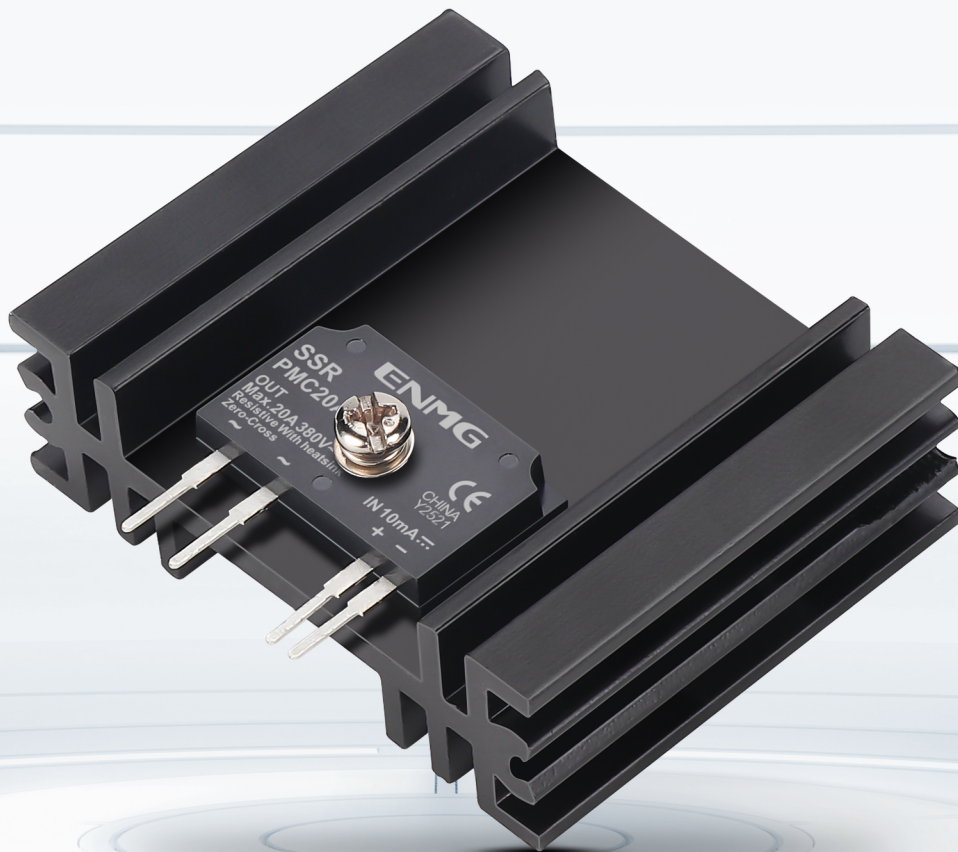


PCB Soldering Type

# Solid State Relay **PMC**

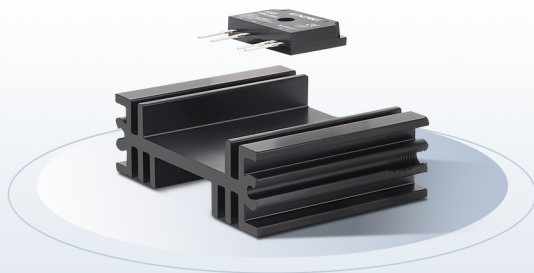
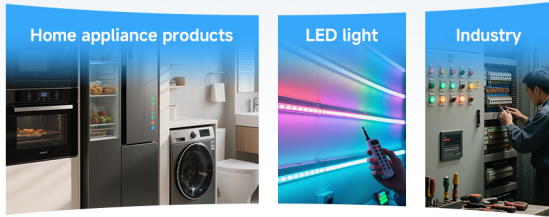
Optocoupler isolation | \*20A 24~380VAC | Triac



\*The load performance depends on heat dissipation, Under good heat dissipation conditions, the maximum load current can reach 20A.

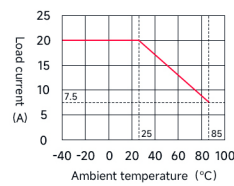
## PCB Printed Circuit Board Mounting

Used in various precision equipment



## Equipped With a Heat Sink

The performance of a solid-state relay depends on heat dissipation, the better the heat dissipation, the larger the current it can carry



With a heat sink  
Load current can reach  
**Max.20A**

## Electronic Type

Contactless and without mechanical structure



Optical isolation

5mm

Thin in thickness



Fast response



Anti-interference



## Integral Potting Type

Resistant to shock, vibration and contamination



## No Built-In Current-Limiting Resistor

Unlimited operating voltage

| Limiting resistor | Operating voltage |
|-------------------|-------------------|
| R: 0.33K          | 5V                |
| R: 0.8~1K         | 12V               |
| R: 1.5~2K         | 24V               |

**OEM / ODM**  
Customization

## Product Information.

Product brand : **ENMG 恩默**

Product name : PMC miniature solid state relay

Product model : PMC20A3000

Control type : DC-AC

Trigger type : Zero-crossing type

Input voltage : Type without built-in current-limiting resistor

Load current : Meet the heat dissipation requirements Max.20A

Load voltage : 24~380VAC

Blocking voltage : 800V

Dielectric withstand voltage : 3000V

Operating temperature : -30°C~ +85°C

Storage temperature: -40°C~ +125°C No condensation, no icing

Mounting method : SIP4 single in-line  
PCB printed circuit board mounting

# Parameter.

## Limit Value

(Ta=25°C)

| Characteristics               | Symbol              | Conditions          | Min           | Typical             | Max                  |
|-------------------------------|---------------------|---------------------|---------------|---------------------|----------------------|
| Input                         | LED Forward voltage | $V_F$               |               | 1.2V                | 1.3V                 |
|                               | LED Reverse current | $I_R$               |               |                     | 10μA                 |
| Output                        | Blocking voltage    | $V_{DRM} / V_{RRM}$ | 800V          |                     |                      |
|                               | Rated current       | $I_{T(RMS)}$        | $I_{in}=10mA$ |                     | 4A                   |
|                               | Inrush current      | $I_{TSM}$           | 50Hz, 1 cycle | 60A                 |                      |
| Dielectric withstand voltage* |                     |                     | $V_{ISO}$     | $I_{SO} \leq 0.3mA$ | 3000V <sub>rms</sub> |

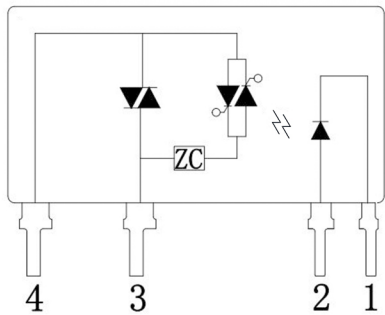
\*\* : RH =40 to 60%, T=20~30°C, AC for 1minute.

## Electrical Parameters

(Ta=25°C)

| Characteristics | Symbol                        | Conditions | Min                                          | Typical | Max           |
|-----------------|-------------------------------|------------|----------------------------------------------|---------|---------------|
| Input           | LED Forward voltage           | $V_F$      | $I_F=10mA$                                   | 1.2V    | 1.3V          |
|                 | LED Reverse current           | $I_R$      | $V_R=5V$                                     |         | 10μA          |
| Output          | Off-state leakage current     | $I_{DRM}$  | $V_{DRM}=700V$                               |         | 10μA          |
|                 | Off-state leakage current     | $I_{RRM}$  | $V_{RRM}=700V$                               |         | 10μA          |
|                 | Load voltage                  | $V_{ac}$   | 48V                                          |         | 264V          |
|                 | Voltage exponential rise rate | $dv/dt$    | $V_{DRM}=600V \cdot 1/\sqrt{2}$              | 200V/μs |               |
| Coupling        | Minimum load current          | $I$        | 100mA                                        |         |               |
|                 | LED Trigger current           | $I_{FT}$   | $V_D=6V$<br>$R_L=100\Omega$                  | 3mA     | 8mA           |
|                 | Working current               | $I_{in}$   |                                              | 5mA     | 15mA          |
|                 | Turn-off voltage              | $V_{off}$  |                                              | 1.2V    |               |
|                 | Conduction voltage drop       | $V_T$      | $I_{in}=10mA$<br>$I_L=4A$<br>$V_D=6V$        | 1.0V    | 1.3V          |
|                 | Zero-crossing voltage         | $V_{ZC}$   | $I_{in}=10mA$<br>$I_L=4A$<br>$V_D=6V$        | 10V     | 20V           |
|                 | Conduction time               | $T_{on}$   | $I_{in}=10mA$<br>$V_D=6V$<br>$R_L=100\Omega$ |         | 1+1/2ms cycle |
|                 | Turn-off time                 | $T_{off}$  |                                              |         | 1+1/2ms cycle |

# Internal Schematic.



# Select Specifications.

## Model Description

The design of product models and ordering codes is intended to cover all possible specifications of this series of products, and they cannot be combined arbitrarily. If you have any questions during the first selection, please contact the technical service engineers for confirmation.

Output current  
20A: 20A AC load  
(Adaptive heat sink)

Input voltage  
00: Type without  
built-in current-limiting resistor

PMC

20A

3

0

00

SIP PCB welding type  
Solid state relay

Load voltage  
3: AC 24~380V

Trigger type  
0: Zero-crossing  
trigger  
1: Random trigger

## Overall Dimension

Unit: mm±0.5. The dimensions are measured manually, so there may be deviations. Please refer to the actual product.

Relay

PCB Soldering Holes  
(Bottom View)

Relay ( Small heat sink HSP10-030 )

Relay ( Large heat sink HSP10-045 )

# Notice.

## Safety Regulation Requirements

- Creepage distance : 4.3mm, CTI ≥275
- Transient overvoltage : 4000V
- Reproduced peak voltage : 800V
- Partial discharge :  $V_{pd} = V_{ORM} \times 1.6$  1230V.

## Regarding Welding

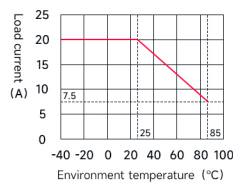
For relay soldering, the soldering time must not exceed 10 seconds at 260°C, and must not exceed 5 seconds at 350°C.

## Anti-Static

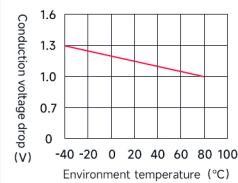
1. When using an electric soldering iron, ground the tip of the soldering iron. (It is recommended to use an electric soldering iron designed for low voltage.)
2. Equipment used during assembly should also be properly grounded.

## Precautions

1. When the working environment temperature exceeds 25°C, please use it with derating.

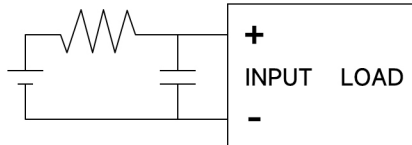


Relationship curve



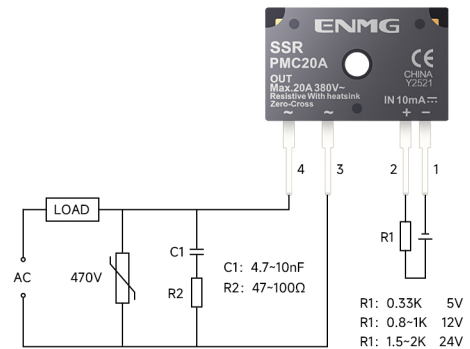
Characteristic

2. When there is significant ambient noise at the input terminal, an R/C circuit should be connected at the input to absorb the noise.

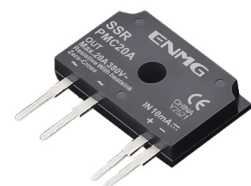
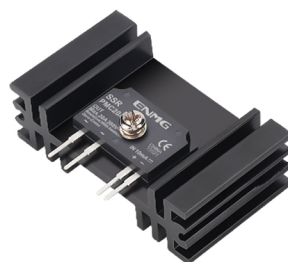
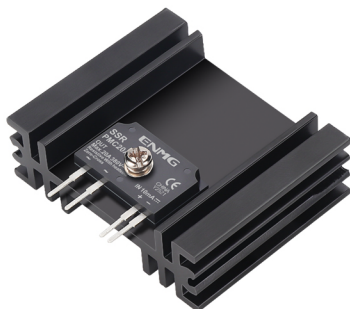


3. When wiring the relay, it is essential to ensure the correct polarity of the input terminal to avoid damaging the relay.

4. In the recommended operating circuit, the spike voltage at the output terminal may cause the SSR to malfunction. Therefore, an R/C circuit or a varistor should be added at the output terminal to absorb the spike voltage. For details, please refer to the figure below.



# Appearance Display.





Started in 2012, exploring the frontier, leading innovation, self-transformation, the world of ideas.

始于2012年，探索前沿、创新引领、自我蜕变、理念世界。

ENMG INTELLIGENT TECHNOLOGY

## 恩爵ENMG智能科技

Zhejiang ENMG Intelligent Technology Co., Ltd.

浙江恩爵智能科技有限公司

Wenzhou Yuanzhang Electric Co., Ltd.

温州元璋电气有限公司

公司地址 Address：浙江省乐清市柳市镇柳江路3788号

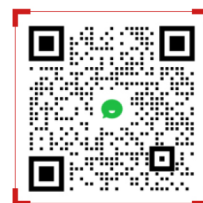
联系方式 Telephones：400-996-2708

官方网站 Website：www.enjue.cc

迪威模型 3D Model：www.3dwhere.com/user/135269



微信公众号  
WeChat Public



微信客服  
WeChat Clientele Services

## 入驻平台 ENTRY PLATFORM

在线搜索“恩爵旗舰店”，线上下单实惠方便！

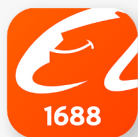
Search for “ENMG Flagship Store” online, ordering online is affordable and convenient !



天猫 Tmall



淘宝 Taobao



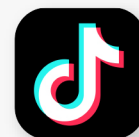
1688



京东 JD



拼多多 PDD



抖音 TikTok



速卖通 AliExpress