060/110/250 LIF 38P PLUG ASSY

1. Scope

1.1 Content

This specification defines the test method for 060/110/250 LIF 38P PLUG ASSY.

1.2 Qualification

When testing the named products, the following specified specifications and standards shall be used.
All tests have to be done using the applicable inspection plan and product.

1.3 Applied Product

2005575	060/110/250 LIF 38P PLUG ASSY.

2. Applicable Documents

The following documents, if they are referred inside this document, are part of this specification.
In case of conflict between the requirements of this specification and the product drawing or in conflict between the requirements of this specification and the referenced documents, this specification has precedence

2.1 TE Connectivity Documents

A. 109-1: General Requirements for Test specifications.

B. Customer Drawings

2005575	060/110/250 LIF 38P PLUG ASSY

2.2 HKMC specification

ES-91500-00	HKMC Connector General Spec.
MS300-08	HMC Combustibility Spec.
MS300-34	HMC Smell Spec.
MS201-02	HMC Material Spec.
MS300-55	HMC VOCs Spec.

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PRODUCT INFORMATION 1-800-522-6752

3. Requirements

<table>
<tr><th>No.</th><th>Items</th><th>Characteristics</th><th>Remarks</th></tr>
<tr><td>1</td><td>Appearance</td><td>No harmful crack, rust, burr, damage, deformation, discoloration etc.</td><td></td></tr>
<tr><td>2</td><td>Connector engage and disengage force</td><td>18kgf or less</td><td></td></tr>
<tr><td>3</td><td>Reverse insertion between housings</td><td>It shall not be incorrectly inserted by applying force of 20kgf</td><td></td></tr>
<tr><td>4</td><td>Reverse insertion between terminal and housing</td><td>060 / 110 /250 : 5kgf or more</td><td></td></tr>
<tr><td>5</td><td>Engage force between terminal and housing</td><td>1.5kgf or less</td><td></td></tr>
<tr><td>6</td><td>Housing locking strength</td><td>10kgf or more</td><td></td></tr>
<tr><td>7</td><td>Lock release force</td><td>Force on release force point of lock part shall be 6kgf or less</td><td></td></tr>
<tr><td>8</td><td>Terminal retention force</td><td>060: 8kgf or more,
110 / 250: 10kgf or more at secondary locking condition</td><td></td></tr>
<tr><td rowspan="3">9</td><td rowspan="3">Terminal engage and disengage force</td><td>Type</td><td>060</td><td>110</td><td>250</td><td rowspan="3"></td></tr>
<tr><td>Engage force</td><td>0.2~0.8</td><td>0.3~1.5</td><td>0.5~2.0</td></tr>
<tr><td>Disengage force</td><td>0.15~0.8</td><td>0.15~0.8</td><td>0.5~2.1</td></tr>
<tr><td rowspan="2">10</td><td rowspan="2">Crimp strength</td><td>SQ</td><td>0.22</td><td>0.3</td><td>0.5</td><td>0.85</td><td>1.25</td><td>2.0</td><td>3.0</td><td>4.0</td><td rowspan="2"></td></tr>
<tr><td>Kgf or more</td><td>4</td><td>6</td><td>9</td><td>13</td><td>17</td><td>20</td><td>35</td><td>40</td></tr>
<tr><td rowspan="4">11</td><td rowspan="4">Voltage drop</td><td>Division</td><td colspan="3">Initial</td><td colspan="3">After endurance</td><td rowspan="4"></td></tr>
<tr><td>060</td><td colspan="3">5 mV/A or less</td><td colspan="3">10 mV/A or less</td></tr>
<tr><td>110</td><td colspan="3">3 mV/A or less</td><td colspan="3">10 mV/A or less</td></tr>
<tr><td>250</td><td colspan="3">3 mV/A or less</td><td colspan="3">20 mV/A or less</td></tr>
<tr><td rowspan="2">12</td><td rowspan="2">Insulation resistance</td><td>Division</td><td colspan="3">Initial</td><td colspan="3">After endurance</td><td rowspan="2"></td></tr>
<tr><td>Non-waterproof</td><td colspan="3">100MΩ or more</td><td colspan="3">100MΩ or more</td></tr>
<tr><td rowspan="2">13</td><td rowspan="2">Leakage current</td><td>Division</td><td colspan="3">Initial</td><td colspan="3">After endurance</td><td rowspan="2"></td></tr>
<tr><td>Non-waterproof</td><td colspan="3">10 μA or less</td><td colspan="3">10μA or less</td></tr>
<tr><td>14</td><td>High voltage test</td><td colspan="7">There shall be no insulation break.</td><td></td></tr>
</table>

< Table 1 >

No.	Items	Characteristics	Remarks
15	Overcurrent cycle test	See Requirement No: 3.1 / 3.10 / 3.14 @ Basic current: 2.4A	
16	Cold temperature test	See Requirement No: 3.1 / 3.10 / 3.11 / 3.12 / 3.14	
17	Cold and hot temperature shock test	See Requirement No: 3.1 / 3.10	
18	High temperature test	See Requirement No: 3.1 / 3.10	
19	Temperature Humidity test	See Requirement No: 3.1 / 3.10 / 3.11 / 3.12	
20	Dust test	See Requirement No: 3.10	
21	Ozone test	See Requirement No: 3.1 / 3.10	
22	Sulfur gas test	See Requirement No: 3.1 / 3.10	
23	Complex environment endurance test	See Requirement No: 3.1 / 3.10 / 3.14 / 3.15	

< Table 2 >

4. Test conditions

4.1 Specimen

Unless there is specific mention, initial sample should use for the test specimen, and test specimen shall be 5EA or more for each cavity. However, if performance is expected to be clearly satisfactory ever by applying load to the same specimen in turn, it is possible to apply multiple test items to the same specimen. In such case, performance shall be satisfied with each item.

4.2 Laboratory condition

Perform each test at designated temperature and humidity. And control humidity at designated absorption ratio for the connector which uses absorbent resin housing.

Temperature: 25 ± 5 ℃, Humidity: 60 ± 20%