

| APPLICABLE STANDARD                                                                              |                             |                                                                                                        |             |                                                                                                                                        |                                 |             |
|--------------------------------------------------------------------------------------------------|-----------------------------|--------------------------------------------------------------------------------------------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-------------|
| RATING                                                                                           | OPERATING TEMPERATURE RANGE | -40 °C TO +125 °C                                                                                      |             | STORAGE TEMPERATURE RANGE                                                                                                              | -10 °C TO +60 °C <sup>(1)</sup> |             |
|                                                                                                  | VOLTAGE                     | △ 60 V AC/DC                                                                                           |             | STORAGE HUMIDITY RANGE                                                                                                                 | RELATIVE HUMIDITY 85% MAX       |             |
|                                                                                                  | CURRENT                     | 2 A                                                                                                    |             |                                                                                                                                        | (NOT DEWED)                     |             |
| 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                                                                               |                             | 1A DC.                                                                                                 |             | 10 mΩ MAX .                                                                                                                            | —                               | —           |
| CONTACT RESISTANCE                                                                               |                             | 10 mV AC MAX, 0.1 mA(DC OR 1000Hz)                                                                     |             | 10 mΩ MAX .                                                                                                                            | —                               | —           |
| MILLIVOLT LEVEL METHOD                                                                           |                             |                                                                                                        |             |                                                                                                                                        |                                 |             |
| INSULATION RESISTANCE                                                                            |                             | 500 V DC.                                                                                              |             | 100 MΩ MIN.                                                                                                                            | x                               | —           |
| VOLTAGE PROOF                                                                                    |                             | 1000 V AC FOR 1 min.                                                                                   |             | NO FLASHOVER OR BREAKDOWN.                                                                                                             | —                               | —           |
| MECHANICAL CHARACTERISTICS                                                                       |                             |                                                                                                        |             |                                                                                                                                        |                                 |             |
| MECHANICAL OPERATION                                                                             |                             | 30 TIMES INSERTIONS AND EXTRACTIONS.                                                                   |             | ① CONTACT RESISTANCE: 20 mΩ MAX.<br>② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.                                                         | —<br>x                          | —<br>—      |
| VIBRATION                                                                                        |                             | FREQUENCY 20 TO 200Hz (88m/s <sup>2</sup> )<br>SWEEP TIME 3min.(ROUND TRIP)<br>AT 3h FOR 3 DIRECTIONS. |             | ① NO ELECTRICAL DISCONTINUITY OF 7ΩMIN ,<br>1μs MIN.<br>② CONTACT RESISTANCE: 20 mΩ MAX.<br>③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | —<br>—<br>x                     | —<br>—<br>— |
| SHOCK                                                                                            |                             | 981m/s <sup>2</sup> DURATION OF PULSE 6ms AT 3 TIMES<br>FOR 6 DIRECTIONS.                              |             | ① NO ELECTRICAL DISCONTINUITY OF 7ΩMIN ,<br>1μs MIN.<br>② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.                                     | —<br>x                          | —<br>—      |
| LOCK STRENGTH                                                                                    |                             | MEASURE BREAK STRENGTH OF THE LOCK BY<br>PULLING THE CONNECTOR IN THE MATING<br>DIRECTION.             |             | ① 100 N MIN                                                                                                                            | x                               | —           |
| ENVIRONMENTAL CHARACTERISTICS                                                                    |                             |                                                                                                        |             |                                                                                                                                        |                                 |             |
| DAMP HEAT<br>(STEADY STATE)                                                                      |                             | EXPOSED AT 60 °C, 90 ~ 95 %, 96 h.                                                                     |             | ① CONTACT RESISTANCE: 20 mΩ MAX.<br>② INSULATION RESISTANCE:100 MΩ MIN.<br>③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS.                  | —<br>x<br>x                     | —<br>—<br>— |
| RAPID CHANGE OF<br>TEMPERATURE                                                                   |                             | TEMPERATURE- 40 →ROOM TEMP →125°C→<br>ROOM TEMP<br>TIME 30 → 5 → 30 → 5 min<br>UNDER 1000 CYCLES.      |             | ① CONTACT RESISTANCE: 20 mΩ MAX.<br>② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.                                                         | —<br>x                          | —<br>—      |
| DRY HEAT                                                                                         |                             | EXPOSED AT 140°C, 120 h.                                                                               |             | ① CONTACT RESISTANCE: 20 mΩ MAX.<br>② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.                                                         | —<br>x                          | —<br>—      |
| COLD                                                                                             |                             | EXPOSED AT -40°C , 120 h.                                                                              |             | ① CONTACT RESISTANCE: 20 mΩ MAX.<br>② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.                                                         | —<br>x                          | —<br>—      |
| RESISTANCE TO SO <sub>2</sub> GAS                                                                |                             | EXPOSED IN 25 PPM AT 75% MIN FOR 96h.                                                                  |             | ① CONTACT RESISTANCE: 20 mΩ MAX.                                                                                                       | —                               | —           |
|                                                                                                  |                             |                                                                                                        |             |                                                                                                                                        |                                 |             |
|                                                                                                  | COUNT                       | DESCRIPTION OF REVISIONS                                                                               | DESIGNED    | CHECKED                                                                                                                                | DATE                            |             |
| △1                                                                                               | 1                           | DIS-T-00006021                                                                                         | YH. MAMADA  | HH. TSUKUMO                                                                                                                            | 20200403                        |             |
| REMARK                                                                                           |                             |                                                                                                        | APPROVED    | HK. UMEHARA                                                                                                                            | 20190511                        |             |
| (NOTE1) "STORAGE" means a long-term storage state for the unused product before assembly to PCB. |                             |                                                                                                        | CHECKED     | HK. UMEHARA                                                                                                                            | 20190511                        |             |
|                                                                                                  |                             |                                                                                                        | DESIGNED    | YH. MAMADA                                                                                                                             | 20190511                        |             |
|                                                                                                  |                             |                                                                                                        | DRAWN       | MINTAE KANG                                                                                                                            | 20190511                        |             |
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test                                   |                             |                                                                                                        | DRAWING NO. |                                                                                                                                        | ELC-383549-00-00                |             |
| HRS                                                                                              | SPECIFICATION SHEET         |                                                                                                        | PART NO.    | ZE05-20DS-HU/R (A)                                                                                                                     |                                 |             |
|                                                                                                  | HIROSE ELECTRIC CO., LTD.   |                                                                                                        | CODE NO.    | CL752-2210-0-00                                                                                                                        | △1                              | 1/1         |