








**THE DATASHEET OF
FX23-120S-0.5SH**



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In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.

| APPLICABLE STANDARD | | | | | |
|--|---|--|--|--|---|
| Rating | Operating Temperature Range  | -55 °C to 105 °C ⁽¹⁾ | Storage Temperature Range | -10 °C to 60 °C ⁽²⁾ | |
| | Voltage | Signal Contact : 50 V AC Power Contact : 200 V AC | Storage Humidity Range | Relative humidity 85% max (Not dewed) | |
| | Current | Signal Contact : 0.5 A Power Contact : 3.0A | Operating Humidity Range | | |
| 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 | 100 mA(DC or 1000Hz) | | Signal Contact : 70m Ω MAX. Power Contact : 20m Ω MAX. | x | — |
| Insulation Resistance | Signal Contact : 100 V DC. Power Contact : 250 V DC | | Signal Contact : 100 MΩ MIN. Power Contact : 1000 MΩ MIN. | x | — |
| Voltage Proof | Signal Contact : 150 V AC for 1 min. | | No flashover or breakdown. | x | x |
| | Power Contact : 600 V AC for 1 min. | | | x | — |
| MECHANICAL CHARACTERISTICS | | | | | |
| Insertion and Withdrawal Forces | Measured by applicable connector. | | Insertion Force: 54 N MAX. Withdrawal Force: 6 N MIN. | x | — |
| Mechanical Operation | 100 times insertions and extractions. | | ① Contact Resistance: Signal Contact : 80m Ω MAX. Power Contact : 30m Ω MAX. ② No damage, crack and looseness of parts. | x | — |
| Vibration | Frequency 10 to 55 to 10Hz, approx 5min Single amplitude : 0.75 mm, 10 cycles for 3 axial directions. | | ① No electrical discontinuity of 1 μs. ② No damage, crack and looseness of parts. | x | — |
| Shock | 490 m/s ² , duration of pulse 11 ms at 3 times for 3 both axial directions. | | | x | — |
| ENVIRONMENTAL CHARACTERISTICS | | | | | |
| Damp Heat (Steady state) | Exposed at 40±2 °C, 90 ~ 95 %, 96 h. | | ① Contact Resistance: Signal Contact : 80m Ω MAX. Power Contact : 30m Ω MAX. ② Insulation Resistance: Signal Contact : 100 MΩ MIN. Power Contact : 1000 MΩ MIN. ③ No damage, crack and looseness of parts. | x | — |
| Rapid Change of Temperature | Temperature -55 → +85 °C Time 30 → 30 min. under 5 cycles. (Relocation time to chamber : within 2~3 MIN) | | | x | — |
| Cold | Exposed at -55°C, 96 h | | ① Contact Resistance: Signal Contact : 80m Ω MAX. Power Contact : 30m Ω MAX. ② No damage, crack and looseness of parts. | x | — |
| Dry Heat  | Exposed at 105°C, 96 h | | | x | — |
| Sulfur Dioxide | Exposed at 25±2°C, 75±5%RH, 25 PPM for 96 h. (Test standard: IEC 68) | | ① No defect such as corrosion which impairs the function of connector. ② Contact Resistance: Signal Contact : 80m Ω MAX. Power Contact : 30m Ω MAX. | x | — |
| Resistance to Soldering Heat | 1)Reflow soldering : Peak TMP : 260°C MAX Reflow TMP: 220°C MIN for 60sec 2) Soldering irons : 360°C MAX. for 5 sec. | | No deformation of case of excessive looseness of the terminal. | x | — |
| Solderability | Soldered at solder temperature 240±3°C for immersion duration, 3 sec. | | A new uniform coating of solder shall cover a minimum of 95 % of the surface being immersed. | x | — |
| | COUNT | DESCRIPTION OF REVISIONS | DESIGNED | CHECKED | DATE |
|  | 2 | DIS-F-00002058 | TS. 00N0 | HT. YAMAGUCHI | 17. 02. 01 |
| REMARKS ⁽¹⁾ Include temperature rise caused by current-carrying. ⁽²⁾ "STORAGE" means a long-term storage state for the unused product before assembly to PCB. | | | APPROVED | HS. OKAWA | 14. 07. 22 |
| Unless otherwise specified, refer to IEC 60512. | | | CHECKED | KN. SHIBUYA | 14. 07. 22 |
| | | | DESIGNED | TS. 00N0 | 14. 07. 22 |
| | | | DRAWN | TS. 00N0 | 14. 07. 22 |
| Note | QT:Qualification Test AT:Assurance Test X:Applicable Test | | DRAWING NO. | ELC-353570-00-00 | |
|  | SPECIFICATION SHEET | | PART NO. | FX23-120S-0. 5SH | |
| | HIROSE ELECTRIC CO., LTD. | | CODE NO. | CL573-3406-2-00 |  1/1 |

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