


APPLICABLE STANDARD						
Rating	Operating Temperature Range	Note.1 -40°C to +105°C	Storage Temperature Range	Note.2 -55°C to +85°C		
	Voltage	AC 600 V , DC 600 V	—	—		
	Current	AWG#16(UL1015) 20pos. : 6 A	Applicable Cable	AWG#16 to AWG#18 (UL-STYLE : UL1007 , UL1015)		
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
ELECTRICAL CHARACTERISTICS						
Contact Resistance	100 mA (DC or 1000 Hz) max.	Note.3 10 mΩ max. (Contact spacing)		X	-	
		Note.3 50 mΩ max. (Shell spacing)		X	-	
Insulation Resistance	500 V DC.	5000 MΩ min.		X	-	
Voltage Proof	2200 V AC. for 1 min.	No flashover or breakdown.		X	-	
MECHANICAL CHARACTERISTICS						
Contact Insertion and Withdrawal Forces	Applicable contact.	Insertion force : 3 N max. Withdrawal force : 1 N min.		X	-	
Connector Insertion and Withdrawal Forces	Applicable connector.	Insertion force : 98 N max. Withdrawal force : 14.7 N min.		X	-	
Contact (Lance) Retention Forces	Pull a terminal by 49 N (1 min.) from terminal area.	1) Contacts should be retained. 2) No damage. Crack and looseness of parts.		X	-	
Conductor Pressure Bonding Forces	Crimp the cable only at the conductor, and retention force shall exceed the specification when pull force is applied.	1) AWG#16 : 147 N min. 2) AWG#18 : 98 N min.		X	-	
Cable Clamp Strength	Apply pull force of 98 N in mating direction for a minute.	1) Contacts should be retained. 2) No damage. Crack and looseness of parts.		X	-	
Mechanical Operation	500 times insertions and extractions.	Note.3 1) Change in contact resistance of contacts : 20 mΩ max. 2) No damage. Crack and looseness of parts.		X	-	
Vibration	Frequency : 10 to 55 Hz, single amplitude 0.75 mm, at 2 h, for 3 directions. (Reference for appended figure)	1) No electrical discontinuity of 10 μs. 2) No damage. Crack and looseness of parts.		X	-	
Shock	In opposite directions of each 6 dimension axis for 3 times at 490 m/s <sup>2</sup> duration of pulse 11 ms.	1) No electrical discontinuity of 10 μs. 2) No damage. Crack and looseness of parts.		X	-	
	COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE	
①						
REMARK Above specification shows the values in assembled condition with applicable crimp contacts.  Unless otherwise specified, refer to IEC 60512.			APPROVED	NM. NISHIMATSU	17.01.25	
			CHECKED	NM. NISHIMATSU	17.01.25	
			DESIGNED	MO. SHIMOYAMA	17.01.25	
			DRAWN	JY. IGA	17.01.25	
Note QT:Qualification Test AT:Assurance Test X:Applicable Test			DRAWING NO.		ELC4-127024-01	
	SPECIFICATION SHEET		PART NO.	PQ50-20S (01)		
	HIROSE ELECTRIC CO., LTD.		CODE NO.	CL236-2014-2-01		1/3

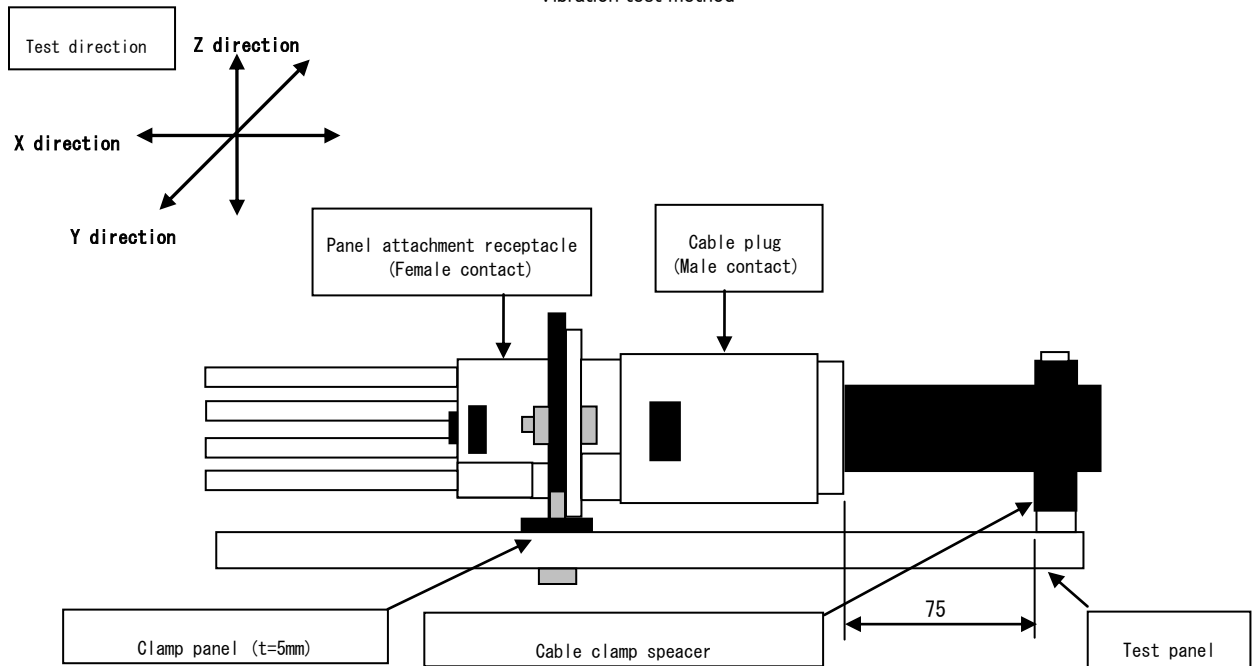
SPECIFICATIONS					
ITEM		TEST METHOD	REQUIREMENTS	QT	AT
ENVIRONMENTAL CHARACTERISTICS					
Rapid Change of Temperature	Temperature -55 → 15 to 35 → 105 → 15 to 35 °C Time 30 → 2 to 3 → 30 → 2 to 3 min. Under 5 cycles.		Note.3 1) Change in contact resistance of contacts : 20 mΩ max. 2) No damage. Crack and looseness of parts.	X	-
Heat Resistance	Exposed at 105 °C ± 2 °C, 96 h, and combine the applicable connectors.		Note.3 1) Change in contact resistance of contacts : 20 mΩ max. 2) Insulation resistance : 1000 MΩ min. 3) No damage. Crack and looseness of parts.	X	-
Cold Resistance	Exposed at -55 °C ± 2 °C, 96 h, and combine the applicable connectors.		Note.3 1) Change in contact resistance of contacts : 20 mΩ max. 2) Insulation resistance : 1000 MΩ min. (After it drier) 3) No damage. Crack and looseness of parts.	X	-
Humidity	Exposed at 60 °C ± 2 °C, 90 to 95 %, 96 h, and combine the applicable connectors.		Note.3 1) Change in contact resistance of contacts : 20 mΩ max. 2) Insulation resistance : 1000 MΩ min. 3) No damage. Crack and looseness of parts.	X	-
Mixed Flowing Gus	Exposed in SO <sub>2</sub> 10 ppm, H <sub>2</sub> S 3 ppm, 70 to 80 %, 24 h, and combine the applicable connectors.		No heavy corrosion ruin the function.	X	-
Corrosion Salt Mist	Exposed in 5 % Salt water spray for 48 h, and combine the applicable connectors.		No heavy corrosion ruin the function.	X	-
<p>Note.1 1) The product performance is guaranteed only in the temperature adequate people's activities. 2) Include temperature rise caused by current-carrying. 3) Specifications for assembled item with applicable housing.</p> <p>Note.2 Packing materials are not included.</p> <p>Note.3 Cable conductor resistance is not included.</p>					
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HRS	SPECIFICATION SHEET		PART NO.	PQ50-20S (01)	
	HIROSE ELECTRIC CO., LTD.		CODE NO	CL236-2014-2-01	 2/3

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In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.

## APPENDED FIGURE

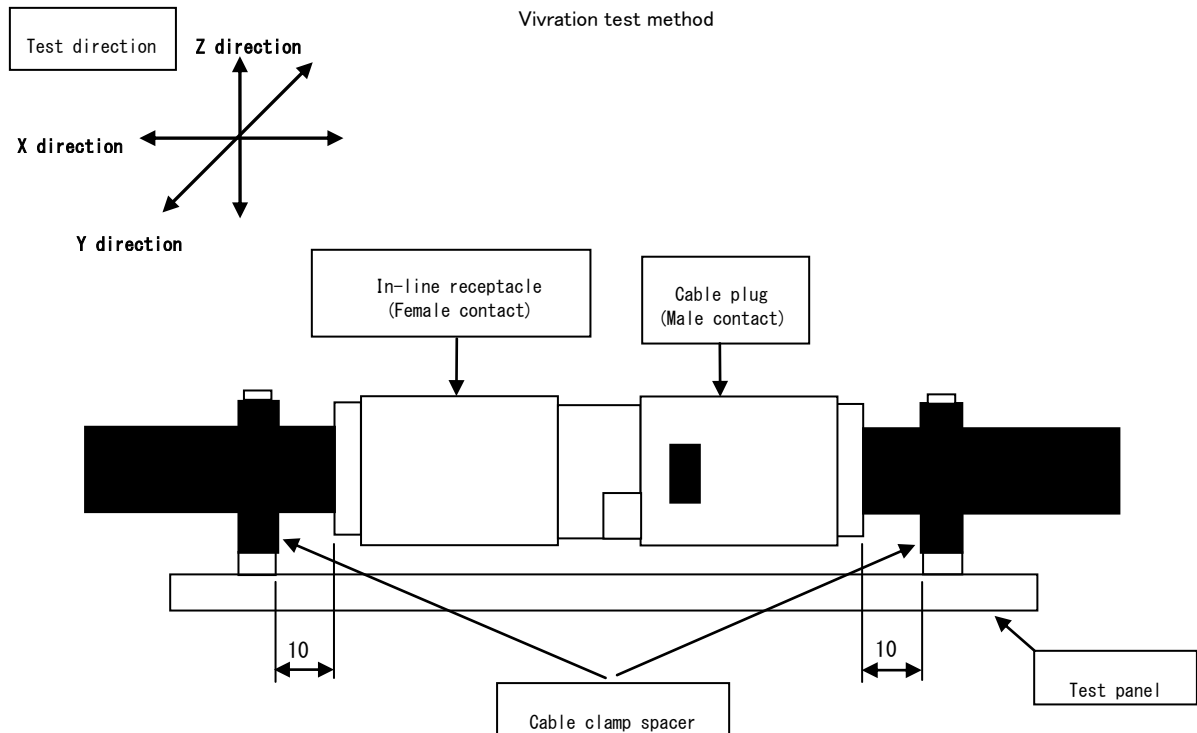
A cable plug (Male contact) and a panel attachment receptacle (Female contact)

Vibration test method



A cable plug (Male contact) and an in-line receptacle (Female contact)

Vibration test method



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**HRS**

SPECIFICATION SHEET

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