

## PRODUCT SPECIFICATION

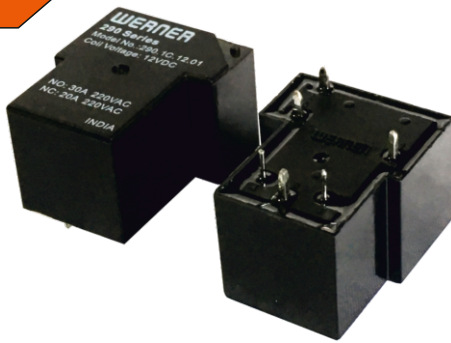
# 290 Series PCB Power Relays



# 290 Series PCB Power Relays

WERNER

## Features



30A Switching Capability  
4.8kV Dielectric strength  
Class F Insulation available  
Open type and sealed type available  
Environmental friendly(RoHS complaint)  
Outline Dimension (32.4 x 27.5 x 20)mm

## Contact Data

| Contact Arrangement     | 1A - NO                    | 1B - NC     | 1C            |
|-------------------------|----------------------------|-------------|---------------|
| Contact Resistance      | 50mΩ(1A 24VDC)             |             |               |
| Contact Material        | AgSnO <sub>2</sub> , AgCdo |             |               |
| Max. switching capacity | 7200VA/900W                | 4800VA/600W | 4500VA/600W   |
| Max. switching voltage  | 250VAC/30VDC               |             |               |
| Max. switching current  | 30A                        | 20A         | NO:30A/NC:20A |
| Rating                  | 30A 240VAC                 | 20A 240VAC  | 20A 240VAC    |
| Mechanical endurance    | 1 x 10 <sup>7</sup>        |             |               |
| Electrical endurance    | 1 x 10 <sup>9</sup>        |             |               |

## Characteristics

|                                 |                             |
|---------------------------------|-----------------------------|
| Insulation Resistance           | 1000MΩ (500VDC)             |
| Between coil & contacts         | 4500 1min                   |
| Between open contacts           | 1500V 1min                  |
| Operate time (at rated voltage) | ≤15ms                       |
| Release time (at rated voltage) | ≤10ms                       |
| Storage temperature range       | -40° C-105° C               |
| Functional                      | 100m/s <sup>2</sup> (10g)   |
| Destructive                     | 1000m/s <sup>2</sup> (100g) |
| Vibration resistance            | 10Hz-55Hz 1.5mm             |
| Humidity                        | 5%-85% RH                   |
| Termination                     | PCB                         |
| Unit weight                     | Approx 36g                  |

## Coil Data Type

| Coil Voltage<br>VDC | Pick-up Voltage<br>VDC | Drop-out Voltage<br>VDC | Max. Allowable Voltage<br>VDC | Coil Resistance<br>Ω |
|---------------------|------------------------|-------------------------|-------------------------------|----------------------|
| 5                   | 2.1                    | 0.45                    | 6.5                           | 27 x (1±10%)         |
| 6                   | 4.2                    | 0.6                     | 7.8                           | 40 x (1±10%)         |
| 9                   | 6.75                   | 0.9                     | 11.7                          | 97x (1±10%)          |
| 12                  | 8.00                   | 2.2                     | 15.6                          | 155x (1±10%)         |
| 24                  | 16.8                   | 3.4                     | 31.2                          | 660x (1±10%)         |
| 110                 | 77.00                  | 16.5                    | 143                           | 13450x (1±10%)       |
| 220/240             | 192                    | 48                      | 286                           | 13490x (1±10%)       |

## ORDERING TABLE

### 290.01.A.12.02.01

**Series**  
290 Series  
PCB Power Relays

**Construction**  
01 Sealed  
02 Open

**Contact Groups**  
A Form A  
B Form B  
C Form C

**Coil Voltage**  
5 5V  
6 6V  
9 9V  
12 12V  
24 24V  
11 110V  
22 220/240V

**Coil Power**  
01 DC  
02 AC

**Termination**  
01 With pin No.6  
10 Without pin No.6

## Dimension & Wiring Diagram

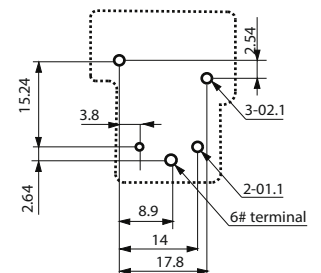
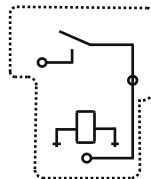
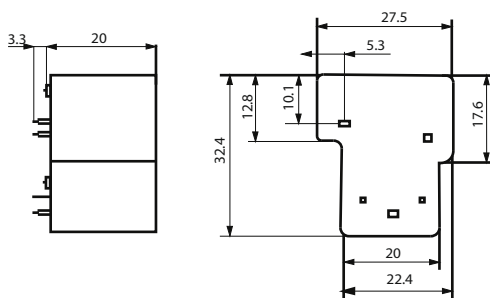
### Outline Dimension

### Wiring Diagram (Bottom view)

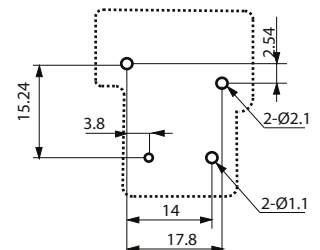
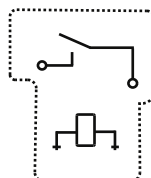
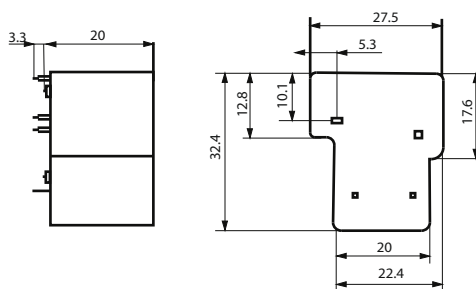
### PCB Layout (Bottom view)

### 1 Form A Close type - (NO)

#### With 6# terminal



#### Without 6# terminal



## Dimension & Wiring Diagram

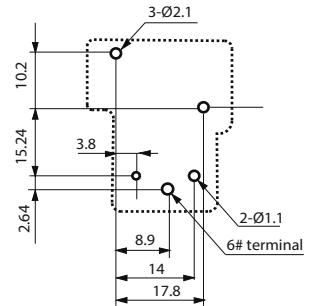
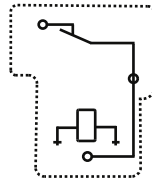
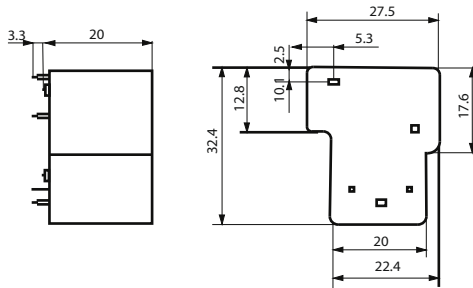
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### Wiring Diagram (Bottom view)

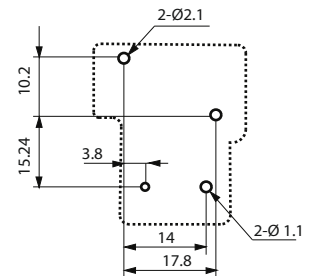
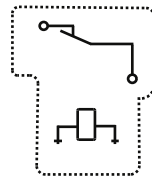
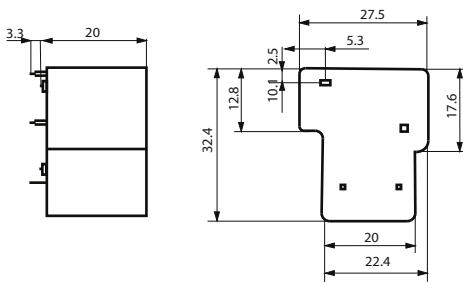
### PCB Layout (Bottom view)

#### 1 Form B Close type - (NC)

##### With 6# terminal

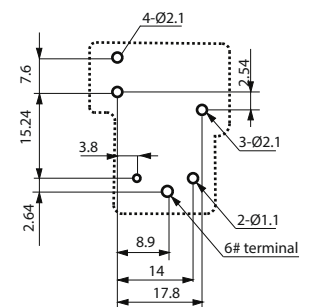
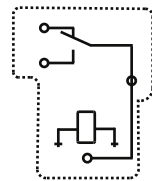
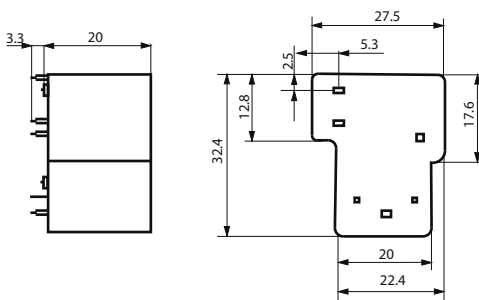


##### Without 6# terminal

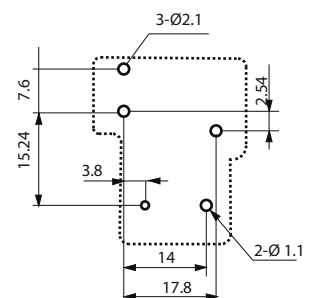
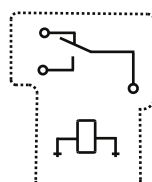
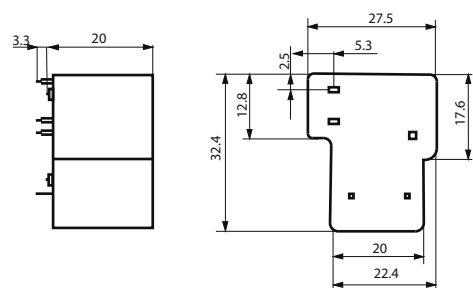


#### 1 Form C Close type - (SPDT)

##### With 6# terminal



##### Without 6# terminal



## Dimension & Wiring Diagram

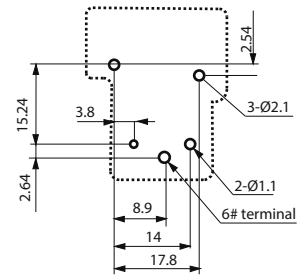
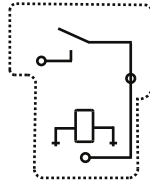
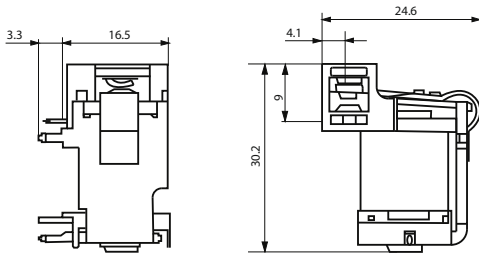
### Outline Dimension

### Wiring Diagram (Bottom view)

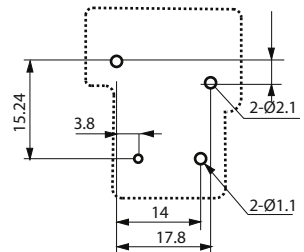
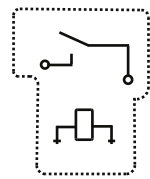
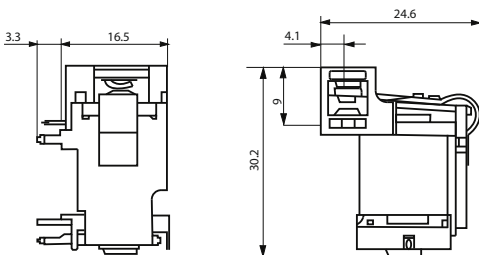
### PCB Layout (Bottom view)

#### 1 Form A Open type - (NO)

##### With 6# terminal

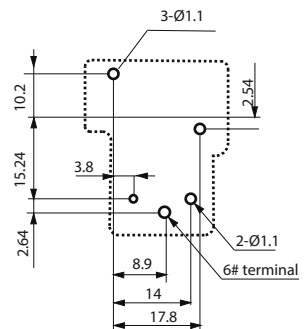
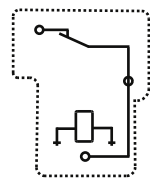
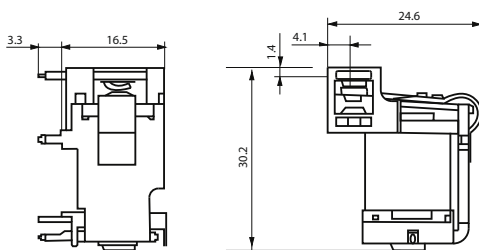


##### Without 6# terminal

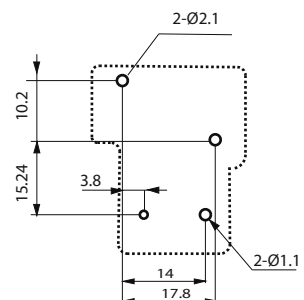
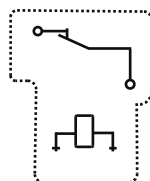
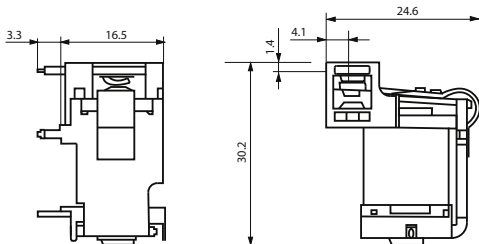


#### 1 Form B Open type - (NC)

##### With 6# terminal



##### Without 6# terminal



## Dimension & Wiring Diagram

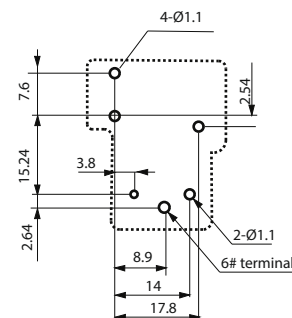
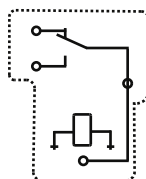
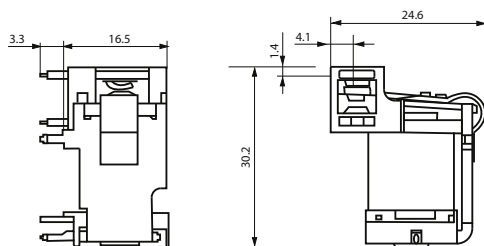
### Outline Dimension

### Wiring Diagram (Bottom view)

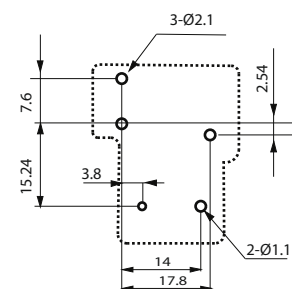
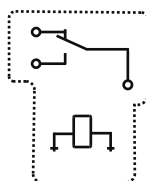
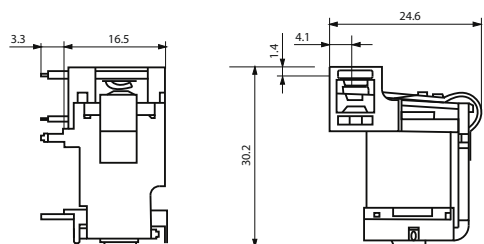
### PCB Layout (Bottom view)

#### 1 Form C Open type - (SPDT)

#### With 6# terminal



#### Without 6# terminal



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Inventing Innovation...

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