

# Miniature PCB Relay PE bistable

1pole 5 A, polarized bistable version



## Features

- 1 C/O contact
- Cadmium-free contacts
- 4 kV coil-contact
- Insulation according to IEC 255
- Ambient temperature 70 °C
- Low height 10.0 mm
- New: Sensitive version with 200 mW coil available

## Applications

Room thermostats, electricity meters, domotic devices and white goods, battery powered controls

F0221-A



Technical data of approved types on request,  
200mW coil versions: approvals in process

## Contact data

Configuration	1 C/O contact
Type of contact	single contact
Rated current	5 A
Rated voltage / max.breaking voltage AC	250 Vac / 440 Vac
Maximum breaking capacity AC	1250 VA
Contact material	AgNi 90/10

## Contact ratings

Type	Load	Operations	Standard
PE 014	5A, 250 Vac, on the C/O contact	10 <sup>5</sup>	VDE 0435

## Coil data

Nominal voltage	2.2...48 Vdc
Nominal coil power	typ. 360 mW / 200 mW
Minimum energization time	20 ms
Information on reduced pulse duration with higher energization voltages on demand	
Max. energization time	1 min at <10% duty cycle
Reset voltage max.	120 % U <sub>nom</sub> at -40 °C

## Coil versions, bistable, 1 coil, 360 mW

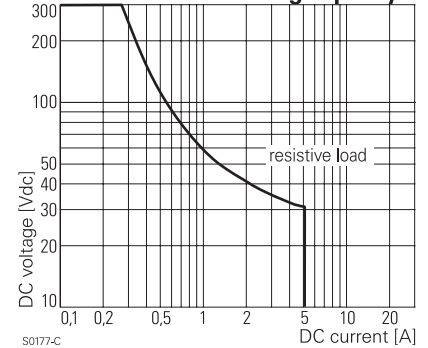
Coil code*	Nominal voltage Vdc	Pull-in voltage Vdc	Reset voltage Vdc	Coil resistance Ω	Coil current mA	
A02	C02	2.2	1.65	1.65	13±10%	163.0
A03	C03	3	2.25	2.25	25±10%	120.0
A05	C05	5	3.75	3.75	69±10%	72.0
A06	C06	6	4.5	4.5	100±10%	60.0
A12	C12	12	9.0	9.0	400±10%	30.0
A24	C24	24	18.0	18.0	1600±10%	15.0

All figures are given for coil without preenergization, at ambient temperature +20°C

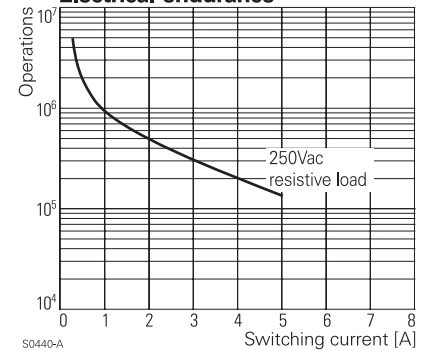
\* Coil codes A.. and C.. for 360 mW, F.. and H.. for 200 mW have opposite polarity; refer to coil operation table

Other coil voltages on request

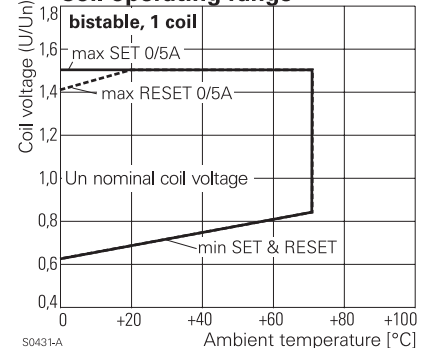
## Max. DC load breaking capacity



## Electrical endurance



## Coil operating range



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## Coil versions, bistable, 1 coil, 200 mW

Coil code*	Nominal voltage Vdc	Pull-in voltage Vdc	Reset voltage Vdc	Coil resistance $\Omega$	Coil current mA	
F02	H02	2.2	1.65	1.65	22±10%	100.0
F03	H03	3	2.25	2.25	41±10%	73.3
F05	H05	5	3.75	3.75	125±10%	40.0
F06	H06	6	4.50	4.50	180±10%	33.3
F12	H12	12	9.00	9.00	650±10%	18.3
F24	H24	24	18.00	18.00	2.780±10%	8.8

All figures are given for coil without preenergization, at ambient temperature +20°C

\* Coil codes A.. and C.. for 360 mW, F.. and H.. for 200 mW have opposite polarity; refer to coil operation table

Other coil voltages on request

## Coils - operation

version	A.. / F..		C.. / H..	
coil terminals	A1	A2	A1	A2
pull-in	+	-	-	+
reset	-	+	+	-

Contact position not defined at delivery

## Insulation

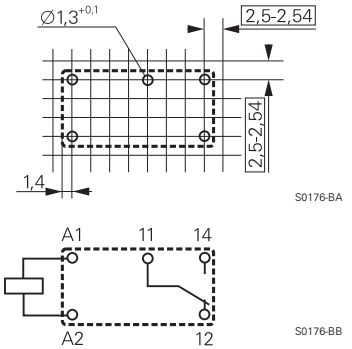
Dielectric strength	coil-contacts	4000 V <sub>rms</sub>
	open contact circuit	1000 V <sub>rms</sub>
Clearance / creepage	≥3.2 / 4 mm	
Insulation to IEC 60664		
Voltage rating	250 V	
Pollution degree	3	
Overtoltage category	III	
Tracking resistance of relay base	CTI 250	

## Other data

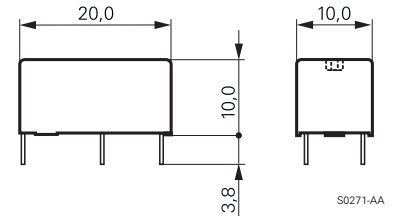
Flammability class according to UL 94	V-0
Ambient temperature	-40...+70 °C
Mechanical life	5x10 <sup>6</sup> operations
Max. switching rate at rated- / minimum load	6 min <sup>-1</sup> / 1200 min <sup>-1</sup>
Shock resistance (destruction)	>100 g
Category of protection (IEC 61810)	RT II - flux proof (RT III - wash tight, on request)
Relay weight	5 g
Packaging unit	25 / 500 pcs.

## PCB layout / terminal assignment

View on solder pins  
Dimensions in mm



## Dimensions



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## Product key

Type	<b>P E</b>	<b>0</b>	<b>1</b>	<b>4</b>			
Version	<b>0</b> flux proof *)						
Contacts	<b>1</b> 1 C/O contact						
Contact material	<b>4</b> AgNi 90/10						
Coil	Coil code: please refer to coil versions table						

\*) washable version on request

Product key	Version	Contacts	Cont. material	Coil	Coil	Part number
PE014F02	flux proof	1 C/O contact	AgNi 90/10	bistable	2.2 Vdc	9-1415389-1
PE014F03				1-coil	3 Vdc	0-1415390-1
PE014F05				polarity F	5 Vdc	1-1415390-1
PE014F06				200mW	6 Vdc	2-1415390-1
PE014F12					12 Vdc	3-1415390-1
PE014F24					24 Vdc	5-1415390-1
PE014H02				bistable	2.2 Vdc	7-1415390-1
PE014H03				1-coil	3 Vdc	8-1415390-1
PE014H05				polarity H	5 Vdc	9-1415390-1
PE014H06				200mW	6 Vdc	0-1415391-1
PE014H12					12 Vdc	1-1415391-1
PE014H24					24 Vdc	2-1415391-1