

| APPLICABLE STANDARD                                                                                                                                                                                                                                                               |                             |                                                                                                                                                                                                                                                                                                                                      |                                                                                                                        |                                |                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|--------------------------------|-------------------------------------------------------------------------------------------|
| RATING                                                                                                                                                                                                                                                                            | OPERATING TEMPERATURE RANGE | -55 °C TO 125 °C (NOTES 1)                                                                                                                                                                                                                                                                                                           | STORAGE TEMPERATURE RANGE                                                                                              | -10 °C TO 60 °C (NOTES 2)      |                                                                                           |
|                                                                                                                                                                                                                                                                                   | VOLTAGE                     | 50 V AC                                                                                                                                                                                                                                                                                                                              |                                                                                                                        |                                |                                                                                           |
|                                                                                                                                                                                                                                                                                   | CURRENT                     | 0.3 A                                                                                                                                                                                                                                                                                                                                |                                                                                                                        |                                |                                                                                           |
| 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                                                                                                                                                                                                                                                                |                             | 20 mV AC OR LESS 1 kHz, 1 mA.                                                                                                                                                                                                                                                                                                        | 50 mΩ MAX.                                                                                                             | X                              | —                                                                                         |
| INSULATION RESISTANCE                                                                                                                                                                                                                                                             |                             | 100 V DC                                                                                                                                                                                                                                                                                                                             | 500 MΩ MAX                                                                                                             | X                              | —                                                                                         |
| VOLTAGE PROOF                                                                                                                                                                                                                                                                     |                             | 150 V AC FOR 1 min.                                                                                                                                                                                                                                                                                                                  | NO FLASHOVER OR BREAKDOWN.                                                                                             | X                              | —                                                                                         |
| MECHANICAL CHARACTERISTICS                                                                                                                                                                                                                                                        |                             |                                                                                                                                                                                                                                                                                                                                      |                                                                                                                        |                                |                                                                                           |
| MECHANICAL OPERATION                                                                                                                                                                                                                                                              |                             | 50 TIMES INSERTIONS AND WITHDRAWALS.                                                                                                                                                                                                                                                                                                 | ① CONTACT RESISTANCE: 50 mΩ MAX.<br>② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.                                         | X                              | —                                                                                         |
| VIBRATION                                                                                                                                                                                                                                                                         |                             | FREQUENCY 10 TO 55 Hz, SINGLE AMPLITUDE 0.75 mm, AT 2 h, FOR 3 DIRECTIONS.                                                                                                                                                                                                                                                           | ① NO ELECTRICAL DISCONTINUITY OF 1 μs.<br>② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.                                   | X                              | —                                                                                         |
| SHOCK                                                                                                                                                                                                                                                                             |                             | 490 m/s <sup>2</sup> DURATION OF PULSE 11 ms AT 3 TIMES FOR 3 DIRECTIONS.                                                                                                                                                                                                                                                            | ① NO ELECTRICAL DISCONTINUITY OF 1 μs.<br>② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.                                   | X                              | —                                                                                         |
| ENVIRONMENTAL CHARACTERISTICS                                                                                                                                                                                                                                                     |                             |                                                                                                                                                                                                                                                                                                                                      |                                                                                                                        |                                |                                                                                           |
| RAPID CHANGE OF TEMPERATURE                                                                                                                                                                                                                                                       |                             | TEMPERATURE -65 →15 TO 35 →125 →15 TO 35 °C<br>TIME 30 → 2 TO 3 → 30 → 2 TO 3 min<br>UNDER 5 CYCLES.                                                                                                                                                                                                                                 | ① CONTACT RESISTANCE: 50 mΩ MAX.<br>② INSULATION RESISTANCE: 500 MΩ MIN.<br>③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | X                              | —                                                                                         |
| DAMP HEAT (STEADY STATE)                                                                                                                                                                                                                                                          |                             | EXPOSED AT 40 ± 2 °C, 90 TO 95 %, 96 h.                                                                                                                                                                                                                                                                                              | ① CONTACT RESISTANCE: 50 mΩ MAX.<br>② INSULATION RESISTANCE: 500 MΩ MIN.<br>③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | X                              | —                                                                                         |
| SULPHUR DIOXIDE                                                                                                                                                                                                                                                                   |                             | EXPOSED IN 25 PPM RH 75 % FOR 96 h.<br>(TEST STANDARD: JEIDA-38)                                                                                                                                                                                                                                                                     | ① CONTACT RESISTANCE: 50 mΩ MAX.<br>② NO HEAVY CORROSION.                                                              | X                              | —                                                                                         |
| HEAT RESISTANCE OF SOLDERING                                                                                                                                                                                                                                                      |                             | 【RECOMMENDED TEMPERATURE PROFILE】<br>《SOLDERING AREA》<br>MAX250°C, 220°C FOR 60 SECONDS MAX.<br>《PREHEATING AREA》<br>150 TO 180°C 90~120 SECONDS.<br>MAXIMUM TWICE ACTION IS ALLOWED UNDER THE SAME CONDITION.<br>【RECOMMENDED MANUAL SOLDELING CONDITION】<br>SOLDERING IRON TEMPERATURE 350°C<br>SOLDERING TIME : WITHIN 3 SECONDS. | NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS.                                                        | X                              | —                                                                                         |
|                                                                                                                                                                                                                                                                                   |                             |                                                                                                                                                                                                                                                                                                                                      |                                                                                                                        |                                |                                                                                           |
| REMARKS<br>NOTES1:INCLUDING THE TEMPERATURE RISE BY CURRENT.<br>NOTES2:STORAGEIS DEFINED AS LONG-TERM STORAGE OF UNUSED PRODUCTS.<br>APPLY OPERATION TEMPERATURE RANGE TO PRODUCTS MOUNTED ON PCB WITHOUT POWER SUPPLY.<br><br>UNLESS OTHERWISE SPECIFIED , REFER TO JIS C 5402 . |                             |                                                                                                                                                                                                                                                                                                                                      |                                                                                                                        |                                |                                                                                           |
|                                                                                                                                                                                                                                                                                   | COUNT                       | DESCRIPTION OF REVISIONS                                                                                                                                                                                                                                                                                                             | DESIGNED                                                                                                               | CHECKED                        | DATE                                                                                      |
|                                                                                                                                                                                                |                             |                                                                                                                                                                                                                                                                                                                                      |                                                                                                                        |                                |                                                                                           |
|                                                                                                                                                                                                                                                                                   |                             |                                                                                                                                                                                                                                                                                                                                      | APPROVED                                                                                                               | WR. FUKUCHI                    | 20200720                                                                                  |
|                                                                                                                                                                                                                                                                                   |                             |                                                                                                                                                                                                                                                                                                                                      | CHECKED                                                                                                                | TS. MIYAZAKI                   | 20200720                                                                                  |
|                                                                                                                                                                                                                                                                                   |                             |                                                                                                                                                                                                                                                                                                                                      | DESIGNED                                                                                                               | KT. KUSAKA                     | 20200717                                                                                  |
|                                                                                                                                                                                                                                                                                   |                             |                                                                                                                                                                                                                                                                                                                                      | DRAWN                                                                                                                  | RN. IIDA                       | 20200717                                                                                  |
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test                                                                                                                                                                                                                    |                             |                                                                                                                                                                                                                                                                                                                                      | DRAWING NO.                                                                                                            | ELC-389292-51-01               |                                                                                           |
|                                                                                                                                                                                                                                                                                   | SPECIFICATION SHEET         |                                                                                                                                                                                                                                                                                                                                      | PART NO.                                                                                                               | DF12NC (3. 0) -50DP-0. 5V (51) |                                                                                           |
|                                                                                                                                                                                                                                                                                   | HIROSE ELECTRIC CO., LTD.   |                                                                                                                                                                                                                                                                                                                                      | CODE NO.                                                                                                               | CL537-0490-0-51                |  1/1 |