



**THE DATASHEET OF
FH40-50S-0.5SV**



Jun.1.2024 Copyright 2024 HIROSE ELECTRIC CO., LTD. All Rights Reserved.
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	Δ -40 °C TO 105 °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	t=0.3±0.05mm, GOLD 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
ELECTRICAL CHARACTERISTICS					
CONTACT RESISTANCE	AC 20 mV MAX (1 KHz) , 1 mA .		50 mΩ MAX. INCLUDING FPC, FFC BULK RESISTANCE (L=8mm)	X	X
INSULATION RESISTANCE	100 V DC.		500 MΩ MIN.	X	X
VOLTAGE PROOF	150 V AC FOR 1 min.		NO FLASHOVER OR BREAKDOWN.	X	X
MECHANICAL CHARACTERISTICS					
MECHANICAL OPERATION	20 TIMES INSERTIONS AND EXTRACTIONS.		① CONTACT RESISTANCE: 50 mΩ MAX. ② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	X	-
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. ② CONTACT RESISTANCE: 50 mΩ MAX.	X	-
SHOCK	981 m/s ² , DURATION OF PULSE 6 ms AT 3 TIMES IN 3 BOTH AXIAL DIRECTIONS.		③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	X	-
FPC RETENTION FORCE	MEASURED BY APPLICABLE FPC. (THICKNESS OF FPC SHALL BE t=0.30mm AT INITIAL CONDITION.)		DIRECTION OF INSERTION: 0.3N × n MIN. VERTICAL DIRECTION TO INSERTION: 0.2N × n MIN. (n:NUMBER OF CONTACTS)	X	-
ENVIRONMENTAL CHARACTERISTICS					
RAPID CHANGE OF TEMPERATURE	TEMPERATURE-40→+15To+35→+105→+15To+35°C TIME 30→ 2 TO 3 → 30→ 2 TO 3 min 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.			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	-
DRY HEAT	EXPOSED AT 105±2 °C, 96 h.		① CONTACT RESISTANCE: 50 mΩ MAX.	X	-
COLD	EXPOSED AT -40±3°C, 96 h.		② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	X	-
CORROSION SALT MIST	EXPOSED AT 35±2°C , 5 % SALT WATER SPRAY FOR 96 h.		① CONTACT RESISTANCE: 50 mΩ MAX. ② NO EVIDENCE OF CORROSION WHICH AFFECTS TO OPERATION OF CONNECTOR.	X	-
SULPHUR DIOXIDE [JIS C 60068-2-42]	EXPOSED AT 40±2 °C , RELATIVE HUMIDITY 80±5% ,25±5 ppm FOR 96 h.			X	-
HYDROGEN SULPHIDE [JIS C 60068-2-43]	EXPOSED AT 40±2 °C , RELATIVE HUMIDITY 80±5% ,10 TO 15 ppm FOR 96 h.			X	-
COUNT	DESCRIPTION OF REVISIONS		DESIGNED	CHECKED	DATE
Δ	11	DIS-F-00000943	RT. IKEDA	HS. SAKAMOTO	15. 12. 24
REMARK			APPROVED	MO. ISHIDA	09. 01. 21
Δ			CHECKED	YN. TAKASHITA	09. 01. 20
Unless otherwise specified, refer to IEC 60512.			DESIGNED	HH. TSUKUMO	09. 01. 20
			DRAWN	HH. TSUKUMO	09. 01. 20
Note QT:Qualification Test AT:Assurance Test X:Applicable Test			DRAWING NO.		ELC4-159298-00
HRS	SPECIFICATION SHEET		PART NO.	FH40-**S-0. 5SV	
	HIROSE ELECTRIC CO., LTD.		CODE NO.	CL580	Δ 1/2

Jun.1.2024 Copyright 2024 HIROSE ELECTRIC CO., LTD. All Rights Reserved.
 In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.



SPECIFICATIONS

ITEM	TEST METHOD	REQUIREMENTS	QT	AT
RESISTANCE TO SOLDERING HEAT	1) REFLOW SOLDERING PEAK TMP. 250 °C MAX . REFLOW TMP. OVER 230 °C WITHIN 60 sec. 2) SOLDERING IRONS : TMP. 350±5°C FOR 5±1 sec .	NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS.	x	—
SOLDERABILITY	SOLDERED AT SOLDER TEMPERATURE, 245±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	—

(note)

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


Note QT:Qualification Test AT:Assurance Test X:Applicable Test		DRAWING NO.		ELC4-159298-00	
HRS	SPECIFICATION SHEET		PART NO.	FH40-**S-0.5SV	
	HIROSE ELECTRIC CO., LTD.		CODE NO	CL580	△ 2/2

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

-  [View FH40-50S-0.5SV on WIN SOURCE](#)
-  [Hirose Electric Co Ltd Information](#)

Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management