

| APPLICABLE STANDARD | | | | |
|---------------------|-----------------------------|-----------------|-------------------------------------|--------------------------------------|
| RATING | Operating temperature range | -55 °C to 85 °C | Storage temperature range | -10 °C TO 50 °C (packed condition) |
| | Voltage | 30V AC / DC | Operating or storage humidity range | Relative humidity 90 %MAX(not dewed) |
| | Current | 0.20 A | Applicable cable | t=0.12±0.02mm, gold plating |

SPECIFICATIONS

| ITEM | TEST METHOD | REQUIREMENTS | QT | AT |
|------|-------------|--------------|----|----|
|------|-------------|--------------|----|----|

CONSTRUCTION

| | | | | |
|---------------------|---------------------------------------|-------------------------------------|---|---|
| General examination | Visually and by measuring instrument. | According to drawing. (note 1,2) | × | × |
| Marking | Confirmed visually. | | × | × |

ELECTRICAL CHARACTERISTICS

| | | | | |
|-----------------------|---------------------|--|---|---|
| Voltage proof | 90 V AC for 1 min. | No flashover or breakdown. | × | × |
| Insulation resistance | 100 V DC. | 50 MΩ MIN. | × | × |
| Contact resistance | AC 20 mV MAX, 1 mA. | 300 mΩ MAX. including fpc,ffc bulk resistance (L=8mm) | × | × |

MECHANICAL CHARACTERISTICS

| | | | | |
|----------------------|---|---|---|---|
| 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: 300 mΩ MAX. | × | — |
| 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. | × | — |
| Mechanical operation | 10times insertions and extractions. | ① Contact resistance: 300 mΩ MAX. ② No damage, crack and looseness of parts. | × | — |
| Fpc retention force | Measured by applicable fpc. (thickness of fpc shall be t=0.12mm at initial condition.) | Direction of insertion : 5.6 N MIN (note 3) | × | — |

ENVIRONMENTAL CHARACTERISTICS

| | | | | |
|---|---|--|---|---|
| Corrosion salt mist | Exposed at 35±2 °C, 5 % salt water spray for 96 h. | ① Contact resistance: 300 mΩ MAX. ② No damage, crack and looseness of parts. ③ No evidence of corrosion which affects to operation of connector. | × | — |
| Rapid change of temperature | Temperature -55→+15TO+35→+85→+15TO+35°C Time 30→ 2 TO 3 → 30 → 2 TO 3 min Under 5 cycles. | ① Contact resistance: 300 mΩ MAX. ② Insulation resistance: 50 MΩ MIN. ③ No damage, crack and looseness of parts. | × | — |
| Damp heat (steady state) | Exposed at 40±2 °C, Relative humidity 90 to 95 %, 96 h. | | × | — |
| Damp heat,cyclic | Exposed at -10 to +65 °C, Relative humidity 90 to 96 %, 10 cycles, total 240 h. | ① Contact resistance: 300 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. | × | — |
| Dry heat | Exposed at 85±2 °C, 96 h. | ① Contact resistance: 300 mΩ MAX. | × | — |
| Cold | Exposed at -55±3°C, 96 h. | ② No damage, crack and looseness of parts. | × | — |
| Sulphur dioxide [JIS C 60068-2-42] | Exposed at 40±2 °C, Relative humidity 80±5% 25±5 ppm for 96 h. | ① Contact resistance: 300 mΩ MAX. ② No damage, crack and looseness of parts. ③ No evidence of corrosion which affects to operation of connector. | × | — |
| Hydrogen sulphide [JIS C 60068-2-43] | Exposed at 40±2 °C, Relative humidity 80±5% , 10 to 15 ppm for 96 h. | | × | — |

| COUNT | DESCRIPTION OF REVISIONS | DESIGNED | CHECKED | DATE |
|-------|--------------------------|----------|---------|------|
| △ | | | | |

| | | | |
|--------|----------|----------------|------------|
| REMARK | APPROVED | NF. MIYAZAKI | 16. 01. 27 |
| | CHECKED | YH. MICHIDA | 16. 01. 27 |
| | DESIGNED | SI. MIZUSAWA | 16. 01. 27 |
| | DRAWN | OTNIEL RINALDO | 16. 01. 27 |

Unless otherwise specified, refer to IEC 60512.

| | | |
|--|-------------|------------------|
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test | DRAWING NO. | ELC-336359-99-00 |
|--|-------------|------------------|

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|------------|---------------------------|----------|-----------------------|-------|
| HRS | SPECIFICATION SHEET | PART NO. | FH53-41S-0. 2SHW (99) | |
| | HIROSE ELECTRIC CO., LTD. | CODE NO. | CL580-3401-7-99 | △ 1/2 |

SPECIFICATIONS

| ITEM | TEST METHOD | REQUIREMENTS | QT | AT |
|---------------------------------|---|--|----|----|
| Solderability | Soldered at solder temperature, 245±3°C for immersion duration, 3±0.3 sec. | A new uniform coating of solder shall cover a minimum of 95 % of the surface being immersed. | × | — |
| Resistance to Soldering heat | 1) Reflow soldering : peak tmp. 250 °C MAX . reflow tmp. over 230 °C within 60 sec. 2) Soldering irons : tmp. 350±10 °C for 5±1 sec . | No deformation of case of excessive looseness of the terminals. (note 4) | × | — |

(note1)

This is a top contact point connector with back flip lock system.

(note2)


Do not close the actuator before inserting fpc even after the connector is mounted
Onto a pcb. Closing the actuator without fpc could make the contact gap smaller,
Which increases the fpc insertion force.

(note3)

Stabilize the fpc to pcb or something fixed, if pull-up or pull-down force is expected to be applied to the fpc.

(note4)

Blisters which may be generated on the housing do not affect product performance.

| | | | | | | | |
|------------|---------------------------|-------------------|-------------------|-------------|-----------------------|---|-----|
| Note | QT:Qualification Test | AT:Assurance Test | X:Applicable Test | DRAWING NO. | ELC-336359-99-00 | | |
| HRS | SPECIFICATION SHEET | | | PART NO. | FH53-41S-0. 2SHW (99) | | |
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