

| COUNT | DESCRIPTION OF REVISIONS | BY | CHKD | DATE | COUNT | DESCRIPTION OF REVISIONS | BY | CHKD | DATE |
|-------|--------------------------|----|------|------|-------|--------------------------|----|------|------|
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| APPLICABLE STANDARD |                             |                 |   |
|---------------------|-----------------------------|-----------------|---|
| 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         | APPLICABLE CABLE t=0.3±0.05 , GOLD PLATED                                 |

**SPECIFICATIONS**

| ITEM | TEST METHOD | REQUIREMENTS | QT | AT |
|------|-------------|--------------|----|----|
|------|-------------|--------------|----|----|

|                     |                                       |                       |   |   |
|---------------------|---------------------------------------|-----------------------|---|---|
| <b>CONSTRUCTION</b> |                                       |                       |   |   |
| GENERAL EXAMINATION | VISUALLY AND BY MEASURING INSTRUMENT. | ACCORDING TO DRAWING. | × | × |
| MARKING             | CONFIRMED VISUALLY.                   |                       | × | × |

| ELECTRIC CHARACTERISTICS |                       |  |   |   |
|--------------------------|-----------------------|--|---|---|
| CONTACT RESISTANCE       | 1 mA (DC OR 1000 Hz). | 50 mΩ MAX.<br>INCLUDING FPC, FFC 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 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 DIRECTIONS.                             | ③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS.                                     | × | — |
| FPC RETENSION 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 → +15 to +35 → +85 → +15 to +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, RELATIVE HUMIDITY 90 TO 95 %, 96 h.  |   | × | — |
| DAMP HEAT, CYCLIC             | EXPOSED AT -10 TO +65 °C, RELATIVE HUMIDITY 90 TO 96 %, 10 CYCLES, TOTAL 240 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. | × | — |
| DRY HEAT                      | EXPOSED AT 85 ± 2 °C, 96 h.  | ① CONTACT RESISTANCE: 50 mΩ MAX.  | × | — |
| COLD                          | EXPOSED AT -40 ± 3 °C, 96 h.   | ② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.  | × | — |

| EMARKS   | DRAWN                | DESIGNED            | CHECKED                   | APPROVED              | RELEASED |
|--|----------------------|---------------------|---------------------------|-----------------------|----------|
| Unless otherwise specified, refer to JIS C 5402. | D.YAMADA<br>04.03.25 | T.MURAI<br>04.03.25 | R. Takayanagi<br>04.03.26 | M. Ishida<br>04.03.26 |          |

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| Note QT:Qualification Test AT:Assurance Test ×:Applicable Test |                                   |
| <b>HRS</b> HIROSE ELECTRIC CO., LTD.                           | SPECIFICATION SHEET               |
| CODE NO.(OLD)<br>CL  | DRAWING NO.<br>ELC4 - 150722 - 51 |
| PART NO.<br>FH12A - * * S - 0.5SH (55)                         | CODE NO.<br>CL 586                |
|  | 1<br>2                            |



| SPECIFICATIONS                      |   |   |    |    |
|-------------------------------------|---|---|----|----|
| ITEM                                | TEST METHOD   | REQUIREMENTS  | QT | AT |
| CORROSION SALT MIST                 | EXPOSED AT 35±2 °C, 5 % SALT WATER SPRAY FOR 96 h.  | ① CONTACT RESISTANCE: 50 mΩ MAX.<br>② NO EVIDENCE OF CORROSION WHICH AFFECTS TO OPERATION OF CONNECTOR. | ×  | —  |
| SURPHUR DIOXIDE<br>[ JIS C 0090 ]   | EXPOSED AT 40±2 °C, RELATIVE HUMIDITY 80±5 % , 25±5 PPM FOR 96 h.   |   | ×  | —  |
| HYDROGEN SULPHIDE<br>[ JIS C 0092 ] | EXPOSED AT 40±2 °C, RELATIVE HUMIDITY 80±5 % , 10 TO 15 PPM FOR 96 h.   |   | ×  | —  |
| 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.   | ×  | —  |
| 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.            | ×  | —  |

※ WHEN THE SAME VALUE OF CURRENT ARE APPLID TO ALL CONTACTS AT THE SAME TIME IN ONCE, SET THE CURRENT TO THE 70 % OF THE RATED CURRENT VALUE.

|  |          |          |                    |                  |          |
|--|----------|----------|--------------------|------------------|----------|
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| Unless otherwise specified, refer to JIS C 5402. | D.YAMADA | T.MURAI  | <i>R. Takayama</i> | <i>M. Ishida</i> |          |
|  | 04.03.25 | 04.03.25 | 04.03.25           | 04.03.26         |          |

Note QT:Qualification Test AT:Assurance Test ×:Applicable Test

|                                      |                                   |                     |   |  |
|--------------------------------------|-----------------------------------|---------------------|---|--|
| <b>HRS</b> HIROSE ELECTRIC CO., LTD. |                                   | SPECIFICATION SHEET |   | PART NO.<br>FH12A - * * S - 0.5SH (55) |
| CODE NO.(OLD)<br>CL                  | DRAWING NO.<br>ELC4 - 150722 - 51 | CODE NO.<br>CL 586  | 2 |  |

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