Applicable standard					
Rating	Operating temperature range △3	-40 °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	DF59-4P-2FC(**) DF59-4P-2C DF59-4P-2SP(**)	Current		3A
			Voltage	Voltage	AC/DC 230V
				UL/C-UL	AC/DC 29.9V
				TÜV	TBD

Specifications

Item	Item	Item	QT	AT
Construction				
General examination	Visually and by measuring instrument.	According to drawing.	X	X
Marking	Confirmed visually.		X	X
Electric characteristics				
Contact resistance △3	DC6V MAX, 100mA. (DC or 1000Hz).	50mΩ MAX.(DF59-4P-2FC(**)/2SP(**)) 30mΩ MAX.(DF59-4P-2C)	X	–
Insulation resistance	500V DC.	1000MΩ MIN.	X	–
Voltage proof	650V AC FOR 1 min.	No flashover or breakdown.	X	–
Mechanical characteristics				
Mechanical operation	30 times insertion and extraction.(DF59-4P-2FC/2C) 10 times insertion and extraction.(DF59-4P-2SP)	①50mΩ MAX.(DF59-4P-2FC(**)/2SP(**)) 30mΩ MAX.(DF59-4P-2C) ②No damage, crack or looseness of parts.	X	–
Vibration	Frequency 10 to 55Hz, single amplitude 0.75mm, at 10cycles for 3direction.	①No electrical discontinuity of 1μs. ②No damage, crack or looseness of parts.	X	–
Shock	490 m/s^2 duration of pulse 11 ms at 3 times for 3 directions.		X	–
Environmental characteristics				
Damp heat (Steady state)	Exposed at 40 ± 2℃ , 90 to 95 %, 96 h. (After leaving the room temperature for 1 - 2h.)	①50mΩ MAX.(DF59-4P-2FC(**)/2SP(**)) 30mΩ MAX.(DF59-4P-2C) ②INSULATION RESISTANCE: 1000MΩ MIN. ③NO DAMAGE, CRACK OR LOOSENESS OF PARTS.	X	–
Rapid change of temperature	Temperature -55℃→ +85℃ Time 30min→ 30min Under 5 cycles. (The transferring time of the tank is 2 - 3 min) (After leaving the room temperature for 1 - 2h.)		X	–
Resistance to soldering heat	1)Reflow soldering Number of reflow cycles : 2cycles max. ≪Reflow area≫ Duration above 220℃, 60sec. Max. Peak temperature: 250℃, 10sec. Max. ≪Pre-heat area≫ Pre-heat temperature:150℃ to 180℃ Pre-heat time:90sec.to 120sec. 2) Manual soldering Soldering iron temperature :350±10℃, Soldering time : 3sec. No strength on contact.	No deformation of case of excessive looseness of the terminals.	X	–
Solderability	Soldering temperature : 245°c Duration of immersion :soldering, for 5sec.	New uniform coating of solder shall cover minimum of 95% of the surface being immersed.	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 mounted on PCB.
After mounted on PCB, operation temperature and humidity range is applied for interim storage during transportation.

	Count	Description of revisions	Designed	Checked	Date
△3	2	DIS-H-00002838	TS.KUMAZAWA	TS.FUKUSHIMA	17.05.30

Remarks			
	Approved	KI.AKIYAMA	11.01.12
	Checked	SZ.ONO	11.01.12
	Designed	KT.ISHII	11.01.12
Unless otherwise specified, refer to IEC60512.	Drawn	KT.ISHII	11.01.12

Note QT:Qualification Test AT:Assurance Test X:Applicable Test — Drawing no. ELC-330590-51-01

HRS	Specification sheet	Part no.	DF59-4S-2V(51)		
	Hirose electric co., ltd.	Code no.	CL667-0003-6-51	△3	1/1