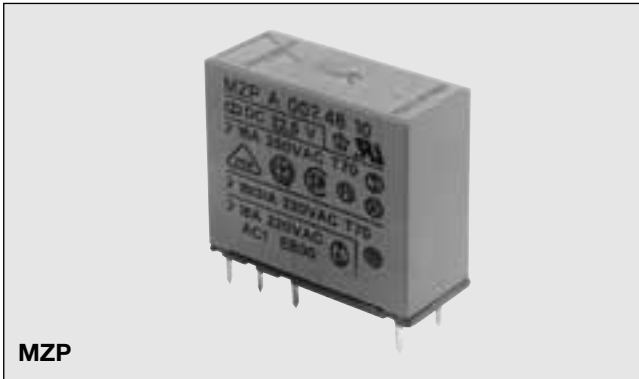


Miniature Relays Series M

Type MZ 1 pole 16A

Monostable

CARLO GAVAZZI



- Miniature size
- PCB mounting
- Reinforced insulation 4 kV / 8 mm
- Switching capacity 16 A
- DC coils 1.53 to 160 VDC
- AC coils 4.8 to 264 VAC
- General purpose, industrial electronics
- Types: Standard, flux-free or sealed
- Switching AC/DC load

Product Description

Sealing

P: Standard, suitable for soldering and manual washing.
F: Flux-free, suitable for automatic soldering and partial immersion or spray washing.

H: Sealed with inert gas according to IP 67, suitable for automatic soldering and/or partial immersion or spray washing.

For **General data**, notes and special versions see page 48

Ordering Key

MZ P A 100 47 16

Type _____
 Sealing _____
 Version (A = Standard) _____
 Contact code _____
 Coil reference number _____
 Contact rating _____

Version

A= 5.0 mm / Ag CdO (standard)
 C= 5.0 mm / hard gold plated
 D= 5.0 mm / flash gilded
 S= 5.0 mm / Ag Sn O₂
 Available only on request Ag Ni

Type Selection

| Contact configuration | Contact rating | Contact code |
|---|----------------|--------------|
| 1 normally open contact (SPST -NO {1-form A}) | 16 A | 100 |
| 1 normally closed contact (SPST -NC {1-form B}) | 16 A | 010 |
| 1 change over contact (SPDT {1-form C}) | 16 A | 001 |

Coil Characteristics DC (20°C)

| Coil ref. no. | Rated Voltage VDC | Winding resistance Ω | ± % | Operating range | | Must release VDC |
|---------------|-------------------|----------------------|-----|-----------------|----------|-----------------------|
| | | | | min. VDC | Max. VDC | |
| 40 | 2.5 | 11 | 10 | 1.53 | 3.50 | ≥ 5% of rated voltage |
| 41 | 4.1 | 30 | 10 | 2.55 | 5.75 | |
| 42 | 5.6 | 55 | 10 | 3.48 | 7.80 | |
| 43 | 8.0 | 110 | 10 | 5.01 | 11.00 | |
| 44 | 10.0 | 170 | 10 | 6.17 | 13.70 | |
| 45 | 12.5 | 280 | 10 | 7.80 | 17.60 | |
| 46 | 16.0 | 450 | 10 | 9.98 | 22.50 | |
| 47 | 20.5 | 720 | 15 | 12.60 | 28.60 | |
| 48 | 22.5 | 860 | 15 | 13.90 | 30.80 | |
| 49 | 26.0 | 1150 | 15 | 16.00 | 35.70 | |
| 50 | 32.5 | 1750 | 15 | 20.30 | 44.00 | |
| 51 | 40.5 | 2700 | 15 | 25.20 | 55.00 | |
| 52 | 51.5 | 4300 | 15 | 32.30 | 69.30 | |
| 53 | 64.5 | 6450 | 15 | 40.10 | 84.70 | |
| 54 | 83.0 | 9900 | 15 | 51.90 | 104.00 | |
| 55 | 95.0 | 12550 | 15 | 59.40 | 117.00 | |
| 56 | 109.0 | 16200 | 15 | 67.90 | 136.00 | |
| 57 | 125.0 | 23500 | 15 | 78.10 | 160.00 | |

Coil Characteristics AC (20°C)

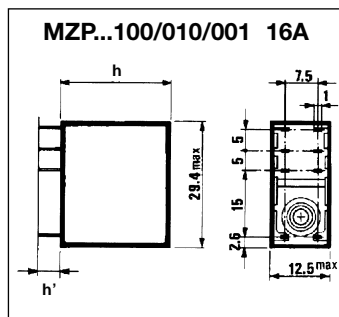
| Coil ref. no. | Rated Voltage VAC | Winding resistance Ω | resistance $\pm \%$ | Operating range | | Must release VAC | Rated Current (mA) | | Inductance H |
|---------------|-------------------|-----------------------------|---------------------|-----------------|----------|------------------------|--------------------|---------|--------------|
| | | | | min. VAC | Max. VAC | | 50Hz | 60Hz | |
| 90 | 6 | 12 | 10 | 4.8 | 6.6 | ≥ 15% of rated voltage | 270.0 | 237.0 | 0.059 |
| 91 | 12 | 56 | 10 | 9.6 | 13.2 | | 119.0 | 104.0 | 0.267 |
| 92 | 24 | 230 | 10 | 19.2 | 26.4 | | 57.0 | 50.0 | 1.123 |
| 93 | 48 | 870 | 15 | 38.4 | 52.8 | | 30.5 | 26.7 | 4.170 |
| 94 | 60 | 1500 | 15 | 48.0 | 66.0 | | 23.8 | 21.0 | 6.450 |
| 95 | 110 | 5300 | 15 | 88.0 | 129.0 | | 12.3 | 10.8 | 22.400 |
| 96 | 220 | 20000 | 15 | 176.0 | 242.0 | | 5.9 | 5.2 | 100.200 |
| 97 | 240 | 25000 | 15 | 192.0 | 264.0 | 5.7 | 5.0 | 107.800 | |

Contact Characteristics

| | | | |
|--|---|---|---|
| Rating | 16 A | Power Max. switching power with resistive load in AC ³⁾ Max. switching power in DC Minimum switching current ²⁾ (Typical value) | 4000 VA see diagram 3 100mA at 24VDC |
| Material (standard version) ²⁾ | AgCdO | | |
| Current (at 250VAC) Rated current Max. switching current Overload current (4sec ON / 40sec OFF cycle) | 16 A 20 A 25 A | Life (see diagram 1) Typical electrical life at max. resistive load 1000 cycles/h 500 cycles/h Max. electrical repetition rate Mech. life at 18000 cycles/h | 10⁵ cycles 1.5 x 10⁵ cycles 3600 cycles/h 50 x 10⁵ cycles |
| Voltage Rated voltage Max. switching voltage (VDE 0435) | 250 VAC 380 VAC | | |

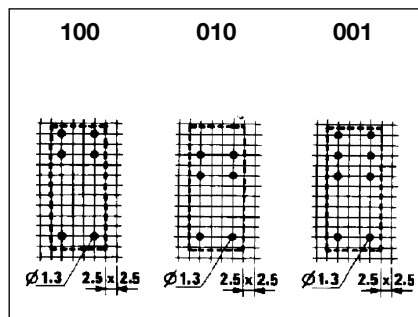
²⁾³⁾ See pag. 48

Dimensions



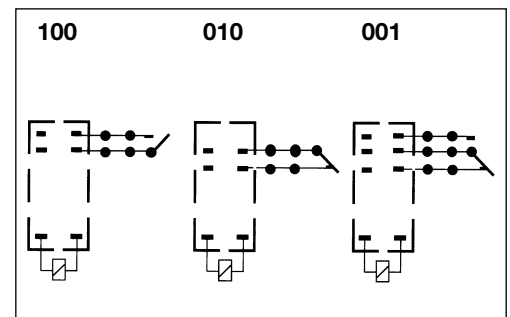
MZP: h = 25,2 mm
h' = 4,3 - 5,3 mm

Pin View



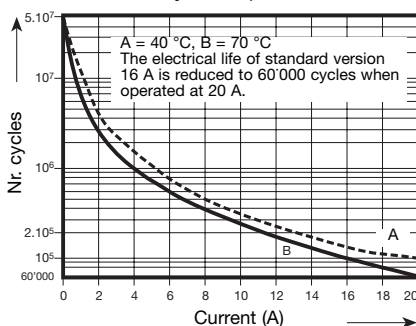
MZF/MZH: h = 26.5 mm
h' = 2.8 - 3.8 mm

Wiring Diagrams

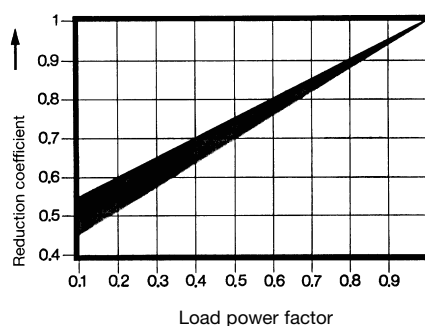


Diagrams

1 Expected life at 250 VAC
(Resistive loads and repetition rate 1000 cycles/h)



2 Reduction of expected life against load power factor cos ϕ



3 Max. switching power DC

