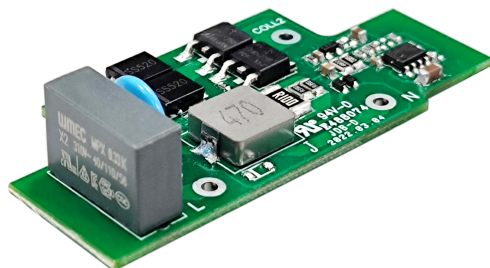


Energy-saving Wide-voltage Contactor Control Module

KM115-C24

MORNSUN®

115A Energy-saving Wide-voltage Contactor Control Module



RoHS

FEATURES

- Energy-saving Wide-voltage Contactor Control Module
- Ultra-wide 18 - 32VAC/VDC input voltage range
- Operating ambient temperature range: -40°C to +70°C
- Apparent power lower than 4.5VA
- High reliability
- Maximum Operating Frequency: 3600 times/H
- Quick response, switch delay less than 65ms
- EMI meet CISPR32/EN55032 CLASS A
- 5 years warranty
- Customization available

KM115-C24 — is a control module specially designed for contactor. It only needs one coil and is compatible with many contactor models. It features low power consumption, low delay, 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 115A shells in the market.

Selection Guide

Part No.	Contactor Rated operational current	Control voltage range
KM115-C24	115A	18-32 VAC/VDC

Input Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Input Voltage Range	AC/DC input	18	24	32	VAC/VDC
AC Input Frequency	AC input	47	--	63	Hz
Apparent Power	24VAC	--	--	4.5	VA

Operating Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Operating Voltage	AC/DC input	--	--	18	VAC/VDC
Release Voltage	AC/DC input	7	--	13.5	
Operating Current	AC/DC input	4	6	--	A
Hold-in Current	AC/DC input	0.2	0.5	--	
Start-up Delay Time	24VDC input	--	50	65	ms
	24VAC input	--	50	65	
Turn-off Delay Time	18-32 VDC	--	25	35	
	18-32 VAC	--	25	35	
Maximum Operating Frequency	Normal temperature 25°C, 24VAC	3600 times / H			
	High temperature 70°C, 60VAC	2400 times / H			
	Low temperature -40°C, 24VAC	600 times / H			
Working Noise	The rated voltage, working in hold-in state	--	40	50	dB

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Energy-saving Wide-voltage Contactor Control Module KM115-C24

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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			

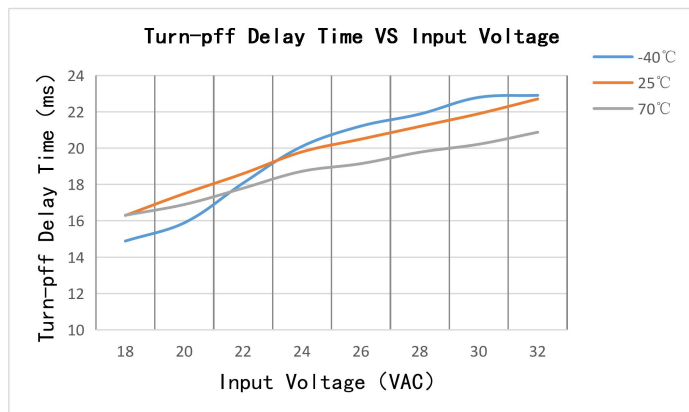
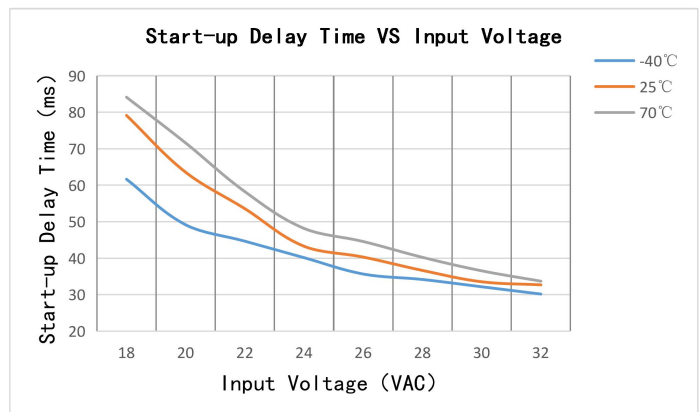
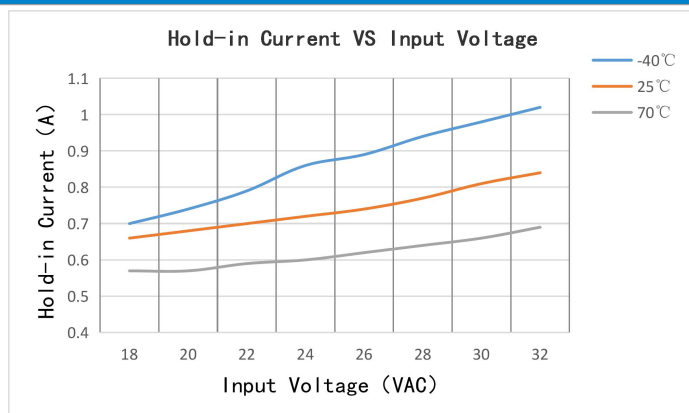
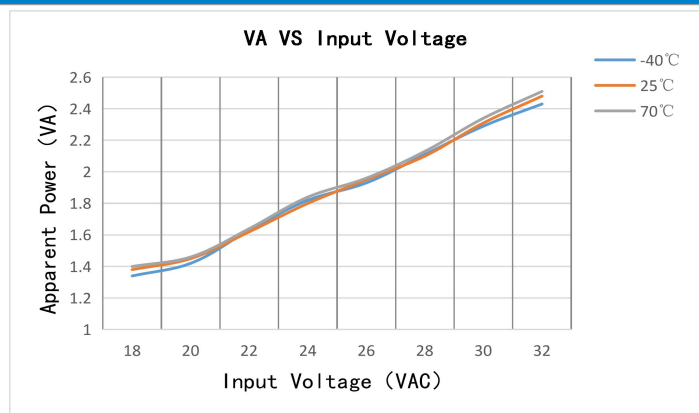
Mechanical Specifications

Dimension	68.00 x 32.00 x 19.60 mm
Weight	16.0g(Typ.)
Cooling Method	Free air convection

Electromagnetic Compatibility (EMC)

Emissions	CE	CISPR32/EN55032	CLASS A	
	RE	CISPR32/EN55032	CLASS A	
Immunity	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

Product Characteristic Curve



Design Reference

1. Typical application

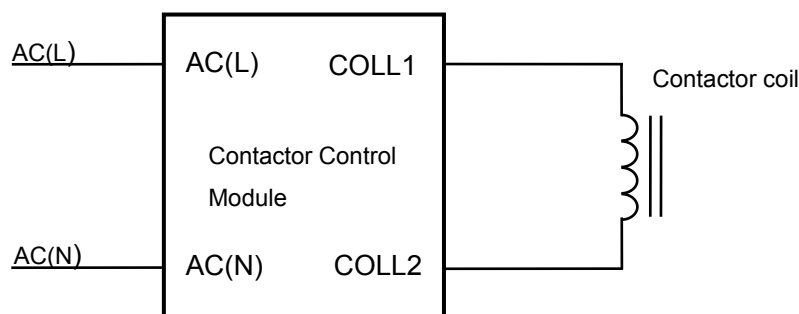


Fig. 1 Typical application

Recommended coil parameter table

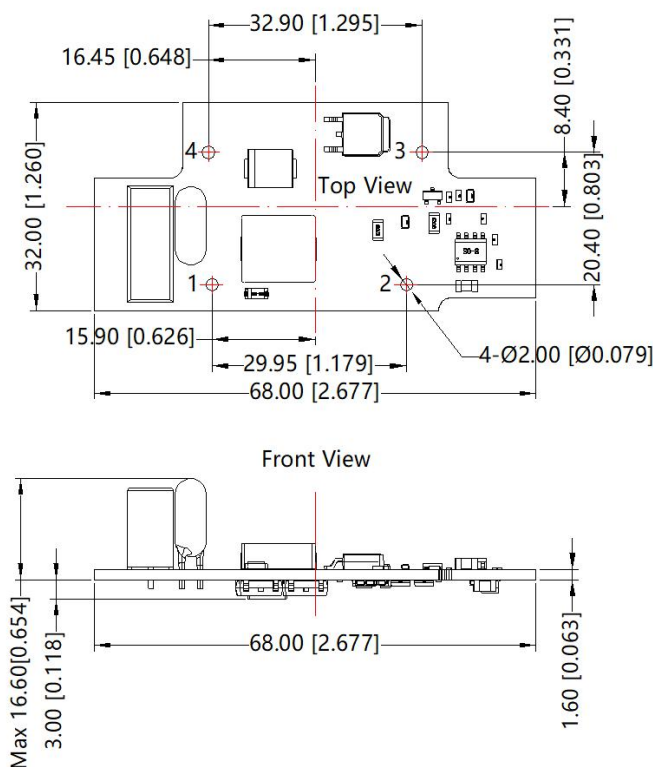
Air-cored inductance	Release inductance	Operating inductance	Coil resistance	Coil diameter	Coil turns
3.1mH	10.0mH	13.5mH	2.82 Ω	0.55mm	355T

Note: The inductance is measured under the condition of 10KHz/0.1V, and the above data are measured at 25 °C.

2. For additional information please refer to Contactor Control Module application notes on www.mornsun-power.com.

Dimensions and Recommended Layout

THIRD ANGLE PROJECTION



Pin-Out	
Pin	Mark
1	L
2	N
3	COLL2
4	COLL1

Note:
Unit: mm[inch]
General tolerances: $\pm 0.50 [\pm 0.02]$
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: 58060001;
2. Unless otherwise specified, parameters in this datasheet were measured under the conditions of $T_a=25\text{ }^{\circ}\text{C}$, humidity<75%RH with nominal input voltage;
3. All index testing methods in this datasheet are based on our 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 module 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.

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