

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 7A<br>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 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                                     | 3.0 kg min.                |            |

### 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    |

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|     | Item                             | Test Condition  | Requirement           |                          |
|-----|----------------------------------|---|-----------------------|--------------------------|
| 3-4 | Heat resistance                  | 105 ± 2°C, 96 hours   | Contact resistance    | 20 mΩ max.               |
|     |                                  |   | Appearance            | No damage                |
| 3-5 | Humidity                         | Temperature : 40±2°C<br>Relative Humidity: 90~95%<br>Duration : 96 hours<br>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                |
| 3-6 | Temperature cycling ( 5 cycles ) | One cycle consists of<br>(1) -55±3°C, 30 minute<br>(2) Room temp. 10~15 minute<br>(3) 105±2°C, 30 minute<br>(4) Room temp. 10~15 minute | Contact resistance    | 20 mΩ max.               |
|     |                                  |   | Appearance            | No damage                |
| 3-7 | Salt Spray                       | Temperature: 35±2°C<br>Solution : 5±1%<br>Spray time : 48±4 hours<br>Measurement must be taken after water rinse.                       | Contact resistance    | 20 mΩ max.               |
|     |                                  |   | Appearance            | No significant corrosion |
| 3-8 | SO <sub>2</sub> Gas              | 24 hours in sulfur dioxide gas (SO <sub>2</sub> ) 50±5ppm 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. |               | 5194T,TL   | AWG #18 ~ #24 | φ 3.2 max.      |
| 2. |               | 5225T,TL   | AWG #22 ~ #28 | φ 2.6 max.      |
| 3. |               |            |               |                 |
| 4. |               |            |               |                 |
| 5. |               |            |               |                 |

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

\* : Including terminal temperature rise.

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

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