

| APPLICABLE STANDARD                                                                                                                                                                                                                                                                                  |                             |                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                      |                                 |                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------|
| RATING                                                                                                                                                                                                                                                                                               | OPERATING TEMPERATURE RANGE | -35°C TO +85°C (NOTES 1)                                                                                                                                                                                                                                                                                                                                         | STORAGE TEMPERATURE RANGE                                                                                            | -10°C TO +60°C (NOTE3)          |                |
|                                                                                                                                                                                                                                                                                                      | OPERATING HUMIDITY RANGE    | 20 % TO 80 % (NOTES 2)                                                                                                                                                                                                                                                                                                                                           | STORAGE HUMIDITY RANGE                                                                                               | 40 % TO 70 % (NOTE3)            |                |
|                                                                                                                                                                                                                                                                                                      | VOLTAGE                     | 150 V AC (DC)                                                                                                                                                                                                                                                                                                                                                    | CURRENT                                                                                                              | 1 A                             |                |
|                                                                                                                                                                                                                                                                                                      | APPLICABLE CONNECTOR        | DF13-*S-1.25C                                                                                                                                                                                                                                                                                                                                                    | APPLICABLE CONTACT                                                                                                   | DF13(G)-2630SCF<br>DF13-3032SCF |                |
| <b>SPECIFICATIONS</b>                                                                                                                                                                                                                                                                                |                             |                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                      |                                 |                |
| 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                                                                                                                                                                                                                                                                                   |                             | 100 m A (DC OR 1000 Hz).                                                                                                                                                                                                                                                                                                                                         | 30 mΩ MAX.                                                                                                           | X                               | —              |
| INSULATION RESISTANCE                                                                                                                                                                                                                                                                                |                             | 100 V DC.                                                                                                                                                                                                                                                                                                                                                        | 500 MΩ MIN.                                                                                                          | X                               | —              |
| VOLTAGE PROOF                                                                                                                                                                                                                                                                                        |                             | 500 V AC FOR 1 min.                                                                                                                                                                                                                                                                                                                                              | NO FLASHOVER OR BREAKDOWN.                                                                                           | X                               | —              |
| <b>MECHANICAL CHARACTERISTICS</b>                                                                                                                                                                                                                                                                    |                             |                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                      |                                 |                |
| MECHANICAL OPERATION                                                                                                                                                                                                                                                                                 |                             | 30 TIMES INSERTIONS AND EXTRACTIONS.                                                                                                                                                                                                                                                                                                                             | ① CONTACT RESISTANCE: 30 mΩ MAX.<br>② NO DAMAGE, CRACK OR 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 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                               | —              |
| <b>ENVIRONMENTAL CHARACTERISTICS</b>                                                                                                                                                                                                                                                                 |                             |                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                      |                                 |                |
| RAPID CHANGE OF TEMPERATURE                                                                                                                                                                                                                                                                          |                             | TEMPERATURE -55→ 15 TO 35→+85→ 15 TO 35 °C<br>TIME 30→ 2 TO 3→30→ 2 TO 3 min.<br>UNDER 5 CYCLES.                                                                                                                                                                                                                                                                 | ① CONTACT RESISTANCE: 30mΩ MAX.<br>② INSULATION RESISTANCE: 500 MΩ MIN.<br>③ NO DAMAGE, CRACK OR LOOSENESS OF PARTS. | X                               | —              |
| DAMP HEAT (STEADY STATE)                                                                                                                                                                                                                                                                             |                             | EXPOSED AT 40 ± 2 °C, 90 TO 95 %, 96 h.                                                                                                                                                                                                                                                                                                                          |                                                                                                                      | X                               | —              |
| RESISTANCE TO SOLDERING HEAT                                                                                                                                                                                                                                                                         |                             | 1) REFLOW SOLDERING<br>«REFLOW AREA»<br>250°C MAX 10 sec MAX<br>230°C MIN 60 sec MAX<br>«PREHEATING AREA»<br>170°C TO 190°C 60 sec TO 120 sec<br>PUT THROUGH IN REFLOW FURNACE TWICE,<br>LEAVE IN AMBIENT TEMPERATURE AND HUMIDITY FOR 1 HOUR.<br>2) MANUAL SOLDERING<br>SOLDERING IRON TEMPERATURE :350°C,<br>SOLDERING TIME : 3sec.<br>NO STRENGTH ON CONTACT. | NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS.                                                      | X                               | —              |
| SOLDERABILITY                                                                                                                                                                                                                                                                                        |                             | SOLDERED AT SOLDER TEMPERATURE, 245°C FOR INSERTION DURATION, 3sec.                                                                                                                                                                                                                                                                                              | SOLDER SHALL COVER A MINIMUM OF 95 % OF THE SURFACE BEING IMMERSSED.                                                 | X                               | —              |
| REMARKS<br>NOTE1: INCLUDE THE TEMPERATURE RISING BY CURRENT<br>NOTE2:NO CONDENSING<br>NOTE3:APPLY TO THE CONDITION OF LONG TERM STORAGE FOR UNUSED PRODUCTS BEFORE PCB ON BOARD,<br>AFTER PCB BOARD , OPERATING TEMPERATURE AND HUMIDITY RANGE IS APPLIED FOR INTERIM STORAGE DURING TRANSPORTATION. |                             |                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                      |                                 |                |
| Unless otherwise specified, refer to JIS C 5402.                                                                                                                                                                                                                                                     |                             |                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                      |                                 |                |
|                                                                                                                                                                                                                                                                                                      | COUNT                       | DESCRIPTION OF REVISIONS                                                                                                                                                                                                                                                                                                                                         | DESIGNED                                                                                                             | CHECKED                         | DATE           |
| △                                                                                                                                                                                                                                                                                                    |                             |                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                      |                                 |                |
|                                                                                                                                                                                                                                                                                                      |                             |                                                                                                                                                                                                                                                                                                                                                                  | APPROVED                                                                                                             | TS. SAKATA                      | 09. 11. 04     |
|                                                                                                                                                                                                                                                                                                      |                             |                                                                                                                                                                                                                                                                                                                                                                  | CHECKED                                                                                                              | TS. FUKUSHIMA                   | 09. 11. 04     |
|                                                                                                                                                                                                                                                                                                      |                             |                                                                                                                                                                                                                                                                                                                                                                  | DESIGNED                                                                                                             | KT. ISHII                       | 09. 11. 01     |
|                                                                                                                                                                                                                                                                                                      |                             |                                                                                                                                                                                                                                                                                                                                                                  | DRAWN                                                                                                                | KT. ISHII                       | 09. 11. 01     |
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test                                                                                                                                                                                                                                       |                             |                                                                                                                                                                                                                                                                                                                                                                  | DRAWING NO.                                                                                                          |                                 | ELC4-162444-06 |
| <b>HRS</b>                                                                                                                                                                                                                                                                                           | SPECIFICATION SHEET         |                                                                                                                                                                                                                                                                                                                                                                  | PART NO.                                                                                                             | DF13A-*P-1. 25H (21)            |                |
|                                                                                                                                                                                                                                                                                                      | HIROSE ELECTRIC CO., LTD.   |                                                                                                                                                                                                                                                                                                                                                                  | CODE NO.                                                                                                             | CL536                           | △ 1/1          |