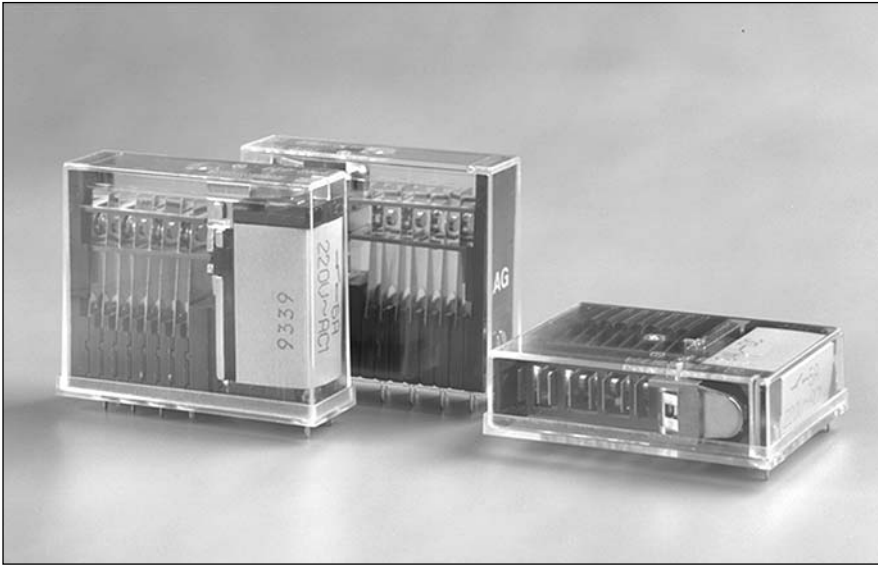


# PR - PCB relay



## 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-save 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.

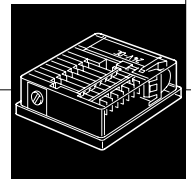
High precision in mechanical and electrical control guarantees the high and stable quality of the relays.

## features

- simple fail-save 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.

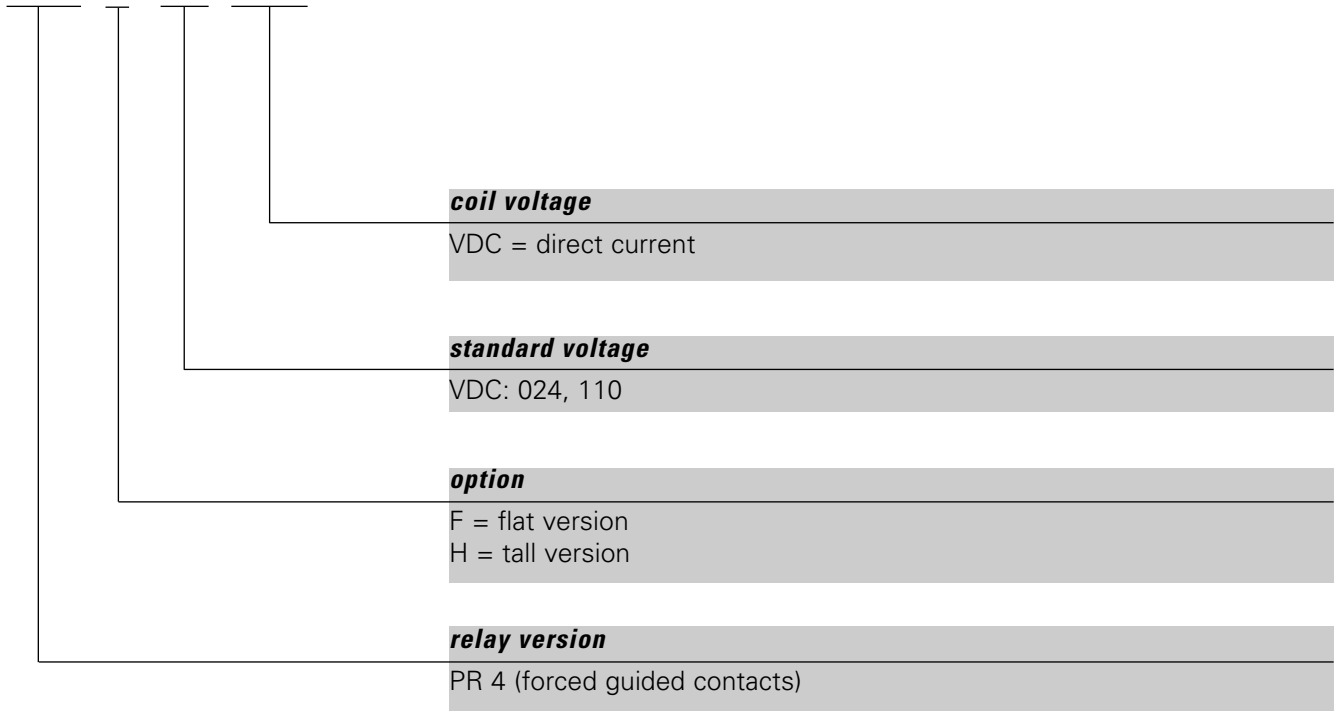
## applications

- devices of automation and control



**type number key**

**PR 4 ... 024 VDC**

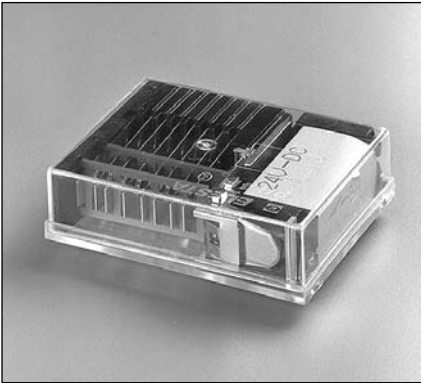


**order sample**

**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)

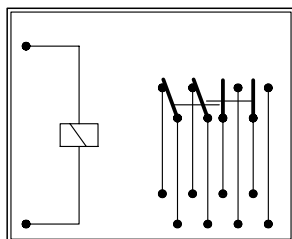
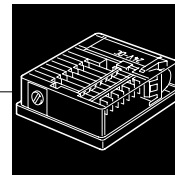
contact material	AgCuNi
contact type	single contact
nominal switching capacity	250 VAC 6 A AC1 1500 VA
electric life expectancy	app. 100'000 operations 250 VAC 6A AC1 (360 Schaltung/h)
inrush current	15 A for 200 ms
switching current range	50 mA to 6A
switching power range	0,3VA to 1500VA

## general data

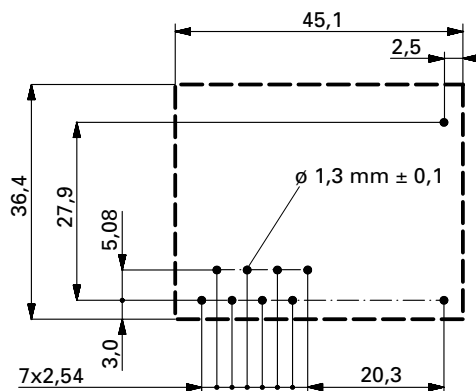
mechanic life expectancy	> 20 x 10 <sup>6</sup> operations
mechanical switching frequency	20 Hz
pull-in time	10 ms
release time	2,5 ms
bounce time normally open contact	6 ms
bounce time break contact	6 ms
test voltage, coil/contact	2'000 V <sub>eff</sub> / 50 Hz
test voltage, open contact	1'500 V <sub>eff</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

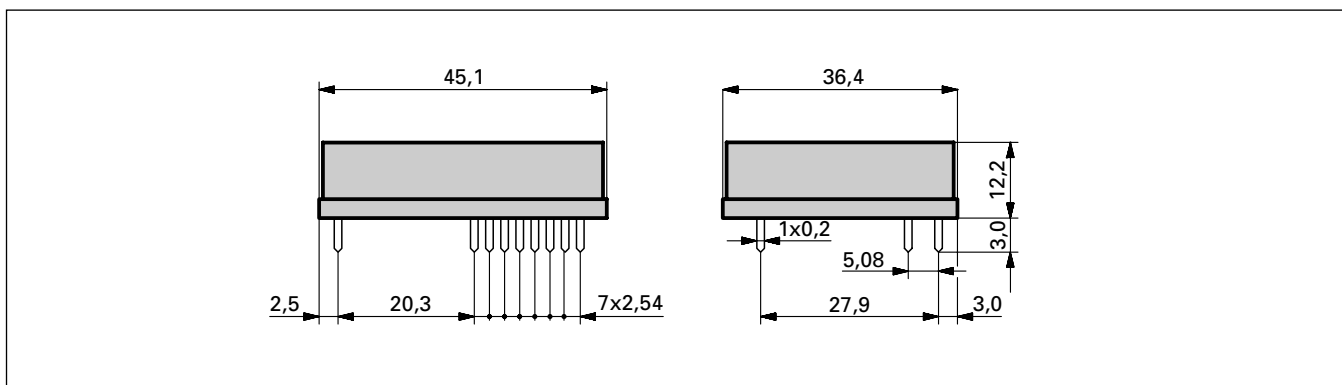


circuit diagram (view from the top)



drilling plan (view on solder side)

### dimensions

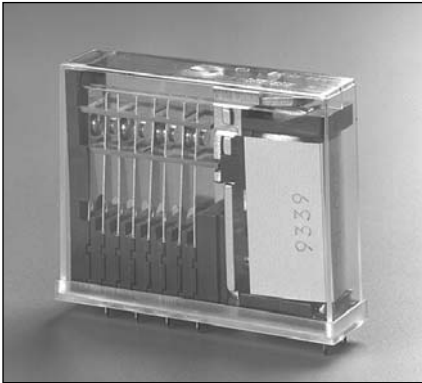


### coil specifications

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)

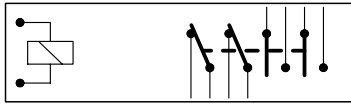
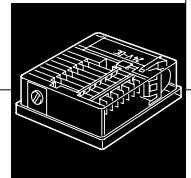
contact material	AgCuNi
contact type	single contact
nominal switching capacity	250 VAC 6 A AC1 1500 VA
electric life expectancy	app. 100'000 operations 250 VAC 6A AC1 (360 operations/h)
inrush current max.	15 A for 200 ms
switching current range	50 mA to 6A
switching power range	0,3VA to 1500VA

## general data

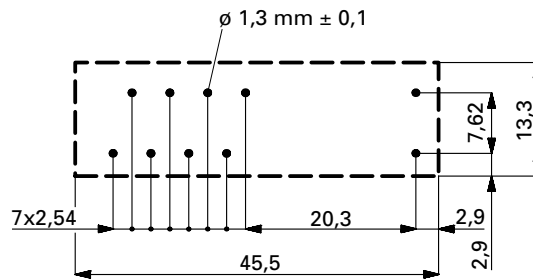
mechanic life expectancy	> 20 x 10 <sup>6</sup> operations
mechanical switching frequency	20 Hz
pull-in time	10 ms
release time	2,5 ms
bounce time normally open contact	6 ms
bounce time break contact	6 ms
test voltage, coil/contact	2'000 V <sub>eff</sub> / 50 Hz
test voltage, open contact	1'500 V <sub>eff</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

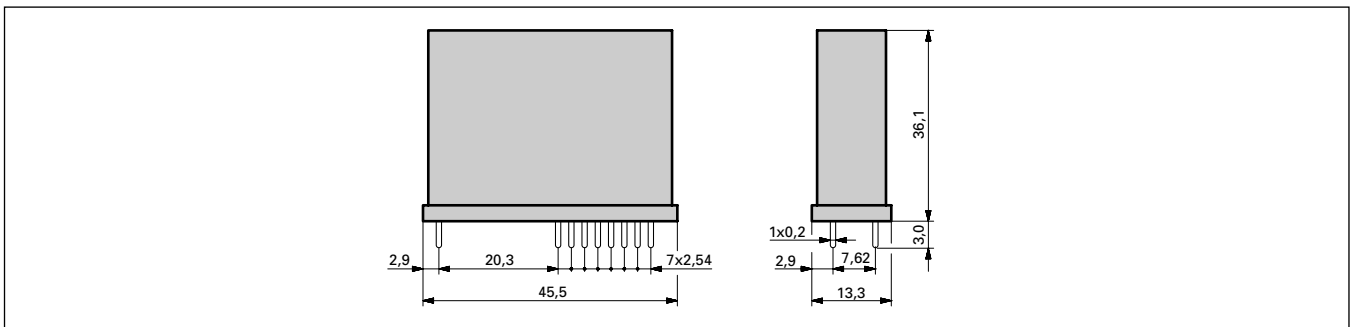


circuit diagram (view from the top)



drilling plan (view on solder side)

### dimensions

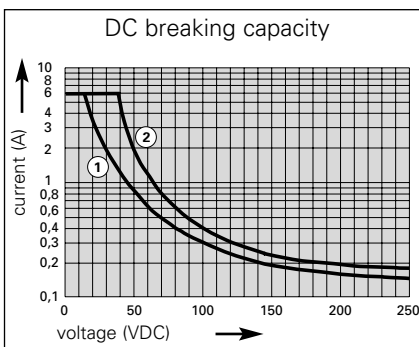


### coil specifications

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)



data valid for relay

contact material  
contact type  
nominal switching capacity  
electric life expectancy

inrush current max.  
switching current range\*

switching power range\*  
contact resistance  
\*typical values

PR 4F PR 4H
AgCuNi (AgCu1,8Ni0,12)
single contact
250VAC 6A AC1 1500VA
app. 100'000 operations 250 VAC 6A AC1 (360 operations/h)
15A for 200 ms
50mA to 6A
0,3VA(W) to 1500VA(W)
≤ 120mΩ in the new condition

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



**Kühn Controls AG**

**Notes:**

You want more information about this product, please call us: tel: +49 (0)7082-940000 or send us a fax: +49 (0)7082-940001, or email: [sales@kuehn-controls.de](mailto:sales@kuehn-controls.de) or visit our Website: [www.kuehn-controls.de](http://www.kuehn-controls.de)