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| APPLICABLE STANDARD  |   |   |                           |                  |     |
|--|---|---|---------------------------|------------------|-----|
| RATING   | OPERATING TEMPERATURE RANGE   | -25 °C TO +85 °C  | STORAGE TEMPERATURE RANGE | -10 °C TO +60 °C |     |
|  | VOLTAGE   | AC 100 V , DC 140 V   |                           |                  |     |
|  | CURRENT   | 10 A  | APPLICABLE CABLE          |                  |     |
| <b>SPECIFICATIONS</b>  |   |   |                           |                  |     |
| ITEM   | TEST METHOD   | REQUIREMENTS  | QT                        | AT               |     |
| <b>CONSTRUCTION</b>  |   |   |                           |                  |     |
| GENERAL EXAMINATION  | VISUALLY AND BY MEASURING INSTRUMENT.   | ACCORDING TO DRAWING.   | X                         | X                |     |
| MARKING  | CONFIRMED VISUALLY.   |   | X                         | X                |     |
| <b>ELECTRIC CHARACTERISTICS</b>  |   |   |                           |                  |     |
| CONTACT RESISTANCE   | CONTACT SHALL BE MEASURED AT DC 1 A   | 5 mΩ MAX.   | X                         | X                |     |
| INSULATION RESISTANCE  | 500 V DC.   | 1000 MΩ MIN.  | X                         | X                |     |
| VOLTAGE PROOF  | 1000 V AC. FOR 1 min.   | NO FLASHOVER OR BREAKDOWN.  | X                         | X                |     |
| <b>MECHANICAL CHARACTERISTICS</b>  |   |   |                           |                  |     |
| CONTACT INSERTION AND WITHDRAWAL FORCES  | φ1.57±0.003 BY STEEL GAUGE.   | INSERTION AND WITHDRAWAL FORCES : 0.49 N MIN.   | X                         | -                |     |
| CONNECTOR INSERTION AND WITHDRAWAL FORCES  | MEASURED BY APPLICABLE CONNECTOR.   | INSERTION AND WITHDRAWAL FORCES<br>LOCKING DEVICE WITH UNLOCK : 14 N MAX.   | X                         | -                |     |
| MECHANICAL OPERATION   | 500 TIMES INSERTIONS AND EXTRACTIONS.   | CONTACT RESISTANCE: 5 mΩ MAX.   | X                         | -                |     |
| VIBRATION  | FREQUENCY: 10 TO 55 Hz, SINGLE AMPLITUDE 0.75 mm,<br>- m/s <sup>2</sup> AT 2h, FOR 3 DIRECTIONS.              | ①NO ELECTRICAL DISCONTINUITY OF 10 μs.<br>②NO DAMAGE, CRACK AND LOOSENESS, OF PARTS.  | X                         | -                |     |
| SHOCK  | IN OPPOSITE DIRECTIONS OF EACH 3 DEMENSION AXIS FOR 3 TIMES AT 490 m/s <sup>2</sup> DURATIONS OF PULSE 11 ms. | ① NO ELECTRICAL DISCONTINUITY OF 10 μs.<br>② NO DAMAGE, CRACK AND LOOSENESS, OF PARTS.  | X                         | -                |     |
| <b>ENVIRONMENTAL CHARACTERISTICS</b>   |   |   |                           |                  |     |
| DAMP HEAT (STEADY STATE)   | EXPOSED AT 40 °C, 90 TO 95 %, 96 h.   | ① INSULATION RESISTANCE: 10 MΩ MIN (AT HIGH HUMIDITY).<br>② INSULATION RESISTANCE: 100 MΩ MIN (AT DRY).<br>③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | X                         | -                |     |
| RAPID CHANGE OF TEMPERATURE  | TEMPERATURE -40→ R/T <sup>(1)</sup> → +100 → R/T °C<br>TIME 30 → 10 TO 15 → 30 → 10 TO 15 min UNDER 5 CYCLES. | ① INSULATION RESISTANCE: 1000 MΩ MIN.<br>② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.   | X                         | -                |     |
| CORROSION SALT MIST  | EXPOSED IN 5 % SALT WATER SPRAY FOR 500 h.  | NO HEAVY CORROSION RUIN THE FUNCTION.   | X                         | -                |     |
| DRY HEAT   | EXPOSED AT + 100 °C , 96 h.   | NO DAMAGE, CRACK AND LOOSENESS OF PARTS.  | X                         | -                |     |
| COLD   | EXPOSED AT - 40 °C , 96 h.  | NO DAMAGE, CRACK AND LOOSENESS OF PARTS.  | X                         | -                |     |
| RESISTANCE TO SOLDERING HEAT   | SOLDERED AT SOLDERING IRON BIT TEMPERATURE +380±10°C FOR 3 TO 4 s.  | NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS.   | X                         | -                |     |
| SOLDERABILITY  | SOLDERED AT SOLDERING IRON BIT TEMPERATURE +350±10°C FOR 2 TO 3 s.  | WETTING ON SOLDER SURFACE.<br>NO SOLDER CLUSTER.  | X                         | -                |     |
| SEALING <sup>(2)</sup>   | EXPOSED AT A DEPTH OF 1.8 m FOR 48 h.   | NO WATER PENETRATION INSIDE CONNECTOR.  | X                         | -                |     |
| AIRTIGHTNESS <sup>(2)</sup>  | APPLY AIR PRESSURE 18 kPa FOR 30 S TO INSIDE CONNECTOR.   | NO AIR BUBBLES INSIDE CONNECTOR.  | X                         | -                |     |
| COUNT  | DESCRIPTION OF REVISIONS  | DESIGNED  | CHECKED                   | DATE             |     |
| 0  |   |   |                           |                  |     |
| REMARK   |   | APPROVED  | HY. KOBAYASHI             | 18.02.26         |     |
| NOTES  |   | CHECKED   | HY. KOBAYASHI             | 18.02.26         |     |
| (1) R/T : ROOM TEMPERATURE.  |   | DESIGNED  | TH. KAMEYA                | 18.02.23         |     |
| (2) SEALING AND AIRTIGHTNESS SHALL BE TESTED UNDER MATED CONDITION WITH AN APPLICABLE CONNECTOR. |   | DRAWN   | MK. INOUE                 | 18.02.23         |     |
| Unless otherwise specified, refer to JIS C 5402.(IEC 60512.)                                     |   |   |                           |                  |     |
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test                                   |   | DRAWING NO.   | ELC-110568-31-00          |                  |     |
| <b>HRS</b>   | SPECIFICATION SHEET   | PART NO.  | JR13WP-3S (31)            |                  |     |
|  | HIROSE ELECTRIC CO., LTD.   | CODE NO.  | CL114-2012-1-31           |                  | 1/1 |