

## Product Description

- ◆ Zero Crossing Switching
- ◆ DC Input
- ◆ Load Current: 10A, 20A, 40A
- ◆ Internal RC Protection Circuit
- ◆ RoHS Compliant



## Product Selection

| KMC        | 380                        | D                             | 10                                                 | P                                        | -24                                                  | (XXX)                                      |
|------------|----------------------------|-------------------------------|----------------------------------------------------|------------------------------------------|------------------------------------------------------|--------------------------------------------|
| KMC Series | Load Voltage<br>380:380VAC | Control Mode<br>D: DC Control | Load Current<br>10:10Amp<br>20: 20Amp<br>40: 40Amp | Blank: Common Cathode<br>P: Common Anode | Control Voltage<br>12:9.6~14.4VDC<br>24:19.2~28.8VDC | 130: Lead Terminal<br>Blank:Screw Terminal |

## Available Part Numbers

| Load Voltage | 10A               | 20A               | 40A          |
|--------------|-------------------|-------------------|--------------|
| 380VAC       | KMC380D10-12      | KMC380D20-12      | KMC380D40-12 |
|              | KMC380D10-24      | KMC380D20-24      | KMC380D40-24 |
|              | KMC380D10-12(130) | KMC380D20-12(130) |              |
|              | KMC380D10-24(130) | KMC380D20-24(130) |              |

## Technical Specifications

| Input Specifications (Ta=25°C) |       |               |
|--------------------------------|-------|---------------|
| Control Voltage Range          | 12VDC | 9.6~14.4VDC   |
|                                | 24VDC | 19.2~28.8VDC  |
| Must Turn-on Voltage           | 12VDC | 9.6VDC        |
|                                | 24VDC | 19.2VDC       |
| Must Turn-off Voltage          |       | 2VDC          |
| Maximum Input Current          | 12VDC | 15 mA@14.4VDC |
|                                | 24VDC | 25 mA@28.8VDC |

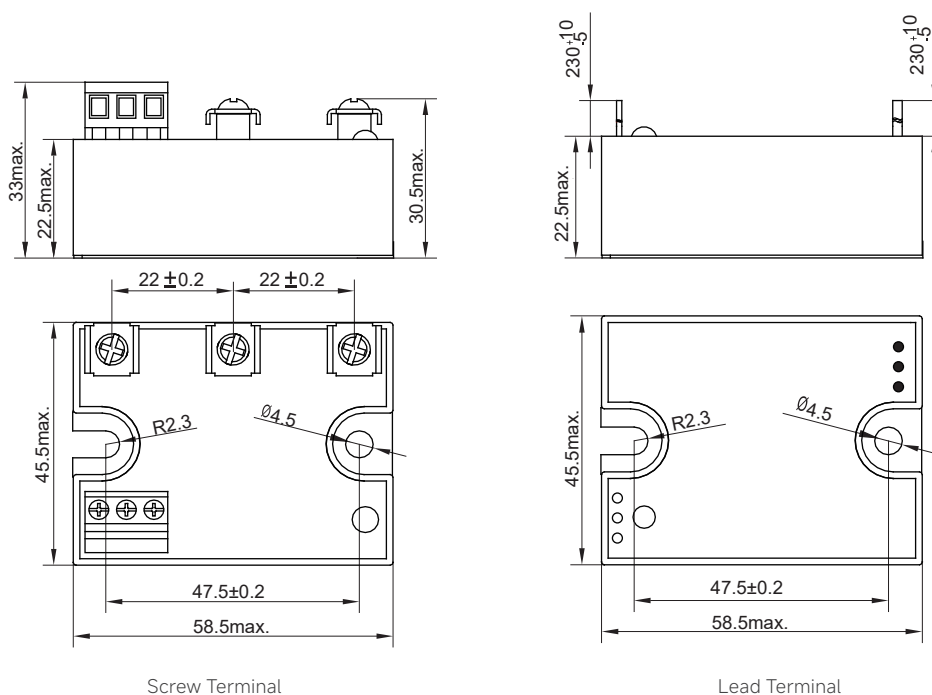
| Output Specifications (Ta=25°C)                         |     |                     |
|---------------------------------------------------------|-----|---------------------|
| Load Voltage Range                                      |     | 24~440VAC           |
| Maximum Turn-on Time                                    |     | 10ms                |
| Maximum Turn-off Time                                   |     | 10ms                |
| Maximum Surge Current (@10ms)                           | 10A | 100A                |
|                                                         | 20A | 200A                |
|                                                         | 40A | 400A                |
| Maximum I <sup>2</sup> t (@10ms)                        | 10A | 50A <sup>2</sup> s  |
|                                                         | 20A | 200A <sup>2</sup> s |
|                                                         | 40A | 800A <sup>2</sup> s |
| Maximum Transient Overvoltage                           |     | 800Vpk              |
| Maximum Off-State Leakage Current (@Rated Load Voltage) |     | 5mA                 |
| Maximum On-State Voltage Drop (@Rated Current)          |     | 1.6Vrms             |
| Minimum Off-State dv/dt                                 |     | 200 V/μs            |

| General Specifications (Ta=25°C) |                    |                |
|----------------------------------|--------------------|----------------|
| Dielectric Strength (50Hz/60Hz)  | Input/Output       | 4000Vrms       |
|                                  | Input, output/Base | 2500Vrms       |
| Insulation Resistance (@500VDC)  |                    | 1000MΩ         |
| Ambient Temperature Range        |                    | -30°C ~ +80°C  |
| Storage Temperature Range        |                    | -30°C ~ +100°C |
| Weight (Typ)                     | Screw Terminal     | 125g           |
|                                  | Lead Terminal      | 100g           |

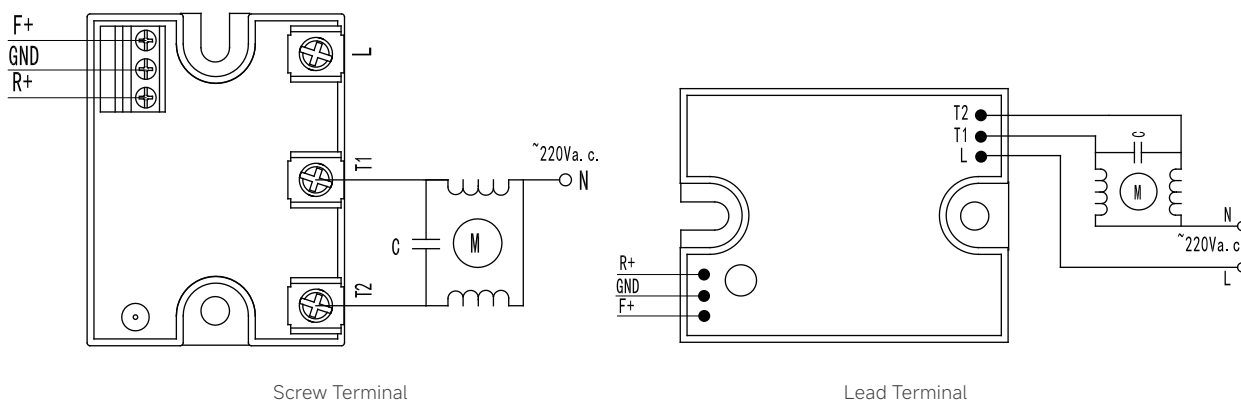
## Applications

Suitable for Single phase motor control.

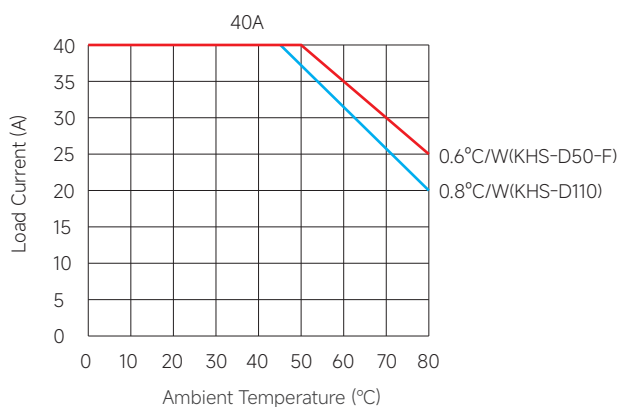
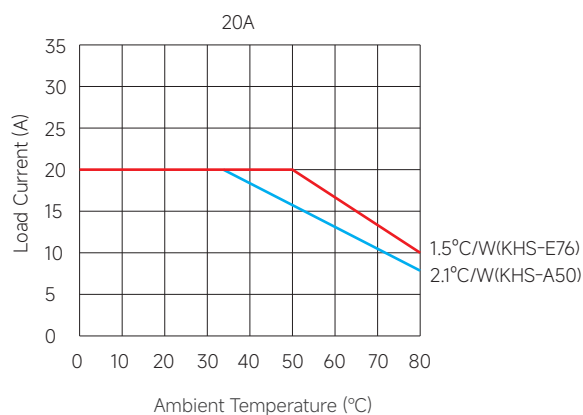
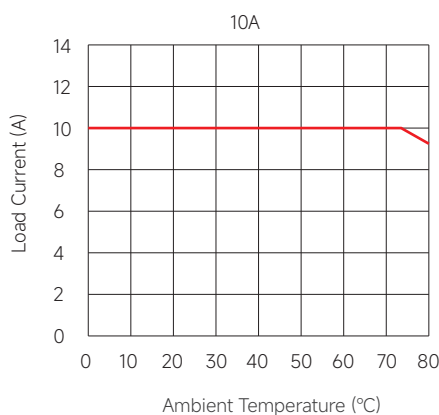
## Outline Dimensions



## Wiring Diagram



## Thermal Derating Curve



## 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 heat sink.
2. When connecting wiring to SSR please ensure screws are torqued down properly. Recommended torque for input screw is 4.43in-lb/(0.2-0.5) N·m, output screw is (8.67-12.12)in-lb (0.98-1.37)N·m.
3. When the operation temperature is above 25°C, please consider the derating as per the Thermal Derating Curve.
4. Please ensure reliable grounding when using the SSR.
5. The forward and reverse switching time must be over 20ms, which can avoid the damage caused by the operation error or the SCR can not be turned off in time during the forward and reverse switching operation.



## 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.