

# Power Relays

## Type NA/NF/NP/NB

### Monostable

CARLO GAVAZZI



- Power relay
- Switching capacity 30A
- DC coils 6 to 110VDC
- AC coils 12 to 240VAC
- 1 or 2 normally open contact
- Reinforced insulation 4kV / 8 mm (0.31")
- Heavy load up to 7500V
- PCB or Fast-on terminal
- General purpose, industrial power application
- CE, TÜV, UL approved

### Product Description

Relay high power output. It is sealed and control equipment. designed for Power and compressors vending machines, copiers load.

### Approvals



### Ordering Key

**N B D 100 12 SE**

Type \_\_\_\_\_  
 Terminal version \_\_\_\_\_  
 A = Faston no flange  
 B = Bolt terminals  
 F = Flange and faston terminals  
 P = PCB  
 Coil version (A=AC - D=DC) \_\_\_\_\_  
 Contact code \_\_\_\_\_  
 Coil code \_\_\_\_\_  
 Options \_\_\_\_\_

Box content: 1 relay  
 Box size: (W 75 x D 40 x H 60) mm Weight: 100g  
 (W 2.95 x D 1.57 x H 2.36) inches Weight: 3.53oz  
 Box size: (W 60 x D 55 x H 60) mm Weight: 120g  
 (DIN rail mounting types) (W 2.36 x D 2.17 x H 2.36) inches Weight: 4.23oz

### Type Selection

#### Contact configuration

1 normally open contact	(SPST {1-form A})
2 normally open contacts	(DPST {2-form A})

#### Contact rating

30A
25A

#### Contact code

100
200

### Coil Characteristics, DC @ +20°C (+68°F)

Coil Code	Rated voltage VDC	Pick-up voltage VDC	Drop-out voltage VDC	Max voltage VDC	Coil resistance Ω ±10%
6	6	4.50	0.9	6.6	18.9
12	12	9.00	1.8	13.2	75.0
24	24	18.00	3.6	26.4	303.0
48	48	36.00	7.2	52.8	1220.0
100	100	75.00	15	110.0	5260.0
110	110	82.50	16.5	121.0	6360.0

### Coil Characteristics, AC @ +20°C (+68°F)

Coil Code	Rated voltage VAC	Pick-up voltage VAC	Drop-out voltage VAC	Max voltage VAC	Coil resistance Ω ±10%
12	12	9.6	1.8	13.2	65.0
24	24	19.2	3.6	26.4	275.0
48	48	38.4	7.2	52.8	1100.0
115	100-120	96.0	18.0	132.0	4730.0
230	200-240	176.0	33.0	264.0	21000.0

## Options

### For NA relays

- Nil** = Standard with mounting clip (i.e. fig.1)  
**T** = Test button and mechanical indicator (i.e. fig.1)

### For NF relays

- Nil** = Standard top flange mounting (i.e. fig.2)  
**D** = With DIN rail mounting (i.e. fig.3)  
**T** = Test button and mechanical indicator (i.e. fig.2)

### For NP relays

- Nil** = Standard with mounting clip (i.e. fig.4)  
**SE** = With mounting clip (i.e. fig.5)

### For NB relays (Protection cover for terminals always included)

- DE** = With DIN rail mounting (i.e. fig.8)  
**FE** = Top flange mounting (i.e. fig.7)  
**SE** = With mounting clip (i.e. fig.6)  
**DL** = With DIN rail mounting and LED indication (i.e. fig.8)  
**FL** = Top flange mounting and LED indication (i.e. fig.7)  
**SL** = With mounting clip and LED indication (i.e. fig.6)

**Note:** If not listed above option is not available.

## Contact Characteristics

	100	200
<b>Rating</b>	30A	25A
<b>UL rating</b>	1.5HP / 120VAC 3HP / 240VAC 30A / 277VAC TV 10	
<b>Contact rating</b> with resistive load	30A/277VAC 30A/28VDC	25A/277VAC 25A/28VDC
<b>Material</b>	Silver alloy	

<b>Initial contact resistance</b>	100mΩ max. (1A-24VDC)	
<b>Current</b>		
Max. switching current	30A	25A
Max. switching power	8370VA/840W	6925VA/700W
<b>Voltage</b>		
Max. switching voltage	277VAC / 28VDC max.	
<b>Life</b>		
Electrical life	1 x 10 <sup>5</sup> ops (1800 ops/h)	
Mechanical life	1 x 10 <sup>6</sup> ops (1800 ops/h)	

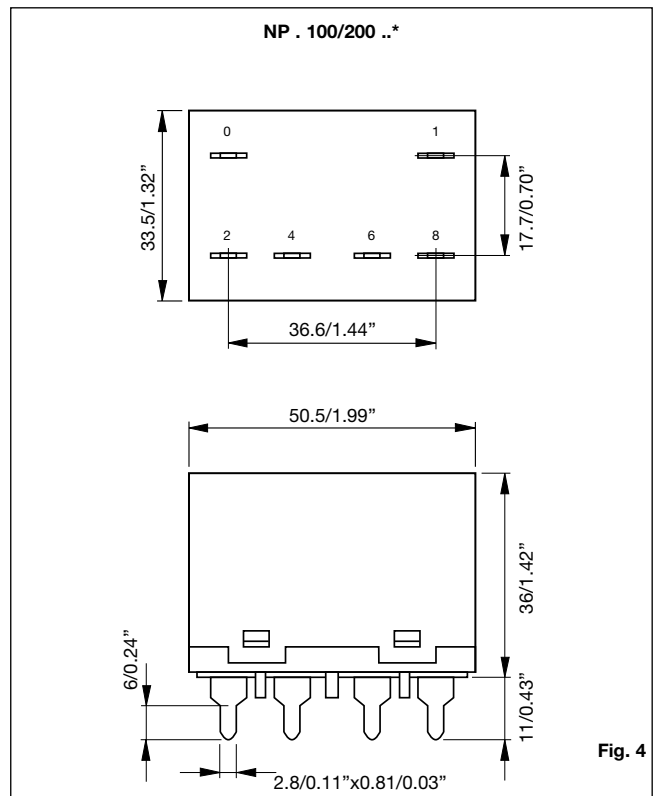
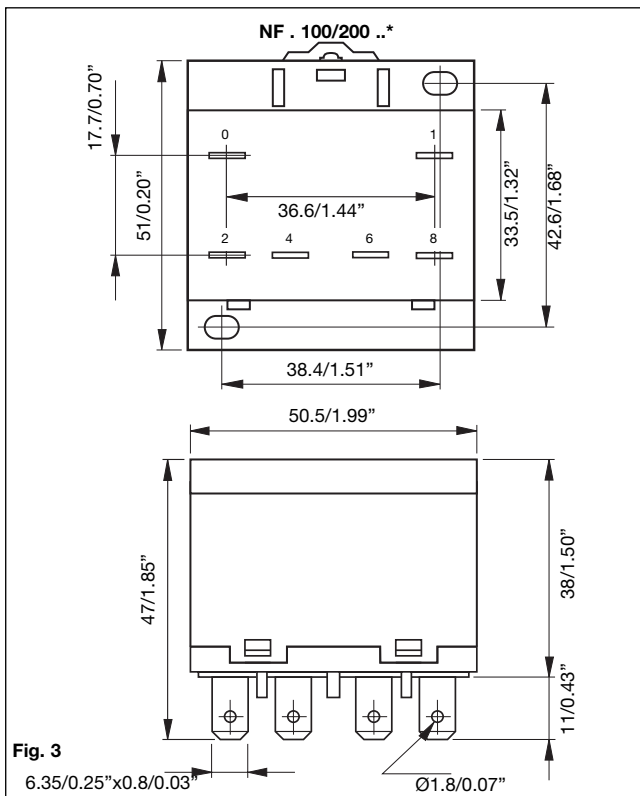
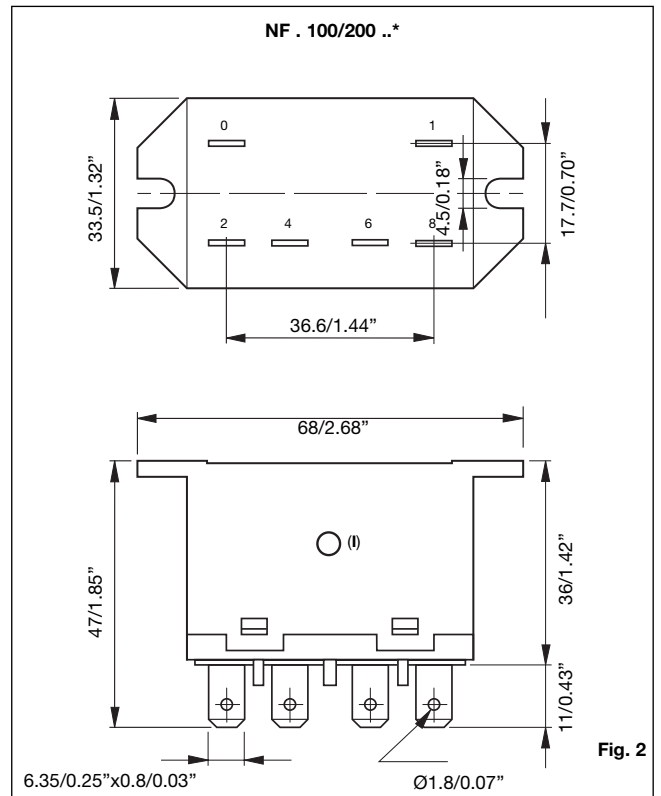
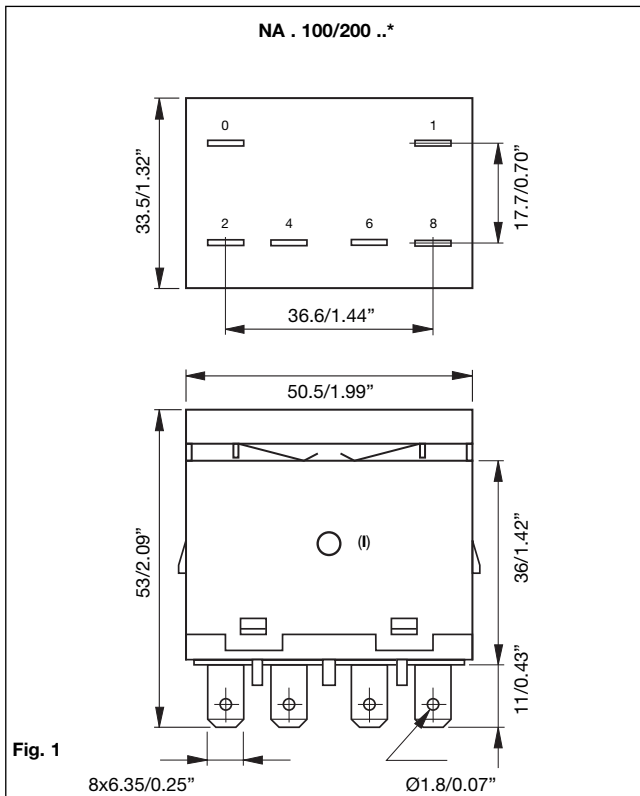
## Insulation

<b>Test voltage</b> (1 min.)	
Open contacts	2000VAC
Contacts different polarity	2000VAC
Contacts/coil	4000VAC
<b>Surge voltage</b>	
Contacts/coil	10000VAC
<b>Initial insulation resistance</b> @ 500VDC	100MΩ

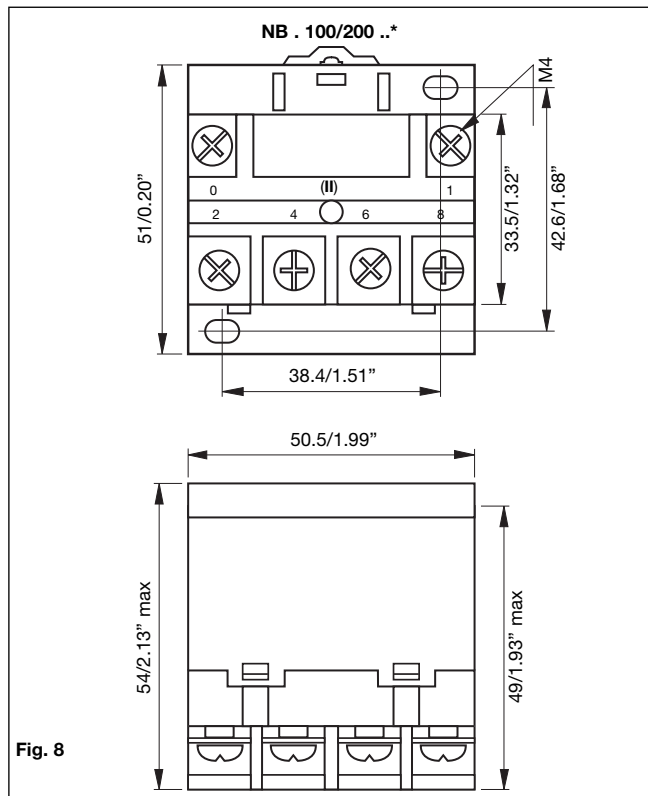
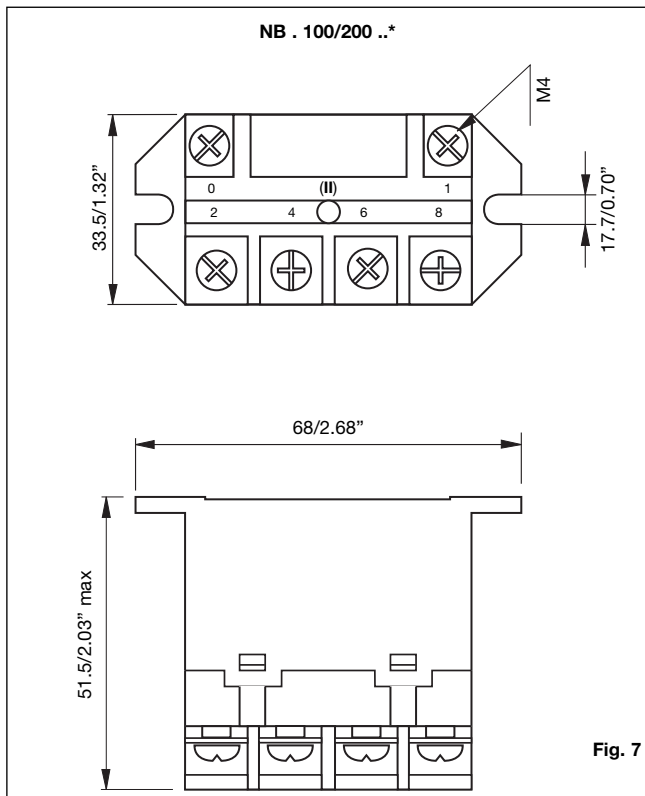
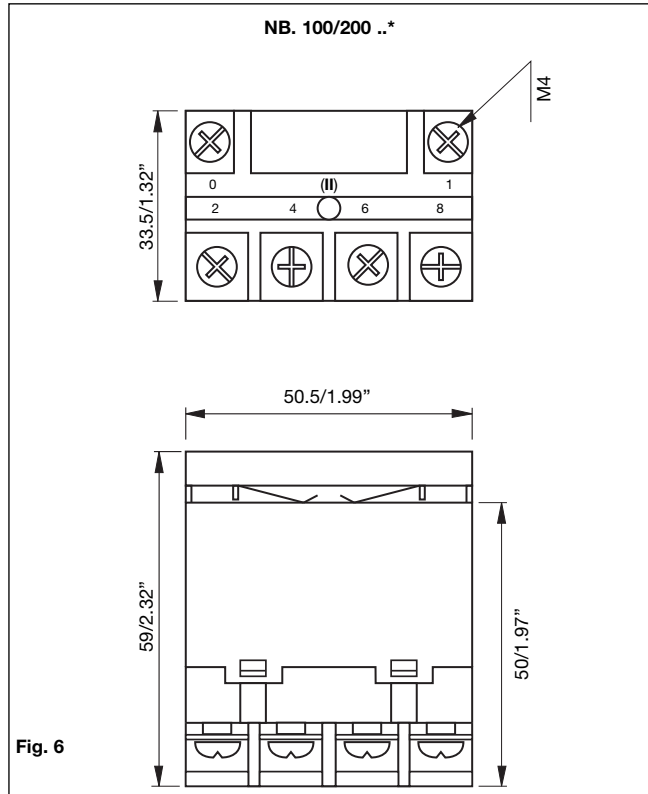
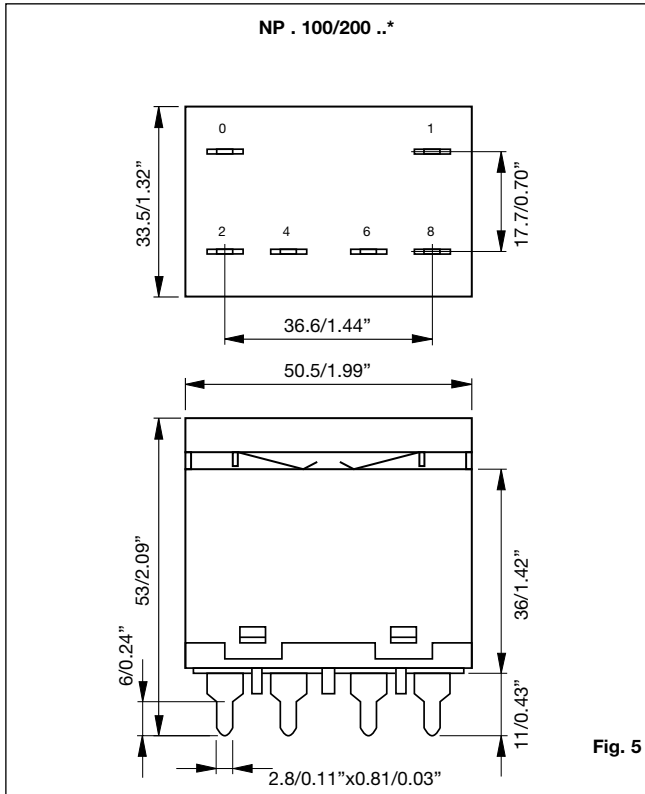
## General Data

<b>Vibration resistance</b>	1.5mm p.p. 10 to 55Hz	
<b>Shock resist.</b>	Functional	98m/s <sup>2</sup> (malfunction) 10G
	Destructive	980m/s <sup>2</sup> (mechanical) 100G
<b>Humidity</b>	98% +40°C (+104°F)	
<b>Weight</b>	90 to 120g (3.17 to 4.23oz)	
<b>Construction</b>	Dust cover	
<b>Nominal coil power</b>	AC version 2.5VA DC version 1.9W	
<b>Operate time</b> at nom. voltage	30ms	
<b>Release time</b> at nom. voltage	30ms	
<b>Ambient temperature</b>	-55° to +70°C (-67° to +158°F)	
<b>Temperature rise</b>	+50°C (+122°F) max.	
<b>Vibration resistance</b>	1.5mm (0.06") p.p. 10 to 50Hz	

## Dimensions mm/inches

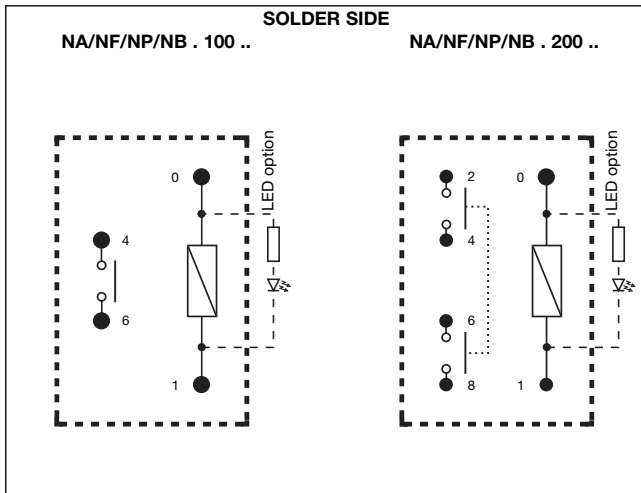


\* = On version 100 terminals number 2 and 8 are not present  
(I) = Mechanical push button

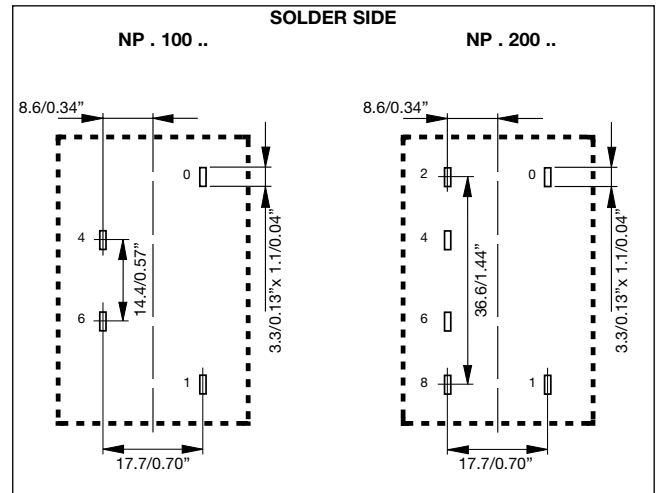


\* = On version 100 terminals number 2 and 8 are not present  
 (I) = Mechanical push button  
 (II) = LED indication

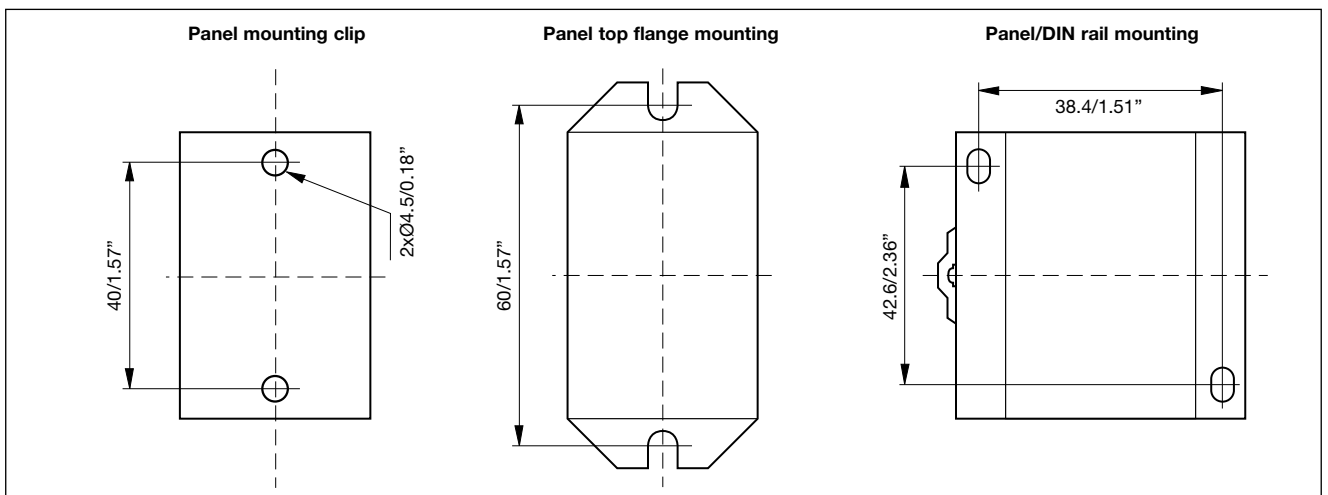
## Wiring Diagram



## Pin View mm/inches

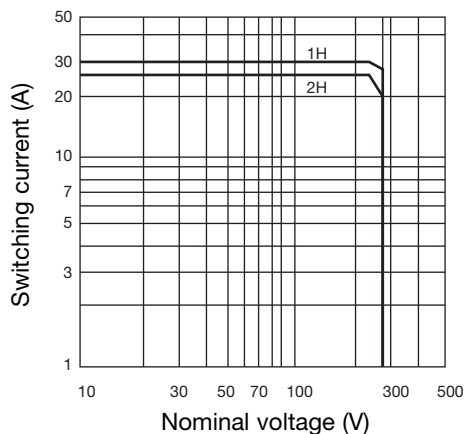


## Drilling patterns mm/inches



## Diagrams

### 1 Contact rating



### 2 Life endurance

