



**THE DATASHEET OF  
FH48-40S-0.5SV**



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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	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 (note)	APPLICABLE CABLE	CONDUCTOR END: t=0.3±0.05mm, GOLD PLATING GROUND PLATE: t=0.5±0.05mm, TIN PLATING	
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 .		100 mΩ MAX. INCLUDING FFC BULK RESISTANCE (L=8mm)	x	x
MECHANICAL CHARACTERISTICS					
VIBRATION	FREQUENCY 10 TO 55 Hz, HALF AMPLITUDE 0.75 mm, - m/s <sup>2</sup> FOR 10 CYCLES IN 3 DIRECTIONS.		① NO ELECTRICAL DISCONTINUITY OF 1 μs. ② CONTACT RESISTANCE: 100 mΩ MAX.	x	-
SHOCK	981 m/s <sup>2</sup> , DURATION OF PULSE 6 ms AT 3 TIMES IN 3 DIRECTIONS.		③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS.		
MECHANICAL OPERATION	20 TIMES INSERTIONS AND EXTRACTIONS.		① CONTACT RESISTANCE: 100 mΩ MAX. ② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	x	-
FFC RETENSION FORCE	MEASURED BY APPLICABLE FPC. (THICKNESS OF FFC SHALL BE t=0.30mm AT CONDUCTOR END, t=0.50mm AT GROUND PLATE AT INITIAL CONDITION.)		DIRECTION OF INSERTION: 0.3N × n MIN.	x	-
ENVIRONMENTAL CHARACTERISTICS					
RAPID CHANGE OF TEMPERATURE	TEMPERATURE -40→+15To+35→+85→+15To+35°C TIME 30→ 2~3 → 30→ 2~3 min UNDER 5 CYCLES.		① CONTACT RESISTANCE: 100 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.			x	-
DAMP HEAT,CYCLIC	EXPOSED AT -10 TO +65°C, RELATIVE HUMIDITY 90 TO 96 %, 10 CYCLES,TOTAL 240 h.		① CONTACT RESISTANCE: 100 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	-
DRY HEAT	EXPOSED AT 85±2 °C, 96 h.		① CONTACT RESISTANCE: 100 mΩ MAX.	x	-
COLD	EXPOSED AT -40±3°C, 96 h.		② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	x	-
	COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE
REMARK			APPROVED	MO. ISHIDA	10.06.08
			CHECKED	YN. TAKASHITA	10.06.08
			DESIGNED	SJ. OKAMURA	10.06.08
Unless otherwise specified, refer to JIS C 5402.			DRAWN	SJ. OKAMURA	10.06.08
Note QT:Qualification Test AT:Assurance Test X:Applicable Test			DRAWING NO.		ELC4-332362-00
	SPECIFICATION SHEET		PART NO.	FH48-**S-0.5SV	
	HIROSE ELECTRIC CO., LTD.		CODE NO.	CL580	1/2

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## SPECIFICATIONS

ITEM	TEST METHOD	REQUIREMENTS	QT	AT
CORROSION SALT MIST	EXPOSED AT 35±2°C , 5 % SALT WATER SPRAY FOR 96 h.	① CONTACT RESISTANCE: 100 mΩ MAX. ② NO EVIDENCE OF CORROSION WHICH AFFECTS TO OPERATION OF CONNECTOR. ③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	×	—
SURPHUR DIOXIDE [JIS C 0090]	EXPOSED AT 40±2 °C , RELATIVE HUMIDITY 80±5% ,25±5 PPM FOR 96 h.		×	—
HYDROGEN SULPHIDE [JIS C 0092]	EXPOSED AT 40±2 °C , RELATIVE HUMIDITY 80±5% ,10 ~ 15 PPM FOR 96 h.		×	—
SOLDERABILITY	SOLDERED AT SOLDER TEMPERATURE, ±5 °C FOR IMMERSION DURATION, 2±0.5 sec.	245 A NEW UNIFORM COATING OF SOLDER SHALL COVER A MINIMUM OF 95 % OF THE SURFACE BEING IMMERSED.	×	—
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.	×	—

**(note)**

WHEN THE SAME VALUE OF CURRENT ARE APPLID TO ALL CONTACTS AT THE SAME TIME IN ONCE,  
 SET THE CURRENT TO THE 70 % OF THE RATED CURRENT VALUE.







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<b>HRS</b>	SPECIFICATION SHEET		PART NO.	FH48-**S-0.5SV	
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