

| APPLICABLE STANDARD | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---------------------------|-----------------------------|-------------------------|----|------|-----|----|------|-----|----|------|-----|----|------|-----|----|------|-----|----|------|-----|---|---|
| RATING | OPERATING TEMPERATURE RANGE | -45 °C TO +125 °C (NOTES 1) | STORAGE TEMPERATURE RANGE | -10 °C TO + 60 °C (NOTES 2) | | | | | | | | | | | | | | | | | | | | | |
| | VOLTAGE | 50 V AC | APPLICABLE CONNECTOR | DF12#-*DS-0.5V (81) | | | | | | | | | | | | | | | | | | | | | |
| | CURRENT | 0.3 A | | DF12#-*DS-0.5V (86) | | | | | | | | | | | | | | | | | | | | | |
| 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 | 100 m A (DC OR 1000 Hz). | 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 | | | | | | | | | | | | | | | | | | | | | | | | | |
| INSERTION AND WITHDRAWAL FORCES | MEASURED BY APPLICABLE CONNECTOR. | <table border="1"> <thead> <tr> <th>SIGNAL</th> <th>INSERTION FORCE (N)MAX</th> <th>WITHDRAWAL FORCE (N)MIN</th> </tr> </thead> <tbody> <tr><td>20</td><td>23.4</td><td>2.6</td></tr> <tr><td>30</td><td>27.0</td><td>3.4</td></tr> <tr><td>36</td><td>29.0</td><td>4.0</td></tr> <tr><td>40</td><td>30.6</td><td>4.2</td></tr> <tr><td>50</td><td>34.2</td><td>5.0</td></tr> <tr><td>60</td><td>38.0</td><td>6.0</td></tr> </tbody> </table> | SIGNAL | INSERTION FORCE (N)MAX | WITHDRAWAL FORCE (N)MIN | 20 | 23.4 | 2.6 | 30 | 27.0 | 3.4 | 36 | 29.0 | 4.0 | 40 | 30.6 | 4.2 | 50 | 34.2 | 5.0 | 60 | 38.0 | 6.0 | X | — |
| SIGNAL | INSERTION FORCE (N)MAX | WITHDRAWAL FORCE (N)MIN | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 23.4 | 2.6 | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | 27.0 | 3.4 | | | | | | | | | | | | | | | | | | | | | | | |
| 36 | 29.0 | 4.0 | | | | | | | | | | | | | | | | | | | | | | | |
| 40 | 30.6 | 4.2 | | | | | | | | | | | | | | | | | | | | | | | |
| 50 | 34.2 | 5.0 | | | | | | | | | | | | | | | | | | | | | | | |
| 60 | 38.0 | 6.0 | | | | | | | | | | | | | | | | | | | | | | | |
| MECHANICAL OPERATION | 50 TIMES INSERTIONS AND EXTRACTIONS. | ① CONTACT RESISTANCE: 50 mΩ MAX. 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 1 μs. ② NO DAMAGE, CRACK OR LOOSENESS OF PARTS. | X | — | | | | | | | | | | | | | | | | | | | | | |
| SHOCK | 490 m/s ² DURATION OF PULSE 11 ms AT 3 TIMES FOR 3 DIRECTIONS. | ① NO ELECTRICAL DISCONTINUITY OF 1 μs. ② NO DAMAGE, CRACK OR LOOSENESS OF PARTS. | X | — | | | | | | | | | | | | | | | | | | | | | |
| ENVIRONMENTAL CHARACTERISTICS | | | | | | | | | | | | | | | | | | | | | | | | | |
| RAPID CHANGE OF TEMPERATURE | TEMPERATURE -65 → 15 TO 35 → 125 → 15 TO 35 °C TIME 30 → 10 TO 15 → 30 → 10 TO 15 min UNDER 5 CYCLES. | ① CONTACT RESISTANCE: 50 mΩ MAX. ② INSULATION RESISTANCE: 500 MΩ MIN. 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: 50 mΩ MAX. ② INSULATION RESISTANCE: 500 MΩ MIN. ③ NO DAMAGE, CRACK OR LOOSENESS OF PARTS. | X | — | | | | | | | | | | | | | | | | | | | | | |
| CORROSION SALT MIST | EXPOSED IN 5% SALT WATER SPRAY FOR 48 h. | ① CONTACT RESISTANCE: 50 mΩ MAX. ② NO HEAVY CORROSION. | X | — | | | | | | | | | | | | | | | | | | | | | |
| SULPHUR DIOXIDE | EXPOSED IN 10 PPM FOR 96 h. (TEST STANDARD: JEIDA-39) | ① CONTACT RESISTANCE: 50 mΩ MAX. ② NO HEAVY CORROSION. | X | — | | | | | | | | | | | | | | | | | | | | | |
| HEAT RESISTANCE OF SOLDERING | [RECOMMENDED TEMPERATURE PROFILE] 《SOLDERING AREA》 MAX250°C, 220°C FOR 60 SECONDS MAX. 《PREHEATING AREA》 150 TO 180°C 90~120 SECONDS. MAXIMUM TWICE ACTION IS ALLOWED UNDER THE SAME CONDITION. [RECOMMENDED MANUAL SOLDELING CONDITION] SOLDERING IRON TEMPERATURE 350°C SOLDERING TIME : WITHIN 3 SECONDS. | NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS. | X | — | | | | | | | | | | | | | | | | | | | | | |
| REMARKS | | | | | | | | | | | | | | | | | | | | | | | | | |
| NOTE1:INCLUDING THE TEMPERATURE RISE BY CURRENT. | | | | | | | | | | | | | | | | | | | | | | | | | |
| NOTE2:STORAGE IS DEFINED AS LONG-TERM STORAGE OF UNUSED PRODUCTS. | | | | | | | | | | | | | | | | | | | | | | | | | |
| APPLY OPERATION TEMPERATURE RANGE TO PRODUCTS MOUNTED ON PCB WITHOUT POWER SUPPLY. | | | | | | | | | | | | | | | | | | | | | | | | | |
| UNLESS OTHERWISE SPECIFIED, REFER TO JIS C 5402. | | | | | | | | | | | | | | | | | | | | | | | | | |
| | COUNT | DESCRIPTION OF REVISIONS | DESIGNED | CHECKED | DATE | | | | | | | | | | | | | | | | | | | | |
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| | | | APPROVED | MO. NAKAMURA | 06.02.01 | | | | | | | | | | | | | | | | | | | | |
| | | | CHECKED | TS. MIYAZAKI | 06.01.31 | | | | | | | | | | | | | | | | | | | | |
| | | | DESIGNED | YH. MICHIDA | 06.01.31 | | | | | | | | | | | | | | | | | | | | |
| | | | DRAWN | HK. MURAKAMI | 06.01.31 | | | | | | | | | | | | | | | | | | | | |
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test | | | DRAWING NO. | ELC4-163516-09 | | | | | | | | | | | | | | | | | | | | | |
| HRS | SPECIFICATION SHEET | | PART NO. | DF12E (5.0) -*DP-0.5V (81) | | | | | | | | | | | | | | | | | | | | | |
| | HIROSE ELECTRIC CO., LTD. | | CODE NO. | GL537 | △ 1/1 | | | | | | | | | | | | | | | | | | | | |