

The subject products should meet the following requirements when tested under the condition of involving all circuits with terminals crimped on the specified maximum size wire.

1. Electrical Performance

	Item	Test Condition	Requirement
1-1	Rated voltage and current		AC 250V 9A DC 250V 9A
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 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 7
2-2	Extraction force	Disengaging speed : 25±3mm/minute	See para 7
2-3	Durability	When mated up to 30 cycles by the rate of 10 cycles per minute	Contact resistance 20 mΩ max.
			Insertion extraction force See para 7
2-4	Terminal retention force	Pull speed : 25±3mm/minute	9.1 kg min.
2-5	Terminal strength	When applied a load of 500g, 1 minute to the product to be soldered.	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. B

Molex Japan Co.,Ltd.		Product Specification		P/No.: 1490 P*/R*	
	Item	Test Condition		Requirement	
3-4	Solderability	Soldering time : 3 ± 0.5 sec. Soldering pot : 230 ± 5 °C		Min. 3/4 of immersed area	
3-5	Resistance to soldering heat	Soldering time : 5 ± 0.5 sec. Soldering pot : 260 ± 5 °C		No damage	
3-6	Heat resistance	85 ± 2 °C, 96 hours	Contact resistance	20 mΩ max.	
			Appearance	No damage	
3-7	Humidity	Temperature : 40 ± 2 °C Relative Humidity: 90~95% Duration : 96 hours Measurement must be taken within 30 minute 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 ± 3 °C, 30 minute (2) Room temp. 10~15 minute (3) 105 ± 2 °C, 30 minute (4) Room temp. 10~15 minute	Contact resistance	20 mΩ max.	
			Appearance	No damage	
3-9	Salt Spray	Temperature: 35 ± 2 °C Solution : $5 \pm 1\%$ Spray time : 48 ± 4 hours Measurement must be taken after water rinse.	Contact resistance	20 mΩ max.	
			Appearance	No significant corrosion	
3-10	SO ₂ Gas	24 hours in sulfur dioxide gas (SO ₂) 50 ± 5 ppm at 40 ± 2 °C	Contact resistance	20 mΩ max.	

4. Terminal To Be Used

	Customer P/No	Molex P/No	Wire Size	Insulation Dia.
1.		1189,1190	AWG #14 ~ #20	φ (1.6)~4.1
2.		1380,1381	AWG #18 ~ #24	φ (1.5)~3.1
3.		1433,1434	AWG #24 ~ #28	φ (0.8)~1.5
4.		1376,1377	-----	-----
5.				

5. Ambient Temperature Range : -40 °C ~ 105 °C

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

REV. B

7. Insertion and Extraction Force

No of Ckt.	Insertion Force (kgf, max.)			Extraction Force (kgf, min.)		
	1st	6th	30th	1st	6th	30th
4	13.0	12.0	10.0	2.0	1.4	1.4

Mated with Molex parts No.

1490P,P1/1490R,R1

REV.B