

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

APPLICABLE STANDARD		TEST METHOD		REQUIREMENTS		QT	AT
OPERATING TEMPERATURE RANGE	-55 °C TO 85 °C	STORAGE TEMPERATURE RANGE	-10 °C TO 50 °C (PACKED CONDITION)			X	X
VOLTAGE	50 V AC / DC	OPERATING OR STORAGE HUMIDITY RANGE	RELATIVE HUMIDITY 90 % MAX (NOT DEWED)			X	X
CURRENT	0.5 A	APPLICABLE CABLE	±0.3±0.05mm, GOLD PLATING			X	X
SPECIFICATIONS							
ITEM	TEST METHOD		REQUIREMENTS		QT	AT	
CONSTRUCTION				GENERAL EXAMINATION VISUALLY AND BY MEASURING INSTRUMENT. ACCORDING TO DRAWING.			
MARKING				CONFIRMED VISUALLY.			
ELECTRIC CHARACTERISTICS							
VOLTAGE PROOF	150 V AC FOR 1 min.	NO FLASHOVER OR BREAKDOWN.	X	X			
INSULATION RESISTANCE	100 V DC.	500 MΩ MIN.	X	X			
CONTACT RESISTANCE	AC 20 mV MAX (1 KHz) , 1 mA .	50 mΩ MAX. INCLUDING FPC, FPC BULK RESISTANCE (L=8mm)	X	X			
MECHANICAL CHARACTERISTICS							
VIBRATION	FREQUENCY 10 TO 55 Hz, HALF AMPLITUDE 0.75 mm, — m/s ² FOR 10 CYCLES IN 3 AXIAL DIRECTIONS.	① NO ELECTRICAL DISCONTINUITY OF 1 μs.	X	—			
SHOCK	981 m/s ² , DURATION OF PULSE 6 ms AT 3 TIMES IN 3 BOTH AXIAL DIRECTIONS.	② CONTACT RESISTANCE: 50 mΩ MAX. ③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	X	—			
MECHANICAL OPERATION	20 TIMES INSERTIONS AND EXTRACTATIONS.	① CONTACT RESISTANCE: 50 mΩ MAX. ② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	X	—			
FPC RETENTION FORCE	MEASURED BY APPLICABLE FPC. (THICKNESS OF FPC SHALL BE ±0.30mm AT INITIAL CONDITION.)	DIRECTION OF INSERTION : 3.6N MIN. (note 1)	X	—			
ENVIRONMENTAL CHARACTERISTICS							
CORROSION SALT MIST	EXPOSED AT 35±2 °C , 5 % SALT WATER SPRAY FOR 96 h.	① CONTACT RESISTANCE: 100 mΩ MAX. ② NO DAMAGE, CRACK AND LOOSENESS OF PARTS. ③ NO EVIDENCE OF CORROSION WHICH AFFECTS TO OPERATION OF CONNECTOR.	X	—			
RAPID CHANGE OF TEMPERATURE	TEMPERATURE: -55 → +15 to +35 → +85 → +15 to +35 °C TIME 30 → 2 TO 3 → 30 → 2 TO 3min UNDER 5 CYCLES.	① CONTACT RESISTANCE: 50 mΩ MAX. ② INSULATION RESISTANCE: 50 MΩ MIN. ③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	X	—			
DAMP HEAT (STEADY STATE)	EXPOSED AT 40±2 °C, RELATIVE HUMIDITY 90 TO 95 %, 96 h.	① CONTACT RESISTANCE: 50 mΩ MAX. ② INSULATION RESISTANCE: 1 MΩ MIN. (AT HIGH HUMIDITY) ③ INSULATION RESISTANCE: 50 MΩ MIN. (AT DRY) ④ NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	X	—			
DAMP HEAT, CYCLIC	EXPOSED AT -10 TO +65 °C, RELATIVE HUMIDITY 90 TO 96 %, 10 CYCLES, TOTAL 240 h.		X	—			
COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE			
REMARK							
Unless otherwise specified, refer to JIS C 5402.		DRAWING NO.		ELC4-323981-01			
Note QT:Qualification Test AT:Assurance Test X:Applicable Test		DRAWING NO.					
HRS		SPECIFICATION SHEET		PART NO.		FH33J-12S-0.5SH (10)	
		HIROSE ELECTRIC CO., LTD.		CODE NO.		QL580-1328-8-10	
		APPROVED		MM. NISHIMATSU		11. 11. 16	
		CHECKED		HS. SAKAMOTO		11. 11. 15	
		DESIGNED		YH. KOTANI		11. 11. 15	
		DRAWN		YH. KOTANI		11. 11. 15	

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SPECIFICATIONS

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DRY HEAT	EXPOSED AT 85±2 °C, 96 h.	① CONTACT RESISTANCE: 50 mΩ MAX. ② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	X	—
COLD	EXPOSED AT -55±3°C, 96 h.	② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	X	—
SULPHUR DIOXIDE [JIS C 0090]	EXPOSED AT 40±2 °C, RELATIVE HUMIDITY ±5% 25±5 PPM FOR 96 h.	① CONTACT RESISTANCE: 100 mΩ MAX. ② NO DAMAGE, CRACK AND LOOSENESS OF PARTS. ③ NO EVIDENCE OF CORROSION WHICH AFFECTS TO OPERATION OF CONNECTOR.	X	—
HYDROGEN SULPHIDE [JIS C 0092]	EXPOSED AT 40±2 °C, RELATIVE HUMIDITY 80±5%, 10 TO 15 PPM FOR 96 h.	③ NO EVIDENCE OF CORROSION WHICH AFFECTS TO OPERATION OF CONNECTOR.	X	—
SOLDERABILITY	SOLDERED AT SOLDER TEMPERATURE, 235 ±5°C FOR IMMERSION DURATION, 2±0.5 sec.	A NEW UNIFORM COATING OF SOLDER SHALL COVER A MINIMUM OF 95% OF THE SURFACE BEING IMMERSED.	X	—
RESISTANCE TO SOLDERING HEAT	1) REFLOW SOLDERING : PEAK TMP. 250 °C MAX. REFLOW TMP. 230 °C MIN FOR 60 sec. 2) SOLDERING IRONS : TMP. 350 ± 10 °C FOR 5±1 sec.	NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS.	X	—

(notes)

THIS PRODUCT HAS FLIP-LOCK CONSTRUCTION. FASTEN FPC ON PCB OR SOMETHING FIXED IF FORCE IN VERTICAL DIRECTION SHALL BE PREDICTED.

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	HIROSE ELECTRIC CO., LTD.	CODE NO	CL580-1328-8-10	△ 2/2