Insertion Force (kgf, max.)			Extraction Force (kgf, min.)		
	1st	6th	30th	1st	6th	30th
2	3.6	3.4	3.4	0.65	0.55	0.55
3	4.4	4.1	4.1	0.70	0.60	0.60
4	5.2	4.8	4.8	0.75	0.65	0.65
5	6.0	5.5	5.5	0.80	0.70	0.70
6	6.6	6.0	6.0	0.90	0.80	0.80
7	7.2	6.5	6.5	1.00	0.90	0.90
8	7.8	7.0	7.0	1.15	1.00	1.00
9	8.4	7.5	7.5	1.30	1.15	1.15
10	9.0	8.0	8.0	1.45	1.30	1.30
11	9.6	8.5	8.5	1.60	1.45	1.45
12	10.2	9.0	9.0	1.85	1.60	1.60
13	10.8	9.5	9.5	2.00	1.75	1.75
14	11.4	10.0	10.0	2.15	1.90	1.90
15	12.0	10.5	10.5	2.30	2.05	2.05
16	12.6	11.0	11.0	2.45	2.20	2.20
17	13.2	11.5	11.5	2.60	2.35	2.35
18	13.8	12.0	12.0	2.75	2.50	2.50
19	14.4	12.5	12.5	2.90	2.65	2.65
20	15.0	13.0	13.0	3.05	2.80	2.80

Mated with Molex parts No.

5051-N (TERMINAL: 5159 SERIES)

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