

APPLICABLE STANDARD					
RATING	Operating temperature range	-40°C to +105°C (Note1)	Storage temperature range	-55°C to +85°C (Note2)	
	Voltage	AC 300 V , DC 300 V	—	—	
	Current	AWG#18(UL1007) : 12.5 A/pin	Applicable cable	AWG#18 to AWG#22 (UL-STYLE : UL1007)	
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.	5 mΩ MAX. (Contact spacing) (Note3)	X	-	
		40 mΩ MAX. (shell spacing) (Note3)	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 : 0.3 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 29.4 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#18 : 89 N MIN. ② AWG#20 : 57.9 N MIN. ③ AWG#22 : 35.6 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.	① Change in contact resistance of Contacts : 10 mΩ MAX. (Note3) 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 axial 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 3 both axis for 3 times at 490 m/s ² 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
△	2	DIS-E-00002673	TS. ITO	TU. TANIGUCHI	20191016
REMARK Above specification shows the values in assembled condition with applicable crimp contacts. Unless otherwise specified, refer to IEC 60512(JIS C 5402).			APPROVED	MN. KENJO	20190228
			CHECKED	TU. TANIGUCHI	20190228
			DESIGNED	SH. KOYAMA	20190228
			DRAWN	SH. KOYAMA	20190228
Note QT:Qualification Test AT:Assurance Test X:Applicable Test			DRAWING NO.	ELC-129858-01-00	
HRS	SPECIFICATION SHEET		PART NO.	PQ50S-48S-FLMA (01)	
	HIROSE ELECTRIC CO., LTD.		CODE NO.	CL236-2130-0-01	△ 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.	① Change in contact resistance of contacts : 10 mΩ MAX. (Note3) ② No damage. Crack and looseness of parts.	X	-	
Heat Resistance	Exposed at 105 °C ± 2 °C, 96 h, and combine the applicable connectors.	① Change in contact resistance of contacts : 10 mΩ MAX. (Note3) ② Insulation resistance : 1000 MΩ MIN. ③ No damage. Crack and looseness of parts.	X	-	
Cold Resistance	Exposed at -55 °C ± 3 °C, 96 h, and combine the applicable connectors.	① Change in contact resistance of contacts : 10 mΩ MAX. (Note3) ② Insulation resistance : 1000 MΩ MIN. ③ No damage. Crack and looseness of parts.	X	-	
Humidity	Exposed at 60 °C ± 2 °C, 93±3 %, 96 h, and combine the applicable connectors.	① Change in contact resistance of contacts : 10 mΩ MAX. (Note3) ② Insulation resistance : 1000 MΩ MIN. (After it drier) ③ No damage. Crack and looseness of parts.	X	-	
Mixed Flowing Gus	Exposed in SO ₂ 10 ppm, H ₂ S 3 ppm, 70 to 80 %, 24 h, and combine the Applicable connectors.	No heavy corrosion ruin the function.  Change in contact resistance of contacts : 10 mΩ MAX. (contacts, shell)	X	-	
Corrosion Salt Mist	Exposed in 5 % salt water spray for 48 h, and combine the applicable connectors.	No heavy corrosion ruin the function.  Change in contact resistance of contacts : 10 mΩ MAX. (contacts, shell)	X	-	
(Note1) 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. (Note2) Packing materials are not included. (Note3) Cable conductor resistance is not included.					
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	SPECIFICATION SHEET	PART NO.	PQ50S-48S-FLMA (01)		
	HIROSE ELECTRIC CO., LTD.	CODE NO	CL236-2130-0-01		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.

