

APPLICABLE STANDARD				
RATING	OPERATING TEMPERATURE RANGE	-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 (note1)	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.	×	×
MARKING	CONFIRMED VISUALLY.		×	×
ELECTRICAL CHARACTERISTICS				
CONTACT RESISTANCE	AC 20 mV MAX (1 KHz) , 1 mA .	50 mΩ MAX. INCLUDING FPC, FFC BULK RESISTANCE (L=8mm)	×	×
INSULATION RESISTANCE	100 V DC.	500 MΩ MIN.	×	×
VOLTAGE PROOF	150 V AC FOR 1 min.	NO FLASHOVER OR BREAKDOWN.	×	×
MECHANICAL CHARACTERISTICS				
MECHANICAL OPERATION	20 TIMES INSERTIONS AND EXTRACTIONS.	① CONTACT RESISTANCE: 50 mΩ MAX. ② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	×	—
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.	×	—
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.	×	—
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) (note2)	×	—
ENVIRONMENTAL CHARACTERISTICS				
RAPID CHANGE OF TEMPERATURE	TEMPERATURE -40 → +15 TO +35 → +105 → +15 TO +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.	×	—
DAMP HEAT (STEADY STATE)	EXPOSED AT 40 ± 2 °C, RELATIVE HUMIDITY 90 TO 95 %, 96 h.		×	—
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.	×	—
DRY HEAT	EXPOSED AT 105 ± 2 °C, 96 h.	① CONTACT RESISTANCE: 50 mΩ MAX.	×	—
COLD	EXPOSED AT -40 ± 3 °C, 96 h.	② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	×	—
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.	×	—
SULPHUR DIOXIDE [JIS C 60068-2-42]	EXPOSED AT 40 ± 2 °C, RELATIVE HUMIDITY 80 ± 5 %, 25 ± 5 ppm FOR 96 h.		×	—
HYDROGEN SULPHIDE [JIS C 60068-2-43]	EXPOSED AT 40 ± 2 °C, RELATIVE HUMIDITY 80 ± 5 %, 10 TO 15 ppm FOR 96 h.		×	—
COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE
①				
REMARK		APPROVED	HS. SAKAMOTO	20181211
		CHECKED	HS. SAKAMOTO	20181211
		DESIGNED	RT. IKEDA	20181211
Unless otherwise specified, refer to IEC 60512.		DRAWN	KY. KIKUCHI	20181210
Note QT:Qualification Test AT:Assurance Test X:Applicable Test		DRAWING NO.	ELC-159101-00-00	
HRS	SPECIFICATION SHEET	PART NO.	FH40-10S-0.5SV	
	HIROSE ELECTRIC CO., LTD.	CODE NO.	CL580-2104-6-00	△ 1/2

Nov.1.2020 Copyright 2020 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	—

(note1)

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.

(note2)

THERE'S A CASE WHICH FPC/FFC RETENTION FORCE DOESN'T FULFILL THE VALUE, BECAUSE FPC/FFC SPECIFICATION AFFECTS THE RESULT OF FPC/FFC RETENTION FORCE.

Note QT:Qualification Test AT:Assurance Test X:Applicable Test		DRAWING NO.		ELC-159101-00-00		
HRS	SPECIFICATION SHEET		PART NO.	FH40-10S-0.5SV		
	HIROSE ELECTRIC CO., LTD.		CODE NO	CL580-2104-6-00		2/2