

May.1.2024 Copyright 2024 HIROSE ELECTRIC CO., LTD. All Rights Reserved.  
In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.

| 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      | WIRE SIZE  | —————            |                  |
|   | CURRENT  | 5 A                      | APPLICABLE CABLE   | φ4.2 TO φ5       |                  |
| SPECIFICATIONS  |  |                          |  |                  |                  |
| 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 DC 1 A   |                          | 5 mΩ MAX.  | X                | X                |
|   | CONTACT SHALL BE MEASURED DC — A   |                          | — 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                |
| <b>MECHANICAL CHARACTERISTICS</b>                                     |  |                          |  |                  |                  |
| CONTACT INSERTION AND WITHDRAWAL FORCES                               | φ0.991 <sup>+0.003</sup> <sub>0</sub> BY STEEL GAUGE.  |                          | INSERTION AND WITHDRAWAL FORCES : 0.2 N MIN.   | X                | —                |
| CONNECTOR INSERTION AND WITHDRAWAL FORCES                             | MEASURED BY APPLICABLE CONNECTOR LOCKING DEVICE WITH LOCK.   |                          | INSERTION AND WITHDRAWAL FORCES : 30 N MAX.  | X                | —                |
| MECHANICAL OPERATION  | 1000 TIMES INSERTIONS AND EXTRACTIONS.   |                          | CONTACT RESISTANCE: 10 mΩ MAX.   | X                | —                |
|   |  |                          | — RESISTANCE: — mΩ MAX.  | —                | —                |
| VIBRATION   | FREQUENCY 10 TO 55 Hz, (1CYC, 5min) SINGLE AMPLITUDE 0.75 mm, AT 10CYC, FOR 3 DIRECTIONS                         |                          | ① NO ELECTRICAL DISCONTINUITY OF 10 μs.<br>② NO DAMAGE, CRACK AND LOOSENESS, OF PARTS.   | X                | —                |
| SHOCK   | IN OPPOSITE DIRECTIONS OF EACH 3 DEMENSION ALAXIS FOR 3 TIMES AT 490 m/s <sup>2</sup> DURATION OF PULSE 11 ms.   |                          | ① NO ELECTRICAL DISCONTINUITY OF 10 μs.<br>② NO DAMAGE, CRACK AND LOOSENESS, OF PARTS.   | X                | —                |
| BREAKING STRENGTH   | MAX 30N SHALL BE APPLIED TO CABLE IN UP AND DOWN, LEFT AND RIGHT DIRECTIONS WHEN MATED                           |                          | NO BREAKAGE OF CONNECTOR.  | 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 -55°C→ R/T <sup>(1)</sup> → +85°C → R/T<br>TIME 30 → 10 TO 15 → 30 → 10 TO 15 min<br>UNDER 5 CYCLES. |                          | ① INSULATION RESISTANCE: 100 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 CORROSION.  | 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 IMMERSION DURATION, 3 <sup>+1</sup> <sub>0</sub> s.                         |                          | NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS.  | X                | —                |
| SOLDERABILITY   | SOLDERED AT SOLDER TEMPERATURE, +350±10°C FOR IMMERSION DURATION, 2 TO 3 s.                                      |                          | SOLDER SURFACE TO BE FREE FROM PIN-HOLE, NO WETTING AND OTHER DEFECTS.   | X                | —                |
| SEALING <sup>(2)</sup>  | EXPOSED AT A DEPTH OF 1m FOR 0.5 h.  |                          | NO WATER PENETRATION INSIDE CONNECTOR.   | X                | —                |
| AIRTIGHTNESS <sup>(2)</sup>   | APPLY AIR PRESSURE 17.6 kPa FOR 0.5min TO INSIDE CONNECTOR   |                          | NO AIR BUBBLES INSIDE CONNECTOR  | X                | —                |
|   | COUNT  | DESCRIPTION OF REVISIONS | DESIGNED   | CHECKED          | DATE             |
| Q   |  |                          |  |                  |                  |
| REMARK  |  |                          | APPROVED   | HY. KOBAYASHI    | 18.06.05         |
| NOTES(1) R/T : ROOM TEMPERATURE                                       |  |                          | CHECKED  | HY. KOBAYASHI    | 18.06.05         |
| (2) SEALING AND AIRTIGHTNESS SHALL BE TESTED BY APPLICABLE CONNECTOR. |  |                          | DESIGNED   | DS. MATSUNE      | 18.06.05         |
| Unless otherwise specified, refer to IEC 60512.(JIS C 5402)           |  |                          | DRAWN  | DS. MATSUNE      | 18.06.05         |
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test        |  |                          | DRAWING NO.  |                  | ELC-112005-31-00 |
| <b>HRS</b>  | SPECIFICATION SHEET  |                          | PART NO.   | HR30-6P-3S (31)  |                  |
|   | HIROSE ELECTRIC CO., LTD.  |                          | CODE NO.   | CL130-0004-1-31  | △ 1/1            |