



**THE DATASHEET OF
FH28D-30S-0.5SH(05)**



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| APPLICABLE STANDARD | | | | | |
|--|--|---------------------------|---|--|----------------|
| RATING | OPERATING TEMPERATURE RANGE | Δ -40 °C TO 105 °C | STORAGE TEMPERATURE RANGE | -10 °C TO 50 °C (PACKED CONDITION) | |
| | VOLTAGE | 50 V AC / DC | OPERATING OR STORAGE HUMIDITY RANGE | RELATIVE HUMIDITY 90 % MAX (NOT DEWED) | |
| | CURRENT | 0.5 A (note 1) | APPLICABLE CABLE | t=0.3±0.05mm, GOLD PLATING | |
| 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 |
| ELECTRICAL CHARACTERISTICS | | | | | |
| CONTACT RESISTANCE | 1mA(DC OR 1000Hz). | | 50 mΩ MAX. INCLUDING FPC,FFC BULK RESISTANCE (L=8mm) | x | x |
| INSULATION RESISTANCE | 100 V DC. | | 500 MΩ MIN. | x | x |
| VOLTAGE PROOF | 150 V AC FOR 1 min. | | NO FLASHOVER OR BREAKDOWN. | x | x |
| MECHANICAL CHARACTERISTICS | | | | | |
| MECHANICAL OPERATION | 20 TIMES INSERTIONS AND EXTRACTIONS. | | ① CONTACT RESISTANCE: 50 mΩ MAX. ② NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | x | — |
| Δ VIBRATION | FREQUENCY 10 TO 55 Hz, HALF AMPLITUDE 0.75 mm, FOR 10 CYCLES IN 3 AXIAL DIRECTIONS. | | ① NO ELECTRICAL DISCONTINUITY OF 1 μs. ② CONTACT RESISTANCE: 50 mΩ MAX. | x | — |
| Δ SHOCK | 981 m/s ² , DURATION OF PULSE 6 ms AT 3 TIMES IN 3 BOTH AXIAL DIRECTIONS. | | ③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | x | — |
| FPC RETENTION FORCE | MEASURED BY APPLICABLE FPC. (CONNECTOR,FPC AT INITIAL CONDITION. THICKNESS OF FPC SHALL BE t=0.30mm) | | DIRECTION OF INSERTION: 0.4xn N MIN (n : NUMBER OF CONTACTS). | x | — |
| ENVIRONMENTAL CHARACTERISTICS | | | | | |
| Δ RAPID CHANGE OF TEMPERATURE | TEMPERATURE -40→+15T ₀ +35→+105→+15T ₀ +35°C TIME 30→ 2 TO 3 → 30→ 2 TO 3 min. UNDER 5 CYCLES. | | ① CONTACT RESISTANCE: 50 mΩ MAX. ② INSULATION RESISTANCE: 50 MΩ MIN. ③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | x | — |
| DAMP HEAT (STEADY STATE) | EXPOSED AT 40±2 °C, RELATIVE HUMIDITY 90 TO 95 %, 96 h. | | | x | — |
| DAMP HEAT,CYCLIC | EXPOSED AT -10 TO +65 °C, RELATIVE HUMIDITY 90 TO 96 %, 10 CYCLES,TOTAL 240 h. | | ① CONTACT RESISTANCE: 50 mΩ MAX. ② INSULATION RESISTANCE: 1 MΩ MIN. (AT HIGH HUMIDITY) ③ INSULATION RESISTANCE: 50 MΩ MIN. (AT DRY) ④ NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | x | — |
| Δ DRY HEAT | EXPOSED AT 105±2 °C, 96 h. | | ① CONTACT RESISTANCE: 50 mΩ MAX. ② NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | x | — |
| COLD | EXPOSED AT -40±3°C, 96 h. | | | x | — |
| CORROSION SALT MIST | EXPOSED AT 35±2 °C 5% SALT WATER SPRAY FOR 96 h. | | ① CONTACT RESISTANCE: 50 mΩ MAX. ② NO EVIDENCE OF CORROSION WHICH AFFECTS TO OPERATION OF CONNECTOR. | x | — |
| Δ SULPHUR DIOXIDE [JIS C 60068-2-42] | EXPOSED AT 40±2 °C , RELATIVE HUMIDITY 80±5% , 25±5 ppm FOR 96 h. | | | x | — |
| Δ HYDROGEN SULPHIDE [JIS C 60068-2-43] | EXPOSED AT 40±2 °C , RELATIVE HUMIDITY 80±5% , 10 TO 15 ppm FOR 96 h. | | | x | — |
| | COUNT | DESCRIPTION OF REVISIONS | DESIGNED | CHECKED | DATE |
| Δ | 9 | DIS-F-00000493 | RT. IKEDA | HS. SAKAMOTO | 15.10.26 |
| REMARK | | | APPROVED | RI. TAKAYASU | 05.04.19 |
| | | | CHECKED | SS. WATANABE | 05.04.18 |
| Δ Unless otherwise specified, refer to IEC 60512 . | | | DESIGNED | HH. TSUKUMO | 05.04.18 |
| | | | DRAWN | HH. TSUKUMO | 05.04.18 |
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test | | | DRAWING NO. | | ELC4-155415-02 |
| HRS | SPECIFICATION SHEET | | PART NO. | FH28D-**S-0.5SH (05) | |
| | HIROSE ELECTRIC CO., LTD. | | CODE NO. | CL586 | Δ 1/2 |

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SPECIFICATIONS

| ITEM | TEST METHOD | REQUIREMENTS | QT | AT |
|------------------------------|--|--|----|----|
| RESISTANCE TO SOLDERING HEAT | 1) REFLOW SOLDERING (MAX 2 CYCLES.) PEAK TMP 250 °C MAX REFLOW TMP OVER 230 °C WITHIN 60 sec. PRE-HEAT 150 TO 200°C FOR 90 TO 120 sec. 2) SOLDERING IRONS TMP 350 ± 10 °C FOR 5± 1 sec. | NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS. | × | — |
| SOLDERABILITY | SOLDERED AT SOLDER TEMPERATURE, 235±3 °C FOR IMMERSION DURATION, 2±0.5 sec. | A NEW UNIFORM COATING OF SOLDER SHALL COVER A MINIMUM OF 95 % OF THE SURFACE BEING IMMERSED. | × | — |



(note 1)

WHEN THE SAME VALUE OF CURRENT ARE APPLIED TO ALL CONTACTS AT THE SAME TIME IN ONCE, SET THE CURRENT TO THE 70 % OF THE RATED CURRENT VALUE.

| | | | | | |
|--|---------------------------|-------------|----------|-----------------------|-------|
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| HRS | SPECIFICATION SHEET | | PART NO. | FH28D-**S-0. 5SH (05) | |
| | HIROSE ELECTRIC CO., LTD. | | CODE NO | CL586 | △ 2/2 |

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