



**THE DATASHEET OF
FH33-40S-0.5SH(10)**



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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	-55 °C TO 85 °C	STORAGE TEMPERATURE RANGE	-10 °C TO 50 °C (PACKED CONDITION)	
	VOLTAGE	50 V AC / DC	OPERATING OR STORAGE HUMIDITY RANGE	RELATIVE HUMIDITY 90 % MAX.(NOT DEWED)	
	CURRENT	0.5 A	APPLICABLE CABLE	t=0.3±0.05mm, GOLD PLATING.(4~30 POS.) t=0.3±0.03mm, GOLD PLATING.(OVER 31 POS.)	
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					
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,FFC 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 DIRECTIONS.		① NO ELECTRICAL DISCONTINUITY OF 1 μs. ② CONTACT RESISTANCE: 50 mΩ MAX. ③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	x	—
SHOCK	981 m/s ² , DURATION OF PULSE 6 ms AT 3 TIMES IN 3 DIRECTIONS.			x	—
MECHANICAL OPERATION	20 TIMES INSERTIONS AND EXTRACTIONS.		① CONTACT RESISTANCE: 50 mΩ MAX. ② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	x	—
FPC RETENSION FORCE	MEASURED BY APPLICABLE FPC. (THICKNESS OF FPC SHALL BE t=0.30mm AT INITIAL CONDITION.)		DIRECTION OF INSERTION : 0.3N × n MIN.(4~30 POS.) 0.2N × n MIN.(OVER 31 POS.) (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→+15TO+35→+85→+15TO+35°C TIME 30→ 2 TO 3 → 30→ 2 TO 3 min UNDER 5 CYCLES.			x	—
DAMP HEAT (STEADY STATE)	EXPOSED AT 40±2 °C, RELATIVE HUMIDITY 90 TO 95 %, 96 h.			x	—
DAMP HEAT,CYCLIC	EXPOSED AT -10 TO +65 °C, RELATIVE HUMIDITY 90 TO 96 %, 10 CYCLES,TOTAL 240 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	—
COUNT	DESCRIPTION OF REVISIONS		DESIGNED	CHECKED	DATE
0					
REMARK			APPROVED	MO. ISHIDA	07.02.17
			CHECKED	NM. NISHIMATSU	07.02.17
			DESIGNED	YH. KOTANI	07.02.14
Unless otherwise specified, refer to JIS C 5402.			DRAWN	YH. KOTANI	07.02.14
Note QT:Qualification Test AT:Assurance Test X:Applicable Test			DRAWING NO.		ELC4-156169-02
HRS	SPECIFICATION SHEET		PART NO.	FH33-**S-0.5SH(10)	
	HIROSE ELECTRIC CO., LTD.		CODE NO.	CL580	△ 1/2

SPECIFICATIONS

ITEM	TEST METHOD	REQUIREMENTS	QT	AT
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.		x	—
SURPHUR DIOXIDE [JIS C 0090]	EXPOSED AT 40±2 °C , RELATIVE HUMIDITY 80 ±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.		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	—

(note1)

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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