



Releu Phoenix REL-MR

Single relay - REL-MR- 24DC/21-21 - 2961192

TENSIUNE :

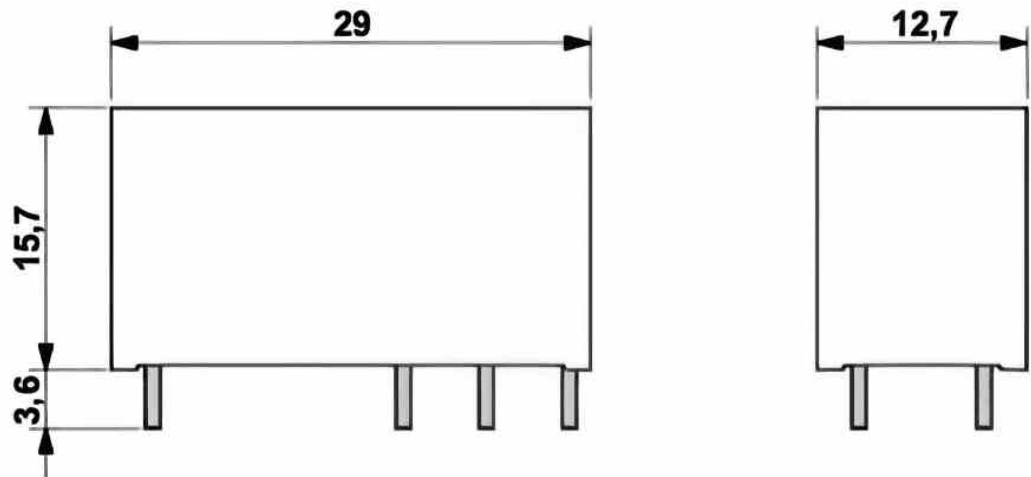
24V DC

120V AC

230V AC

Pluggable miniature relays, with power contact, 2 PDT, input voltage 24 V DC

**Dimensioned drawing**



**Technical data**

**Dimensions**

Width	12.7 mm
Height	29 mm
Depth	15.7 mm

**Ambient conditions**

Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

**Coil side**

Nominal input voltage $U_N$	24 V DC
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**Coil side**

Typical input current at $U_N$	17 mA
Typical response time	7 ms
Typical release time	3 ms
Coil resistance	1440 $\Omega$ $\pm$ 10 % (at 20 °C)



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## Contact side

Contact type	2 PDT
Contact material	AgNi
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	5 V (at 10 mA)
Maximum inrush current	25 A (20 ms)
Min. switching current	10 mA (At 5 V)
Limiting continuous current	8 A
Interrupting rating (ohmic load) max.	190 W (at 24 V DC)
	85 W (at 48 V DC)
	60 W (at 60 V DC)
	44 W (at 110 V DC)
	60 W (at 220 V DC)
	2000 VA (for 250 V AC)
Switching capacity in acc. with DIN VDE 0660/IEC 60947	2 A (at 24 V, DC13)
	0.2 A (at 250 V, DC13)
	3 A (at 24 V, AC15)
	3 A (at 120 V, AC15)
	3 A (at 250 V, AC15)

## General

Test voltage relay winding/relay contact	5 kV AC (50 Hz, 1 min.)
Test voltage relay contact/relay contact	2.5 kV AC (50 Hz, 1 min.)
Operating mode	100% operating factor
Mechanical service life	3 x 10 <sup>7</sup> cycles
Standards/regulations	IEC 60664
	EN 50178
	IEC 62103
Rated surge voltage / insulation	Basic insulation
Pollution degree	3
Surge voltage category	III
Mounting position	any

Assembly instructions	Can be aligned without spacing (> 70 °C ≥ 2.5 mm)
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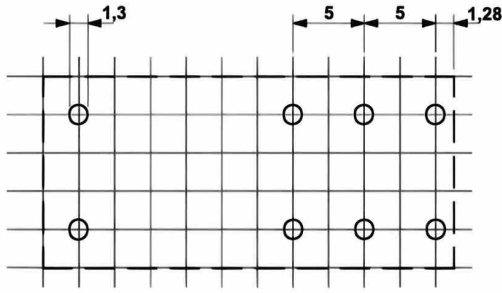


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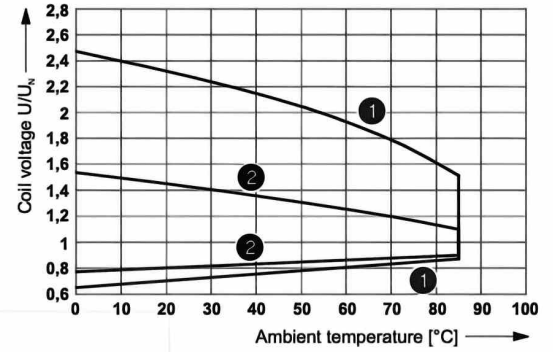
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**Drilling diagram**



a = pitch division 2.5 mm

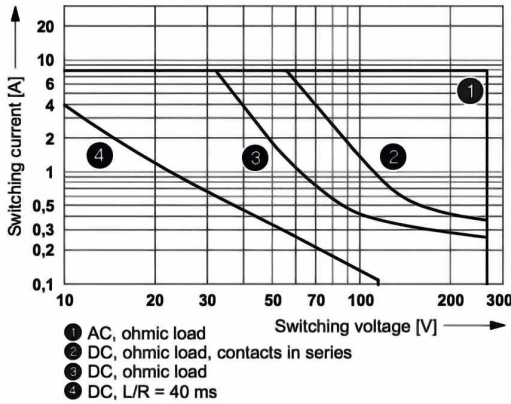
**Diagram**



- 1 DC coils
- 2 AC coils

Operating voltage range

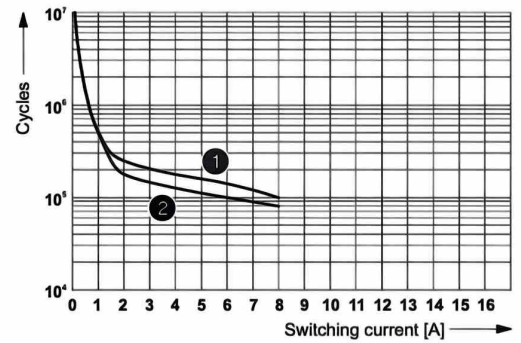
**Diagram**



- 1 AC, ohmic load
- 2 DC, ohmic load, contacts in series
- 3 DC, ohmic load
- 4 DC, L/R = 40 ms

Interrupting rating

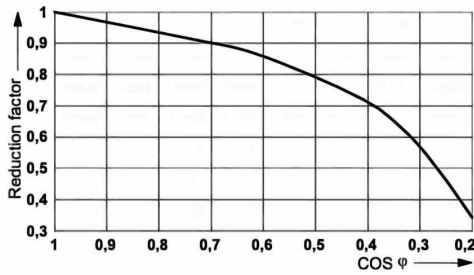
**Diagram**



- 1 250 V AC, ohmic load (DC coils)
- 2 250 V AC, ohmic load (AC coils)

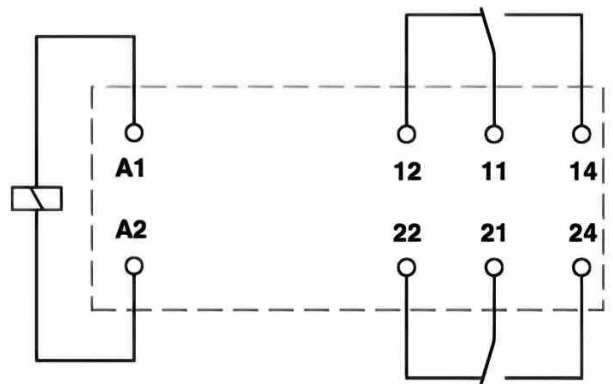
Electrical service life

**Diagram**



Service life reduction factor with various cos phi

**Circuit diagram**



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Single relay - REL-MR-120AC/21-21 - 2961448 [3]

TENSIUNE :

24V DC

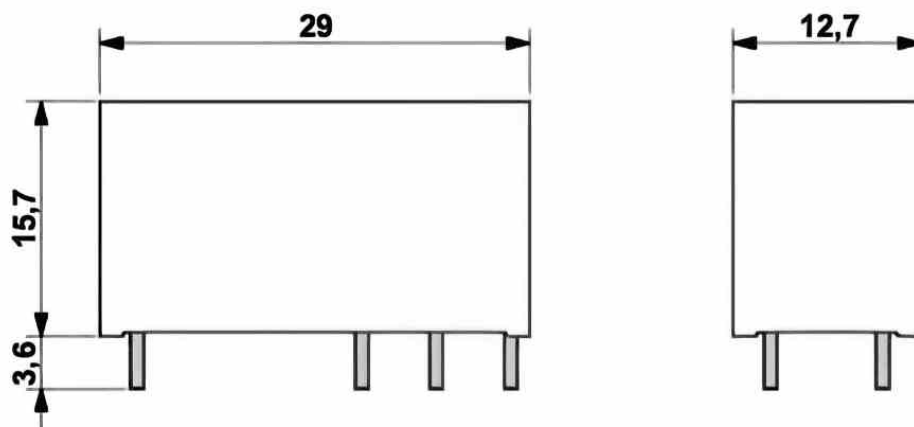
120V AC

230V AC



Pluggable miniature relay, with power contact, 2 PDT, coil voltage 120 V AC

### Dimensioned drawing



### Technical data

#### Dimensions

Width	12.7 mm
Height	29 mm
Depth	15.7 mm

#### Ambient conditions

Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

#### Coil side

Nominal input voltage $U_N$	120 V AC
Typical input current at $U_N$	7 mA (at 50 Hz)
	5 mA (At 60 Hz)
Typical response time	3 ms ... 12 ms (depending on phase relation)

Typical release time range	2 ms ... 9 ms (depending on phase relation)
Coil resistance	8100 $\Omega$ $\pm$ 15 % (at 20 °C)



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## Contact side

Contact type	2 PDT
Contact material	AgNi
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	5 V (at 10 mA)
Maximum inrush current	12 A (20 ms)
Min. switching current	10 mA (At 5 V)
Limiting continuous current	8 A
Interrupting rating (ohmic load) max.	190 W (at 24 V DC)
	85 W (at 48 V DC)
	60 W (at 60 V DC)
	44 W (at 110 V DC)
	60 W (at 220 V DC)
	2000 VA (for 250 V AC)
Switching capacity in acc. with DIN VDE 0660/IEC 60947	2 A (at 24 V, DC13)
	0.2 A (at 250 V, DC13)
	3 A (at 24 V, AC15)
	3 A (at 120 V, AC15)
	3 A (at 250 V, AC15)

## General

Test voltage relay winding/relay contact	5 kV AC (50 Hz, 1 min.)
Test voltage relay contact/relay contact	2.5 kV AC (50 Hz, 1 min.)
Operating mode	100% operating factor
Mechanical service life	1 x 10 <sup>7</sup> cycles
Standards/regulations	IEC 60664
	EN 50178
	IEC 62103
Pollution degree	3
Surge voltage category	III
Mounting position	any
Assembly instructions	Can be aligned without spacing (> 70 °C ≥ 2.5 mm)



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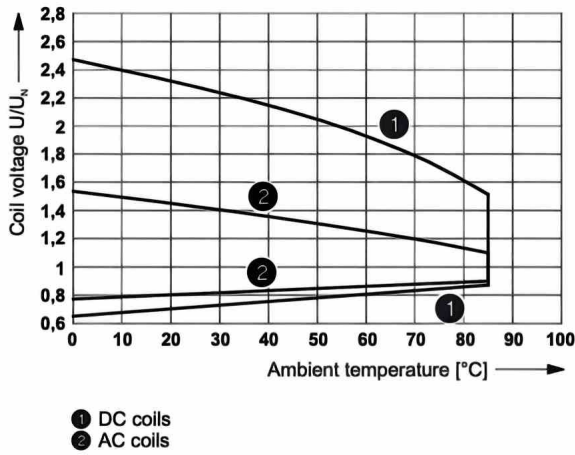
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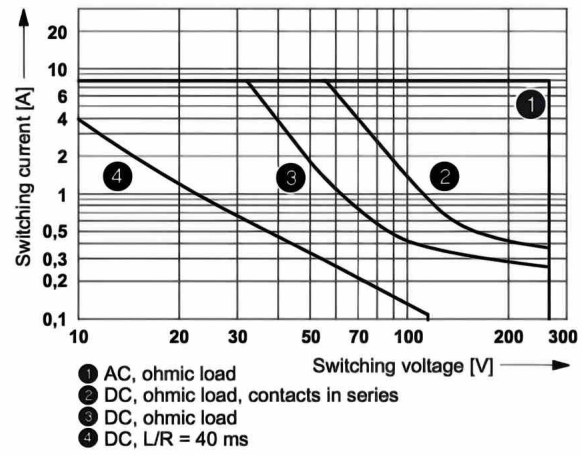
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Diagram



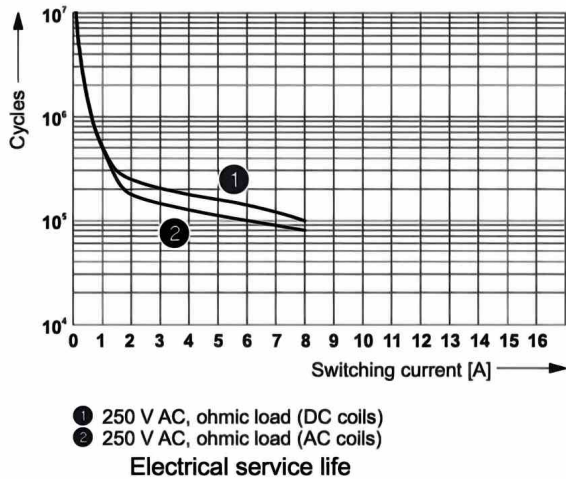
Diagram



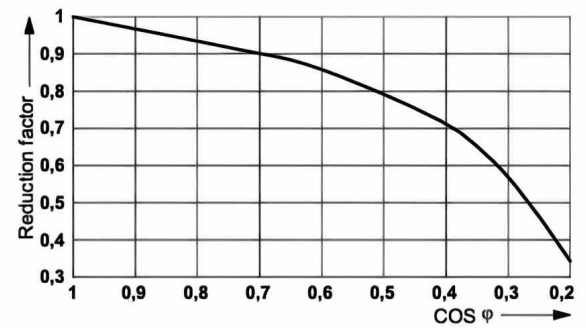
Operating voltage range

Interrupting rating

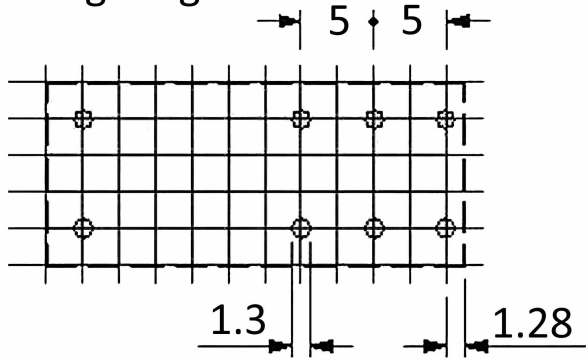
Diagram



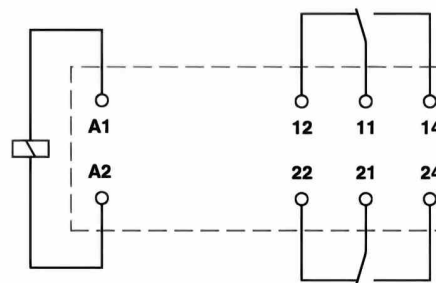
Diagram



Drilling Diagram



Circuit diagram



Single relay - REL-MR-230AC/21-21 - 2961451 [3]

TENSIUNE :

24V DC

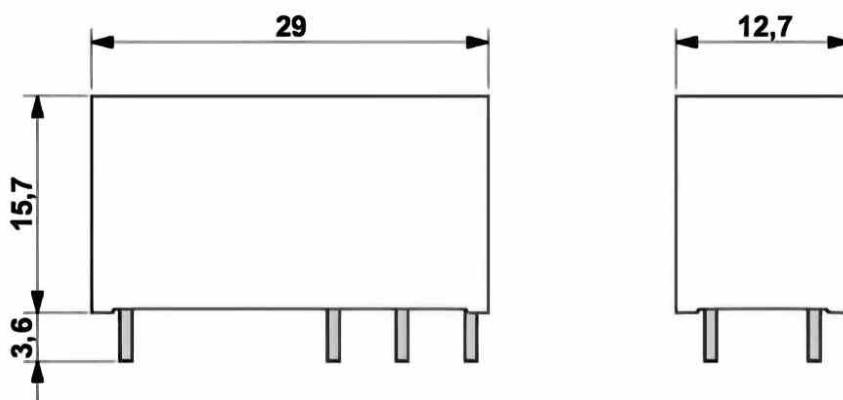
120V AC

230V AC



Pluggable miniature relay, with power contact, 2 PDT, coil voltage 230 V AC

### Dimensioned drawing



### Technical data

#### Dimensions

Width	12.7 mm
Height	29 mm
Depth	15.7 mm

#### Ambient conditions

Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

#### Coil side

Nominal input voltage $U_N$	230 V AC
Typical input current at $U_N$	3 mA (at 50 Hz)
	2.5 mA (At 60 Hz)
Typical response time	3 ms ... 12 ms (depending on phase relation)

#### Coil side

Typical release time range	2 ms ... 9 ms (depending on phase relation)
Coil resistance	32500 $\Omega$ $\pm$ 15 % (at 20 °C)



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## Contact side

Contact type	2 PDT
Contact material	AgNi
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	5 V (at 10 mA)
Maximum inrush current	12 A (20 ms)
Min. switching current	10 mA (At 5 V)
Limiting continuous current	8 A
Interrupting rating (ohmic load) max.	190 W (at 24 V DC)
	85 W (at 48 V DC)
	60 W (at 60 V DC)
	44 W (at 110 V DC)
	60 W (at 220 V DC)
	2000 VA (for 250 V AC)
Switching capacity in acc. with DIN VDE 0660/IEC 60947	2 A (at 24 V, DC13)
	0.2 A (at 250 V, DC13)
	3 A (at 24 V, AC15)
	3 A (at 120 V, AC15)
	3 A (at 250 V, AC15)

## General

Test voltage relay winding/relay contact	5 kV AC (50 Hz, 1 min.)
Test voltage relay contact/relay contact	2.5 kV AC (50 Hz, 1 min.)
Operating mode	100% operating factor
Mechanical service life	1 x 10 <sup>7</sup> cycles
Standards/regulations	IEC 60664
	EN 50178
	IEC 62103
Pollution degree	3
Surge voltage category	III
Mounting position	any
Assembly instructions	Can be aligned without spacing (> 70 °C ≥ 2.5 mm)



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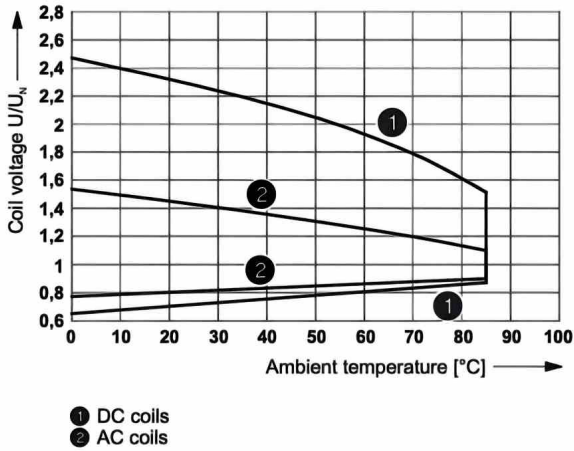


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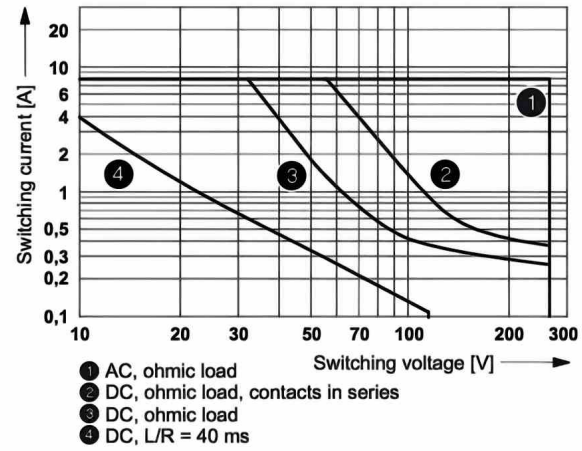


Drawings

Diagram

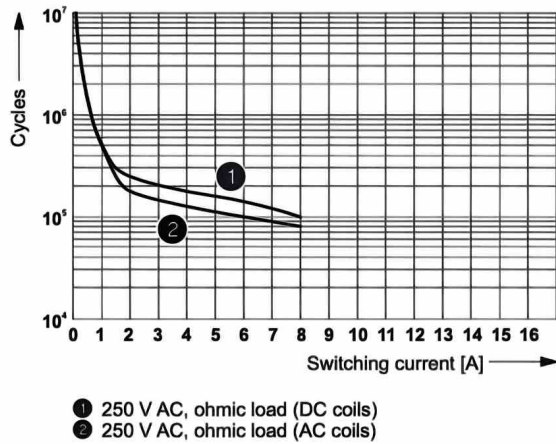


Diagram



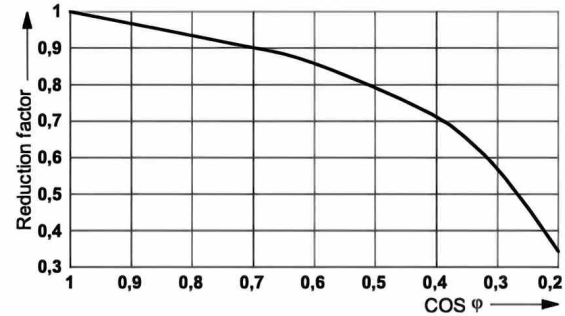
Operating voltage range

Diagram



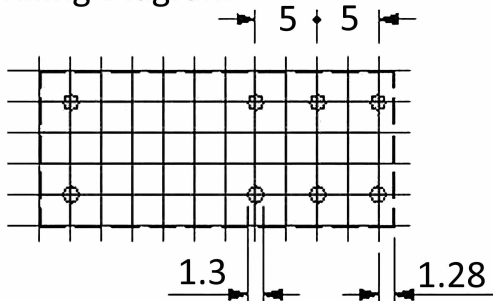
Interrupting rating

Diagram



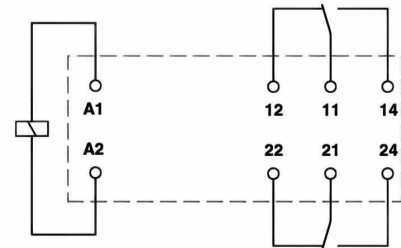
Electrical service life

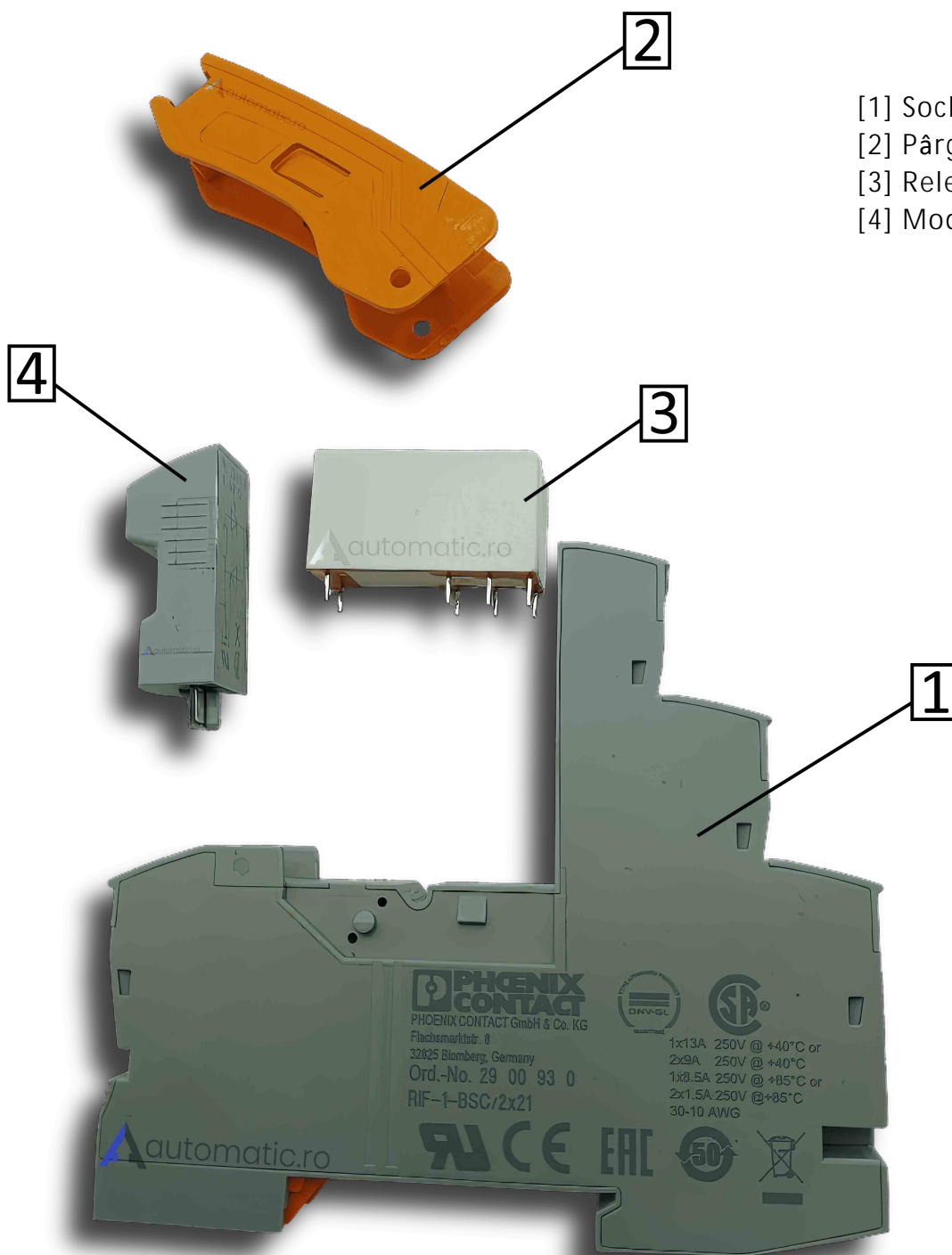
Drilling Diagram



Service life reduction factor with various cos phi

Circuit diagram





- [1] Soclu Releu Phoenix RIF-1-BSC2x21
- [2] Pârghie Phoenix RIF-RH-1
- [3] Releu Phoenix Contact MR 8A
- [4] Modul Phoenix RIF-LDP



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