

|   |                             |   |   |                                |                  |
|---|-----------------------------|---|---|--------------------------------|------------------|
| Applicable standard   |                             |   |   |                                |                  |
| Rating<br>△3  | Operating Temperature Range | -55 to +105°C (Note1)   | Storage Temperature Range   | -10 °C to +60°C (Note3)        |                  |
|   | Operating Humidity Range    | 20% to 80% (Note2)  | Storage Humidity Range  | 40% to 70% (Note3)             |                  |
|   | Applicable Connector        | DF51%-18DS-2C(##)   | Current   | AWG 24 : 2.0A                  |                  |
|   | Applicable Contact          | DF11-EP2428PC(A)/PCF(A)   |   | AWG 26 : 1.5A<br>AWG 28 : 1.0A |                  |
|   | Voltage                     | 250 V AC/DC   | UL • C-UL Rating  | Voltage                        | 30 V AC/DC       |
|   |                             |   | Current   | AWG 24 to 28 : 1.0A            |                  |
| 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 △3   |                             |   |   |                                |                  |
| Insulation Resistance   |                             | 500 V DC.   | 1000 MΩ MIN.  | X                              | —                |
| Voltage Proof   |                             | 650 V AC for 1 min.   | No flashover or breakdown.  | X                              | —                |
| Mechanical Characteristics  |                             |   |   |                                |                  |
| Mechanical Operation (Sn Plating)   |                             | 30 times insertion and extraction.  | No damage, crack or looseness of parts. △3  | X                              | —                |
| Mechanical Operation (Au Plating)   |                             | 50 times insertion and extraction.  |   | X                              | —                |
| Mating and unmating Force (Sn Plating)  |                             | It takes out and inserts with a conformity connector.   | 1.Insertion Force : 80.2N MAX.<br>2.Extraction Force : 4.7N MIN.                      | X                              | —                |
| Mating and unmating Force (Au Plating)  |                             | It takes out and inserts with a conformity connector.   | 1.Insertion Force : 53.9N MAX.<br>2.Extraction Force : 4.5N MIN.                      | X                              | —                |
| Vibration   |                             | Frequency 10 to 55 Hz, single amplitude 0.75 mm, at 10 cycles for 3 direction.  | No damage, crack or looseness of parts. △3  | X                              | —                |
| Shock   |                             | Acceleration 490 m/s <sup>2</sup> duration of pulse 11 ms at 3 times for 3 directions.  |   | X                              | —                |
| Contact extraction force  |                             | Pull out the cable after housing fixation.  | 11.8N MIN   | X                              | —                |
| Environmental Characteristics   |                             |   |   |                                |                  |
| Damp Heat (Steady State)  |                             | Exposed at 40 ± 2°C, humidity 90 to 95 %, 96 h. (After leaving the room temperature for 1 to 2h.)   | 1.Insulation resistance: 500 MΩ MIN. △3<br>2.No damage, crack or looseness of parts.  | X                              | —                |
| Rapid Change Of Temperature   |                             | Temperature -55°C→ +105°C<br>Time 30min→ 30min<br>Under 5 Cycles.<br>(The transferring time of the tank is 2 to 3 MIN)<br>(After leaving the room temperature for 1 to 2h.) | 1.Insulation resistance: 1000 MΩ MIN. △3<br>2.No damage, crack or looseness of parts. | X                              | —                |
| Dry Heat  |                             | Exposed at 105±2°C, 96h   |   | X                              | —                |
| Cold  |                             | Exposed at -55±3°C, 96h   |   | X                              | —                |
| Remarks   |                             |   |   |                                |                  |
| Note 1:Include the temperature rising by current.   |                             |   |   |                                |                  |
| Note 2:No condensing  |                             |   |   |                                |                  |
| Note 3:Apply to the condition of long term storage for unused products before mount on pcb,<br>After mounted on pcb, operating temperature and humidity range is applied for interim storage during transportation. |                             |   |   |                                |                  |
| △3  | COUNT                       | DESCRIPTION OF REVISIONS  | DESIGNED  | CHECKED                        | DATE             |
|   | 6                           | DIS-H-00004571  | TS. MIYAKI  | SZ. ONO                        | 20190110         |
| Unless otherwise specified, refer to IEC 60512.   |                             |   | APPROVED  | HS. OKAWA                      | 20160601         |
|   |                             |   | CHECKED   | YN. TAKASHITA                  | 20160601         |
|   |                             |   | DESIGNED  | TT. OHSAKO                     | 20160601         |
|   |                             |   | DRAWN   | TT. OHSAKO                     | 20160601         |
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test  |                             |   | DRAWING NO.   |                                | ELC-366289-00-00 |
| HRS   | SPECIFICATION SHEET         |   | PART NO.  | DF51-18DEP-2C                  |                  |
|   | HIROSE ELECTRIC CO., LTD.   |   | CODE NO.  | CL543-5078-0-00                | △3 1/1           |