

## Plug in AC switching Solid State Relays



#### **Features**

- AC output Solid State Relay in an Industry standard EMR plug in package
- Ratings of 1A, 3A, 5A, 8A, 12Amps
- Load voltage range of 24-440 VAC, 4-240VAC
- Fits standard DIN rail & PCB mountable sockets
- · LED input status indicator
- AC or DC control
- IEC Rated, CE & RoHS Compliant
- · Horsepower Rated, Pilot Duty Rated

## **Applications**

- · Plastic injection molding equipment
- Packaging equipment
- · Professional cooking equipment
- Lighting control
- HVAC & R

## **Model Explanation:**

GD- series AC switching plug in type SSR relays

L - 50/60HZ, low frequency; H - 0-1000Hz, high frequency

5 - Relay Socket Code H5; 6 - Relay Socket Code H6

1 - 1 channel output; 2 - dual output; 3 triple output

K - Normal Open; B - Normal Close

01 - 1A; 03 - 3A; 05 - 5A; 08 - 8A; 12 - 12A

44 - 24-440VAC; 24 - 4-240VAC; 36 - 4-36VAC

D - DC control; A - AC control





| Model         | Switch mode | Control voltage | Operating voltage | Rated current | Relay Base | SSR size | Frequency |
|---------------|-------------|-----------------|-------------------|---------------|------------|----------|-----------|
| GDL51K-0144D  | 1NO         | 4-32VDC         | 24-440VAC         | 1A            | 12x29mm    | 38x29mm  | 50/60Hz   |
| GDL51K-0344D  | 1NO         | 4-32VDC         | 24-440VAC         | 3A            | 12x29mm    | 38x29mm  | 50/60Hz   |
| GDL51K-0544D  | 1NO         | 4-32VDC         | 24-440VAC         | 5A            | 12x29mm    | 38x29mm  | 50/60Hz   |
| GDL51K-0144A  | 1NO         | 5-28VAC         | 24-440VAC         | 1A            | 12x29mm    | 38x29mm  | 50/60Hz   |
| GDL51K-0344A  | 1NO         | 5-28VAC         | 24-440VAC         | 3A            | 12x29mm    | 38x29mm  | 50/60Hz   |
| GDL51K-0544A  | 1NO         | 5-28VAC         | 24-440VAC         | 5A            | 12x29mm    | 38x29mm  | 50/60Hz   |
| GDL51B-0144D  | 1NC         | 4-32VDC         | 24-440VAC         | 1A            | 12x29mm    | 38x29mm  | 50/60Hz   |
| GDL51B-0344D  | 1NC         | 4-32VDC         | 24-440VAC         | 3A            | 12x29mm    | 38x29mm  | 50/60Hz   |
| GDL51B-0544D  | 1NC         | 4-32VDC         | 24-440VAC         | 5A            | 12x29mm    | 38x29mm  | 50/60Hz   |
| GDL51B-0144A  | 1NC         | 5-28VAC         | 24-440VAC         | 1A            | 12x29mm    | 38x29mm  | 50/60Hz   |
| GDL51B-0344A  | 1NC         | 5-28VAC         | 24-440VAC         | 3A            | 12x29mm    | 38x29mm  | 50/60Hz   |
| GDL51B-0544A  | 1NC         | 5-28VAC         | 24-440VAC         | 5A            | 12x29mm    | 38x29mm  | 50/60Hz   |
| GDL52K-0144D  | 2NO         | 4-32VDC         | 24-440VAC         | 1A            | 12x29mm    | 38x29mm  | 50/60Hz   |
| GDL52K-0344D  | 2NO         | 4-32VDC         | 24-440VAC         | 3A            | 12x29mm    | 38x29mm  | 50/60Hz   |
| GDL52K-0544D  | 2NO         | 4-32VDC         | 24-440VAC         | 5A            | 12x29mm    | 38x29mm  | 50/60Hz   |
| GDL52KB-0144D | 1NO+1NC     | 4-32VDC         | 24-440VAC         | 1A            | 12x29mm    | 38x29mm  | 50/60Hz   |
| GDL52KB-0344D | 1NO+1NC     | 4-32VDC         | 24-440VAC         | 3A            | 12x29mm    | 38x29mm  | 50/60Hz   |
| GDL52KB-0544D | 1NO+1NC     | 4-32VDC         | 24-440VAC         | 5A            | 12x29mm    | 38x29mm  | 50/60Hz   |
| GDL62K-0144D  | 2NO         | 4-32VDC         | 24-440VAC         | 1A            | 21x27mm    | 38x27mm  | 50/60Hz   |
| GDL62K-0344D  | 2NO         | 4-32VDC         | 24-440VAC         | 3A            | 21x27mm    | 38x27mm  | 50/60Hz   |
| GDL62K-0544D  | 2NO         | 4-32VDC         | 24-440VAC         | 5A            | 21x27mm    | 38x27mm  | 50/60Hz   |
| GDL62K-0144A  | 2NO         | 5-28VAC         | 24-440VAC         | 1A            | 21x27mm    | 38x27mm  | 50/60Hz   |
| GDL62K-0344A  | 2NO         | 5-28VAC         | 24-440VAC         | 3A            | 21x27mm    | 38x27mm  | 50/60Hz   |
| GDL62K-0544A  | 2NO         | 5-28VAC         | 24-440VAC         | 5A            | 21x27mm    | 38x27mm  | 50/60Hz   |
| GDL62KB-0144D | 1NO+1NC     | 4-32VDC         | 24-440VAC         | 1A            | 21x27mm    | 38x27mm  | 50/60Hz   |
| GDL62KB-0344D | 1NO+1NC     | 4-32VDC         | 24-440VAC         | 3A            | 21x27mm    | 38x27mm  | 50/60Hz   |
| GDL62KB-0544D | 1NO+1NC     | 4-32VDC         | 24-440VAC         | 5A            | 21x27mm    | 38x27mm  | 50/60Hz   |
| GDL62KB-0144A | 1NO+1NC     | 5-28VAC         | 24-440VAC         | 1A            | 21x27mm    | 38x27mm  | 50/60Hz   |
| GDL62KB-0344A | 1NO+1NC     | 5-28VAC         | 24-440VAC         | 3A            | 21x27mm    | 38x27mm  | 50/60Hz   |
| GDL62KB-0544A | 1NO+1NC     | 5-28VAC         | 24-440VAC         | 5A            | 21x27mm    | 38x27mm  | 50/60Hz   |
| GDL53K-0144D  | 3NO         | 4-32VDC         | 24-440VAC         | 1A            | 12x29mm    | 38x29mm  | 50/60Hz   |
| GDL53K-0344D  | 3NO         | 4-32VDC         | 24-440VAC         | 3A            | 12x29mm    | 38x29mm  | 50/60Hz   |
| GDL63K-0144D  | 3NO         | 4-32VDC         | 24-440VAC         | 1A            | 12x29mm    | 38x29mm  | 50/60Hz   |
| GDL63K-0344D  | 3NO         | 4-32VDC         | 24-440VAC         | 3A            | 12x29mm    | 38x29mm  | 50/60Hz   |
| GDL63K-0144A  | 3NO         | 5-28VAC         | 24-440VAC         | 1A            | 12x29mm    | 38x29mm  | 50/60Hz   |
| GDL63K-0344A  | 3NO         | 5-28VAC         | 24-440VAC         | 3A            | 12x29mm    | 38x29mm  | 50/60Hz   |



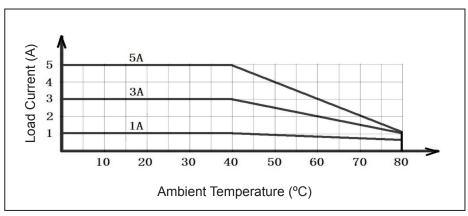


#### **Features**

- · Optical isolation between input and output circuits
- · Control signal to interface with TTL and PLC logic
- A set of contactless switch outputs; No spark or arc pulling phenomenon when making or breaking
- Solid packaging, shockproof, moisture-proof and anti-corrosion, stable and reliable operation
- Plug-in structure, easy to install. It can directly replace small current relays
- The product is mainly used for intermediate relays in industrial automation control and small power appliances such as contactless switches for small motors, solenoid valves, power supplies, etc

## **Specifications**

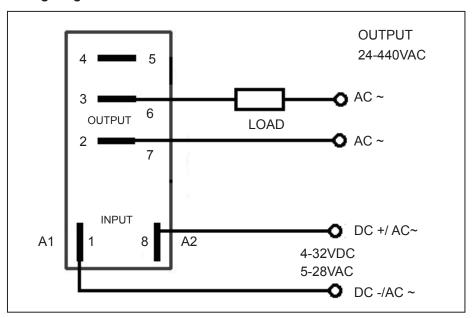
| Description               |                            | GDL51K   | GDL51B |  |
|---------------------------|----------------------------|--|--------|--|
| Input<br>Specifications   | Control Voltage            | 4-32VDC; 5-28VAC                                     |        |  |
|                           | Control Current            | 6-18   | BmA    |  |
|                           | Turn-Off Voltage           | ≤1.5VDC  |        |  |
| Spec                      | Input Current              | 6mA  |        |  |
|                           | Input Status Indicator     | LED  |        |  |
|                           | Operating Voltage          | 24-440VAC  |        |  |
| ્રા                       | Load Current               | 1A; 3A; 5A   |        |  |
| Output                    | On State Voltage Drop      | ≤1.5V  |        |  |
| Output                    | Off State dv/dt (min.)     | ≥850V  |        |  |
| Spe                       | Off State Leakage Current  | ≤0.1mA   |        |  |
|                           | Turn-on Time/Turn-off Time | 10+10ms  |        |  |
|                           | Switch Static              | 1NO  | 1NC    |  |
|                           | Dielectric Strength        | ≥2000V   |        |  |
| General<br>Specifications | Insulation Resistance      | ≥100mΩ   |        |  |
|                           | Ambient Temperature        | -30~80°C   |        |  |
|                           | Power Frequency            | 50/60Hz  |        |  |
|                           | Load Current Safety Factor | Take 1:2 for resistive load 1:2.5 for inductive load |        |  |
|                           | Dimensions                 | L:29x:W:13xH38 (mm) (H5-5 pir                        |        |  |



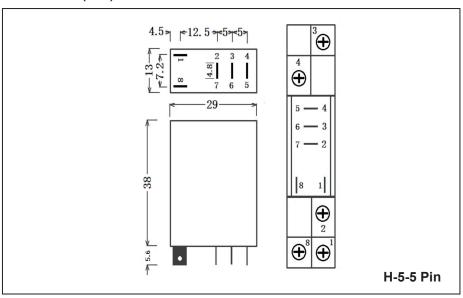




## **Wiring Diagram**



#### **Dimensions (mm)**



- 1. According to the different nature of the load, the current level of the selected product is also different. Usually, users should choose 1.5-2 times of the load current for resistive loads and 1.8-2.5 times of the load current for inductive or capacitive loads.
- 2. According to the relationship between the load current and the ambient temperature, when the working environment temperature is high or the heat dissipation condition is not good, users should increase the current capacity.
- 3. To prevent damage to the solid-state switch chip after a load short circuit, it is recommended to connect the corresponding fast fuse in series in the load circuit.
- 4. This model is naturally cooling. When the shell temperature exceeds 80  $^{\circ}$  C, a fan needs to be added for cooling.



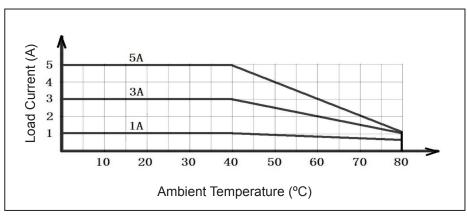


## **Features**

- · Optical isolation between input and output circuits
- · Control signal to interface with TTL and PLC logic
- Two set of contactless switch outputs; No spark or arc pulling phenomenon when making or breaking
- Solid packaging, shockproof, moisture-proof and anti-corrosion, stable and reliable operation
- Plug-in structure, easy to install. It can directly replace small current relays
- The product is mainly used for intermediate relays in industrial automation control and small power appliances such as contactless switches for small motors, solenoid valves, power supplies, etc

## **Specifications**

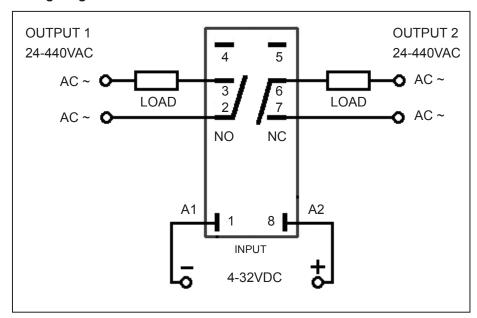
| Description             |                            | GDL52K   | GDL52KB |
|-------------------------|----------------------------|--|---------|
| Input<br>Specifications | Control Voltage            | 4-32VDC  |         |
|                         | Control Current            | 6-18mA   |         |
|                         | Turn-Off Voltage           | ≤1.5VDC  |         |
|                         | Input Current              | 6mA  |         |
|                         | Input Status Indicator     | LED  |         |
|                         | Operating Voltage          | 24-440VAC  |         |
| ્ર                      | Load Current               | 1A; 3A; 5A   |         |
| Output                  | On State Voltage Drop      | ≤1.5V  |         |
| Out                     | Off State dv/dt (min.)     | ≥850V  |         |
| Spe                     | Off State Leakage Current  | ≤0.1mA   |         |
|                         | Turn-on Time/Turn-off Time | 10+10ms  |         |
|                         | Switch Static              | 2NO  | 1NO+1NC |
|                         | Dielectric Strength        | ≥2500V   |         |
| Suc                     | Insulation Resistance      | ≥100mΩ   |         |
| General                 | Ambient Temperature        | -30~80°C   |         |
|                         | Power Frequency            | 50/60Hz  |         |
|                         | Load Current Safety Factor | Take 1:2 for resistive load 1:2.5 for inductive load |         |
|                         | Dimensions                 | L:29x:W:13xH38 (mm) (H5-8A pin)(H5-8B pin            |         |



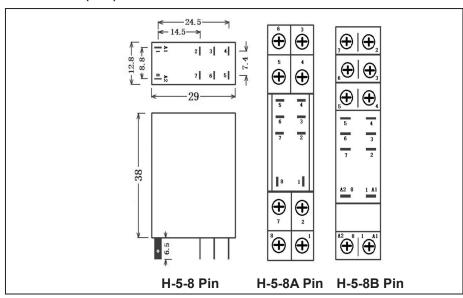




#### **Wiring Diagram**



## **Dimensions (mm)**



- 1. According to the different nature of the load, the current level of the selected product is also different. Usually, users should choose 1.5-2 times of the load current for resistive loads and 1.8-2.5 times of the load current for inductive or capacitive loads.
- 2. According to the relationship between the load current and the ambient temperature, when the working environment temperature is high or the heat dissipation condition is not good, users should increase the current capacity.
- 3. To prevent damage to the solid-state switch chip after a load short circuit, it is recommended to connect the corresponding fast fuse in series in the load circuit.
- 4. This model is naturally cooling. When the shell temperature exceeds 80  $^{\circ}$  C, a fan needs to be added for cooling.



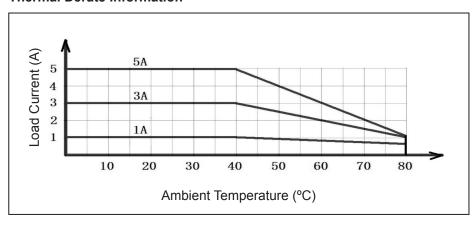


#### **Features**

- · Optical isolation between input and output circuits
- · Control signal to interface with TTL and PLC logic
- Two set of contactless switch outputs; No spark or arc pulling phenomenon when making or breaking
- Solid packaging, shockproof, moisture-proof and anti-corrosion, stable and reliable operation
- Plug-in structure, easy to install. It can directly replace small current relays
- The product is mainly used for intermediate relays in industrial automation control and small power appliances such as contactless switches for small motors, solenoid valves, power supplies, etc

## **Specifications**

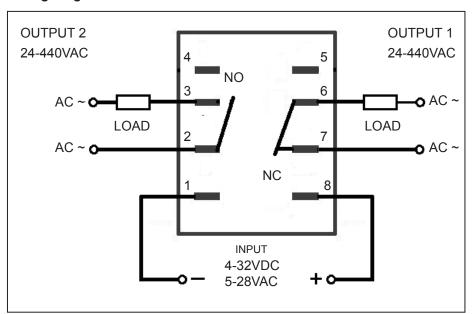
| Description   GDL62K   GDL62KB     Total   Control Voltage   4-32VDC; 5-28VAC     Control Current   6-18mA     Turn-Off Voltage   ≤1.5VDC     Input Current   6mA     Input Status Indicator   LED     Operating Voltage   24-440VAC     Load Current   1A; 3A; 5A     On State Voltage Drop   ≤1.5V     Off State dv/dt (min.)   ≥850V     Off State Leakage Current   ≤0.1mA     Turn-on Time/Turn-off Time   10+10ms     Switch Static   2NO   1NO+1NC     Dielectric Strength   ≥2000V     Insulation Resistance   ≥100mΩ     Ambient Temperature   -30~80°C     Power Frequency   50/60Hz     Load Current Safety Factor   Take 1:2 for resistive load 1:2.5 for inductive load          |                           |                            |                       |                        |  |  |
|--|---------------------------|----------------------------|-----------------------|------------------------|--|--|
| Control Current  Turn-Off Voltage  Input Current  Input Status Indicator  Operating Voltage  Load Current  Off State dv/dt (min.)  Off State Leakage Current  Turn-on Time/Turn-off Time  Switch Static  Dielectric Strength  Insulation Resistance  Ambient Temperature  Power Frequency  Load Current  6-18mA  6-1 | Description               |                            | GDL62K                | GDL62KB                |  |  |
| Input Status Indicator   LED   | Input<br>Specifications   | Control Voltage            | 4-32VDC; 5-28VAC      |                        |  |  |
| Input Status Indicator   LED   |                           | Control Current            | 6-18mA                |                        |  |  |
| Input Status Indicator   LED   |                           | Turn-Off Voltage           | ≤1.5VDC               |                        |  |  |
| Input Status Indicator   LED   |                           | Input Current              | 6mA                   |                        |  |  |
| Load Current    Total Current   1A; 3A; 5A   |                           | Input Status Indicator     | LED                   |                        |  |  |
| On State Voltage Drop  Off State dv/dt (min.)  Off State Leakage Current  Turn-on Time/Turn-off Time  Switch Static  Dielectric Strength  Dielectric Strength  Insulation Resistance  Ambient Temperature  Power Frequency  Load Current Safety Factor  Take 1:2 for resistive load  |                           | Operating Voltage          | 24-440VAC             |                        |  |  |
| Turn-on Time/Turn-off Time  Switch Static  Dielectric Strength  Dielectric Strength  Insulation Resistance  Ambient Temperature  Power Frequency  Load Current Safety Factor  Take 1:2 for resistive load  | ဋ                         | Load Current               | 1A; 3A; 5A            |                        |  |  |
| Turn-on Time/Turn-off Time  Switch Static  Dielectric Strength  Dielectric Strength  Insulation Resistance  Ambient Temperature  Power Frequency  Load Current Safety Factor  Take 1:2 for resistive load  | Output                    | On State Voltage Drop      | ≤1.5V                 |                        |  |  |
| Turn-on Time/Turn-off Time  Switch Static  Dielectric Strength  Dielectric Strength  Insulation Resistance  Ambient Temperature  Power Frequency  Load Current Safety Factor  Take 1:2 for resistive load  |                           | Off State dv/dt (min.)     | ≥850V                 |                        |  |  |
| Switch Static  2NO  1NO+1NC  Dielectric Strength  ≥2000V  Insulation Resistance  Ambient Temperature  Power Frequency  Load Current Safety Factor  Switch Static  2NO  1NO+1NC  ≥2000V  -30~80°C  -30~80°C  -30~80°C  -30/60Hz  Take 1:2 for resistive load  | Spe                       | Off State Leakage Current  | ≤0.1mA                |                        |  |  |
| Dielectric Strength ≥2000V  Insulation Resistance ≥100mΩ  Ambient Temperature -30~80°C  Power Frequency 50/60Hz  Load Current Safety Factor  Take 1:2 for resistive load   |                           | Turn-on Time/Turn-off Time | 10+10ms               |                        |  |  |
| Insulation Resistance ≥100mΩ  Ambient Temperature -30~80°C  Power Frequency 50/60Hz  Load Current Safety Factor Take 1:2 for resistive load  |                           | Switch Static              | 2NO                   | 1NO+1NC                |  |  |
| Insulation Resistance   ≥100mΩ   |                           | Dielectric Strength        | ≥2000V                |                        |  |  |
| Ambient Temperature -30~80°C  Power Frequency 50/60Hz  Load Current Safety Factor Take 1:2 for resistive load 1:2.5 for inductive load   | General<br>Specifications | Insulation Resistance      | ≥100mΩ                |                        |  |  |
| Power Frequency  50/60Hz  Load Current Safety Factor  Take 1:2 for resistive load 1:2.5 for inductive load   |                           | Ambient Temperature        | -30~80°C              |                        |  |  |
| Load Current Safety Factor  Take 1:2 for resistive load 1:2.5 for inductive load   |                           | Power Frequency            | 50/60Hz               |                        |  |  |
|  |                           | Load Current Safety Factor |                       |                        |  |  |
| Dimensions L:27x:W:21xH38 (mm) (H6-8A pin)(H6-8B pin)  |                           | Dimensions                 | L:27x:W:21xH38 (mm) ( | (H6-8A pin)(H6-8B pin) |  |  |



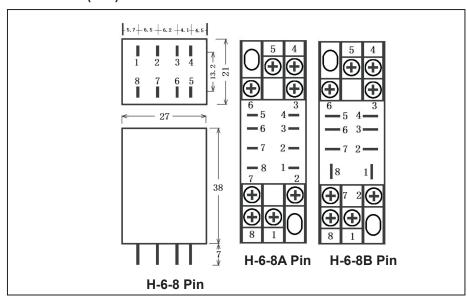




## **Wiring Diagram**



## **Dimensions (mm)**



- 1. According to the different nature of the load, the current level of the selected product is also different. Usually, users should choose 1.5-2 times of the load current for resistive loads and 1.8-2.5 times of the load current for inductive or capacitive loads.
- 2. According to the relationship between the load current and the ambient temperature, when the working environment temperature is high or the heat dissipation condition is not good, users should increase the current capacity.
- 3. To prevent damage to the solid-state switch chip after a load short circuit, it is recommended to connect the corresponding fast fuse in series in the load circuit.
- 4. This model is naturally cooling. When the shell temperature exceeds 80  $^{\circ}$  C, a fan needs to be added for cooling.



# AC Solid State Relays 3NO series

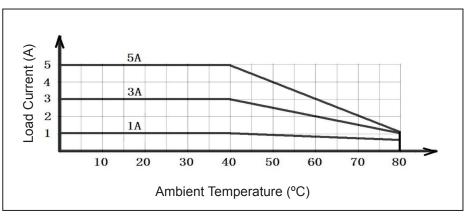


#### **Features**

- · Optical isolation between input and output circuits
- · Control signal to interface with TTL and PLC logic
- Three set of contactless switch outputs; No spark or arc pulling phenomenon when making or breaking
- Solid packaging, shockproof, moisture-proof and anti-corrosion, stable and reliable operation
- Plug-in structure, easy to install. It can directly replace small current relays
- The product is mainly used for intermediate relays in industrial automation control and small power appliances such as contactless switches for small motors, solenoid valves, power supplies, etc

## **Specifications**

| Description               |                            | GDL53K   | GDL63K                          |  |
|---------------------------|----------------------------|--|---------------------------------|--|
| Input<br>Specifications   | Control Voltage            | 4-32VDC  | 4-32VDC; 5-28VAC                |  |
|                           | Control Current            | 6-18mA   |                                 |  |
|                           | Turn-Off Voltage           | ≤1.5VDC  |                                 |  |
|                           | Input Current              | 6mA  |                                 |  |
|                           | Input Status Indicator     | LED  |                                 |  |
|                           | Operating Voltage          | 24-440VAC  |                                 |  |
| ્રા                       | Load Current               | 1A; 3A   |                                 |  |
| Output                    | On State Voltage Drop      | ≤1.5V  |                                 |  |
| Out                       | Off State dv/dt (min.)     | ≥850V  |                                 |  |
| Spe                       | Off State Leakage Current  | ≤0.1mA   |                                 |  |
|                           | Turn-on Time/Turn-off Time | 10+10ms  |                                 |  |
|                           | Switch Static              | 3NO  | 3NO                             |  |
|                           | Dielectric Strength        | ≥2000V   |                                 |  |
| General<br>Specifications | Insulation Resistance      | ≥100mΩ   |                                 |  |
|                           | Ambient Temperature        | -30~80°C   |                                 |  |
|                           | Power Frequency            | 50/60Hz  |                                 |  |
|                           | Load Current Safety Factor | Take 1:2 for resistive load 1:2.5 for inductive load |                                 |  |
|                           | Dimensions                 | L:29x:W:13xH38 (mm) (H5-8A pin)                      | L:29x:W:21xH38 (mm) (H6-8B pin) |  |

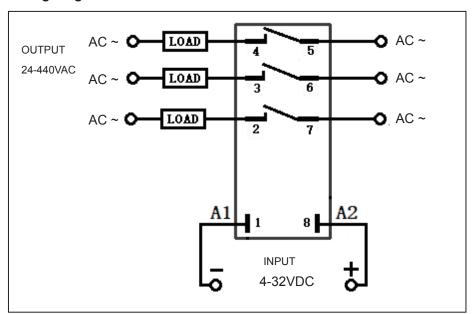




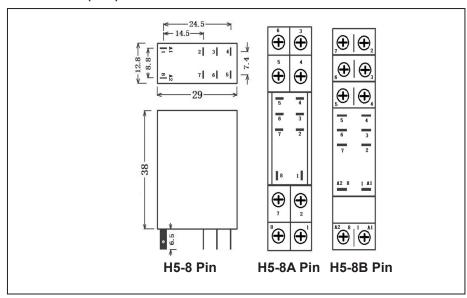
# AC Solid State Relays 3NO series



## **Wiring Diagram**



## **Dimensions (mm)**



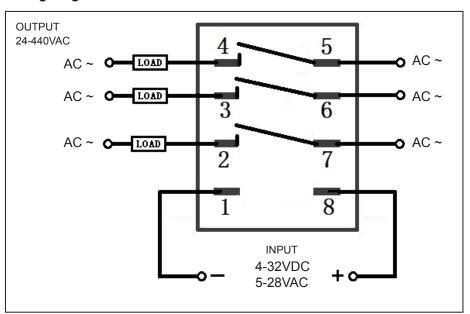
9



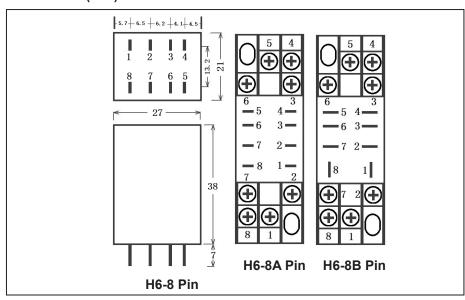
## AC Solid State Relays 3NO series



## **Wiring Diagram**



## **Dimensions (mm)**



- 1. According to the different nature of the load, the current level of the selected product is also different. Usually, users should choose 1.5-2 times of the load current for resistive loads and 1.8-2.5 times of the load current for inductive or capacitive loads.
- 2. According to the relationship between the load current and the ambient temperature, when the working environment temperature is high or the heat dissipation condition is not good, users should increase the current capacity.
- 3. To prevent damage to the solid-state switch chip after a load short circuit, it is recommended to connect the corresponding fast fuse in series in the load circuit.
- 4. This model is naturally cooling. When the shell temperature exceeds 80  $^{\circ}$  C, a fan needs to be added for cooling.