









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In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.

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 	AC, DC 600 V(UL,TÜV) AC, DC 1000V	Pollution Degree	3			
	Current 		Applicable Cable 				
	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 - steel gauge.		Insertion And Withdrawal Forces: - N MIN.		-	-
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/s ² 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	-
Contact Retention Force		Subjected to a pulling force of 150N from wiring side.		No damage.		X	-
ENVIRONMENTAL CHARACTERISTICS							
Damp Heat (Steady State)		Subjected to 40 °C, 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 °C 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°C for 96 h.		No damage, cracks or looseness of parts.		X	-
Cold		Subjected to -55°C for 96 h.		No damage, cracks or looseness of parts.		X	-
	COUNT	DESCRIPTION OF REVISIONS		DESIGNED	CHECKED	DATE	
	4	DIS-C-00001408		DS. MATSUNE	HY. KOBAYASHI	17.01.27	
Notes				APPROVED	SU. OBARA	14.02.04	
(2) Operating temperature range includes the temperature rise by current carrying.				CHECKED	HY. KOBAYASHI	14.02.04	
(3) R/T : Room Temperature.				DESIGNED	HS. KAWASHIMA	14.02.04	
(4) Above specifications show the values in assembled condition with applicable crimp contacts.				DRAWN	HS. KAWASHIMA	14.02.04	
(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).							
Note QT:Qualification Test AT:Assurance Test X:Applicable Test				DRAWING NO.		ELC-118307-00-00	
	SPECIFICATION SHEET			PART NO.	EM12MP-1PCB		
	HIROSE ELECTRIC CO., LTD.			CODE NO.	CL138-0033-0-00		1/2

1 Current Rating and Applicable Cable

2

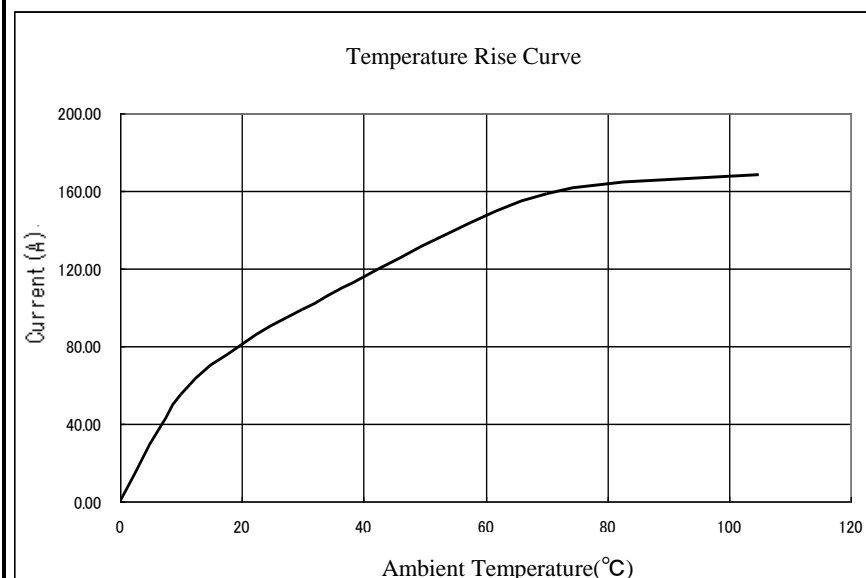
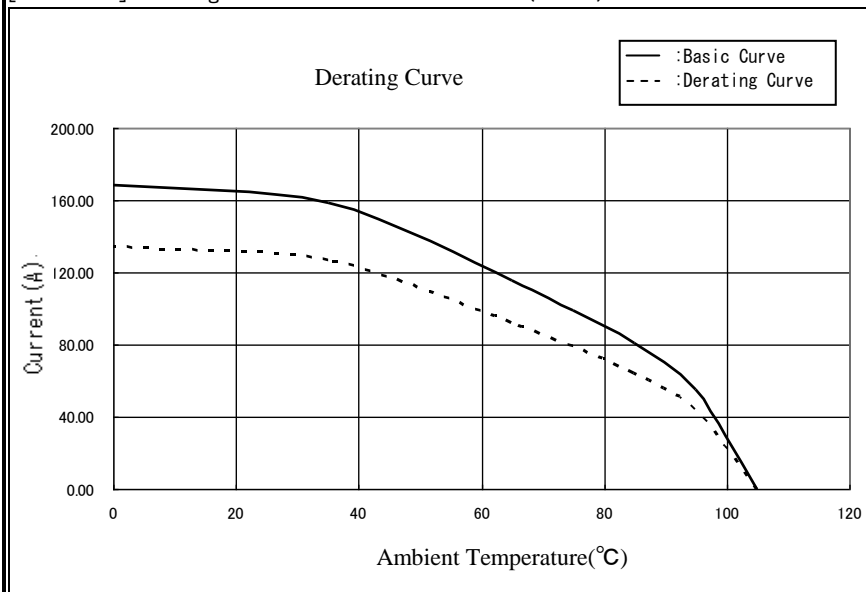
Table 1 shows the current rating and applicable cable.

Table 1. Current Rating And Applicable Cable

Current (7)	90A (UL,TÜV), 130A (Ambient Temperature 25°C)	70A (UL,TÜV),
Applicable Cable	38 (22.66 to 42.42)mm ² AWG 2	14 (10.52 to 16.78)mm ² AWG 6
	22 (16.78 to 26.66)mm ² 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.

Note	QT:Qualification Test AT:Assurance Test X:Applicable Test	DRAWING NO.	ELC-118307-00-00	
HRS	SPECIFICATION SHEET	PART NO.	EM12MP-1PCB	
	HIROSE ELECTRIC CO., LTD.	CODE NO.	CL138-0033-0-00	2/2