APPLICABLE STANDARD				
RATING	OPERATING TEMPERATURE RANGE	-40 °C TO 105 °C (***note 1***)	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	3mA	APPLICABLE CIC	t=0.3±0.05mm Carbon hardness: Pencil hardness H or higher

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	0.1mA(DC OR 1000Hz).	50 Ω MAX. INCLUDING CIC BULK RESISTANCE (L=80mm)	×	—
INSULATION RESISTANCE	100 V DC.	500 MΩ MIN.	×	—
VOLTAGE PROOF	150 V AC FOR 1 min.	NO FLASHOVER OR BREAKDOWN.	×	—
MECHANICAL CHARACTERISTICS				
MECHANICAL OPERATION	5 TIMES INSERTIONS AND EXTRACTIONS.	① CONTACT RESISTANCE: 70Ω MAX. ② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	×	—
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: 70Ω MAX.	×	—
SHOCK	981 m/s², DURATION OF PULSE 6 ms AT 3 TIMES IN 3 BOTH AXIAL DIRECTIONS.	③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	×	—
CIC RETENTION FORCE	MEASURED BY APPLICABLE CIC. (CONNECTOR, CIC AT INITIAL CONDITION. THICKNESS OF CIC SHALL BE t=0.30mm)	DIRECTION OF INSERTION: 0.4×n N MIN (n : NUMBER OF CONTACTS). (***note 2***)	×	—
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 1000 CYCLES.	① CONTACT RESISTANCE: 70Ω MAX. ② INSULATION RESISTANCE: 50 MΩ MIN. ③ NO FLASHOVER OR BREAKDOWN.	×	—
DAMP HEAT (STEADY STATE)	EXPOSED AT 60±2 °C, RELATIVE HUMIDITY 90 TO 95 %, 1000 h.	④ NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	×	—
DAMP HEAT,CYCLIC	EXPOSED AT -10 TO +65 °C, RELATIVE HUMIDITY 90 TO 96 %, 10 CYCLES,TOTAL 240 h.	① CONTACT RESISTANCE: 70 Ω MAX. ② INSULATION RESISTANCE: 1 MΩ MIN. (AT HIGH HUMIDITY) ③ INSULATION RESISTANCE: 50 MΩ MIN. (AT DRY) ④ NO FLASHOVER OR BREAKDOWN. ⑤ NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	×	—
DRY HEAT	EXPOSED AT 105±2 °C, 1000 h.	① CONTACT RESISTANCE: 70Ω MAX. ② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	×	—
COLD	EXPOSED AT -40±3°C, 96h.		×	—
SULPHUR DIOXIDE [JIS C 60068-2-42]	EXPOSED AT 40±2 °C , RELATIVE HUMIDITY 80±5% , 25±5 ppm FOR 96 h.	① CONTACT RESISTANCE: 70Ω MAX. ② NO EVIDENCE OF CORROSION WHICH AFFECTS TO OPERATION OF CONNECTOR.	×	—

	COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE
⚠1					

REMARK

Unless otherwise specified, refer to IEC 60512.

APPROVED	KN. SHIBUYA	20240322
CHECKED	HS. HIRAHARA	20240322
DESIGNED	TA. SUZUKI	20240322
DRAWN	TA. SUZUKI	20240322

Note QT:Qualification Test AT:Assurance Test X:Applicable Test

DRAWING NO. ELC-402412-00-00

HRS	SPECIFICATION SHEET	PART NO.	FH52C-12S-1SH	
	HIROSE ELECTRIC CO., LTD.	CODE NO.	CL0580-4661-0-00 ⚠1	1/2

FORM HD0011-2-1

SPECIFICATIONS

ITEM	TEST METHOD	REQUIREMENTS	QT	AT
RESISTANCE TO SOLDERING HEAT	1) REFLOW SOLDERING (TO BE 2 TIMES MAX.) PEAK TMP. 250 ℃ MAX REFLOW TMP. OVER 230 ℃ WITHIN 60 sec. PRE-HEATING. 150 TO 200℃ 90 TO 120 sec. 2)SOLDERING IRONS : 400 ± 10 ℃, FOR 5± 1 sec .	NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS.	×	—
SOLDERABILITY	SOLDERED AT SOLDER TEMPERATURE, 245±3 ℃ FOR IMMERSION DURATION, 3±0.3 sec.	A NEW UNIFORM COATING OF SOLDER SHALL COVER A MINIMUM OF 95 % OF THE SURFACE BEING IMMERSED.	×	—

(***note 1***)
FOLLOW THE SPECIFICATIONS OF CIC IF IT'S ALLOWABLE MAXIMUM OPERATING TEMPERATURE IS BELOW 105℃

(***note 2***)
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.