

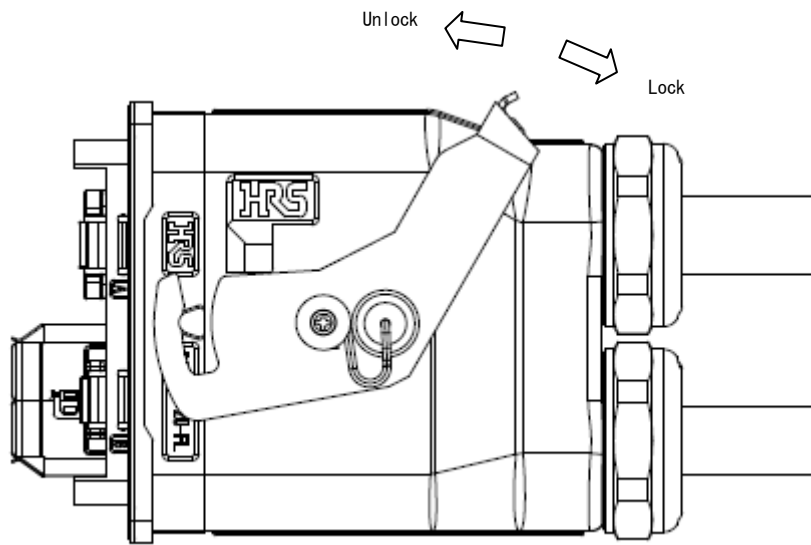


Applicable Standard						
Rating	Operating Temperature Range	Note.1 -55℃ to +105℃	Storage Temperature Range	Note.2 -55℃ to +85℃		
	Voltage	AC 600 V , DC 600 V(only connector) AC 300 V , DC 300 V(TUV·UL)	—	—		
	Current	PQ50 (A) contact: 19.0A/pin (AWG#14) PQ50S (A) contact: 12.5A/pin (AWG#16 UL1007) 12.5A/pin (AWG#18 UL1007) Conduct specified current to a single pin of contacts.	Applicable Cable	·PQ50WA/S-10*/34*-UNIT AWG#14 to AWG#22 (only 10pin) (UL-STYLE:UL1007, UL1015) ·Others AWG#16 to AWG#28 (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.	Note.3 5 mΩ max. (contact spacing)		X	-	
		Note.3 50 mΩ max. (shell spacing)		X	-	
Insulation Resistance	500 V DC.	5000 MΩ min.		X	-	
Voltage Proof	3310 V AC. for 1 min.	No flashover or breakdown.		X	-	
Temperature Rise	Conduct specified current to a single pin of below contacts. PQ50 (A) contact ⇔ PQ50 (A) contact (AWG#14 UL1015) (AWG#14 UL1015) Current carried:19A/pin PQ50S (A) contact ⇔ PQ50S (A) contact (AWG#18 UL1007) (AWG#18 UL1007) Current carried:12.5A/pin		Max.30℃ increase from ambient temperature.		X	-
MECHANICAL CHARACTERISTICS						
Contact Insertion and Withdrawal Forces	Measure with the below contact pair. ① PQ50 (A) contact ⇔ PQ50 (A) contact ② PQ50S (A) contact ⇔ PQ50S (A) contact		① Insertion force : 3.0 N max. Withdrawal force : 1.0 N min. ② Insertion force : 3.0 N max. Withdrawal force : 0.3 N min.		X	-
Connector Insertion and Withdrawal Forces	Measure with the lock lever released (all contacts are assembled) use 2 units of PQ50WA/S-10*/34*-UNIT and PQ50WASX-46*-UNIT.		Insertion force : 270 N max. Withdrawal force : 34 N min.		X	-
Contact (Lance) Retention Forces	Apply axial pull out force at the speed rate of 25mm/min to the terminal, and measure the force when the terminal is pull out. ① PQ50 (A) -15P (S) CFA (AWG#14) ② PQ50S (A) -1822P (S) CFA (AWG#18)		① 68.6N min. ② 29.4N min.		X	-
	COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE	
REMARK Above spesification shows the values in assembled condition with "PQ50WA" series. In case of using for other series of connector,the specification is based on each series. Unless otherwise specified, refer to IEC 60512.			APPROVED	NM. NISHIMATSU	17. 11. 21	
			CHECKED	NM. NISHIMATSU	17. 11. 21	
			DESIGNED	MO. SHIMOYAMA	17. 11. 21	
			DRAWN	MO. SHIMOYAMA	17. 11. 21	
Note QT:Qualification Test AT:Assurance Test X:Applicable Test			DRAWING NO.		ELC-129060-30-00	
	SPECIFICATION SHEET		PART NO.	PQ50WASX-46S-UNIT (30)		
	HIROSE ELECTRIC CO., LTD.		CODE NO.	CL236-2086-0-30		1/3

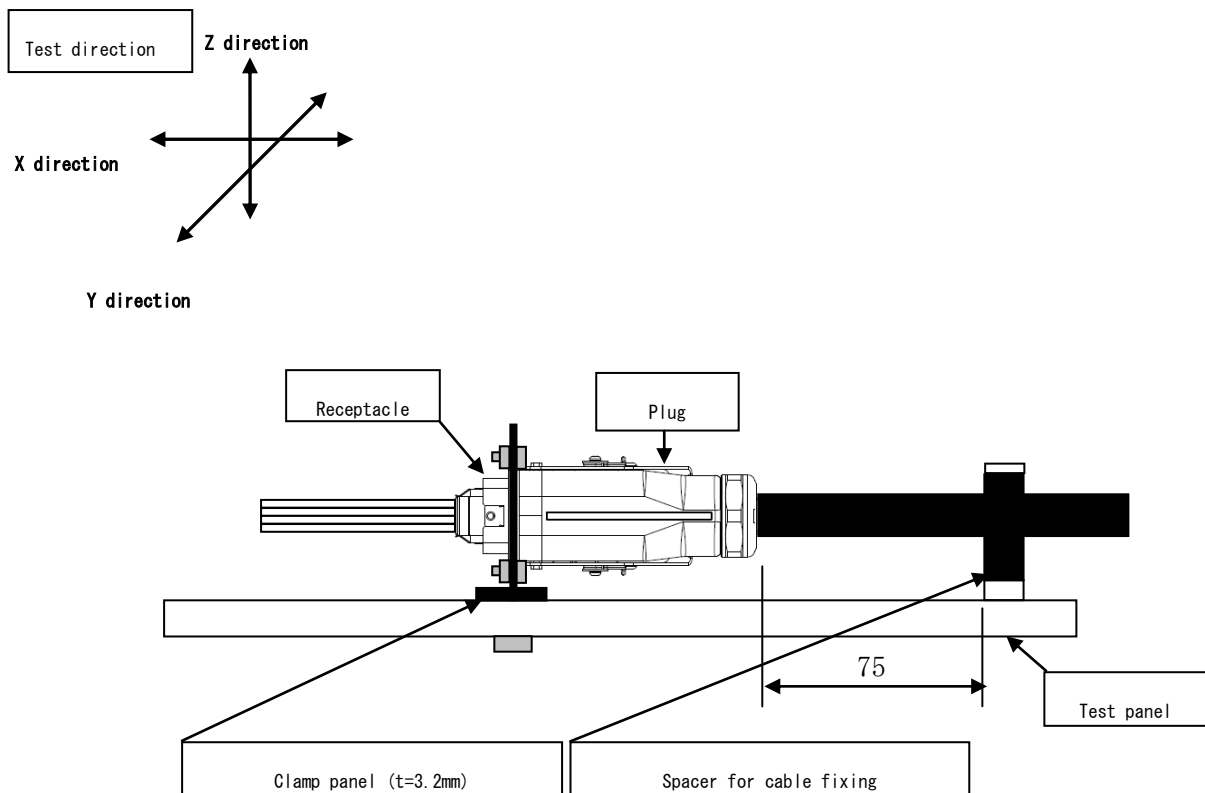
SPECIFICATIONS					
ITEM	TEST METHOD	REQUIREMENTS	QT	AT	
ENVIRONMENTAL CHARACTERISTICS					
Conductor Pressure Bonding Forces	Crimp the cable only at the conductor, and retention force shall exceed the specification when pull force is applied. ①PQ50A - 15P(S)CFA (AWG#14 UL1015) ②PQ50S(A)-1618P(S)CFA (AWG#16 UL1007) ③PQ50S(A)-1822P(S)CFA (AWG#18 UL1007) ④PQ50S(A)-1822P(S)CFA (AWG#24 UL1007)	① 222.6 N min. ② 133.5 N min. ③ 89.0 N min. ④ 22.3 N min.	X	-	
Lock Strength	Apply 98 N pull force for 1 minutes to the plug in mating axial direction with locked condition.	No damage, crack and looseness of parts.	X	-	
Lever Operation Force	Measure the lever operation force for lock/unlock.	Lock : 147 N max. Unlock : 147 N max.	X	-	
Cable Clamp Strength	Apply pull force of 98N in mating direction for a minute.	① Contacts should be retained. ② No damage, crack and looseness of parts.	X	-	
Mechanical Operation	100 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 2)	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 ² durations of pulse 11 ms.	① No electrical discontinuity of 10 μs. ② No damage, crack and looseness of parts.	X	-	
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 ± 3 °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	-	
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. (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.	X	-	
Dust/Splash Protection	Follow IEC60529 tests and combine the applicable connectors.	IP65(IEC60529) min protected to avoid dust intrusion. No harmful effect from direct water splash from any directions.	X	-	
REMARK					
"A" in parenthesis PQ50(A) and PQ50S(A) indicates sequential contacts, PQ50A and PQ50SA.					
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.					
Note.2 Packing materials are not included.					
Note.3 Cable conductor resistance is not included.					
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APPENDED FIGURE

Appended figure 1. lever operation force



Appended figure 2. vibration test method diagram(side view).



Note QT:Qualification Test AT:Assurance Test X:Applicable Test

DRAWING NO.

ELC-129060-30-00

HRS

SPECIFICATION SHEET

PART NO.

PQ50WASX-46S-UNIT (30)

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CODE NO

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