

APPLICABLE STANDARD					
RATING	Operating temperature range	-55 °C to 85 °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	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 <b>(Note 1)</b>	×	×
Marking	Confirmed visually			×	×
ELECTRICAL CHARACTERISTICS					
Voltage proof	150 V AC for 1 min		No breakdown	×	—
Insulation resistance	100 V DC		500 MΩ MIN	×	—
Contact resistance	AC 20 mV MAX (1kHz), 1 mA		30 mΩ MAX (Connector only) (The conductor resistance including the FPC pattern 8mm is 50 mΩ MAX.)	×	—
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 : 70 mΩ MAX ③ No damage, crack and looseness of 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 : 70 mΩ MAX ② No damage, crack and looseness of parts	×	—
FPC insertion force	Measured by applicable FPC (thickness of FPC shall be t=0.3mm at initial condition)		13.6 N Max <b>(Note 2)</b>	×	—
FPC retention force	Measured by applicable FPC. (thickness of FPC shall be t=0.3mm at initial condition)		Direction of insertion : 16 N MIN <b>(Note 3)</b>	×	—
ENVIRONMENTAL CHARACTERISTICS					
Rapid change of temperature	Temperature -55→+15 to +35→+85→+15 to +35°C Time 30→ 2 to 3 → 30 → 2 to 3 min Under 5 cycles		① Contact resistance : 70 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 : 70 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 : 70 mΩ MAX ② No damage, crack and looseness of parts	×	—
Cold	Exposed at -55±3°C, 96 h			×	—
	COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE
REMARK			APPROVED	HH. MURAKAMI	20250328
			CHECKED	HY. YAMAZAKI	20250328
			DESIGNED	YT. SASAKI	20250328
Unless otherwise specified, refer to IEC 60512.			DRAWN	YT. SASAKI	20250328
Note QT:Qualification Test AT:Assurance Test X:Applicable Test			DRAWING NO.		ELC-405113-00-00
	SPECIFICATION SHEET		PART NO.	FH81-24S-0.5SH	
	HIROSE ELECTRIC CO., LTD.		CODE NO.	CL0580-6004-0-00	1/2

## SPECIFICATIONS

ITEM	TEST METHOD	REQUIREMENTS	QT	AT
Sulphur dioxide [JIS C 60068-2-42]	Exposed at 40±2°C, Relative humidity 80±5% 25±5 ppm for 96 h	Contact resistance : 70 mΩ MAX	×	—
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 220°C 60 to 90 sec Number of allowed reflow cycles 2 times 2) Soldering irons : TMP. 350±10°C for 5±1 sec	No deformation of case of excessive looseness of the terminals. <b>(Note 4)</b>	×	—

**(Note 1)**

This product is a one-action lock (mating operation is FPC insertion only) with upper and lower contacts.  
 Open and close the lock lever only when FPC removal is required.

**(Note 2)**

Be careful not to insert the FPC at an angle to this product.

**(Note 3)**

If pull-up or pull-down force is expected to be applied to the FPC, stabilize the FPC into PCB or other fixed components.  
 There's a case which FPC retention force doesn't fulfill the value,  
 because FPC specification affects the results of FPC retention force

**(Note 4)**

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

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