APPLICABLE STANDARD				
RATING	OPERATING TEMPERATURE RANGE	1 -55°C TO +105°C	STORAGE TEMPERATURE RANGE	2 -55°C TO +85°C
	VOLTAGE	AC 600 V , DC 600 V	—	—
	CURRENT	PQ50B CONTACT: 30A/PIN (AWG#10 UL1015) PQ50(A) CONTACT: 19A/PIN (AWG#14 UL1015) PQ50S(A) CONTACT: 12.5A/PIN (AWG#18 UL1007) CONDUCT SPECIFIED CURRENT TO A SINGLE PIN OF CONTACTS.	APPLICABLE CABLE	$\phi 28.5\ ^{+0.5}_{-1.5}$

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.	3 5 mΩ MAX. (CONTACT SPACING)	X	-
		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. PQ50B CONTACT ⇔ PQ50(A) CONTACT × 2PIN (AWG#10 UL1015) (AWG#14 UL1015) CURRENT CARRIED:30A/PIN 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°C INCREASE FROM AMBIENT TEMPERATURE.	X	-
MECHANICAL CHARACTERISTICS				
CONTACT INSERTION AND WITHDRAWAL FORCES	MEASURE WITH THE BELOW CONTACT PAIR. ① PQ50B CONTACT ⇔ PQ50(A) CONTACT ② PQ50(A) CONTACT ⇔ PQ50(A) CONTACT ③ PQ50S(A) CONTACT ⇔ PQ50S(A) CONTACT	①INSERTION FORCE : 6.0 N MAX. WITHDRAWAL FORCE : 1.5 N MIN. SPECIFICATION OF SINGLE SIDE OF PQ50B CONTACT. ②INSERTION FORCE : 3.0 N MAX. WITHDRAWAL FORCE : 1.0 N MIN. ③INSERTION FORCE : 3.0 N MAX. WITHDRAWAL FORCE : 0.3 N MIN.	X	-
CONNECTOR INSERTION AND WITHDRAWAL FORCES	MEASURE WITH THE LOOK LEVER RELEASED (72 CONTACTS OF PQ50(A) ARE ASSEMBLED) USE 6 UNITS OF PQ50WT-12P-UNIT AND PQ50WT-12S-UNIT.	INSERTION FORCE : 392 N MAX. WITHDRAWAL FORCE : 72 N MIN.	X	-
CONTACT(LANCE) RETENTION FORCES	APPLY SPECIFICATIONED PULL FORCE FOR A MINUTE FROM CABLE ASSEMBLY SIDE. PQ50B -1012SCFA(AWG#10) :98.0 N PQ50(A) -15P(S)CFA(AWG#14) :68.6 N PQ50S(A) -1822P(S)CFA(AWG#18):29.4 N	① CONTACTS SHOULD BE RETAINED. ② NO DAMAGE. CRACK AND LOOSENESS OF PARTS.	X	-

	COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE
0					

REMARK

ABOVE SPESIFICATION SHOWS THE VALUES IN ASSEMBLED CONDITION WITH APPLICABLE CRIMP CONTACTS.

Unless otherwise specified, refer to IEC 60512.

APPROVED	RI.TAKAYASU	16.06.07
CHECKED	NM.NISHIMATSU	16.06.06
DESIGNED	TY.MIURA	16.06.06
DRAWN	TY.MIURA	16.06.06

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

DRAWING NO. ELC-129308-00-00

HRS	SPECIFICATION SHEET	PART NO.	PQWT-CMA(28.5)	
	HIROSE ELECTRIC CO., LTD.	CODE NO.	CL236-2103-0-00	0 1/3

FORM HD0011-2-1

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. ①PQ50B -1012SCFA (AWG#10 UL1015) ②PQ50A -15P(S)CFA (AWG#14 UL1015) ③PQ50S(A)-1822P(S)CFA(AWG#18 UL1007)	① 356.0 N MIN. ② 222.6 N MIN. ③ 89.0 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 98 N 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.	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, SINGE 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 DURACTIONS 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 ℃ TIME 30 → 2 TO 3 → 30 → 2 TO 3 min. UNDER 5 CYCLES.	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 ℃ ± 2 ℃, 96 h, AND COMBINE THE APPLICABLE CONNECTORS.	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 ℃ ± 3 ℃, 96 h, AND COMBINE THE APPLICABLE CONNECTORS.	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 ℃ ± 2 ℃, 90 TO 95 %, 96 h, AND COMBINE THE APPLICABLE CONNECTORS.	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_2S 3 ppm, 70 TO 80 %, 24 h, AND COMBINE THE APPLICABLE CONNECTORS.	NO HEAVY CORROSIN RUIN THE FUNCTION.	X	-
DUST/SPRASH PROTECTION	FOLLOW IEC60529 TESTS AND COMBINE THE APPLICABLE CONNECTORS.	IP65(IEC60529) PROTECTED TO AVOID DUST INTRUSION. NO HARMFULL EFFECT FROM DIRECT WATER SPRASH FROM ANY DIRECTIONS.	X	-

REMARK
"A" IN PARENTHESIS PQ50(A) AND PQ50S(A) INDICATES SEQUENTIAL CONTACTS, PQ50A AND PQ50SA.

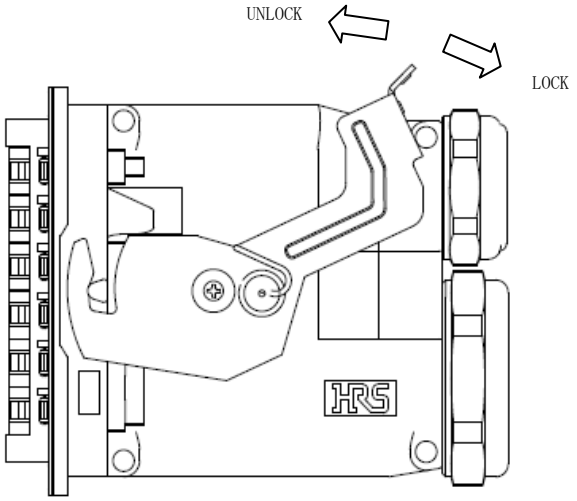
1 ① THE PRODUCT PERFORMANCE IS GUARANTEED ONLY IN THE TEMPERATURE ADEQUATE PEOPLE'S ACTIVITIES.
② INCLUDE TEMPERATURE RISE CAUSED BY CURRENT-CARRYING.
③ SPECIFICATIONS FOR ASSEMBLED ITEM WITH APPLICABLE HOUSING.

2 PACKING MATERIALS ARE NOT INCLUDED.

3 CABLE CONDUCTOR RESISTANCE IS NOT INCLUDED.

APPENDED FIGURE

APPENDED FIGURE 1. LEVER OPERATION FORCE



APPENDED FIGURE 2. VIBRATION TEST METHOD DIAGRAM(SIDE VIEW).