

| APPLICABLE STANDARD                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                             |                                       |                                                                                                                      |                         |                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|----------------------------------------------------------------------------------------------------------------------|-------------------------|----------------|
| RATING                                                                                                                                                                                                                                                                                            | OPERATING TEMPERATURE RANGE                                                                                                                                                                                                 | -35°C TO +85°C (NOTE 1)               | STORAGE TEMPERATURE RANGE                                                                                            | -10°C TO +60°C (NOTE 3) |                |
|                                                                                                                                                                                                                                                                                                   | OPERATING HUMIDITY RANGE                                                                                                                                                                                                    | 40% TO 80% (NOTE 2)                   | STORAGE HUMIDITY RANGE                                                                                               | 40% TO 70% (NOTE 3)     |                |
|                                                                                                                                                                                                                                                                                                   | VOLTAGE                                                                                                                                                                                                                     | 500V AC/DC                            | APPLICABLE CABLE                                                                                                     | UL1007, AWG20-22        |                |
|                                                                                                                                                                                                                                                                                                   | CURRENT                                                                                                                                                                                                                     | AWG 20 : 5A<br>AWG 22 : 4A            | APPLICABLE CONNECTOR                                                                                                 | DF33C-10DS-3. 3C        |                |
| 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                                                                                                                                                                                                                                                                                | 1mA (DC OR 1000 Hz). 20mV MAX                                                                                                                                                                                               |                                       | 10mΩ MAX.                                                                                                            | X                       | —              |
| INSULATION RESISTANCE                                                                                                                                                                                                                                                                             | 500V DC.                                                                                                                                                                                                                    |                                       | 1000MΩ MIN.                                                                                                          | X                       | —              |
| VOLTAGE PROOF                                                                                                                                                                                                                                                                                     | 1500V AC FOR 1 min.                                                                                                                                                                                                         |                                       | NO FLASHOVER OR BREAKDOWN.                                                                                           | X                       | —              |
| MECHANICAL CHARACTERISTICS                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                             |                                       |                                                                                                                      |                         |                |
| MECHANICAL OPERATION                                                                                                                                                                                                                                                                              | 30 TIMES INSERTIONS AND EXTRACTIONS.                                                                                                                                                                                        |                                       | ① CONTACT RESISTANCE: 20mΩ MAX.<br>② NO DAMAGE, CRACK OR LOOSENESS OF PARTS.                                         | X                       | —              |
| VIBRATION                                                                                                                                                                                                                                                                                         | FREQUENCY 10 TO 55 Hz, SINGLE AMPLITUDE 0.75 mm, AT 10 CYCLE FOR EACH, FOR 3 DIRECTIONS.                                                                                                                                    |                                       | ① NO ELECTRICAL DISCONTINUITY OF 1μs.<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                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                             |                                       |                                                                                                                      |                         |                |
| DAMP HEAT (STEADY STATE)                                                                                                                                                                                                                                                                          | EXPOSED AT 40 ± 2 °C, 90 TO 95 %, 96 h.                                                                                                                                                                                     |                                       | ① CONTACT RESISTANCE: 20mΩ MAX.<br>② INSULATION RESISTANCE: 500MΩ MIN.<br>③ NO DAMAGE, CRACK OR LOOSENESS OF PARTS.  | X                       | —              |
| RAPID CHANGE OF TEMPERATURE                                                                                                                                                                                                                                                                       | TEMPERATURE -55→+85°C<br>TIME 30→ 30min.<br>UNDER 5 CYCLES.<br>THE TRANSFERRING TIME OF THE TANK IS 2~3 min.                                                                                                                |                                       | ① CONTACT RESISTANCE: 20mΩ MAX.<br>② INSULATION RESISTANCE: 1000MΩ MIN.<br>③ NO DAMAGE, CRACK OR LOOSENESS OF PARTS. | X                       | —              |
| RESISTANCE TO SOLDERING HEAT                                                                                                                                                                                                                                                                      | 1) AUTOMATIC SOLDERING (FLOW)<br>SOLDERED AT SOLDER TEMPERATURE, 260°C FOR IN IMMERSION , DURATION, 10 s.<br><br>2)MANUAL SOLDERING<br>SOLDERING IRON TEMPERATURE :300°C,<br>SOLDERING TIME :3s.<br>NO STRENGTH ON CONTACT. |                                       | NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS.                                                      | X                       | —              |
| SOLDERABILITY                                                                                                                                                                                                                                                                                     | SOLDERED AT SOLDER TEMPERATURE, 245°C FOR IN IMMERSION , DURATION, 5 s.                                                                                                                                                     |                                       | A NEW UNIFORM COATING OF SOLDER SHALL COVER MINIMUM OF 95 % OF THE SURFACE BEING IMMERSED.                           | X                       | —              |
| REMARKS<br>NOTE 1:INCLUDING THE TEMPERATURE RISE BY CURRENT.<br>NOTE 2:NO CONDENSING<br>NOTE3:APPLY TO THE CONDITION OF LONGTERM STORAGE FOR UNUSED PRODUCTS BEFORE PCB ON BOARD, AFTER PCB BOARD, OPERATING TEMPERATURE AND HUMIDITY RANGE IS APPLIED FOR INTERIM STORAGE DURING TRANSPORTATION. |                                                                                                                                                                                                                             |                                       |                                                                                                                      |                         |                |
|                                                                                                                                                                                                                                                                                                   | COUNT                                                                                                                                                                                                                       | DESCRIPTION OF REVISIONS              | DESIGNED                                                                                                             | CHECKED                 | DATE           |
| △                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                             |                                       |                                                                                                                      |                         |                |
| Unless otherwise specifid , refer to JIS C 5402.                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                             |                                       | APPROVED                                                                                                             | KI. AKIYAMA             | 13. 03. 11     |
|                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                             |                                       | CHECKED                                                                                                              | TS. KUMAZAWA            | 13. 03. 11     |
|                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                             |                                       | DESIGNED                                                                                                             | HT. SATO                | 13. 03. 11     |
|                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                             |                                       | DRAWN                                                                                                                | MI. SAKIMURA            | 13. 03. 08     |
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test                                                                                                                                                                                                                                    |                                                                                                                                                                                                                             |                                       | DRAWING NO.                                                                                                          |                         | ELC4-338390-02 |
| HRS                                                                                                                                                                                                                                                                                               | SPECIFICATION SHEET                                                                                                                                                                                                         |                                       | PART NO.                                                                                                             | DF33C-10DP-3. 3DSA (24) |                |
|                                                                                                                                                                                                                                                                                                   | HIROSE ELECTRIC CO., LTD.                                                                                                                                                                                                   |                                       | CODE NO.                                                                                                             | CL676-1116-9-24         | △ 1/1          |