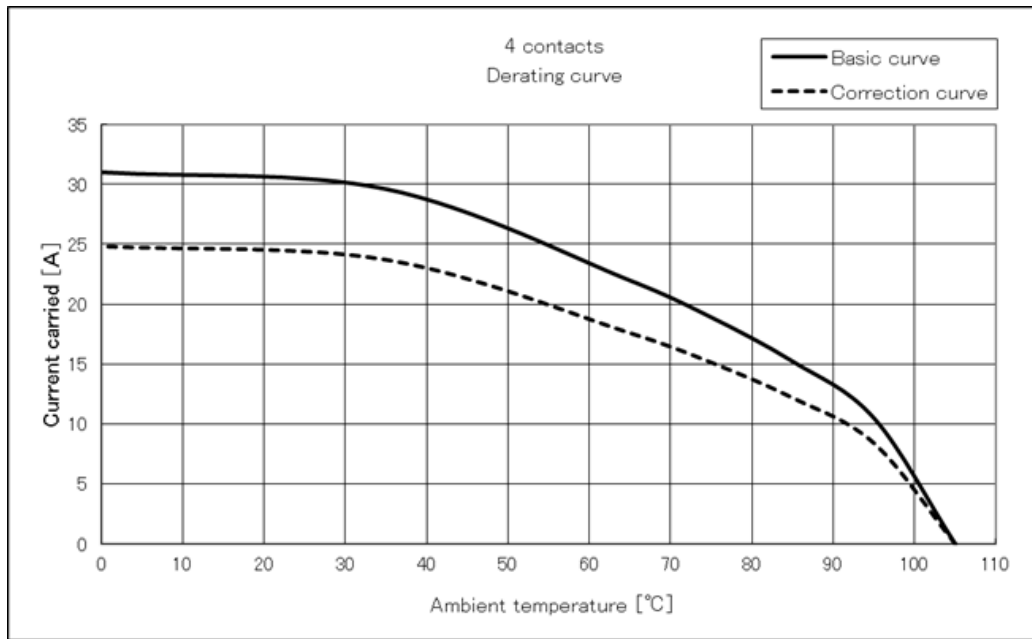


APPLICABLE STANDARD					
Rating	Operating Temperature Range <sup>(2)</sup>	-40°C to +105°C	Storage Temperature Range	-10°C to +60°C	
	Voltage	AC 30 V , DC 42 V	Applicable Cable	Power : AWG#14 to 16 Signal : AWG#22 to 24	
	Current <sup>(1)(6)</sup>	Power : 24 A(Ambient Temperature 25°C) Signal : 1 A	Insulation diameter	Power : φ 2.6 to 3.0 Signal : φ 1.4 to 1.6	
<b>△</b>					
SPECIFICATIONS					
ITEM	TEST METHOD		REQUIREMENTS	QT	AT
<b>CONSTRUCTION</b>					
General Examination	Examined visually and with a measuring instrument.		According to the drawing.	X	X
Marking	Confirmed visually.			X	X
<b>ELECTRICAL CHARACTERISTICS</b>					
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
<b>MECHANICAL CHARACTERISTICS</b>					
Contact Insertion and Extraction Forces	Measured with a φ ___ steel gauge.		Insertion and extraction forces: — N MIN.	—	—
Mating and Unmating Forces	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 <sup>2</sup> , 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	—
<b>ENVIRONMENTAL CHARACTERISTICS</b>					
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 <sup>(4)</sup> → +105 → R/T <sup>(4)</sup> °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 <sup>(3)</sup>	Subjected to 5 % salt spray for 48 h.		No heavy corrosion which impairs functionality.	X	—
Dry Heat	Subjected to +105 °C for 96 h.		No damage, cracks or looseness of parts.	X	—
Cold	Subjected to -40 °C for 96 h.		No damage, cracks or looseness of parts.	X	—
Sealing(IPX7) <sup>(3)</sup> (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 <sup>(3)</sup>	17.6kPa applied to the inside of the connector for 0.5min.		No air bubbles from the inside of the connector.	X	—
Sealing(IPX6) <sup>(3)</sup> (JIS C 0920:2003)	100L/min fountain water in all directions from a distance of 3m,3min		No water penetration to the inside of the connector.	X	—
<b>△</b>					
	COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE
	2	DIS-C-00009416	SH. KOYAMA	EJ. KUNI I	20211215
<b>REMARK</b>			APPROVED	YH. YAMADA	20200128
Notes			CHECKED	HN. TANAKA	20200128
(1) The above specifications show the values in assembled condition with applicable contacts (BH12-P-213,BH12-P1-213).			DESIGNED	SH. KOYAMA	20200128
(2) Including temperature rise due to current carrying.			DRAWN	SH. KOYAMA	20200128
(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).					
Note	QT:Qualification Test AT:Assurance Test X:Applicable Test		DRAWING NO.	ELC-390463-00-00	
<b>HRS</b>	SPECIFICATION SHEET		PART NO.	BH12WRA-4P	
	HIROSE ELECTRIC CO., LTD.		CODE NO.	CL0140-0013-0-00	<b>△</b> 2/2



[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<sup>2</sup>), Signal···AWG#22 (0.3mm<sup>2</sup>)
  - 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.)

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

DRAWING NO.

ELC-390463-00-00



SPECIFICATION SHEET

PART NO.

BH12WRA-4P

HIROSE ELECTRIC CO., LTD.

CODE NO.

CL0140-0013-0-00



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