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APPLICABLE STANDARD		TÜV approved(R 50287187), UL approved(E52653)		
RATING	Operating Temperature Range	-25°C to +105°C (1)	Storage Temperature Range	-10°C TO +60°C
	Voltage △2	AC, DC 600 V(UL,TÜV) AC, DC 1000V	Pollution Degree	3
	Current	〈1〉	Applicable Cable	〈1〉
	IP- Degree	IP20	—	—

SPECIFICATIONS

ITEM	TEST METHOD	REQUIREMENTS	QT	AT
CONSTRUCTION				
General Examination	Examined visually and by measuring instrument.	According to the drawing.	X	X
Marking	Confirmed visually.		X	X
ELECTRICAL CHARACTERISTICS				
Contact Resistance	Contact measured at DC 1A.	0.5 mΩ MAX.	X	X
Insulation Resistance	Measured at 500 V DC.	1000 MΩ MIN.	X	X
Voltage Proof	3310 V AC applied for 1 min.	No flashover or breakdown.	X	X
MECHANICAL CHARACTERISTICS				
Contact Insertion and Withdrawal Forces	Measured with a $\phi 7.98^{+0}_{-0.003}$ steel gauge.	Insertion And Withdrawal Forces: 1.7 N MIN.	X	—
Connector Insertion and Withdrawal Forces	Measured with an applicable connector. Without locking device.	Insertion And Withdrawal Forces: 70 N MAX (initial measurements).	X	—
Mechanical Operation	Mated and unmated 30 times.	① No damage, cracks or looseness of parts. ② Contact Resistance: 1 mΩ MAX. ③ Insertion And Withdrawal Forces: 100 N MAX.	X	—
Vibration	Frequency: 10 → 55 → 10 (Hz) (1cyc,5min) Single Amplitude: 0.75 mm Performed over 10 cycles in each of three mutually perpendicular directions.	① No electrical discontinuity of 10 μs. ② No damage, cracks or looseness of parts.	X	—
Shock	Acceleration: 490 m/s² Half sine wave pulses of 11 ms. Performed 3 times in each of three mutually perpendicular directions.	① No electrical discontinuity of 10 μs. ② No damage, cracks or looseness of parts.	X	—
ENVIRONMENTAL CHARACTERISTICS				
Damp Heat (Steady State)	Subjected to 40 ℃, at a humidity of 90 to 95 %, for 96 h.	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 -55→ R/T(3) → +105 → R/T ℃ Time 30 → 2-3 → 30 → 2-3 min for 5 cycles.	① Insulation resistance: 1000 MΩ min. ② No damage, cracks or looseness of parts.	X	—
Corrosion Salt Mist	Subjected to 5 % salt water 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 -55℃ for 96 h.	No damage, cracks or looseness of parts.	X	—

	COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE
△2	2	DIS-C-00001406	DS.MATSUNE	HY.KOBAYASHI	17.01.27

NOTES
(2) Operating temperature range includes the temperature rise by current carrying.
(3) R/T : Room Temperature.
(4) Above specifications show the values in assembled condition with applicable crimp contacts.
(5) This connector is designed to be used under stationary conditions. Please avoid applications in which vibration is applied.

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

APPROVED	SU.OBARA	14.02.04
CHECKED	HY.KOBAYASHI	14.02.04
DESIGNED	HS.KAWASHIMA	14.02.04
DRAWN	HS.KAWASHIMA	14.02.04

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

DRAWING NO. ELC-118306-00-00

HRS	SPECIFICATION SHEET	PART NO.	EM12MR-1SCB	
	HIROSE ELECTRIC CO., LTD.	CODE NO.	CL138-0032-8-00 △2	1/2

FORM HD0011-2-1

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1 Current Rating and Applicable Cable

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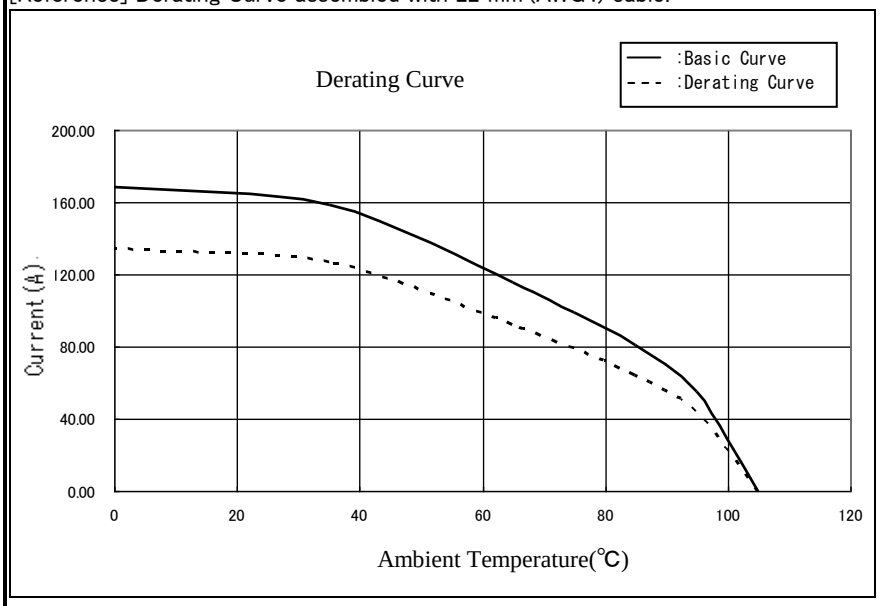
Table 1 shows the current rating and applicate cable.

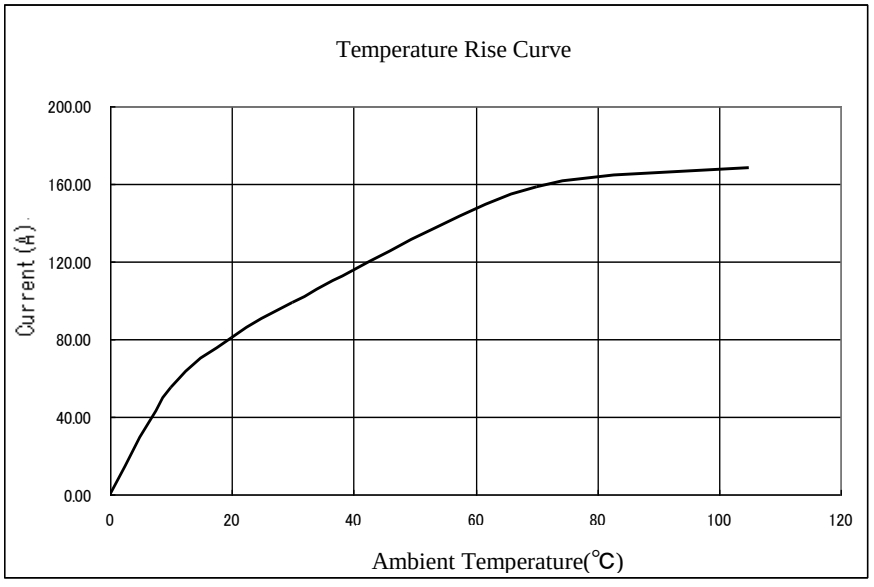
Table 1. Current Rating And Applicable Cable

Current (7)	90A (UL,TÜV), 130A(Ambient Tempurature 25℃)	70A (UL,TÜV),
Applicable Cable	38(22.66 to 42.42)mm² AWG 2	14(10.52 to 16.78)mm² AWG 6
	22(16.78 to 26.66)mm² AWG 4	

Current rating depends on ambient temperature. Please refer to the derating curve shown below.

[Reference] Derating Curve assembled with 22 mm²(AWG4) cable.





6) The derating curve is derived from the basic curve multiplied by the derating factor of 0.8.
7) The value of rated current varies with the ambient temperature. It is recommended to use the product within the derating curve zone. When using a UL or TÜV approved product, please use the product within the specified range as well as the derating curve area.
8) The measurement method of the derating curve is shown below.
   •Test specimen: This product, unused prior to testing.
   •Test cable conductor cross sectional area: AWG4 (22mm²)
   •Test condition: Power supplied while the specimen is in a stationary state and then measured.