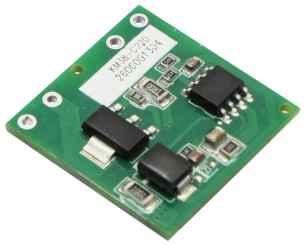
9A/38A Magnetoelectric Controller



RoHS

FEATURE

- Wide-voltage energy-saving dedicated control module for contactors
- Wide voltage input range: 85-275VAC/VDC
- Operating temperature range: -40℃ to +70℃
- Low power consumption: 0.8VA (Typ.)
- High reliability: 2400 times/h no-load switching frequency
- Customization available

KM9(38)-C220--- is a controller specially designed for contactor. It only needs one coil and is compatible with many contactor models. It features low power consumption, small size, low cost, high reliability and strong anti-tripping capability. The product is safe and reliable, with stable pull-in, fast response, wide input voltage range, strong anti-grid power shaking capability, universal AC and DC, no need for short-circuit design. It is widely used in various types of contactor power-saving and a new generation of wide-voltage input contactors.Applicable to the upgrade and optimization needs of most 9A/38A shells in the market.

Selection Guide

Part No.	Input Voltage	Contactor Rated Operational Current (A)	Control Voltage Range
KM9-C220	220VAC/VDC	9	85-275 VAC/VDC
KM38-C220		38	

Input Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Input Voltage Range	AC/DC input	85	220	275	VAC/VDC
AC Input Frequency		47	--	63	Hz
Input Power	220VAC input, full temperature range	--	0.8	2	VA

Operating Specifications

Item	Operating Conditions		Min.	Typ.	Max.	Unit
Minimum Operating Voltage	Decrease the voltage for startup until it fails to pick up		--	--	85	VAC/VDC
Release Voltage	Gradually reduce the input voltage until it drops out		--	--	70	
Operating Current	Full voltage range, full temperature range	KM9-C220	450	650	--	mA
		KM38-C220	600	800		
Hold-in Current		KM9-C220	12	40		
		KM38-C220	10			
Start-up Delay Time	220VAC input, full temperature range		--	25	60	ms
Turn-off Delay Time	Full voltage range, full temperature range		--	120	160	
No-load Switching Frequency	25℃, 275VAC		2400 times/h			
	70℃, 275VAC		1200 times/h			

General Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Operating Temperature		-40	--	+70	℃
Storage Temperature		-40	--	+85	
Storage Humidity		--	--	95	%RH
Safety Class		CLASS II			
MTBF	MIL-HDBK-217F@25℃	≥300,000 h			

Mechanical Specifications

Dimension	22.00 x 22.00 x 9.00mm
Weight	3g(Typ.)
Cooling Method	Free air convection

Electromagnetic Compatibility (EMC)

EMS	ESD	IEC/EN61000-4-2	Contact ±4kV/ Air ±8kV	perf. Criteria A
	RS	IEC/EN61000-4-3	10V/m	perf. Criteria A
	EFT	IEC/EN61000-4-4	±2kV	perf. Criteria A
	Surge	IEC/EN61000-4-5	Line to line ±1kV	perf. Criteria A
	CS	IEC/EN61000-4-6	10Vr.m.s	perf. Criteria A
	Voltage dip	IEC/EN61000-4-11	70%	perf. Criteria A

Design Reference

1.Typical application

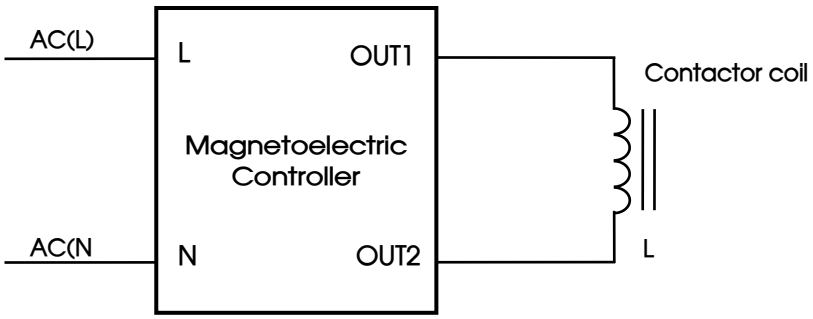


Fig. 1 Typical application

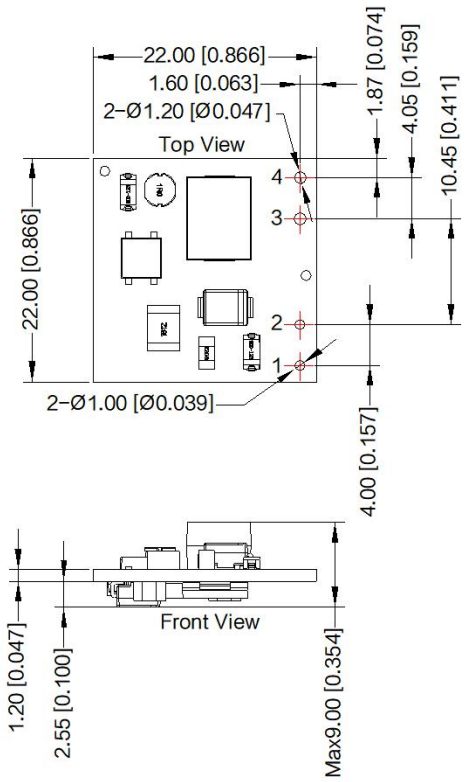
Recommended coil parameter table:

Part No.	Air-cored inductance (mH)	Release inductance (mH)	Operating inductance (mH)	Coil resistance (Ω)	Coil diameter (mm)	Coil turns (T)
KM9-C220	90	247	1187	98.2	0.2	2200
KM38-C220	74	230	1130	95.4	0.2	2100

Note:
1. Hot plug is unavailable;
2. Air-cored inductance, release inductance and operating inductance are measured under the condition of 10kHz/1V, and the above data are measured at 25℃.

Dimensions and Recommended Layout

THIRD ANGLE PROJECTION



Pin-Out	
Pin	Mark
1	OUT1
2	OUT2
3	N
4	L

Note:
Unit: mm[inch]
General tolerances: ± 0.50[± 0.02]
The layout of the device is for reference only, please refer to the actual product

Note:

1. For additional information on Product Packaging please refer to www.mornsun-power.com. Packaging bag number: 58210111;
2. Unless otherwise specified, parameters in this datasheet were measured under the conditions of Ta=25℃, humidity<75%RH with nominal input voltage;
3. All index testing methods in this datasheet are based on company corporate standards;
4. We can provide product customization service, please contact our technicians directly for specific information;
5. Products are related to laws and regulations: see "Features" and "EMC";
6. The Magnetoelectric Controller should be considered as a part of the contactor, all EMC tests need to be confirmed with the contactor. For guidance on EMC test operation, please consult our FAE;
7. Our products shall be classified according to ISO14001 and related environmental laws and regulations, and shall be handled by qualified units.

Mornsun Guangzhou Science & Technology Co., Ltd.

Address: No. 8 Nanyun 4th Road, Huangpu District, Guangzhou, China

Tel: 86-20-38601850 Fax: 86-20-38601272 E-mail: info@mornsun.cn