APPLICA	BLE STAN	IDARD	IEC 61076-3-124								
RATING	Operating Temperature Range				Storage T Range	torage Temperature ange		-30°C to +60°C(95%RH max) (note1)			
							,	1.5 A/pin (all pin)			
	Volta	ige	50 V AC / 60 V DC			Current		3 A/pin (pin No.1,2,6	7)		
			SPECI	IFICA	TION	S	•				
רו	ГЕМ		TEST METHOD				REQL	JIREMENTS	QT	AT	
CONSTR	RUCTION										
General Exam	ination	Examined visually and with a measuring instrument.			A	According to drawing.				Х	
Marking		Confirmed visually.			A	ccording to	drawing.		Х	Х	
ELECTR	IC CHARA	CTERI	STICS								
Contact Resistance		Measured at 100 mA max (DC or 1000 Hz).				Contact : 30 m Ω max. (note3) Shield : 100 m Ω max. (note3)			X	_	
Insulation Res	istance	Measured at 500 V DC.			50	500 MΩ min.			Х	-	
Voltage Proof		500 V DC applied for 1 min. Current leakage 2mA max.			ax. N	o breakdo	wn.	<u></u>	Х	_	
Insertion Loss		Measured in the range of 1 to 500 MHz.			0.	02 √(f) d	B 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	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 Cros	sstalk	Measured in the range of 1 to 500 MHz.		94	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.)				-	
					1						
Far end cross	talk	Measured in the range of 1 to 500 MHz.		83	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 Co	onversion Loss	Measured in the range of 1 to 500 MHz.				3 – 20log(f		,			
					,	(Whenever the formula results in a value greater than 50 dB, the requirement shall revert to 50 dB.)				-	
Transverse Co	onversion	Measured in the range of 1 to 500 MHz.			68	68 – 20log(f) dB min.					
Transfer Loss					,	(Whenever the formula results in a value greater than 50 dB, the requirement shall revert to 50 dB.)				_	
MECHAN	ICAL CHAR	RACTER	ISTICS								
Insertion and Withdrawal Forces		A maximum rate of 50 mm/min.				Insertion force 25 N max.			Х	_	
		Measured by applicable connector.			W	Withdrawal force 25 N max.					
Mechanical O	peration	5000 times insertions and extractions.				1) Resistance:					
						Contact: $80 \text{ m}\Omega$ max. (note3) Shield: $100 \text{ m}\Omega$ max. (note3)			X	-	
		Mating speed: 10 mm/s max.									
L			ss, min.(unmated)			2) No damage, cracks or looseness of parts.					
Note	oneina 2 Tho	operation to	mperature includes the temperati	uro rico by	current ca	rnina					
	conductor resista	•		uie lise by	current car	iryirig					
			e to the contacts and shield excep	ot for conta	acts No. 3 a	ind 8.					
COUN	IT DI	ESCRIPTI	ON OF REVISIONS		DESIGN	SIGNED		CHECKED		ATE	
<u>6</u> 7		DIS-	E-00016077		MT.YASL	JDA		KI.KAGOTANI	202	40419	
REMARK							ROVED	RI.TAKAYASU	201	70328	
						DESIGNI		KI.NAGANUMA		70327	
								TS.SAKAIZAWA	2017032		
Unless otherwise specified, refer to IEC 60512.				DRAWN TS.SAKAIZAWA		201	70327				
Note QT:Qualification Test AT:Assurance Test X:Applicable Test			DRA	DRAWING NO. ELC-1294		ELC-129431-	0-0	00			
HS.	S	PECIF	CATION SHEET	Γ PAR		10.	IX40G-A-10S-CV(7.			1	
	HIR	HIROSE ELECTRIC CO., LTD.			CODE NO. CL0251		51-0022-0-00	<u>/6\</u>	1/3		

ITEM	SPECIFICA	ATIONS	<u> </u>				
I I ∟IVI	TEST METHOD		REQUIREMENTS	QT	АТ		
/ibration ,sinusoidal	Frequency 10 to 500 Hz	1) No	o electrical discontinuity of 1μs. (note4)				
	0.35 mm, 50 m/s ²	2) No	2) No damage, cracks or looseness of parts.				
	2hrs in each of 3 mutually perpendicular axis.						
retting Corrosion	490 m/s ² , 30 times/min at 1000 times.	1) No	1) No electrical discontinuity of 1µs. (note4)				
		2) No	2) No damage, cracks or looseness of parts.				
Mechanical Shock	Subject mated specimens to 300 m/s² half-sine shoo	k nulses 1) No	1) No electrical discontinuity of 1µs. (note4)				
viechanical Onlock	of 11 milliseconds duration, 3 shocks in both direction	20062	2) Resistance:				
	mutually perpendicular directions (totally 18 shocks)	1	Contact : 80 m Ω max. (note4)				
			Shield : 100 mΩ max. (note4)				
			No damage, cracks or looseness of parts.				
		0) 110	d damage, cracke of looderlood of parte.				
Effectiveness of the connect	1117 0	n in state No u	inlocking, damage, cracks or looseness of parts.	Х	_		
coupling device	in fitted with applicable connector.						
Locking device mechanical	10000 cycles	,	1) Insertion and Withdrawal Forces				
operations	20 cycles/min max		nsertion force 25 N max.	X			
			Withdrawal force 25 N max.				
		2) No	2) No damage, cracks or looseness of parts.				
Wrenching Strength	Applying 25times of 30 N 1s for 2 axis direction on ti	p of plug No da	lamage, cracks or looseness of parts.	Х			
	case in state in fitted with applicable connector.						
ENVIRONMENTA	L CHARACTERISTICS						
Rapid Change of Temperatu	·		1) Voltage proof : 500 V DC applied for 1 min.				
	85°C with 30 minutes dwell at temp. extremes and 2	to 3 Cu	Current leakage 2mA max.				
	minutes transition between temperatures.	No	No breakdown. 🏠				
		2) Re	2) Resistance:				
		С	Contact : 80 mΩ max. (note3)				
		S	Shield : 100 mΩ max. (note3)				
		3) Ins	3) Insulation resistance: 500 M Ω min. (at dry)				
		4) No	4) No damage, cracks or looseness of parts.				
	Low temperature 25 °C;	4) \/a	1) Voltage proof : 500 V DC applied for 1 min.				
Humidity / Temperature	Low temperature 25°C,	1) VC	ollage proof . 300 v DC applied for 1 min.	X	-		
Humidity / Temperature Cycling	High temperature 65 °C;	-	urrent leakage 2mA max.	X			
		Cu	- ·	X			
	High temperature 65 °C;	Cu No	urrent leakage 2mA max.	X			
	High temperature 65 °C; Cold sub-cycle - 10 °C;	Cu No 2) Re	urrent leakage 2mA max. o breakdown. 🛕	X			
	High temperature 65 °C; Cold sub-cycle - 10 °C; Relative humidity 93 %	Cu No 2) Re C	urrent leakage 2mA max. o breakdown. 6	X			
	High temperature 65 °C; Cold sub-cycle - 10 °C; Relative humidity 93 % Duration 10 / each 24 h	Cu No 2) Re C S	urrent leakage 2mA max. b breakdown. 6 cesistance: Contact : 80 mΩ max. (note3)	X			
	High temperature 65 °C; Cold sub-cycle - 10 °C; Relative humidity 93 % Duration 10 / each 24 h	Cu No 2) Re C S 3) Ins	urrent leakage 2mA max. be breakdown. \bigcirc besistance: Contact : 80 m Ω max. (note3) Shield : 100 m Ω max. (note3)	X			
	High temperature 65 °C; Cold sub-cycle - 10 °C; Relative humidity 93 % Duration 10 / each 24 h	Cu No 2) Re C S 3) Ins 4) Ins	urrent leakage 2mA max. o breakdown. \bigcirc esistance: Contact : 80 m Ω max. (note3) Shield : 100 m Ω max. (note3) sulation resistance: 500 M Ω min. (at dry)	X			
	High temperature 65 °C; Cold sub-cycle - 10 °C; Relative humidity 93 % Duration 10 / each 24 h	Cu No 2) Re C S 3) Ins 4) Ins	urrent leakage 2mA max. o breakdown. \bigcirc esistance: Contact : 80 m Ω max. (note3) Shield : 100 m Ω max. (note3) sulation resistance: 500 M Ω min. (at dry) sertion and Withdrawal Forces	X			
	High temperature 65 °C; Cold sub-cycle - 10 °C; Relative humidity 93 % Duration 10 / each 24 h	Cu No 2) Re C S 3) Ins 4) Ins In	urrent leakage 2mA max. o breakdown. \bigcirc esistance: Contact : 80 m Ω max. (note3) Shield : 100 m Ω max. (note3) sulation resistance: 500 M Ω min. (at dry) sertion and Withdrawal Forces nsertion force 25 N max.	X			
	High temperature 65 °C; Cold sub-cycle - 10 °C; Relative humidity 93 % Duration 10 / each 24 h	Cu No 2) Re C S 3) Ins 4) Ins In	urrent leakage 2mA max. be breakdown. \bigcirc esistance: Contact : 80 m Ω max. (note3) Shield : 100 m Ω max. (note3) sulation resistance: 500 M Ω min. (at dry) esertion and Withdrawal Forces neertion force 25 N max.	X			
	High temperature 65 °C; Cold sub-cycle - 10 °C; Relative humidity 93 % Duration 10 / each 24 h	Cu No 2) Re C S 3) Ins 4) Ins In V 5) No	urrent leakage 2mA max. be breakdown. \bigcirc esistance: Contact : 80 m Ω max. (note3) Shield : 100 m Ω max. (note3) sulation resistance: 500 M Ω min. (at dry) esertion and Withdrawal Forces neertion force 25 N max.	X			
Cycling	High temperature 65 °C; Cold sub-cycle — 10 °C; Relative humidity 93 % Duration 10 / each 24 h (IEC 60068-2-38,test Z / AD)	Cu No 2) Re C S 3) Ins 4) Ins In W 5) No	urrent leakage 2mA max. o breakdown. \bigcirc esistance: Contact : 80 m Ω max. (note3) Shield : 100 m Ω max. (note3) sulation resistance: 500 M Ω min. (at dry) sertion and Withdrawal Forces nsertion force 25 N max. Vithdrawal force 25 N max. o damage, cracks or looseness of parts.				
Cycling	High temperature 65 °C; Cold sub-cycle — 10 °C; Relative humidity 93 % Duration 10 / each 24 h (IEC 60068-2-38,test Z / AD) Subject mated specimens to a relative humidity of 93	Cu No 2) Re C S 3) Ins 4) Ins In W 5) No 3 % at a 1) Vo Cu	urrent leakage 2mA max. b breakdown. Δ esistance: Contact : 80 mΩ max. (note3) Shield : 100 mΩ max. (note3) sulation resistance: 500 MΩ min. (at dry) sertion and Withdrawal Forces nsertion force 25 N max. Vithdrawal force 25 N max. o damage, cracks or looseness of parts.				
Cycling	High temperature 65 °C; Cold sub-cycle — 10 °C; Relative humidity 93 % Duration 10 / each 24 h (IEC 60068-2-38,test Z / AD) Subject mated specimens to a relative humidity of 93	Cu No 2) Re C S 3) Ins 4) Ins In W 5) No C Cu No	urrent leakage 2mA max. b breakdown. Δ esistance: Contact : 80 mΩ max. (note3) Shield : 100 mΩ max. (note3) sulation resistance: 500 MΩ min. (at dry) sertion and Withdrawal Forces nsertion force 25 N max. Vithdrawal force 25 N max. o damage, cracks or looseness of parts. oltage proof: 500 V DC applied for 1 min. urrent leakage 2mA max.				
Cycling	High temperature 65 °C; Cold sub-cycle — 10 °C; Relative humidity 93 % Duration 10 / each 24 h (IEC 60068-2-38,test Z / AD) Subject mated specimens to a relative humidity of 93	Cu No 2) Re C S 3) Ins 4) Ins In W 5) No Cu No 2) Re	contract: 80 mΩ max. (note3) Shield: 100 mΩ max. (note3) Sulation resistance: 500 MΩ min. (at dry) Sertion and Withdrawal Forces Insertion force 25 N max. Withdrawal force 25 N max. O damage, cracks or looseness of parts. Obreakdown.				
Cycling	High temperature 65 °C; Cold sub-cycle — 10 °C; Relative humidity 93 % Duration 10 / each 24 h (IEC 60068-2-38,test Z / AD) Subject mated specimens to a relative humidity of 93	Cu No 2) Re C S 3) Ins 4) Ins In W 5) No C Cu No 2) Re C	contract: 80 mΩ max. (note3) contact: 80 mΩ max. (note3)				
Cycling	High temperature 65 °C; Cold sub-cycle — 10 °C; Relative humidity 93 % Duration 10 / each 24 h (IEC 60068-2-38,test Z / AD) Subject mated specimens to a relative humidity of 93	Cu No 2) Re C S 3) Ins 4) Ins In W 5) No C Cu No 2) Re C S	contact: 80 mΩ max. (note3) sulation resistance: Contact: 80 mΩ max. (note3) sulation resistance: 500 MΩ min. (at dry) sertion and Withdrawal Forces nsertion force 25 N max. Withdrawal force 25 N max. O damage, cracks or looseness of parts. Contact: 80 mΩ max. O breakdown.				
Cycling	High temperature 65 °C; Cold sub-cycle — 10 °C; Relative humidity 93 % Duration 10 / each 24 h (IEC 60068-2-38,test Z / AD) Subject mated specimens to a relative humidity of 93	Cu No 2) Re C S 3) Ins 4) Ins In W 5) No Cu No 2) Re C S 3) Ins	urrent leakage 2mA max. b breakdown. c breakdown. c breakdown. c breakdown. c breakdown. c breakdown. c c breakdown. c c c c c c c c c c c c c c c c c c c		_		
Cycling	High temperature 65 °C; Cold sub-cycle — 10 °C; Relative humidity 93 % Duration 10 / each 24 h (IEC 60068-2-38,test Z / AD) Subject mated specimens to a relative humidity of 93	Cu No 2) Re C S 3) Ins 4) Ins In V 5) No Cu No 2) Re C S 3) Ins 4) Ins 4) Ins	urrent leakage 2mA max. b breakdown. c breakdown. c breakdown. c breakdown. c breakdown. c breakdown. c c breakdown. c c c c c c c c c c c c c c c c c c c		_		
Cycling	High temperature 65 °C; Cold sub-cycle — 10 °C; Relative humidity 93 % Duration 10 / each 24 h (IEC 60068-2-38,test Z / AD) Subject mated specimens to a relative humidity of 93	Cu No 2) Re C S 3) Ins 4) Ins In W 5) No Cu No 2) Re C S 3) Ins 4) Ins In	urrent leakage 2mA max. b breakdown. c breakdown. c breakdown. c breakdown. c breakdown. c breakdown. c c breakdown. c c c c c c c c c c c c c c c c c c c				
Cycling	High temperature 65 °C; Cold sub-cycle — 10 °C; Relative humidity 93 % Duration 10 / each 24 h (IEC 60068-2-38,test Z / AD) Subject mated specimens to a relative humidity of 93	Cu No 2) Re C S 3) Ins 4) Ins In W 5) No 2) Re C C S 3) Ins 4) Ins In W 10 No 2) Re C S 3) Ins V 10 No V No	contact: 80 mΩ max. (note3) Shield: 100 mΩ max. (note3) Sulation resistance: 500 MΩ min. (at dry) Sertion and Withdrawal Forces Insertion force: 25 N max. Withdrawal force: 25 N max. Withdrawal force: 25 N max. Obaccomposition of the contact is a sertion of the contact: 80 mΩ max. (note3) Shield: 100 mΩ max. (note3) Shield: 100 mΩ max. (note3) Shield: 100 mΩ max. (note3) Sulation resistance: 500 MΩ min. (at dry) Sertion and Withdrawal Forces Insertion force: 25 N max.				
Oamp Heat, Steady State	High temperature 65 °C; Cold sub-cycle — 10 °C; Relative humidity 93 % Duration 10 / each 24 h (IEC 60068-2-38,test Z / AD) Subject mated specimens to a relative humidity of 93 temperature of 40°C during 21 days.	Cu No 2) Re C S 3) Ins 4) Ins In W 5) No 2) Re C Cu No 2) Re C S 3) Ins 4) Ins In V 5) No 5) No 5) No 5) No 6	urrent leakage $2mA$ max. b breakdown. choract: $80 \text{ m}\Omega$ max. (note3) Shield: $100 \text{ m}\Omega$ max. (note3) sulation resistance: $500 \text{ M}\Omega$ min. (at dry) sertion and Withdrawal Forces nsertion force: 25 N max. Withdrawal force: 25 N max. b damage, cracks or looseness of parts. choract: $80 \text{ m}\Omega$ max. b breakdown. choract: $80 \text{ m}\Omega$ max. (note3) shield: $100 \text{ m}\Omega$ max. (note3) sulation resistance: $500 \text{ M}\Omega$ min. (at dry) sertion and Withdrawal Forces nsertion force: 25 N max. Withdrawal force: 25 N max. Withdrawal force: 25 N max. Withdrawal force: 25 N max.	X	0		
Damp Heat, Steady State Note QT:Qualification	High temperature 65 °C; Cold sub-cycle — 10 °C; Relative humidity 93 % Duration 10 / each 24 h (IEC 60068-2-38,test Z / AD) Subject mated specimens to a relative humidity of 93 temperature of 40°C during 21 days.	Cu No 2) Re C S 3) Ins 4) Ins In W 5) No 2) Re C S 3) Ins 4) Ins In No DRAW	urrent leakage $2mA$ max. b breakdown. contact: $80 \text{ m}\Omega$ max. (note3) Shield: $100 \text{ m}\Omega$ max. (note3) sulation resistance: $500 \text{ M}\Omega$ min. (at dry) sertion and Withdrawal Forces nsertion force: 25 N max. Withdrawal force: 25 N max. o damage, cracks or looseness of parts. contact: $80 \text{ m}\Omega$ max. b breakdown. contact: $80 \text{ m}\Omega$ max. (note3) shield: $100 \text{ m}\Omega$ max. (note3) sulation resistance: $500 \text{ M}\Omega$ min. (at dry) sertion and Withdrawal Forces nsertion force: 25 N max. Withdrawal force: 25 N max.	X	0		
Damp Heat, Steady State Note QT:Qualification	High temperature 65 °C; Cold sub-cycle — 10 °C; Relative humidity 93 % Duration 10 / each 24 h (IEC 60068-2-38,test Z / AD) Subject mated specimens to a relative humidity of 93 temperature of 40°C during 21 days.	Cu No 2) Re C S 3) Ins 4) Ins In W 5) No 2) Re C Cu No 2) Re C S 3) Ins 4) Ins In V 5) No 5) No 5) No 5) No 6	urrent leakage 2mA max. b breakdown. c breakdown. c breakdown. c breakdown. c breakdown. c c contact: 80 mΩ max. (note3) c c c c c c c c c c c c c c c c c c c	X 00-0	0		

	SPECIFICATIO	110		
ITEM	TEST METHOD	REQUIREMENTS	QT	AT
ENVIRONMENTAL	CHARACTERISTICS			
Dry Heat	Subject to +85 ± 2 °C, 21 days. (mating applicable connector)	1) Voltage proof: 500 V DC applied for 1 min. Current leakage 2mA max. No breakdown. 2) Resistance: Contact: 80 mΩ max. (note3) Shield: 100 mΩ max. (note3) 3) Insulation resistance: 500 MΩ min. (at dry) 4) Insertion and Withdrawal Forces Insertion force 25 N max. Withdrawal force 25 N max. 5) No damage, cracks or looseness of parts.	X	
Cold	Subject to -55 ± 3 °C, 10 days. (mating applicable connector)	1) Voltage proof: 500 V DC applied for 1 min. Current leakage 2mA max. No breakdown. 2) Resistance: Contact: 80 mΩ max. (note3) Shield: 100 mΩ max. (note3) 3) Insulation resistance: 500 MΩ min. (at dry) 4) Insertion and Withdrawal Forces Insertion force 25 N max. Withdrawal force 25 N max. 5) No damage, cracks or looseness of parts.	X	_
Corrosion Salt Mist	Subject to 5 % salt water, 35 ± 2 °C, 48h.	No heavy corrosion of contacts.	Х	_
Mixed Flowing Gas Corrosion	(leave under unmated condition.) 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. (note3) Shield : 100 mΩ max. (note3) 2) No damage, cracks or looseness of parts.	X	_
Solderability	Temperature +350 ± 10 °C, 3 sec at soldering parts.	Wetting on solder surface. No solder cluster.	Х	_
Resistance To Soldering Heat	Temperature +350 ± 10 °C, 5 sec at soldering parts.	No damage, cracks or looseness of parts.	Х	_

Note QT:Q	ualification Test AT:Assurance Test X:Applicable Test	DRAWING NO.		ELC-129431-00-00		
HS.	SPECIFICATION SHEET	PART NO.	IX4	7.0)		
	HIROSE ELECTRIC CO., LTD.	CODE NO	CL025	51-0022-0-00	<u>&</u> 3/3	