



**THE DATASHEET OF
FH52-12S-0.5SH**



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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 |
| ELECTRIC 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 | — |
| VIBRATION | FREQUENCY 10 TO 55 Hz, HALF AMPLITUDE 0.75 mm, FOR 10 CYCLES IN 3 DIRECTIONS. | | ① NO ELECTRICAL DISCONTINUITY OF 1 μs. | X | — |
| SHOCK | 981 m/s ² , DURATION OF PULSE 6 ms AT 3 TIMES IN 3 DIRECTIONS. | | ② CONTACT RESISTANCE: 50 mΩ MAX. ③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | X | — |
| FPC RETENSION 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. | X | — |
| COLD | EXPOSED AT -40±3°C, 96 h. | | ② NO DAMAGE, CRACK AND LOOSENESS OF PARTS. | 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 SURPHUR 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 | 6 | DIS-F-00000491 | SG. MASAKI | HS. SAKAMOTO | 15. 07. 25 |
| REMARK | | | | APPROVED | MO. ISHIDA 10. 05. 13 |
| | | | | CHECKED | NM. NISHIMATSU 10. 05. 13 |
| Δ | Unless otherwise specified, refer to IEC 60512. | | | DESIGNED | YS. EBI 10. 05. 12 |
| | | | | DRAWN | YS. EBI 10. 05. 12 |
| Note | QT:Qualification Test AT:Assurance Test X:Applicable Test | | DRAWING NO. | ELC4-328248-00 | |
| HRS | SPECIFICATION SHEET | | PART NO. | FH52-**S-0. 5SH | |
| | HIROSE ELECTRIC CO., LTD. | | CODE NO. | CL580 | Δ 1/2 |

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SPECIFICATIONS

| ITEM | TEST METHOD | REQUIREMENTS | QT | AT |
|------------------------------|---|--|----|----|
| RESISTANCE TO SOLDERING HEAT | 1) REFLOW SOLDERING (TO BE 2 TIMES MAX.) PEAK TMP. 250 °C MAX REFLOW TMP. 230 °C MIN FOR 30 sec. PRE-HEATING. 150 TO 200°C 90 TO 120 sec. SOLDERING IRONS : 350 ± 10 °C, FOR 5± 1 sec . | NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS. | × | — |
| SOLDERABILITY | SOLDERED AT SOLDER TEMPERATURE, 235±5 °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 APPLID TO ALL CONTACTS AT THE SAME TIME IN ONCE,
SET THE CURRENT TO THE 70 % OF THE RATED CURRENT VALUE.

| | | | | | |
|--|---------------------------|-------------|----------|-----------------|-------|
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test | | DRAWING NO. | | ELC4-328248-00 | |
| HRS | SPECIFICATION SHEET | | PART NO. | FH52-**S-0. 5SH | |
| | HIROSE ELECTRIC CO., LTD. | | CODE NO | GL580 | △ 2/2 |

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