KMGM Series Three-phase Motor Reversing Module

Product Description

- Load Current: 25A@24-440VAC
- Control Voltage: 12VDC or 24VDC
- Internal RC Protection Circuit
- High EMC Design
- Three Phase Switch or Three Phase 2-leg Control

Product Selection

KMGM	480	D	25	R	P	-24
KMGM Series	Load Voltage 480: 480VAC	Control Mode D: DC Control	Load Current 25: 25Amp	Switching Mode R: Random-on	Control Polarity Type Blank: Common Cathode P: Common Anode	Protection Type T: TVS Protection Blank: Without Protection

F	(XXX)
F: Three Phase Switch Blank: Three Phase 2-leg Control	Customized Code

Technical Specifications

Input Specifications (Ta=25°C)		
Control Voltage Range	-12	9.6~14.4VDC
	-24	15~28.8VDC
Must Turn-on Voltage	-12	9.6VDC
	-24	21VAC
Must Turn-off Voltage		4VDC
Maximum Input Current	-12	65mA (@14.4VDC)
	-24	45mA (@28.8VDC)
Delay Conduction Time (Typical)		70~100ms

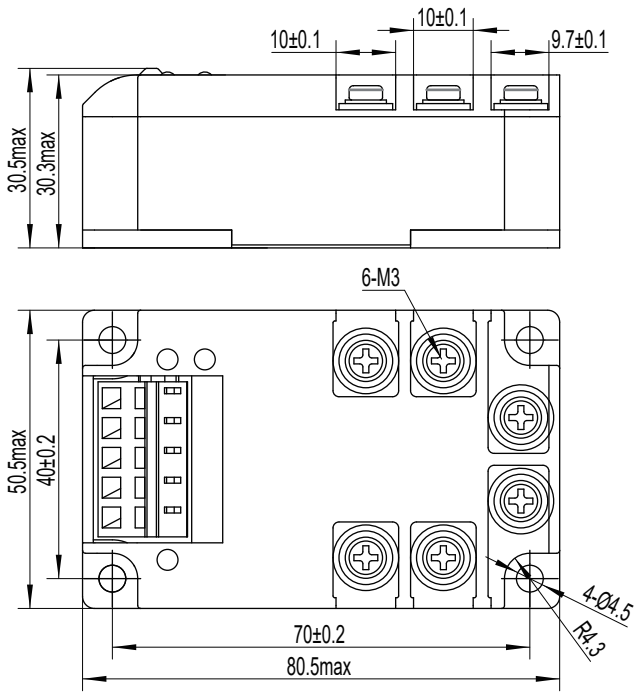
Output Specifications (Ta=25°C)	
Load Voltage Range	24~440VAC
Minimum Load Current	100mA
Maximum Motor Power	1.5kW
Maximum Turn-off Time	20ms
Maximum Surge Current (@10ms)	250A
Maximum I^2t for Fusing (@10ms)	312A^2s
Maximum Transient Overvoltage	800Vpk
Maximum Off-State Leakage Current (@Rated Voltage)	5mA
Maximum On-State Voltage Drop (@Rated Current)	1.6Vrms
Minimum Off-State (dv/dt)	200V/μs

General Specifications (Ta=25°C)		
Dielectric Withstand (50/60Hz)	Input/Output	2500Vrms
	Input, output/Base	2500Vrms
Ambient Temperature Range		-30℃～+80℃
Storage Temperature Range		-30℃～+100℃
Weight (Typical)		180g
Pulse Immunity Level	IEC61000-4-4	4kV/100kHz (Level 4)
Surge Immunity Level	IEC61000-4-5	2kV/common mould, 1kV/different mould(Level 3)
Electrostatic Discharge Immunity Level	IEC61000-4-2	6kV/contact discharge, 8kV/air discharge(Level 4)
LED Indication	Green	Forward
	Red	Reverse

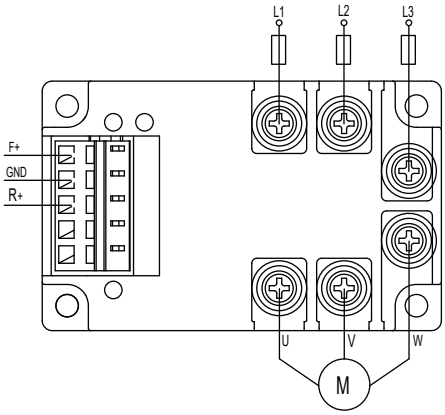
Applications

Suitable for motor control.

Outline Dimensions



Wiring Diagram

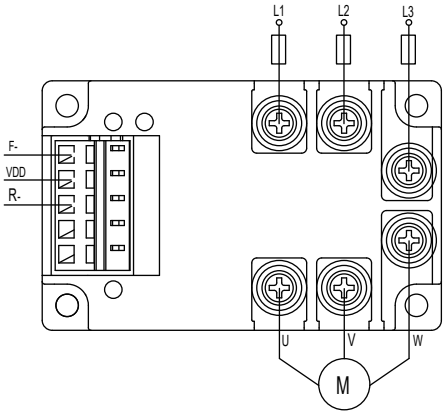


Wiring instructions of common negative control:
Input wiring:
F+: Connect to the positive pole of motor forwarding signal
GND: Connect to the negative pole of power supply
R+: Connect to the positive pole of motor reversing signal

Output wiring:
L1/L2/L3: Connect to input terminals of motor
U/V/W: Connect to output terminals of motor

Note: Internal short circuit between phases L3 and W in three phase 2-leg Control product.

Common Cathode



Wiring instructions of common positive control:
Input wiring:
F-: Connect to the negative pole of motor forwarding signal
VDD: Connect to the positive pole of power supply, 10-32VDC
R-: Connect to the negative pole of motor reversing signal

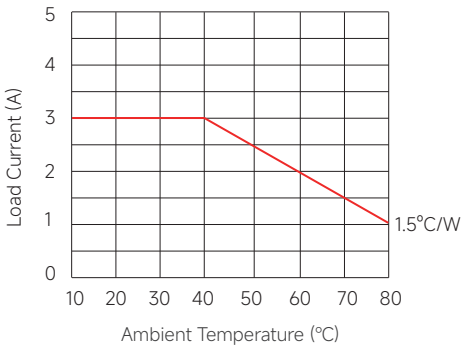
Output wiring:
L1/L2/L3: Connect to input terminals of motor
U/V/W: Connect to output terminals of motor

Note: Internal short circuit between phases L3 and W in three phase 2-leg Control product.

Common Anode

Thermal Derating Curve

25A Motor load temperature curve



Note: This product can be installed on a panel with a thermal resistance of ≤ 1.5 °C/W to assist in heat dissipation.

General Notes

1. Relay must be mounted to proper sized heat sink based on thermal curves. Thermal grease or a thermal pad must be used between the relay and the heat sink.
2. If the connected load will generate high surge current, please pay attention to whether the product can withstand the value of surge current.
3. When connecting wiring to SSR please ensure screws are torqued down properly. Recommended torque for output screw is (8.67-12.12) in-lb / (0.98-1.37) N·m.
4. Avoid using the product under the condition of strong magnetic field. The external strong magnetic field will affect the product's performance, such as switching on and off.
5. Please ensure reliable grounding when using the SSR.
6. The forward and reverse module should avoid dropping or falling due to improper installation. If the module falls, it may be damaged or suffer from reduced reliability, which could shorten its service life. If the product is accidentally dropped, it is not recommended to continue using it.

! Warnings

1. The product may be hot, allow the product to cool before touching.
2. Disconnect all power before installing or working with this equipment.
3. Verify all connections and replace all covers before turning on power.

