

# PR - PCB relay



## the PR-PCB relay

PCB-Relay from the PR family are small relays. The version has forced guided contacts, 2 normally open contacts, 2 normally closed contacts.

In the industrial electronic as well as in the control industry they are used as fail-safe elements.

The forced guided contact version are often used in control systems of high safe applications.

By using best materials and because of the simple construction the highest fail-security was achieved.

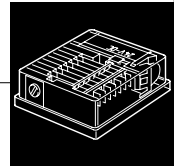
High precision in mechanical and electrical control guarantees the high and stable quality of the relays.

## features

- simple fail-safe construction
- high switching power
- high load current
- extraordinary life time
- high contact force
- security distance according to VDE and CSA
- minimal dimensions
- the forced guided contact version, SUVA approved.

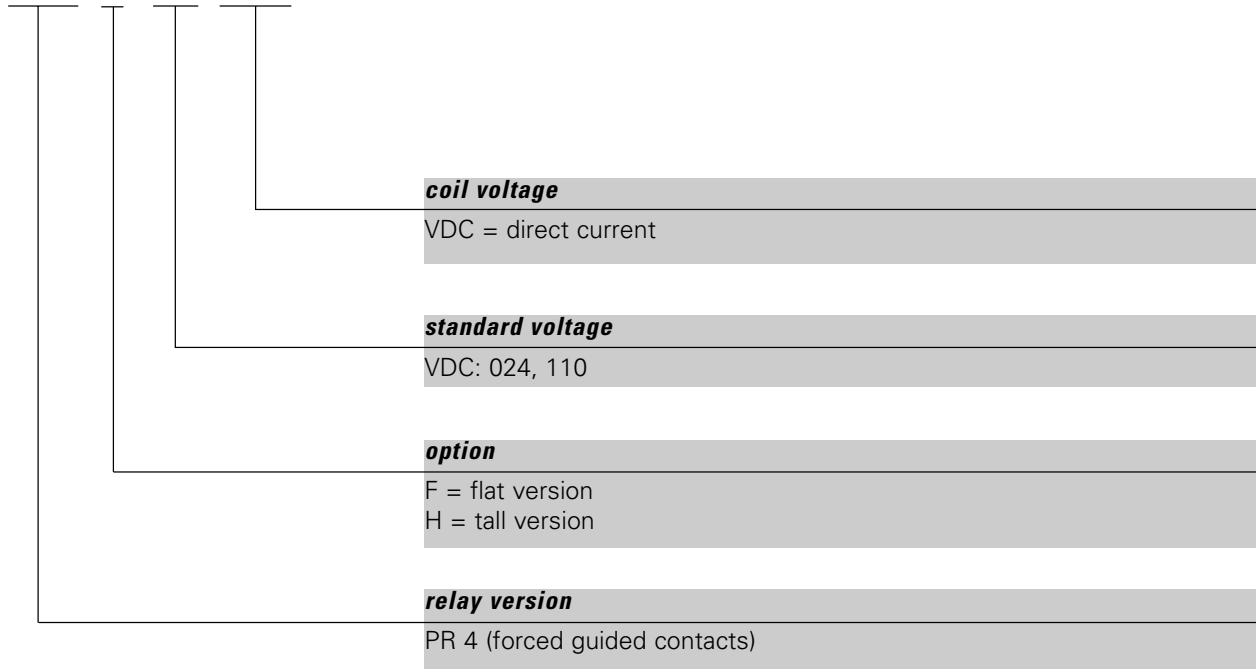
## applications

- devices of automation and control



**type number key**

**PR 4 ... 024 VDC**



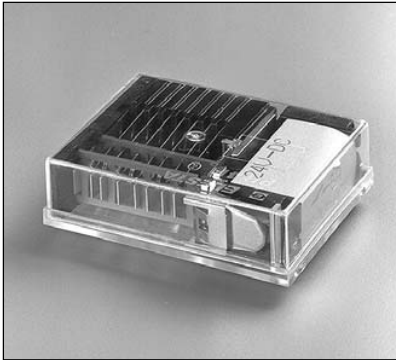
**order sample**

**PR 4 F 024 VDC**

- PCB-relay with forced guided contacts
- flat version
- coil voltage 24 VDC



# PR 4F - PCB relay



PCB-relay with forced guided contacts, flat version with 2 normally open contacts, and 2 normally closed contacts

## order numbers

serial version      PR 4F .. VDC

## contact specifications

(see data sheet for curves)

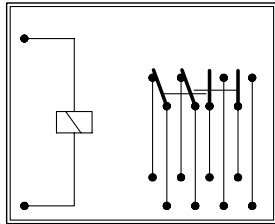
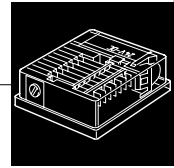
contact material	AgCuNi
contact type	single contact
nominal switching capacity	250 VAC 6 A AC1 1500 VA
electric life expectancy	app. 100'000 operations 250 VAC 6A AC1 (360 Schaltung/h)
inrush current	15 A for 200 ms
switching current range	50 mA to 6A
switching power range	0,3VA to 1500VA

## general data

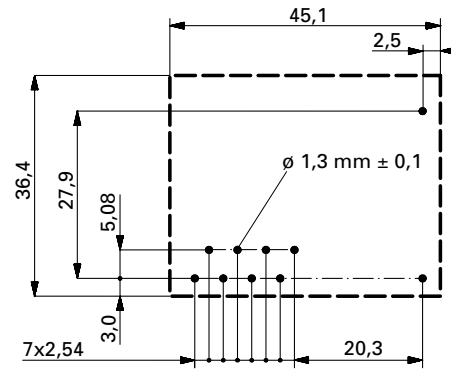
mechanic life expectancy	> 20 x 10 <sup>6</sup> operations
mechanical switching frequency	20 Hz
pull-in time	10 ms
release time	2,5 ms
bounce time normally open contact	6 ms
bounce time break contact	6 ms
test voltage, coil/contact	2'000 V <sub>eff</sub> / 50 Hz
test voltage, open contact	1'500 V <sub>eff</sub>
insulation resistance	2x10 <sup>11</sup> Ohm
weight	30 g
installation situation	any
ambient temperature	max. +60 °C

## tests, instructions

certificates      CSA, VDE, SUVA

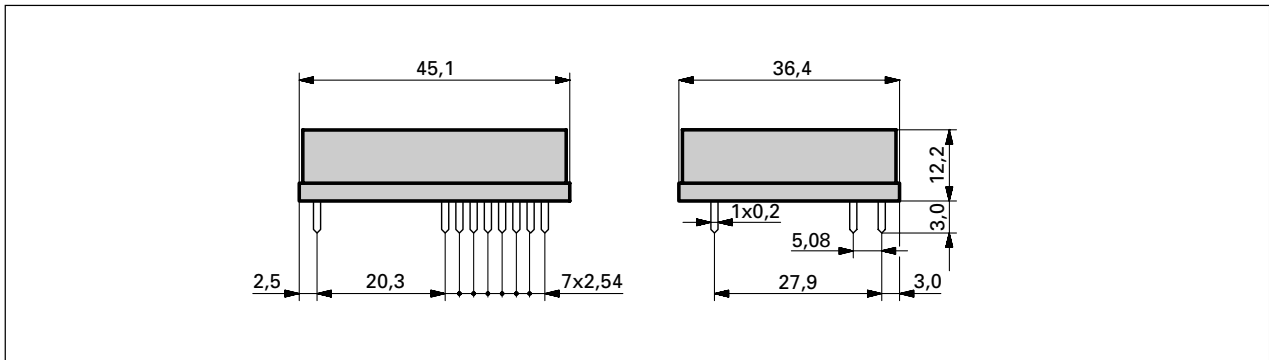


circuit diagram (view from the top)



drilling plan (view on solder side)

**dimensions**



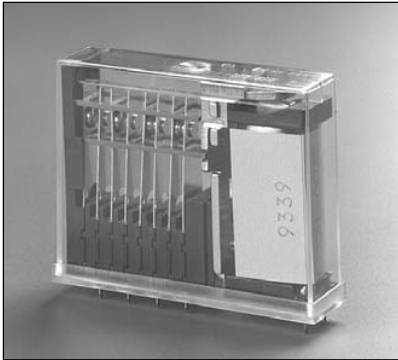
**coil specifications**

standard coils for direct current (other voltages on enquiry)

rated voltage VDC	pull-in voltage at 20 °C	reset voltage at 20 °C	nominal current mA	resistance Ohm at 20 °C	tolerance %
6	5,1	≥ 0,3	222	27	+/-10
12	10,2	≥ 0,6	109	110	+/-10
24	20,4	≥ 1,2	54,5	440	+/-10
48	40,8	≥ 2,4	30	1'600	+/-10
110	93,5	≥ 5,5	10,3	10'600	+/-13



# PR 4H - PCB relay



PCB-relay with forced guided contacts, tall version with 2 normally open contacts, and 2 normally closed contacts

## order numbers

serial version PR4H .. VDC

## contact specifications

(see data sheet for curves)

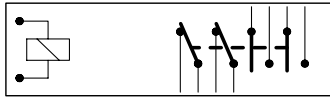
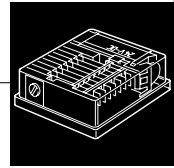
contact material	AgCuNi
contact type	single contact
nominal switching capacity	250 VAC 6 A AC1 1500 VA
electric life expectancy	app. 100'000 operations 250 VAC 6A AC1 (360 operations/h)
inrush current max.	15 A for 200 ms
switching current range	50 mA to 6A
switching power range	0,3VA to 1500VA

## general data

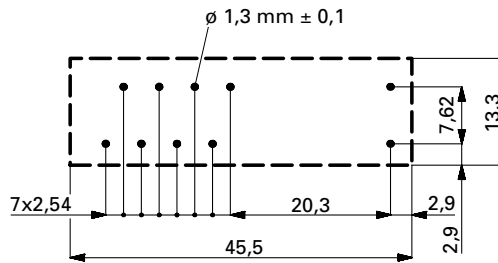
mechanic life expectancy	> 20 x 10 <sup>6</sup> operations
mechanical switching frequency	20 Hz
pull-in time	10 ms
release time	2,5 ms
bounce time normally open contact	6 ms
bounce time break contact	6 ms
test voltage, coil/contact	2'000 V <sub>eff</sub> / 50 Hz
test voltage, open contact	1'500 V <sub>eff</sub>
insulation resistance	2x10 <sup>11</sup> Ohm
weight	30 g
installation situation	any
ambient temperature	max. +60 °C

## tests, instructions

certificates	CSA, VDE, SUVA
--------------	----------------

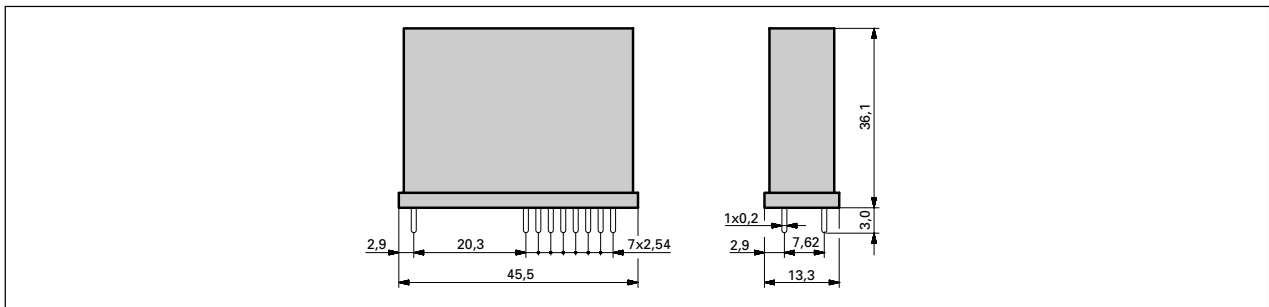


circuit diagram (view from the top)



drilling plan (view on solder side)

### dimensions

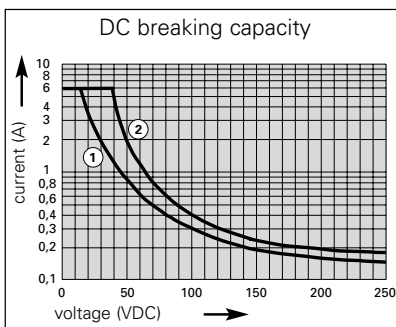


### coil specifications

standard coils for direct current (other voltages on enquiry)

rated voltage VDC	min. pull-in voltage at 20 °C	release voltage at 20 °C	nominal current mA	resistance Ohm at 20 °C	tolerance %
6	5,1	≥ 0,3	222	27	+/-10
12	10,2	≥ 0,6	109	110	+/-10
24	20,4	≥ 1,2	54,5	440	+/-10
48	40,8	≥ 2,4	30	1'600	+/-10
110	93,5	≥ 5,5	10,3	10'600	+/-13

### contact specifications (AgCuNi 6A single contact)



- 1) inductive load, L/R 40 ms
- 2) resistive load

data valid for relay

contact material	PR 4F PR 4H AgCuNi (AgCu1,8Ni0,12)
contact type	single contact
nominal switching capacity	250VAC 6A AC1 1500VA
electric life expectancy	app. 100'000 operations 250 VAC 6A AC1 (360 operations/h)
inrush current max.	15A for 200 ms
switching current range*	50mA to 6A
switching power range*	0,3VA(W) to 1500VA(W)
contact resistance	≤ 120mΩ in the new condition

\*typical values

