APPLICABLE STANDARD		IEC 61076-3-124		
Rating	Operating Temperature Range	-40°C TO +85°C(95%RH max) (note1)	Storage Temperature Range	-30°C TO +60°C(95%RH max) (note1)
	Voltage	50 V AC / 60 V DC	Current	1.5 A/pin (all pin) 3 A/pin (pin No.1,2,6,7)

SPECIFICATIONS

ITEM	TEST METHOD	REQUIREMENTS	QT	AT
CONSTRUCTION				
General Examination	Examined visually and with a measuring instrument.	According to drawing.	X	X
Marking	Confirmed visually.	According to drawing.	X	X
ELECTRIC CHARACTERISTICS				
Contact Resistance	Measured at 100 mA max (DC or 1000 Hz).	Contact : 30 mΩ max. Shield : 100 mΩ max.	X	—
Insulation Resistance	Measured at 500 V DC.	500 MΩ min.	X	—
Voltage Proof	500 V DC applied for 1 min. Current leakage 2mA max.	No flashover or breakdown.	X	—
Insertion Loss	Measured in the range of 1 to 500 MHz.	0.02 $\sqrt{}$(f) dB max. (Whenever the formula results in a value less than 0.1 dB, the requirement shall revert to 0.1 dB.)	X	—
Return Loss	Measured in the range of 1 to 500 MHz.	68 – 20log(f) dB min. (Whenever the formula results in a value greater than 30 dB, the requirement shall revert to 30 dB.)	X	—
Near end Crosstalk	Measured in the range of 1 to 500 MHz.	94 – 20log(f) dB min. (1MHz to 250MHz) 46.04 – 30log(f/250) dB min. (250MHz to 500MHz) (Whenever the formula results in a value greater than 75 dB, the requirement shall revert to 75 dB.)	X	—
Far end Crosstalk	Measured in the range of 1 to 500 MHz.	83.1 – 20log(f) dB min. (Whenever the formula results in a value greater than 75 dB, the requirement shall revert to 75 dB.)	X	—
Transverse Conversion Loss	Measured in the range of 1 to 500 MHz.	68 – 20log(f) dB min. (Whenever the formula results in a value greater than 50 dB, the requirement shall revert to 50 dB.)	X	—
Transverse Conversion Transfer Loss	Measured in the range of 1 to 500 MHz.	68 – 20log(f) dB min. (Whenever the formula results in a value greater than 50 dB, the requirement shall revert to 50 dB.)	X	—
MECHANICAL CHARACTERISTICS				
Insertion And Withdrawal Forces	A maximum rate of 50 mm/min. Measured by applicable connector.	Insertion force 25 N max. Withdrawal force 25 N max.	X	—
Mechanical Operation	5000 times insertions and extractions. Mating speed : 10 mm/s max. Rest : 5s, min.(unmated)	1) Resistance: Contact : 80 mΩ max. Shield : 100 mΩ max. 2) No damage, cracks or looseness of parts.	X	—
Vibration	Frequency 10 to 500 Hz 0.35 mm, 50 m/s^2 2hrs in each of 3 mutually perpendicular axis.	1) No electrical discontinuity of 1μs. 2) No damage, cracks or looseness of parts.	X	—

	COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE
③	1	DIS-E-00001800	JY.IGA	KI.NAGANUMA	20181005

Note

Note 1. Non-condensing.

Unless otherwise specified, refer to IEC 60512.

APPROVED	RI.TAKAYASU	20170324
CHECKED	KI.NAGANUMA	20170324
DESIGNED	HT.SATO	20170324
DRAWN	HT.SATO	20170324

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

DRAWING NO. ELC-129485-00-00

HRS	SPECIFICATION SHEET	PART NO.	IX31G-A-10S-CV(7.0)	
	HIROSE ELECTRIC CO., LTD.	CODE NO.	CL251-0023-0-00	③ 1/2

SPECIFICATIONS

ITEM	TEST METHOD	REQUIREMENTS	QT	AT
Fretting Corrosion	490 m/s^2 , 30 times/min at 1000 times.	1) No electrical discontinuity of 1μs. 2) No damage, cracks or looseness of parts.	X	—
Shock	Subject mated specimens to 300 m/s^2 half-sine shock pulses of 11 milliseconds duration, 3 shocks in both directions of 3 mutually perpendicular directions (totally 18 shocks)	1) No electrical discontinuity of 1μs. 2) No damage, cracks or looseness of parts.	X	—
Lock Strength	Applying 80 N force for the mating axis direction in state in fitted with applicable connector.	No unlocking, damage, cracks or looseness of parts.	X	—
Wrenching Strength	Applying 25times of 30 N 1s for 2 axis direction on tip of plug case in state in fitted with applicable connector.	No damage, cracks or looseness of parts.	X	—
ENVIRONMENTAL CHARACTERISTICS				
Rapid Change of Temperature	Subject mated specimens to 10 cycles between -55°C and 85°C with 30 minutes dwell at temp. Extremes and 1 minute transition between temperatures.	1) Voltage proof : 500 V DC applied for 1 min. Current leakage 2mA max. No flashover or breakdown. 2) Resistance: Contact : 80 mΩ max. Shield : 100 mΩ max. 3)Insulation resistance: 500 MΩ min. (at dry) 4) No damage, cracks or looseness of parts.	X	—
Humidity / Temperature Cycling	Low temperature 25 °C; High temperature 65 °C; Cold sub-cycle – 10 °C; Relative humidity 93 % Duration 10 / each 24 h (IEC 60068-2-38,test Z / AD)	1) Resistance: Contact : 80 mΩ max. Shield : 100 mΩ max. 2) Insulation resistance: 500 MΩ min. (at dry) 3) No damage, cracks or looseness of parts.	X	—
Damp Heat, Steady State	Subject mated specimens to a relative humidity of 93 % at a temperature of 40°C during 21 days.	1) Resistance: Contact : 80 mΩ max. Shield : 100 mΩ max. 2) Insulation resistance: 500 MΩ min. (at dry) 3) No damage, cracks or looseness of parts.	X	—
Dry Heat	Subject to +85 ± 2 °C, 21 days. (mating applicable connector)	1) Resistance: Contact : 80 mΩ max. Shield : 100 mΩ max. 2)Insulation resistance: 500 MΩ min. (at dry) 3) No damage, cracks or looseness of parts.	X	—
Cold	Subject to -55 ± 3 °C, 10 days. (mating applicable connector)	1) Resistance: Contact : 80 mΩ max. Shield : 100 mΩ max. 2) Insulation resistance: 500 MΩ min. (at dry) 3) No damage, cracks or looseness of parts.	X	—
Corrosion Salt Mist	Subject to 5 % salt water, 35 ± 2 °C, 48h. (leave under unmated condition.)	No heavy corrosion of contacts.	X	—
Mixed Flowing Gas Corrosion ③	Test temperature : +25±1 ℃, Relative humidity : 75±3 % H_2S : 10±5 ppb, NO_2 : 200±50 ppb Cl_2 : 10±5 ppb, SO_2 : 200±20 ppb Leave the samples for 4 days with mated. The same is performed with unmated samples. (IEC 60512, method 4)	1) Resistance: Contact : 80 mΩ max. Shield : 100 mΩ max. 2) No damage, cracks or looseness of parts.	X	—