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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	-40°C TO +85°C	APPLICABLE CABLE	Φ9.2±0.3	
	VOLTAGE	250 V AC	CURRENT	1 A	
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	
ELECTRIC CHARACTERISTICS					
CONTACT RESISTANCE	20 mV MAX, 10 mA (DC OR 1000 Hz).	BETWEEN CONTACT: 70 mΩ MAX. BETWEEN SHELL: 10 mΩ MAX	X	X	
INSULATION RESISTANCE	250 V DC.	1000 MΩ MIN.	X	X	
VOLTAGE PROOF	500 V AC FOR 1 min.	NO FLASHOVER OR BREAKDOWN.	X	X	
MECHANICAL CHARACTERISTICS					
INSERTION AND WITHDRAWAL FORCES	MEASURED BY APPLICABLE CONNECTOR.	INSERTION FORCE 78.4 N MAX. EXTRACTION FARCE 14.7 N MIN.	X	-	
MECHANICAL OPERATION	500 TIMES INSERTIONS AND EXTRACTIONS.	1) CONTACT RESISTANCE: 70 mΩ MAX. SHELL RESISTANCE: 10 mΩ MAX. 2) NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	X	-	
VIBRATION	FREQUENCY 10 TO 500 Hz SINGLE AMPLITUDE 0.75 mm, 98 m/s ² AT 3h FOR 6 DIRECTIONS.	1) NO ELECTRICAL DISCONTINUITY OF 1μs. 2) CONTACT RESISTANCE: 70 mΩ MAX. SHELL RESISTANCE: 10 mΩ MAX 3) NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	X	-	
SHOCK	490 m/s ² DIRECTIONS OF PULSE 11 ms AT 3 TIMES FOR 3 DIRECTIONS.		X	-	
ENVIRONMENTAL CHARACTERISTICS					
RAPID CHANGE OF TEMPERATURE	TEMPERATURE -40 → 5 TO 35 → 105 → 5 TO 35 °C TIME 30 → 5 → 30 → 5 min. UNDER 10 CYCLES.	1) CONTACT RESISTANCE: 70 mΩ MAX. SHELL RESISTANCE: 10 mΩ MAX. 2) INSULATION RESISTANCE: 1000 MΩ MIN. 3) NO FLASHOVER OR BREAKDOWN. 4) NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	X	-	
DAMP HEAT/ CURRENT CARRYING	MATED CONNECTOR WITH CONTACTS CONNECTED IN SERIES. EXPOSED WITH CURRENT CARRYING AT TEMPERATURE 85°C, HUMIDITY 85% FOR 1000h. DC 0.5A , 30V LEAVE AT ROOM TEMPERATURE FOR 2h AFTER TESTING				
DRY HEAT/ CURRENT CARRYING	MATED CONNECTOR WITH CONTACTS CONNECTED IN SERIES. EXPOSED WITH CURRENT CARRYING AT TEMPERATURE 105°C, FOR 1000h. DC 0.5A , 30V LEAVE AT ROOM TEMPERATURE FOR 2h AFTER TESTING				
COLD RESISTANCE	LEAVE AT -40 °C, FOR 500h LEAVE AT 5 TO 35°C FOR 1 TO 2h AFTER TESTING.	1) CONTACT RESISTANCE: 70 mΩ MAX. SHELL RESISTANCE: 10 mΩ MAX. 2) NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	X	-	
CORROSION SALT MIST	EXPOSED IN 5% SALT WATER SPRAY FOR 48 h.	1) CONTACT RESISTANCE: 70 mΩ MAX. SHELL RESISTANCE: 10 mΩ MAX. 2) INSULATION RESISTANCE: 25 MΩ MIN. 3) NO HEAVY CORROSION.	X	-	
	COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE
REMARK			APPROVED	RI. TAKAYASU	12. 07. 25
			CHECKED	EJ. WAKATSUKI	12. 07. 25
			DESIGNED	TS. ITO	12. 07. 25
Unless otherwise specified, refer to JIS C 5402.			DRAWN	TY. ITO	12. 07. 23
Note QT:Qualification Test AT:Assurance Test X:Applicable Test			DRAWING NO.	ELC4-122495-01	
	SPECIFICATION SHEET		PART NO.	F140B-20S-CVS5 (50)	
	HIROSE ELECTRIC CO., LTD.		CODE NO.	CL230-0535-6-50	1/2

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SPECIFICATIONS					
ITEM	TEST METHOD	REQUIREMENTS	QT	AT	
MIXED GAS	SULFUR DIOXIDE : 10 PPM HYDROGEN SULFIDE : 3 PPM TEMPERATURE : 40±2 °C HUMIDITY : 70 TO 80 % EXPOSED FOR 96 h	1) CONTACT RESISTANCE: 70 mΩ MAX. SHELL RESISTANCE: 10 mΩ MAX. 2) NO HEAVY CORROSION.	X	—	
MACHINING OIL	SOAK IN MACINING OIL AT TEMPERATURE 85 °C, FOR 100h TESTED WITH 3 DIFFERENT OILS SEPARATELY : UNISOLUBLE HD, UNISOLUBLE CC AND UNICUT TB15	1) CONTACT RESISTANCE: 70 mΩ MAX. SHELL RESISTANCE: 10 mΩ MAX. 2) INSULATION RESISTANCE: 500 MΩ MIN. 3) NO FLASHOVER OR BREAKDOWN. 4) NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	X	—	
RESISTANCE TO SOLDERING HEAT	SOLDER TEMPERATURE 350 ± 10 °C, DURATION 3 ± 0.5 s AND 260 ± 5°C, DURATION 10 ± 1 s FOR IMMERSION.	NO DEFORMATION OF CASE AND EXCESSIVE LOOSENESS OF THE TERMINALS.	X	—	
SOLDERABILITY	SOLDERED AT SOLDER TEMPRATURE 230 ± 5 °C FOR IMMERSION, DURATION 3 ± 0.5 s.	MIN.90% OF SOLDER IMMERSED AREA SHALL BE COVERED NEW SOLDER COATING.	X	—	
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