

Applicable standard					
Rating	Operating Temperature range	-55 °C to +105°C (Note1)	Storage Temperature range	-10 °C to +60°C (Note3)	
	Operating Humidity range	20% to 80% (Note2)	Storage Humidity range	40% to 70% (Note3)	
	Applicable Connector	DF63SF-3S-3.96C	Voltage	AC/DC 630V	
			Current	AWG#16 : 12 A AWG#18 : 10 A	
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	20mV MAX, 1mA (DC or 1000Hz).	10 mΩ MAX.	X	—	
Insulation resistance	500 V DC.	1000 MΩ MIN.	X	—	
Voltage proof	2200 V AC for 1 min.	No flashover or breakdown.	X	—	
Mechanical characteristics					
Mechanical operation	50 times insertion and extraction.	①Contact resistance: 20 mΩ MAX. ②No damage, crack or looseness of parts.	X	—	
Vibration	Frequency 10 to 55 Hz, single amplitude 0.75 mm, at 10 cycles for 3 direction.	①No electrical discontinuity of 1 μs. ②No damage, crack or looseness of parts.	X	—	
Shock	490 m/s ² duration of pulse 11 ms at 3 times each for 3 both axial directions.	①No electrical discontinuity of 1 μs. ②No damage, crack or looseness of parts.	X	—	
Mating force	Measured by applicable connector.	Insertion force : 20.0 N MAX Extraction force : 1.0 N MIN	X	—	
Environmental characteristics					
Damp heat (Steady state)	Exposed at 40 ± 2°C , 90 to 95 % , 96 h. (After leaving the room temperature for 1~2h.)	①Contact resistance: 20 mΩ MAX. ②Insulation resistance: 500 MΩ Min. ③No damage, crack or looseness of parts.	X	—	
Rapid change of temperature	Temperature -55°C→ +105°C Time 30min→ 30min Under 5 cycles. (The transferring time of the tank is 2~3 min) (After leaving the room temperature for 1~2h.)	①Contact resistance: 20 mΩ MAX. ②Insulation resistance: 1000 MΩ Min. ③No damage, crack or looseness of parts.	X	—	
Dry heat	Exposed at +105°C,96h.	①Contact resistance: 20 mΩ MAX. ②Insulation resistance: 1000 MΩ Min. ③No damage, crack or looseness of parts.	X	—	
Cold	Exposed at -55°C,96h.	①Contact resistance:20 mΩ MAX. ②Insulation resistance: 1000 MΩ Min. ③No damage, crack or looseness of parts.	X	—	
Note 1: Include the temperature rising by current. Note 2: No condensing Note 3: Apply to the condition of long term storage for unused products before PCB on board. After PCB on board, operating temperature and humidity range is applied for interim storage during transportation.					
	Count	Description of revisions	Designed	Checked	Date
Remarks			Approved	HS. OKAWA	16. 11. 01
			Checked	YN. TAKASHITA	16. 10. 31
Unless otherwise specified, refer to IEC 60512.			Designed	SANGMUK. LIM	16. 10. 31
			Drawn	SANGMUK. LIM	16. 10. 31
Note QT:Qualification Test AT:Assurance Test X:Applicable Test			Drawing No.		ELC-367034-52-01
	Specification sheet		Part No.	DF63SF-3P-3.96TV (52)	
	HIROSE ELECTRIC CO., LTD.		Code No.	CL680-0701-0-52	1/2

Specifications

Item	Test method	Requirements	QT	AT
Resistance To Soldering Heat	1) Reflow soldering «Reflow time» Number of reflow cycles : 2 cycles MAX. Duration above 220°C, 60 sec. MAX. Peak temperature: 250°C 10 sec. MAX. «Pre-heat time» Pre-heat temperature (MIN) :150°C Pre-heat temperature (MAX) :180°C Pre-heat time(MIN) : 90 sec. Pre-heat time(MAX) : 120 sec. Do not reflow upside down. 2) Manual soldering Soldering iron temperature :350±10°C Soldering time : 5s. No strength on contact.	No deformation of case of excessive looseness of the terminals.	X	—
Solderability	Soldered at solder temperature 245°C for in immersion,duration,5s.	A new uniform coating of solder shall cover minimum of 95% of the surface being immersed.	X	—

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