

| APPLICABLE STANDARD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                             |                                                                                                                                             |                           |                                                                                                                                                                                                       |                |
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| RATING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | OPERATING TEMPERATURE RANGE | -35°C TO +85°C(NOTE 1)                                                                                                                      | STORAGE TEMPERATURE RANGE | -10°C TO +60°C(NOTE 3)                                                                                                                                                                                |                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | OPERATING HUMIDITY RANGE    | 20% TO 80%(NOTE 2)                                                                                                                          | STORAGE HUMIDITY RANGE    | 40% TO 70%(NOTE 2)(NOTE 3)                                                                                                                                                                            |                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | VOLTAGE                     | 100V AC/DC                                                                                                                                  | APPLICABLE CONNECTOR      | DF81※-40P-0.4SD(##)                                                                                                                                                                                   |                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | CURRENT                     | AWG#34,36 : 0.3(MAX0.8A)<br>AWG#40 : 0.25A<br>AWG#42 : 0.2A<br>AWG#44 : 0.15A<br>AWG#46 : 0.1A                                              | (NOTE4)<br>(NOTE5)        |                                                                                                                                                                                                       |                |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                             | 100m A (DC OR 1000 Hz).                                                                                                                     |                           | CONTACT:80mΩ MAX.<br>SHIELDING:80mΩ MAX.                                                                                                                                                              | X —            |
| INSULATION RESISTANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                             | 100V DC.                                                                                                                                    |                           | 50MΩ MIN.                                                                                                                                                                                             | X —            |
| VOLTAGE PROOF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                             | 250V AC FOR 1 min.                                                                                                                          |                           | NO FLASHOVER OR BREAKDOWN.                                                                                                                                                                            | X —            |
| MECHANICAL CHARACTERISTICS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                             |                                                                                                                                             |                           |                                                                                                                                                                                                       |                |
| MECHANICAL OPERATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                             | 30TIMES INSERTIONS AND EXTRACTIONS.                                                                                                         |                           | ① CONTACT RESISTANCE:<br>NO VARIATION OF 50 mΩ OR MORE FROM INITIAL VALUE.<br>SHIELDING RESISTANCE:<br>NO VARIATION OF 50 mΩ OR MORE FROM INITIAL VALUE.<br>② NO DAMAGE, CRACK OR LOOSENESS OF PARTS. | X —            |
| VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                             | FREQUENCY 10 TO 55 Hz, SINGLE AMPLITUDE 0.75 mm, 3 DIRECTIONS x 10 CYCLE.                                                                   |                           | ① NO ELECTRICAL DISCONTINUITY OF 1 μs.<br>② NO DAMAGE, CRACK OR LOOSENESS OF PARTS.                                                                                                                   | X —            |
| SHOCK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                             | 490 m/s <sup>2</sup> DURATION OF PULSE 11 ms AT 3 TIMES FOR 3 DIRECTIONS.                                                                   |                           |                                                                                                                                                                                                       | X —            |
| ENVIRONMENTAL CHARACTERISTICS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                             |                                                                                                                                             |                           |                                                                                                                                                                                                       |                |
| RAPID CHANGE OF TEMPERATURE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                             | TEMPERATURE -55 →+85 °C<br>TIME 30 → 30 min<br>UNDER 5 CYCLES. (THE TRANSFERRING TIME OF THE CHAMBER IS 2-3 MINUTE.)                        |                           | ① CONTACT RESISTANCE:<br>NO VARIATION OF 50 mΩ OR MORE FROM INITIAL VALUE.<br>SHIELDING RESISTANCE:<br>NO VARIATION OF 50 mΩ OR MORE FROM INITIAL VALUE.                                              | X —            |
| DAMP HEAT (STEADY STATE)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                             | EXPOSED AT 40 ± 2 °C, 90 TO 95 %, 96 h.                                                                                                     |                           | ② INSULATION RESISTANCE: 25 MΩ MIN.<br>③ NO DAMAGE, CRACK OR LOOSENESS OF PARTS.                                                                                                                      | X —            |
| SULFUR DIOXIDE GAS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                             | EXPOSED IN 25±5PPM, 25±2°C, 75%RH, 96h.                                                                                                     |                           | NO DEFECT SUCH AS CORROSION WHICH IMPAIRS THE FUNCTION OF CONNECTOR.                                                                                                                                  | X —            |
| RESISTANCE TO SOLDERING HEAT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                             | ①REFLOW TEMPERATURE:<br>PEAK 250°C MAX<br>240°C MIN :20 sec MAX<br>220°C MIN :60 sec MAX<br>②MANUAL SOLDERING TEMPERATURE: 350°C, 3sec MAX. |                           | NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS.                                                                                                                                       | X —            |
| SOLDERABILITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                             | SOLDERED AT SOLDER TEMPERATURE, 245°C FOR INSERTION DURATION, 5 sec. (Sn-3.0Ag-0.5Cu)                                                       |                           | SOLDER SHALL COVER A MINIMUM OF 95 % OF THE SURFACE BEING IMMersed.                                                                                                                                   | X —            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | COUNT                       | DESCRIPTION OF REVISIONS                                                                                                                    | DESIGNED                  | CHECKED                                                                                                                                                                                               | DATE           |
| △                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2                           | DIS-D-003000                                                                                                                                | AH. MIYAZAKI              | MH. TSUCHIDA                                                                                                                                                                                          | 13. 08. 29     |
| REMARKS<br>NOTE1: INCLUDE THE TEMPERATURE RISING BY CURRENT<br>NOTE2: NON CONDENSING<br>NOTE3: THE TERM "STORAGE" REFERS TO PRODUCTS STORED FOR A LONG PERIOD PRIOR TO MOUNTING AND USE. THE OPERATING TEMPERATURE AND HUMIDITY RANGE COVERS THE NON-CONDUCTING CONDITION OF CONNECTORS AFTER BOARD MOUNTING AND THE TEMPORARY STORAGE CONDITIONS OF TRANSPORTATION, etc<br>NOTE4:IT COULD BE VARIED DEPENDING ON THE CONDITIONS.<br>"MAX" IS RATING CURRENT AS ONLY TWO OF THEM TURN ON ELECTRICITY.<br>NOTE5: TEMPERATURE RISE OF CONNECTOR BODY ONLY, AND THAT OF CABLE IS NOT INCLUDED.<br>Unless otherwise specified, refer to JIS C 5402,IEC60512. |                             |                                                                                                                                             | APPROVED                  | TS. SAKATA                                                                                                                                                                                            | 12. 11. 12     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                             |                                                                                                                                             | CHECKED                   | HS. OZAWA                                                                                                                                                                                             | 12. 11. 12     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                             |                                                                                                                                             | DESIGNED                  | AH. MIYAZAKI                                                                                                                                                                                          | 12. 11. 09     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                             |                                                                                                                                             | DRAWN                     | AH. MIYAZAKI                                                                                                                                                                                          | 12. 11. 09     |
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                             |                                                                                                                                             | DRAWING NO.               |                                                                                                                                                                                                       | ELC4-339516-01 |
| HRS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | SPECIFICATION SHEET         |                                                                                                                                             | PART NO.                  | DF81-40S-0. 4H (51)                                                                                                                                                                                   |                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | HIROSE ELECTRIC CO., LTD.   |                                                                                                                                             | CODE NO.                  | CL662-8100-4-51                                                                                                                                                                                       | △ 1/1          |