



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.		
Marking		Confirmed visually.		According to drawing.		
ELECTRIC CHARACTERISTICS						
Contact Resistance		Measured at 100 mA max (DC or 1000 Hz).		Contact : 30 mΩ max. Shield : 100 mΩ max.		
Insulation Resistance		Measured at 500 V DC.		500 MΩ min.		
Voltage Proof		500 V DC applied for 1 min. Current leakage 2mA max.		No flashover or breakdown.		
Insertion Loss		Measured in the range of 1 to 500 MHz.		0.02 √(f) dB max. (Whenever the formula results in a value less than 0.1 dB, the requirement shall revert to 0.1 dB.)		
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.)		
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.)		
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.)		
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.)		
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.)		
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.		
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.		
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.		
	COUNT	DESCRIPTION OF REVISIONS		DESIGNED	CHECKED	
	1	DIS-E-00001800		JY.IGA	KI.NAGANUMA	
Note				APPROVED	RI.TAKAYASU	
Note 1. Non-condensing.				CHECKED	KI.NAGANUMA	
Unless otherwise specified, refer to IEC 60512.				DESIGNED	HT.SATO	
				DRAWN	HT.SATO	
Note QT:Qualification Test AT:Assurance Test X:Applicable Test				DRAWING NO. ELC-129486-00-00		
HRS	SPECIFICATION SHEET			PART NO.	IX31G-B-10S-CV (7. 0)	
	HIROSE ELECTRIC CO., LTD.			CODE NO.	CL251-0024-0-00	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	Test temperature : +25±1 °C, Relative humidity : 75±3 % H ₂ S : 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	—	
Note QT:Qualification Test AT:Assurance Test X:Applicable Test		DRAWING NO.	ELC-129486-00-00		
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