

|                                                                |                             |                                                                                                                 |                                                                                                                                                           |                    |                |
|----------------------------------------------------------------|-----------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------------|
| 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                     | 2 A                                                                                                             | APPLICABLE CABLE                                                                                                                                          |                    |                |
| SPECIFICATIONS                                                 |                             |                                                                                                                 |                                                                                                                                                           |                    |                |
| ITEM                                                           |                             | TEST METHOD                                                                                                     | REQUIREMENTS                                                                                                                                              | QT                 | AT             |
| CONSTRUCTION                                                   |                             |                                                                                                                 |                                                                                                                                                           |                    |                |
| GENERAL EXAMINATION                                            |                             | VISUALLY AND BY MEASURING INSTRUMENT.                                                                           | ACCORDING TO DRAWING.                                                                                                                                     | X                  | X              |
| MARKING                                                        |                             | CONFIRMED VISUALLY.                                                                                             |                                                                                                                                                           | X                  | X              |
| ELECTRIC CHARACTERISTICS                                       |                             |                                                                                                                 |                                                                                                                                                           |                    |                |
| CONTACT RESISTANCE                                             |                             | CONTACT SHALL BE MEASURED AT DC 1 A                                                                             | 10 mΩ MAX.                                                                                                                                                | X                  | X              |
| INSULATION RESISTANCE                                          |                             | 100 V DC.                                                                                                       | 1000 MΩ MIN.                                                                                                                                              | X                  | X              |
| VOLTAGE PROOF                                                  |                             | 300 V AC. FOR 1 min.                                                                                            | NO FLASHOVER OR BREAKDOWN.                                                                                                                                | X                  | X              |
| MECHANICAL CHARACTERISTICS                                     |                             |                                                                                                                 |                                                                                                                                                           |                    |                |
| CONTACT INSERTION AND WITHDRAWAL FORCES                        |                             | φ0.53±0.003 BY STEEL GAUGE.                                                                                     | INSERTION AND WITHDRAWAL FORCES : 0.15 N MIN.                                                                                                             | X                  | —              |
| CONNECTOR INSERTION AND WITHDRAWAL FORCES                      |                             | MEASURED BY APPLICABLE CONNECTOR.                                                                               | INSERTION AND WITHDRAWAL FORCES<br>LOCKING DEVICE WITH UNLOCK : — N MAX.<br>LOCKING DEVICE WITH LOCK : 70 N MAX.                                          | X                  | —              |
| MECHANICAL OPERATION                                           |                             | 1000 TIMES INSERTIONS AND EXTRACTIONS.                                                                          | CONTACT RESISTANCE: 15 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.                | ① NO ELECTRICAL DISCONTINUITY OF 10 μs.<br>② NO DAMAGE, CRACK AND LOOSENESS, OF PARTS.                                                                    | X                  | —              |
| SHOCK                                                          |                             | 490 m/s <sup>2</sup> DIRECTIONS OF PULSE 11 ms AT 3 TIMES<br>FOR 3 DIRECTIONS.                                  | ① NO ELECTRICAL DISCONTINUITY OF 10 μs.<br>② NO DAMAGE, CRACK AND LOOSENESS, OF PARTS.                                                                    | X                  | —              |
| ENVIRONMENTAL CHARACTERISTICS                                  |                             |                                                                                                                 |                                                                                                                                                           |                    |                |
| DAMP HEAT<br>(STEADY STATE)                                    |                             | EXPOSED AT 40 °C, 90 TO 95 %, 96 h.                                                                             | ① INSULATION RESISTANCE: 5 MΩ MIN<br>(AT HIGH HUMIDITY).<br>② INSULATION RESISTANCE: 50 MΩ MIN<br>(AT DRY).<br>③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | X                  | —              |
| RAPID CHANGE OF TEMPERATURE                                    |                             | TEMPERATURE -55→ R/T <sup>(1)</sup> → +85 → R/T °C<br>TIME 30 → 10 TO 15 → 30 → 10 TO 15 min<br>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 48 h.                                                                       | NO HEAVY CORROSIN RUIN THE FUNCTION.                                                                                                                      | X                  | —              |
| DRY HEAT                                                       |                             | EXPOSED AT + 85 °C, 96 h.                                                                                       | NO DAMAGE, CRACK AND LOOSENESS OF PARTS.                                                                                                                  | X                  | —              |
| COLD                                                           |                             | EXPOSED AT - 55 °C, 96 h.                                                                                       | NO DAMAGE, CRACK AND LOOSENESS OF PARTS.                                                                                                                  | X                  | —              |
| RESISTANCE TO SOLDERING HEAT                                   |                             | SOLDER TEMPERATURE, + 380±10°C, FOR SOLDERING DURATION, 3 0 <sup>+1</sup> s.                                    | NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS.                                                                                           | X                  | —              |
| SOLDERABILITY                                                  |                             | SOLDERED AT SOLDER TEMPERATURE, + 350±10°C FOR SOLDERING DURATION, 2 TO 3 s.                                    | WETTING ON SOLDER SURFACE, NO SOLDER CLUSTER.                                                                                                             | X                  | —              |
|                                                                | COUNT                       | DESCRIPTION OF REVISIONS                                                                                        | DESIGNED                                                                                                                                                  | CHECKED            | DATE           |
| ①                                                              |                             |                                                                                                                 |                                                                                                                                                           |                    |                |
| REMARK                                                         |                             |                                                                                                                 | APPROVED                                                                                                                                                  | MO. SATOH          | 07. 03. 08     |
| Note(1) R/T : ROOM TEMPERATURE                                 |                             |                                                                                                                 | CHECKED                                                                                                                                                   | EJ. KUNII          | 07. 03. 08     |
|                                                                |                             |                                                                                                                 | DESIGNED                                                                                                                                                  | TO. HORII          | 07. 03. 08     |
| Unless otherwise specified, refer to JIS C 5402.               |                             |                                                                                                                 | DRAWN                                                                                                                                                     | MK. SATO           | 07. 03. 06     |
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test |                             |                                                                                                                 | DRAWING NO.                                                                                                                                               |                    | ELC4-021368-72 |
| HRS                                                            | SPECIFICATION SHEET         |                                                                                                                 | PART NO.                                                                                                                                                  | HR10A-10R-10S (72) |                |
|                                                                | HIROSE ELECTRIC CO., LTD.   |                                                                                                                 | CODE NO.                                                                                                                                                  | CL110-0409-9-72    | △ 1/1          |