

|                                                                |                             |                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                            |                        |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
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| APPLICABLE STANDARD                                            |                             |                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                            |                        |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
| RATING                                                         | OPERATING TEMPERATURE RANGE | -35°C TO +85°C(NOTE 1)                                                                                                                                                                                                                                                                                                                | STORAGE TEMPERATURE RANGE                                                                                                                                                                                                                                                                                                                                                                                                         | -10°C TO + 60°C            |                        |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
|                                                                | VOLTAGE                     | 50V AC                                                                                                                                                                                                                                                                                                                                | APPLICABLE CONNECTOR                                                                                                                                                                                                                                                                                                                                                                                                              | DF17#(**)-*DS-0.5V(**)     |                        |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
|                                                                | 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                                             |                             | 100m A (DC OR 1000 Hz).                                                                                                                                                                                                                                                                                                               | 60mΩ MAX.                                                                                                                                                                                                                                                                                                                                                                                                                         | X                          | —                      |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
| INSULATION RESISTANCE                                          |                             | 100V DC.                                                                                                                                                                                                                                                                                                                              | 500MΩ MIN.                                                                                                                                                                                                                                                                                                                                                                                                                        | X                          | —                      |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
| VOLTAGE PROOF                                                  |                             | 150V AC FOR 1 min.                                                                                                                                                                                                                                                                                                                    | NO FLASHOVER OR BREAKDOWN.                                                                                                                                                                                                                                                                                                                                                                                                        | X                          | —                      |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
| MECHANICAL CHARACTERISTICS                                     |                             |                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                            |                        |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
| INSERTION AND WITHDRAWAL FORCES                                |                             | MEASURED BY APPLICABLE CONNECTOR.                                                                                                                                                                                                                                                                                                     | <table><tr><td>SIGNAL</td><td>INSERTION FORCE (NMAX)</td><td>WITHDRAWAL FORCE (NMIN)</td></tr><tr><td>20</td><td>20.0</td><td>2.0</td></tr><tr><td>30</td><td>30.0</td><td>3.0</td></tr><tr><td>40</td><td>40.0</td><td>4.0</td></tr><tr><td>50</td><td>50.0</td><td>5.0</td></tr><tr><td>60</td><td>60.0</td><td>6.0</td></tr><tr><td>70</td><td>70.0</td><td>7.0</td></tr><tr><td>80</td><td>80.0</td><td>8.0</td></tr></table> | SIGNAL                     | INSERTION FORCE (NMAX) | WITHDRAWAL FORCE (NMIN) | 20 | 20.0 | 2.0 | 30 | 30.0 | 3.0 | 40 | 40.0 | 4.0 | 50 | 50.0 | 5.0 | 60 | 60.0 | 6.0 | 70 | 70.0 | 7.0 | 80 | 80.0 | 8.0 | X | — |
| SIGNAL                                                         | INSERTION FORCE (NMAX)      | WITHDRAWAL FORCE (NMIN)                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                            |                        |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
| 20                                                             | 20.0                        | 2.0                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                            |                        |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
| 30                                                             | 30.0                        | 3.0                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                            |                        |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
| 40                                                             | 40.0                        | 4.0                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                            |                        |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
| 50                                                             | 50.0                        | 5.0                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                            |                        |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
| 60                                                             | 60.0                        | 6.0                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                            |                        |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
| 70                                                             | 70.0                        | 7.0                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                            |                        |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
| 80                                                             | 80.0                        | 8.0                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                            |                        |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
| MECHANICAL OPERATION                                           |                             | 50TIMES INSERTIONS AND EXTRACTIONS.                                                                                                                                                                                                                                                                                                   | ① CONTACT RESISTANCE: 60mΩ 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.                                                                                                                                                                                                                                                             | ① NO ELECTRICAL DISCONTINUITY OF 1μs.<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→10 TO 15→ 30→10TO15min<br>UNDER 5 CYCLES.                                                                                                                                                                                                                                          | ① CONTACT RESISTANCE: 60mΩ 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.                                                                                                                                                                                                                                                                                               | ① CONTACT RESISTANCE: 60mΩ MAX.<br>② INSULATION RESISTANCE: 250 MΩ MIN.<br>③ NO DAMAGE, CRACK OR LOOSENESS OF PARTS.                                                                                                                                                                                                                                                                                                              | X                          | —                      |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
| CORROSION SALT MIST                                            |                             | EXPOSED IN 5% SALT WATER SPRAY FOR 48 h.                                                                                                                                                                                                                                                                                              | ① CONTACT RESISTANCE: 60 mΩ MAX.<br>② NO HEAVY CORROSION.                                                                                                                                                                                                                                                                                                                                                                         | x                          | —                      |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
| SULPHUR DIOXIDE                                                |                             | EXPOSED IN 10 PPM FOR 96 h.<br>(TEST STANDARD:JEIDA-39)                                                                                                                                                                                                                                                                               | ① CONTACT RESISTANCE: 60 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                          | —                      |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
|                                                                | COUNT                       | DESCRIPTION OF REVISIONS                                                                                                                                                                                                                                                                                                              | DESIGNED                                                                                                                                                                                                                                                                                                                                                                                                                          | CHECKED                    | DATE                   |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
| △                                                              | 1                           | DIS-H-000664                                                                                                                                                                                                                                                                                                                          | HK.MURAKAMI                                                                                                                                                                                                                                                                                                                                                                                                                       | TS.MIYAZAKI                | 05.12.06               |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
| REMARKS                                                        |                             |                                                                                                                                                                                                                                                                                                                                       | APPROVED                                                                                                                                                                                                                                                                                                                                                                                                                          | MO.NAKAMURA                | 05.04.11               |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
| NOTE1:INCLUDING THE TEMPERATURE RISE BY CURRENT.               |                             |                                                                                                                                                                                                                                                                                                                                       | CHECKED                                                                                                                                                                                                                                                                                                                                                                                                                           | TS.MIYAZAKI                | 05.04.11               |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
| UNLESS OTHERWISE SPECIFIED,REFER TO JIS C 0806.                |                             |                                                                                                                                                                                                                                                                                                                                       | DESIGNED                                                                                                                                                                                                                                                                                                                                                                                                                          | YH.MICHIDA                 | 05.04.11               |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
|                                                                |                             |                                                                                                                                                                                                                                                                                                                                       | DRAWN                                                                                                                                                                                                                                                                                                                                                                                                                             | YH.MICHIDA                 | 05.04.11               |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test |                             |                                                                                                                                                                                                                                                                                                                                       | DRAWING NO.                                                                                                                                                                                                                                                                                                                                                                                                                       | ELC4-162139-06             |                        |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
| SPECIFICATION SHEET                                            |                             |                                                                                                                                                                                                                                                                                                                                       | PART NO.                                                                                                                                                                                                                                                                                                                                                                                                                          | DF17 (4. 0) -*DP-0.5V (57) |                        |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |
| HIROSE ELECTRIC CO., LTD.                                      |                             |                                                                                                                                                                                                                                                                                                                                       | CODE NO.                                                                                                                                                                                                                                                                                                                                                                                                                          | CL683                      | △ 1/1                  |                         |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |    |      |     |   |   |