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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 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	0.20A	Applicable cable	t=0.2±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	90V AC for 1 min.		No flashover or breakdown.	×	×
Insulation resistance	100V DC.		50MΩ MIN.	×	×
Contact resistance	20mV AC MAX, 1mA.		300mΩ MAX. Including FPC 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 1μs. ② Contact resistance: 300mΩ MAX. ③ No damage, crack and loose parts.	×	—
Shock	981 m/s <sup>2</sup> , duration of pulse 6 ms at 3 times in 3 both axial directions.			×	—
Mechanical operation	10 times insertions and extractions.		① Contact resistance: 300mΩ MAX. ② No damage, crack and loose parts.	×	—
FPC retention force	Measured by applicable FPC. (thickness of FPC shall be t=0.20mm at initial ondition)		Direction of insertion : 9.54N MIN (note 3,4)	×	—
ENVIRONMENTAL CHARACTERISTICS					
Corrosion salt mist	Exposed at 35±2°C, 5% salt water spray for 96h.		① Contact resistance: 300mΩ MAX. ② No damage, crack and loose parts. ③ No evidence of corrosion which affects connector's operation.	×	—
Rapid change of temperature	Temperature-55 → +15T <sub>0</sub> +35 → +85 → +15T <sub>0</sub> +35°C Time 30 → 2T <sub>0</sub> 3 → 30 → 2T <sub>0</sub> 3 min Under 5 cycles.		① Contact resistance: 300mΩ MAX. ② Insulation resistance: 50MΩ MIN. ③ No damage, crack and loose parts.	×	—
Damp heat (steady state)	Exposed at 40±2°C, relative humidity 90 to 95%, 96h.			×	—
Damp heat,cyclic	Exposed at -10 to +65°C, relative humidity 90 to 96%, 10 cycles, total 240h.		① Contact resistance: 300mΩ MAX. ② Insulation resistance: 1MΩ MIN. (at high humidity) ③ Insulation resistance: 50MΩ MIN. (at dry) ④ No damage, crack and loose parts.	×	—
Dry heat	Exposed at 85±2°C, 96h.		① Contact resistance: 300mΩ MAX. ② No damage, crack and loose parts.	×	—
Cold	Exposed at -55±3°C, 96h.			×	—
Sulphur dioxide [JIS C 60068-2-42]	Exposed at 40±2°C, relative humidity 80±5%, 25±5ppm for 96h.		① Contact resistance: 300mΩ MAX. ② No damage, crack and loose parts. ③ No evidence of corrosion which affects connector's operation.	×	—
Hydrogen sulphide [JIS C 60068-2-43]	Exposed at 40±2°C, relative humidity 80±5%, 10 to 15ppm for 96h.			×	—
	COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE
△					
REMARK			APPROVED	HH. MURAKAMI	20240517
			CHECKED	HS. HIRAHARA	20240517
			DESIGNED	TS. WADA	20240517
			DRAWN	TS. WADA	20240517
Unless otherwise specified, refer to IEC 60512.					
Note QT:Qualification Test AT:Assurance Test X:Applicable Test			DRAWING NO.	ELC-403028-00-00	
<b>HRS</b>	SPECIFICATION SHEET		PART NO.	FH58SA-61S-0. 2SHW	
	HIROSE ELECTRIC CO., LTD.		CODE NO.	CL0580-3835-0-00	△ 1/2

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## SPECIFICATIONS

ITEM	TEST METHOD	REQUIREMENTS	QT	AT
Solderability	Soldered at solder temperature $245 \pm 3^{\circ}\text{C}$ , for immersion duration $3 \pm 0.3$ 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. $250^{\circ}\text{C}$ MAX. reflow tmp. over $230^{\circ}\text{C}$ within 60 sec. 2) Soldering irons: tmp. $350 \pm 10^{\circ}\text{C}$ for $5 \pm 1$ sec.	No case-deformation and loose contacts. <b>(note 5)</b>	×	—

**(note1)**

This connector is back flip lock type, and top/bottom both contact points are available.

**(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)**

If pull-up or pull-down force is expected to be applied to the FPC, stabilize the FPC into PCB or other fixed components.

**(note4)**

There's a case which FPC retention force doesn't fulfill the value, because FPC specification affects the result of FPC retention force.

**(note5)**

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-403028-00-00	
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