

Jul.1.2018 Copyright 2018 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	-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 1)	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

ELECTRIC CHARACTERISTICS

CONTACT RESISTANCE	1mA(DC OR 1000Hz).	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, 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. (CONNECTOR,FPC AT INITIAL CONDITION. THICKNESS OF FPC SHALL BE t=0.30mm)	DIRECTION OF INSERTION: 0.4 × n N MIN (n:NUMBER OF CONTACTS)	X	—

ENVIRONMENTAL CHARACTERISTICS

RAPID CHANGE OF TEMPERATURE	TEMPERATURE-40→+15To+35→+85→+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 85±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 0090]	EXPOSED AT 40±2 °C , RELATIVE HUMIDITY 80±5% , 25±5 PPM FOR 96 h.		X	—
HYDROGEN SULPHIDE [JIS C 0092]	EXPOSED AT 40±2 °C , RELATIVE HUMIDITY 80±5% , 10 TO 15 PPM FOR 96 h.		X	—

COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE
0				

REMARK	APPROVED	NM. NISHIMATSU	12.03.21
	CHECKED	HS. SAKAMOTO	12.03.21
	DESIGNED	RT. IKEDA	12.03.20
	DRAWN	NM. SANPEI	12.03.14

Unless otherwise specified, refer to JIS C 5402.

Note QT:Qualification Test AT:Assurance Test X:Applicable Test	DRAWING NO.	ELC4-159266-02
--	-------------	----------------

HRS	SPECIFICATION SHEET	PART NO.	FH12-**S-0.5SVA (54)	
	HIROSE ELECTRIC CO., LTD.	CODE NO.	CL586	△ 1/2

Jul.1.2018 Copyright 2018 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 (TO BE 2 TIMES MAX.) PEAK TMP. 250 °C MAX REFLOW TMP. 230 °C MIN FOR 30 sec. PRE-HEATING. 150 TO 200°C 90 TO 120 sec. 2)SOLDERING IRONS : 350 ± 10 °C, FOR 5± 1 sec .	NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS.	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	—

(note 1)
 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.		ELC4-159266-02	
HRS	SPECIFICATION SHEET		PART NO.	FH12-***S-0. 5SVA (54)	
	HIROSE ELECTRIC CO., LTD.		CODE NO	CL586	△ 2/2