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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 to +85°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)	
	Voltage	50 V AC/DC	Applicable Connector	DF53-12P-0.6C(##)	
	Current	All pin	AWG 32 : 0.7A		
Any of 2 pins as a power		AWG 32 : 1.3A(power), 0.5A(signal)			
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	20mV MAX, 1mA (DC or 1000Hz).	20 mΩ MAX.	X	—	
Insulation Resistance	100 V DC.	100 MΩ MIN.	X	—	
Voltage Proof	200 V AC for 1 min.	No flashover or breakdown.	X	—	
<b>Mechanical Characteristics</b>					
Mechanical Operation	20 times insertion and extraction.	1.Contact resistance: 40 mΩ MAX. 2.No damage, crack or looseness of parts.	X	—	
Mating and unmating force	It takes out and inserts with a conformity connector.	1.Mating Force : 19.6N MAX. 2.Unmating Force : 3.6N MIN.	X	—	
Vibration	Frequency 10 to 55 Hz, single amplitude 0.75 mm, at 10 cycles for 3 direction.	1.No electrical discontinuity of 1 μ s. 2.No damage, crack or looseness of parts.	X	—	
Shock	Acceleration 500 m/s <sup>2</sup> duration of pulse 11 ms at 3 times for 3 directions.		X	—	
<b>Environmental Characteristics</b>					
Damp Heat (Steady State)	Exposed at 40 ± 2°C , humidity 90 to 95 %, 96 h. (After leaving the room temperature for 1 to 2h.)	1.Contact resistance: 40 mΩ MAX. 2.Insulation resistance: 100 MΩ MIN. 3.No damage, crack or looseness of parts.	X	—	
Rapid Change Of Temperature	Temperature -55°C→ +85°C Time 30min→ 30min Under 5 Cycles. (The transferring time of the tank is 2 to 3 MIN) (After leaving the room temperature for 1 to 2h.)	1.Contact resistance: 40 mΩ MAX. 2.Insulation resistance: 100 MΩ MIN. 3.No damage, crack or looseness of parts.	X	—	
Dry Heat	Exposed at 85±2°C, 96h	1.Contact resistance: 40 mΩ MAX. 2.Insulation resistance: 100 MΩ MIN. 3.No damage, crack or looseness of parts.	X	—	
Cold	Exposed at -55±3°C, 96h	1.Contact resistance: 40 mΩ MAX. 2.Insulation resistance: 100 MΩ MIN. 3.No damage, crack or looseness of parts.	X	—	
Remarks Note 1: Include the temperature rising by current. Note 2: No condensing Note 3: Applicable to unused product packaging.					
	COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE
	0				
			APPROVED	SJ. OKAMURA	20231228
			CHECKED	SZ. ONO	20231228
			DESIGNED	JN. TONAI	20231227
Unless otherwise specified, refer to IEC 60512.			DRAWN	JN. TONAI	20231227
Note QT:Qualification Test AT:Assurance Test X:Applicable Test			DRAWING NO.		ELC-380626-00-00
	SPECIFICATION SHEET		PART NO.	DF53-12S-0. 6H	
	HIROSE ELECTRIC CO., LTD.		CODE NO.	CL0668-1008-0-00	 1/2

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Specifications					
Item	Test method	Requirements	QT	AT	
Resistance to soldering heat	<< Reflow area >> Number of cycles : 2 cycles MAX 250°C MAX      10 sec MAX 220°C MIN      60 sec MAX << Preheating area >> 150°C to 180°C   90 sec to 120 sec	No deformation of case of excessive looseness of the terminals.	X		—
Solderability	Soldered at solder temperature, 245°C for insertion duration, 5sec.	Solder shall cover a minimum of 95 % of the surface being immersed.	X		—

Note QT:Qualification Test AT:Assurance Test X:Applicable Test		DRAWING NO.		ELC-380626-00-00	
<b>HRS</b>	SPECIFICATION SHEET		PART NO.	DF53-12S-0.6H	
	HIROSE ELECTRIC CO., LTD.		CODE NO	CL0668-1008-0-00	△ 2/2