

|                                                                |                                                                                                                                                                                                                                                                                                                                                             |                        |                                                                                                                    |                               |            |
|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------------------------------------------------------------------------------------------------------------|-------------------------------|------------|
| APPLICABLE STANDARD                                            |                                                                                                                                                                                                                                                                                                                                                             |                        |                                                                                                                    |                               |            |
| RATING                                                         | OPERATING TEMPERATURE RANGE                                                                                                                                                                                                                                                                                                                                 | -55°C TO 85°C (NOTE 1) | STORAGE TEMPERATURE RANGE                                                                                          | -10°C TO 60°C                 |            |
|                                                                | VOLTAGE                                                                                                                                                                                                                                                                                                                                                     | 30V AC                 | APPLICABLE CONNECTOR                                                                                               | DF40*-80DP-0.4V (**)          |            |
|                                                                | CURRENT                                                                                                                                                                                                                                                                                                                                                     | 0.3A                   |                                                                                                                    |                               |            |
| 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                                             | 20mV AC OR LESS 1kHz,1mA .                                                                                                                                                                                                                                                                                                                                  |                        | 90mΩ MAX.                                                                                                          | X                             | —          |
| INSULATION RESISTANCE                                          | 100V DC.                                                                                                                                                                                                                                                                                                                                                    |                        | 50MΩ MIN.                                                                                                          | X                             | —          |
| VOLTAGE PROOF                                                  | 100V AC FOR 1 min.                                                                                                                                                                                                                                                                                                                                          |                        | NO FLASHOVER OR BREAKDOWN.                                                                                         | X                             | —          |
| MECHANICAL CHARACTERISTICS                                     |                                                                                                                                                                                                                                                                                                                                                             |                        |                                                                                                                    |                               |            |
| MECHANICAL OPERATION                                           | 30TIMES INSERTIONS AND EXTRACTIONS.                                                                                                                                                                                                                                                                                                                         |                        | ① CONTACT RESISTANCE: 90mΩ MAX.<br>② NO DAMAGE, CRACK OR LOOSENESS OF PARTS.                                       | X                             | —          |
| VIBRATION                                                      | FREQUENCY 10 TO 55 TO 10 Hz, APPROX 5min, SINGLE AMPLITUDE 0.75 mm, 10CYCLES, FOR 3 DIRECTIONS.                                                                                                                                                                                                                                                             |                        | 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.                                                                                                                                                                                                                                                                                   |                        | ① NO ELECTRICAL DISCONTINUITY OF 1 μs.<br>② NO DAMAGE, CRACK OR LOOSENESS OF PARTS.                                | X                             | —          |
| ENVIRONMENTAL CHARACTERISTICS                                  |                                                                                                                                                                                                                                                                                                                                                             |                        |                                                                                                                    |                               |            |
| RAPID CHANGE OF TEMPERATURE                                    | TEMPERATURE -55→ 5 TO 35→85→ 5 TO 35 °C<br>TIME 30→ 5 MAX → 30→ 5 MAX min<br>UNDER 5 CYCLES.                                                                                                                                                                                                                                                                |                        | ① CONTACT RESISTANCE: 90mΩ MAX.<br>② INSULATION RESISTANCE: 50MΩ 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.                                                                                                                                                                                                                                                                                                                     |                        | ① CONTACT RESISTANCE: 90mΩ MAX.<br>② INSULATION RESISTANCE: 25MΩ MIN.<br>③ NO DAMAGE, CRACK OR LOOSENESS OF PARTS. | X                             | —          |
| SULPHUR DIOXIDE                                                | EXPOSED IN 25 PPM FOR 96h, 25°C, 75%.                                                                                                                                                                                                                                                                                                                       |                        | ① CONTACT RESISTANCE: 180mΩ MAX.<br>② NO DAMAGE, CRACK OR LOOSENESS OF PARTS.                                      | X                             | —          |
| HEAT RESISTANCE OF SOLDERING                                   | <b>RECOMMENDED TEMPERATURE PROFILE</b><br><b>SOLDERING AREA</b><br>MAX 250°C, 220°C FOR 60 SECONDS MAX.<br><b>PREHEATING AREA</b><br>150 TO 180°C 90 TO 120SECONDS.<br>MAXIMUM TWICE ACTION IS ALLOWED UNDER THE SAME CONDITION.<br><b>RECOMMENDED MANUAL SOLDERING CONDITION</b><br>SOLDERING IRON TEMPERATURE 350°C.<br>SOLDERING TIME: WITHIN 3 SECONDS. |                        | NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS.                                                    | X                             | —          |
| SOLDERABILITY                                                  | SOLDERING TEMPERATURE: 245±5°C<br>DURATION OF IMMERSION: SOLDERING FOR 3 SECONDS.                                                                                                                                                                                                                                                                           |                        | A NEW UNIFORM COATING OF SOLDER SHALL COVER MINIMUM OF 95% OF THE SURFACE BEING IMMersed.                          | X                             | —          |
| COUNT                                                          | DESCRIPTION OF REVISIONS                                                                                                                                                                                                                                                                                                                                    | DESIGNED               | CHECKED                                                                                                            | DATE                          |            |
| △                                                              |                                                                                                                                                                                                                                                                                                                                                             |                        |                                                                                                                    |                               |            |
| REMARKS                                                        |                                                                                                                                                                                                                                                                                                                                                             |                        | APPROVED                                                                                                           | MO. ISHIDA                    | 15. 11. 27 |
| NOTE1: INCLUDE THE TEMPERATURE RISING BY CURRENT               |                                                                                                                                                                                                                                                                                                                                                             |                        | CHECKED                                                                                                            | TS. MIYAZAKI                  | 15. 11. 27 |
|                                                                |                                                                                                                                                                                                                                                                                                                                                             |                        | DESIGNED                                                                                                           | SH. HOSODA                    | 15. 11. 27 |
| Unless otherwise specified, refer to JIS C 5402, IEC 60512.    |                                                                                                                                                                                                                                                                                                                                                             |                        | DRAWN                                                                                                              | KR. AJITO                     | 15. 11. 27 |
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test |                                                                                                                                                                                                                                                                                                                                                             | DRAWING NO.            |                                                                                                                    | ELC-325389-58-01              |            |
| HRS                                                            | SPECIFICATION SHEET                                                                                                                                                                                                                                                                                                                                         |                        | PART NO.                                                                                                           | DF40HC (4. 0) -80DS-0.4V (58) |            |
|                                                                | HIROSE ELECTRIC CO., LTD.                                                                                                                                                                                                                                                                                                                                   |                        | CODE NO.                                                                                                           | CL684-4140-4-58               | △ 1/1      |