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APPLICABLE STANDARD				
Rating	Operating Temperature Range (2)	-40°C to +105°C	Storage Temperature Range	-10°C to +60°C
	Voltage	AC 30 V , DC 42 V	Applicable Cable	Power : AWG#14 to 16 Signal : AWG#22 to 24
	Current (1) (6) △3	Power : 24 A(Ambient Temperature 25°C) Signal : 1 A	Insulation diameter	Power : φ2.6 to 3.0 Signal : φ1.4 to 1.6

SPECIFICATIONS

ITEM	TEST METHOD	REQUIREMENTS	QT	AT
CONSTRUCTION				
General Examination	Examined visually and with a measuring instrument.	According to the drawing.	X	X
Marking	Confirmed visually.		X	X
ELECTRICAL CHARACTERISTICS				
Contact Resistance	Measured at DC 1A.	10 mΩ MAX. (Power contact) 15 mΩ MAX. (Signal contact)	X	X
Insulation Resistance	Measured at 500 V DC.	1000 MΩ MIN.	X	X
Voltage Proof	600 V AC applied for 2 min.	No flashover or breakdown.	X	X
MECHANICAL CHARACTERISTICS				
Contact Insertion and Extraction Forces	Measured with a $\phi 1.98^{+0.003}_{0}$ steel gauge. Measured with a $\phi 0.98^{+0.003}_{0}$ steel gauge.	Insertion and extraction forces: 1 N MIN. (Power contact) Insertion and extraction forces: 0.2 N MIN. (Signal contact)	X	–
Mating and Unmating Forces △1	Measured with an applicable connector. (Excluding lock mechanism.)	Mating and unmating forces: 60 N MAX.	X	–
Mechanical Operation	Mated and unmated 30 times.	Contact resistance:10 mΩ MAX. (Power contact) 15 mΩ MAX. (Signal contact)	X	–
Vibration	Frequency: 10 Hz to 55 to 10 Hz every cycle (5 min per cycle) Single amplitude: 0.75 mm Performed over 10 cycles in each of three mutually perpendicular directions.	1) No electrical discontinuity of more than 10 μs. 2) No damage, cracks or looseness of parts.	X	–
Shock	Acceleration: 500 m/s^2, Half sine wave pulses of 11 ms. Performed 3 times in each of three mutually perpendicular directions.	1) No electrical discontinuity of more than 10 μs. 2) No damage, cracks or looseness of parts.	X	–
ENVIRONMENTAL CHARACTERISTICS				
Damp Heat, Steady State	Subjected to a temperature of +40 °C, at a humidity of 90 to 95 % for 96 hours.	1) Insulation resistance: 10 MΩ MIN. (At high humidity) 2) Insulation resistance: 100 MΩ MIN. (When dry) 3) No damage, cracks or looseness of parts.	X	–
Rapid Change of Temperature	Temperature: -40 → R/T(4) → +105 → R/T(4) °C Time: 30 → 2 to 3 → 30 → 2 to 3 min for 5 cycles.	1) Insulation resistance: 100 MΩ MIN. 2) No damage, cracks or looseness of parts.	X	–
Corrosion Salt Mist(3)	Subjected to 5 % salt spray for 48 h.	No heavy corrosion which impairs functionality.	X	–
Dry Heat	Subjected to +105 ℃ for 96 h.	No damage, cracks or looseness of parts.	X	–
Cold	Subjected to -40 ℃ for 96 h.	No damage, cracks or looseness of parts.	X	–
Sealing (IPX7) (3) (JIS C 0920:2003)	Subjected to a depth of 1 m for 0.5 h.	No water penetration to the inside of the connector.	X	–
Air Tightness(3)	17.6kPa applied to the inside of the connector for 0.5min.	No air bubbles from the inside of the connector.	X	–
Sealing (IPX6) (3) (JIS C 0920:2003) △2	100L/min fountain water in all directions from a distance of 3m,3min.	No water penetration to the inside of the connector.	X	–

	COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE
△3	2	DIS-C-00009416	SH. KOYAMA	EJ. KUNII	20211215

REMARK

Notes

(1) The above specifications show the values in assembled condition with applicable crimp contacts (BH12-SC-213,BH12-SC1-213).

(2) Including temperature rise due to current carrying.

(3) Corrosion salt mist, sealing and airtightness are tested in mated condition with an applicable connector.

(4) R/T : Room Temperature.

Unless otherwise specified, refer to IEC 60512 (JIS C 5402).

APPROVED	YH. YAMADA	20200128
CHECKED	HN. TANAKA	20200128
DESIGNED	SH. KOYAMA	20200128
DRAWN	SH. KOYAMA	20200128

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

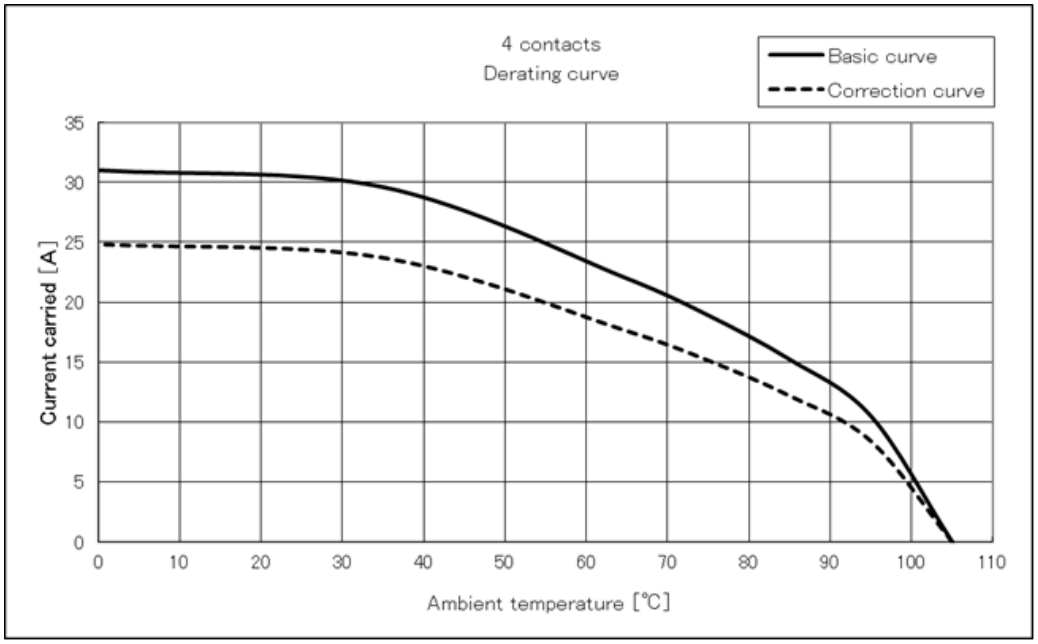
DRAWING NO. ELC-390397-00-00

HRS	SPECIFICATION SHEET	PART NO.	BH12WP-4SC	
	HIROSE ELECTRIC CO., LTD.	CODE NO.	CL0140-0010-0-00 △3	1/2

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△3

[Reference]



Notes (5) The derating curve is derived from the basic curve multiplied by the derating factor of 0.8.
(6) The value of rated current varies with the ambient temperature.
It is recommended to use the product within the derating curve zone.
(7) The measurement method of the derating curve is shown below.
• Test specimen: This product, unused prior to testing.
• Test cable conductor cross sectional area : Power…AWG#14 (2.0mm^2), Signal…AWG#22 (0.3mm^2)
• Test condition: Power supplied while the specimen is in a stationary state and then measured.
(For details, please refer to the examination report number TR140E-20045.)