

| APPLICABLE STANDARD                                                                 |                             |                                                                                                       |                                                                                                                                                                                         |                                        |                                                                                           |
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| RATING                                                                              | OPERATING TEMPERATURE RANGE | -40 °C TO 85 °C                                                                                       | STORAGE TEMPERATURE RANGE                                                                                                                                                               | -10 °C TO 50 °C (PACKED CONDITION)     |                                                                                           |
|                                                                                     | VOLTAGE                     | 50 V AC / DC                                                                                          | OPERATING OR STORAGE HUMIDITY RANGE                                                                                                                                                     | RELATIVE HUMIDITY 90 % MAX (NOT DEWED) |                                                                                           |
|                                                                                     | CURRENT                     | 0.5 A (note 1)                                                                                        | APPLICABLE CABLE                                                                                                                                                                        | t=0.3±0.05mm, GOLD PLATING             |                                                                                           |
| SPECIFICATIONS                                                                      |                             |                                                                                                       |                                                                                                                                                                                         |                                        |                                                                                           |
| ITEM                                                                                |                             | TEST METHOD                                                                                           | REQUIREMENTS                                                                                                                                                                            | QT                                     | AT                                                                                        |
| CONSTRUCTION                                                                        |                             |                                                                                                       |                                                                                                                                                                                         |                                        |                                                                                           |
| GENERAL EXAMINATION                                                                 |                             | VISUALLY AND BY MEASURING INSTRUMENT.                                                                 | ACCORDING TO DRAWING.                                                                                                                                                                   | ×                                      | ×                                                                                         |
| MARKING                                                                             |                             | CONFIRMED VISUALLY.                                                                                   |                                                                                                                                                                                         | ×                                      | ×                                                                                         |
| ELECTRIC CHARACTERISTICS                                                            |                             |                                                                                                       |                                                                                                                                                                                         |                                        |                                                                                           |
| CONTACT RESISTANCE                                                                  |                             | 1mA(DC OR 1000Hz).                                                                                    | 50 mΩ MAX.<br>INCLUDING FPC,FPC BULK RESISTANCE (L=8mm)                                                                                                                                 | ×                                      | ×                                                                                         |
| INSULATION RESISTANCE                                                               |                             | 100 V DC.                                                                                             | 500 MΩ MIN.                                                                                                                                                                             | ×                                      | ×                                                                                         |
| VOLTAGE PROOF                                                                       |                             | 150 V AC FOR 1 min.                                                                                   | NO FLASHOVER OR BREAKDOWN.                                                                                                                                                              | ×                                      | ×                                                                                         |
| MECHANICAL CHARACTERISTICS                                                          |                             |                                                                                                       |                                                                                                                                                                                         |                                        |                                                                                           |
| MECHANICAL OPERATION                                                                |                             | 20 TIMES INSERTIONS AND EXTRACTIONS.                                                                  | ① CONTACT RESISTANCE: 50 mΩ MAX.<br>② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.                                                                                                          | ×                                      | —                                                                                         |
| VIBRATION                                                                           |                             | FREQUENCY 10 TO 55 Hz, HALF AMPLITUDE 0.75 mm, FOR 10 CYCLES IN 3 AXIAL DIRECTIONS.                   | ① NO ELECTRICAL DISCONTINUITY OF 1 μs.<br>② CONTACT RESISTANCE: 50 mΩ MAX.                                                                                                              | ×                                      | —                                                                                         |
| SHOCK                                                                               |                             | 981 m/s <sup>2</sup> , DURATION OF PULSE 6 ms AT 3 TIMES IN 3 BOTH AXIAL DIRECTIONS.                  | ③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS.                                                                                                                                              | ×                                      | —                                                                                         |
| FPC RETENTION FORCE                                                                 |                             | MEASURED BY APPLICABLE FPC. (CONNECTOR,FPC AT INITIAL CONDITION. THICKNESS OF FPC SHALL BE t=0.30mm ) | DIRECTION OF INSERTION: 0.4×n N MIN (n:NUMBER OF CONTACTS)                                                                                                                              | ×                                      | —                                                                                         |
| ENVIRONMENTAL CHARACTERISTICS                                                       |                             |                                                                                                       |                                                                                                                                                                                         |                                        |                                                                                           |
| RAPID CHANGE OF TEMPERATURE                                                         |                             | TEMPERATURE-40→+15TO+35→+85→+15TO+35°C<br>TIME 30→ 2 TO 3 → 30→ 2 TO 3 min.<br>UNDER 5 CYCLES.        | ① CONTACT RESISTANCE: 50 mΩ MAX.<br>② INSULATION RESISTANCE: 50 MΩ MIN.<br>③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS.                                                                   | ×                                      | —                                                                                         |
| DAMP HEAT (STEADY STATE)                                                            |                             | EXPOSED AT 40±2 °C,<br>RELATIVE HUMIDITY 90 TO 95 %, 96 h.                                            | ① CONTACT RESISTANCE: 50 mΩ MAX.<br>② INSULATION RESISTANCE: 1 MΩ MIN. (AT HIGH HUMIDITY)<br>③ INSULATION RESISTANCE: 50 MΩ MIN. (AT DRY)<br>④ NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | ×                                      | —                                                                                         |
| DAMP HEAT,CYCLIC                                                                    |                             | EXPOSED AT -10 TO +65 °C,<br>RELATIVE HUMIDITY 90 TO 96 %, 10 CYCLES,TOTAL 240 h.                     |                                                                                                                                                                                         | ×                                      | —                                                                                         |
| DRY HEAT                                                                            |                             | EXPOSED AT 85±2 °C, 96 h.                                                                             |                                                                                                                                                                                         | ×                                      | —                                                                                         |
| COLD                                                                                |                             | EXPOSED AT -40±3°C, 96 h.                                                                             |                                                                                                                                                                                         | ×                                      | —                                                                                         |
| CORROSION SALT MIST                                                                 |                             | EXPOSED AT 35±2 °C 5% SALT WATER SPRAY FOR 96 h.                                                      |                                                                                                                                                                                         | ×                                      | —                                                                                         |
| SULPHUR DIOXIDE [JIS C 0090]                                                        |                             | EXPOSED AT 40±2 °C , RELATIVE HUMIDITY 80±5% , 25±5 PPM FOR 96 h.                                     | ① CONTACT RESISTANCE: 50 mΩ MAX.<br>② NO EVIDENCE OF CORROSION WHICH AFFECTS TO OPERATION OF CONNECTOR.                                                                                 | ×                                      | —                                                                                         |
| HYDROGEN SULPHIDE [JIS C 0092]                                                      |                             | EXPOSED AT 40±2 °C , RELATIVE HUMIDITY 80±5% , 10 TO 15 PPM FOR 96 h.                                 |                                                                                                                                                                                         | ×                                      | —                                                                                         |
|                                                                                     | COUNT                       | DESCRIPTION OF REVISIONS                                                                              | DESIGNED                                                                                                                                                                                | CHECKED                                | DATE                                                                                      |
| ①                                                                                   |                             |                                                                                                       |                                                                                                                                                                                         |                                        |                                                                                           |
| REMARK                                                                              |                             |                                                                                                       | APPROVED                                                                                                                                                                                | NM. NISHIMATSU                         | 12. 03. 21                                                                                |
|                                                                                     |                             |                                                                                                       | CHECKED                                                                                                                                                                                 | HS. SAKAMOTO                           | 12. 03. 21                                                                                |
|                                                                                     |                             |                                                                                                       | DESIGNED                                                                                                                                                                                | RT. IKEDA                              | 12. 03. 20                                                                                |
|                                                                                     |                             |                                                                                                       | DRAWN                                                                                                                                                                                   | NM. SANPEI                             | 12. 03. 14                                                                                |
| Unless otherwise specified, refer to JIS C 5402.                                    |                             |                                                                                                       |                                                                                                                                                                                         |                                        |                                                                                           |
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test                      |                             |                                                                                                       | DRAWING NO.                                                                                                                                                                             |                                        | ELC4-159266-02                                                                            |
|  | SPECIFICATION SHEET         |                                                                                                       | PART NO.                                                                                                                                                                                | FH12-**S-0. 5SVA (54)                  |                                                                                           |
|                                                                                     | HIROSE ELECTRIC CO., LTD.   |                                                                                                       | CODE NO.                                                                                                                                                                                | CL586                                  |  1/2 |

| SPECIFICATIONS                                                                                                                                                      |                                                                                                                                                                                                             |                                                                                              |                        |                                                                                       |     |
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| ITEM                                                                                                                                                                | TEST METHOD                                                                                                                                                                                                 | REQUIREMENTS                                                                                 | QT                     | AT                                                                                    |     |
| RESISTANCE TO SOLDERING HEAT                                                                                                                                        | 1) REFLOW SOLDERING (TO BE 2 TIMES MAX.)<br>PEAK TMP. 250 °C MAX<br>REFLOW TMP. 230 °C MIN FOR 30 sec.<br>PRE-HEATING. 150 TO 200°C<br>90 TO 120 sec.<br>2)SOLDERING IRONS : 350 ± 10 °C,<br>FOR 5± 1 sec . | NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS.                              | X                      | —                                                                                     |     |
| SOLDERABILITY                                                                                                                                                       | SOLDERED AT SOLDER TEMPERATURE, 235±5 °C FOR IMMERSION DURATION, 2±0.5 sec.                                                                                                                                 | A NEW UNIFORM COATING OF SOLDER SHALL COVER A MINIMUM OF 95 % OF THE SURFACE BEING IMMERSED. | X                      | —                                                                                     |     |
| <p>(note 1)</p> <p>WHEN THE SAME VALUE OF CURRENT ARE APPLIED TO ALL CONTACTS AT THE SAME TIME IN ONCE, SET THE CURRENT TO THE 70 % OF THE RATED CURRENT VALUE.</p> |                                                                                                                                                                                                             |                                                                                              |                        |                                                                                       |     |
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test                                                                                                      |                                                                                                                                                                                                             | DRAWING NO.                                                                                  | ELC4-159266-02         |                                                                                       |     |
|                                                                                  | SPECIFICATION SHEET                                                                                                                                                                                         | PART NO.                                                                                     | FH12-***S-0. 5SVA (54) |                                                                                       |     |
|                                                                                                                                                                     | HIROSE ELECTRIC CO., LTD.                                                                                                                                                                                   | CODE NO                                                                                      | CL586                  |  | 2/2 |