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| APPLICABLE STANDARD  |   |  |  |  |                   |
|--|---|--|--|--|-------------------|
| Rating   | Operating Temperature Range $\triangle 2$   | -55 °C to 105 °C <sup>(1)</sup>                      | Storage Temperature Range  | -10 °C to 60 °C <sup>(2)</sup>           |                   |
|  | Voltage   | Signal Contact : 50 V AC<br>Power Contact : 200 V AC | Storage Humidity Range   | Relative humidity 85% max<br>(Not dewed) |                   |
|  | Current   | Signal Contact : 0.5 A<br>Power Contact : 3.0A       | Operating Humidity Range   |  |                   |
| SPECIFICATIONS   |   |  |  |  |                   |
| ITEM   | TEST METHOD   |  | REQUIREMENTS   | QT                                       | AT                |
| <b>CONSTRUCTION</b>  |   |  |  |  |                   |
| General Examination  | Visually and by measuring instrument.   |  | According to drawing.  | x  | x                 |
| Marking  | Confirmed visually.   |  |  | x  | x                 |
| <b>ELECTRIC CHARACTERISTICS</b>  |   |  |  |  |                   |
| Contact Resistance   | 100 mA(DC or 1000Hz)  |  | Signal Contact : 70m $\Omega$ MAX.<br>Power Contact : 20m $\Omega$ MAX.  | x  | -                 |
| Insulation Resistance  | Signal Contact : 100 V DC.<br>Power Contact : 250 V DC  |  | Signal Contact : 100 M $\Omega$ MIN.<br>Power Contact : 1000 M $\Omega$ 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  | -                 |
| <b>MECHANICAL CHARACTERISTICS</b>  |   |  |  |  |                   |
| Insertion and Withdrawal Forces  | Measured by applicable connector.   |  | Insertion Force: 45 N MAX.<br>Withdrawal Force: 5 N MIN.   | x  | -                 |
| Mechanical Operation   | 100 times insertions and extractions.   |  | ① Contact Resistance:<br>Signal Contact : 80m $\Omega$ MAX.<br>Power Contact : 30m $\Omega$ MAX.<br>② No damage, crack and looseness of parts.   | x  | -                 |
| Vibration  | Frequency 10 to 55 to 10Hz, approx 5min<br>Single amplitude : 0.75 mm, 10 cycles<br>for 3 axial directions.                               |  | ① No electrical discontinuity of 1 $\mu$ s.<br>② No damage, crack and looseness of parts.  | x  | -                 |
| Shock  | 490 m/s <sup>2</sup> , duration of pulse 11 ms<br>at 3 times for 3 both axial directions.   |  |  | x  | -                 |
| <b>ENVIRONMENTAL CHARACTERISTICS</b>   |   |  |  |  |                   |
| Damp Heat (Steady state)   | Exposed at 40 $\pm$ 2 °C, 90 ~ 95 %, 96 h.  |  | ① Contact Resistance:<br>Signal Contact : 80m $\Omega$ MAX.<br>Power Contact : 30m $\Omega$ MAX.<br>② Insulation Resistance:<br>Signal Contact : 100 M $\Omega$ MIN.<br>Power Contact : 1000 M $\Omega$ MIN.<br>③ No damage, crack and looseness of parts. | x  | -                 |
| Rapid Change of Temperature  | Temperature -55 $\rightarrow$ +85 °C<br>Time 30 $\rightarrow$ 30 min.<br>under 5 cycles.<br>(Relocation time to chamber : within 2~3 MIN) |  |  | x  | -                 |
| Cold   | Exposed at -55°C, 96 h  |  | ① Contact Resistance:<br>Signal Contact : 80m $\Omega$ MAX.<br>Power Contact : 30m $\Omega$ MAX.<br>② No damage, crack and looseness of parts.   | x  | -                 |
| Dry Heat $\triangle 2$   | Exposed at 105°C, 96 h  |  |  | x  | -                 |
| Sulfur Dioxide   | Exposed at 25 $\pm$ 2°C, 75 $\pm$ 5%RH, 25 PPM for 96 h.<br>(Test standard: IEC 68)   |  | ① No defect such as corrosion which impairs the function of connector.<br>② Contact Resistance:<br>Signal Contact : 80m $\Omega$ MAX.<br>Power Contact : 30m $\Omega$ MAX.   | x  | -                 |
| Resistance to Soldering Heat   | 1)Reflow soldering :<br>Peak TMP : 260°C MAX<br>Reflow TMP: 220°C MIN for 60sec<br>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<br>240 $\pm$ 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              |
| $\triangle 2$  | 2   | DIS-F-00002062                                       | TS. 00N0   | HT. YAMAGUCHI                            | 17. 02. 02        |
| REMARKS <sup>(1)</sup> Include temperature rise caused by current-carrying.<br><sup>(2)</sup> "STORAGE" means a long-term storage state for the unused product before assembly to PCB. |   |  | APPROVED   | HS. OKAWA                                | 14. 04. 23        |
|  |   |  | CHECKED  | KN. SHIBUYA                              | 14. 04. 23        |
|  |   |  | DESIGNED   | TS. 00N0                                 | 14. 04. 23        |
| Unless otherwise specified, refer to IEC 60512.  |   |  | DRAWN  | TS. 00N0                                 | 14. 04. 23        |
| Note QT:Qualification Test AT:Assurance Test X:Applicable Test   |   |  | DRAWING NO.  | ELC-353548-00-00                         |                   |
| <b>HRS</b>   | SPECIFICATION SHEET   |  | PART NO.   | FX23-100P-0. 5SV20                       |                   |
|  | HIROSE ELECTRIC CO., LTD.   |  | CODE NO.   | CL573-3105-6-00                          | $\triangle 2$ 1/1 |