

| 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 .  | x                               | —           |
| CONTACT RESISTANCE  |                             | 10 mV AC MAX, 0.1 mA(DC OR 1000Hz)   | 10 mΩ MAX .  | x                               | —           |
| MILLIVOLT LEVEL METHOD  |                             |  |  |                                 |             |
| INSULATION RESISTANCE   |                             | 500 V DC.  | 100 MΩ MIN.  | x                               | —           |
| VOLTAGE PROOF   |                             | 1000 V AC FOR 1 min.   | NO BREAKDOWN.  | x                               | —           |
| MECHANICAL CHARACTERISTICS  |                             |  |  |                                 |             |
| MECHANICAL OPERATION  |                             | 30 TIMES INSERTIONS AND EXTRACTIONS.   | ① CONTACT RESISTANCE: 20 mΩ MAX.<br>② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.   | x<br>x                          | —<br>—      |
| VIBRATION   |                             | FREQUENCY 20 TO 200Hz (44m/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. | x<br>x<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.                                     | x<br>x                          | —<br>—      |
| LOCK STRENGTH   |                             | MEASURE BREAK STRENGTH OF THE LOCK BY<br>PULLING THE CONNECTOR IN THE MATING<br>DIRECTION.             | ① 100N 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.                  | x<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.   | x<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.   | x<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.   | x<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.   | x                               | —           |
| RESISTANCE TO<br>SOLDERING HEAT   |                             | REFLOW TEMP. OVER 250°C , 10sec.<br>PREHEAT 180°C MAX , 120sec.  | NO PLATING PEELING OF THE TERMINALS,<br>MELTINGS OF HOUSINGS.  | x                               | —           |
| SOLDERABILITY   |                             | SOLDERED AT SPECIFIED TEMPERATURE<br>PROFILE.  | A NEW UNIFORM COATING OF SOLDER<br>SHALL COVER A MINIMUM OF 95 % OF<br>THE SURFACE BEING IMMERSSED.                                    | x                               | —           |
|   | COUNT                       | DESCRIPTION OF REVISIONS   | DESIGNED   | CHECKED                         | DATE        |
| ①   | 0                           |  |  |                                 |             |
| REMARK  |                             |  | APPROVED   | AH. EDASHIGE                    | 20211026    |
| (NOTE1) "STORAGE" means a long-term storage state for the unused product<br>before assembly to PCB. |                             |  | CHECKED  | AH. EDASHIGE                    | 20211026    |
|   |                             |  | DESIGNED   | KH. MARUNO                      | 20211025    |
|   |                             |  | DRAWN  | YANG CHUAN XING                 | 20211025    |
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test                                      |                             |  | DRAWING NO.  | ELC-395655-00-00                |             |
| <b>HRS</b>  | SPECIFICATION SHEET         |  | PART NO.   | ZH05-24DS-2H (B)                |             |
|   | HIROSE ELECTRIC CO., LTD.   |  | CODE NO.   | CL0756-2109-0-00                | ① 1/1       |