

## Miniature PCB Relay PE bistable

- Polarized bistable version
- 1 pole 5 A, 1 form C (CO) or 6A, 1 form A (NO) contact
- Sensitive version with 200mW coil
- Ambient temperature 70°C
- Low height 10.0mm
- Plastic materials according to IEC 60335-1 (domestic appliances)

### Typical applications

Room thermostats, electricity meters, home automation, white goods, battery powered controls.



### Approvals

VDE Cert. No. 40011901 (for AgNi90/10 contacts only), UL E214025

Technical data of approved types on request.



### Contact Data

Contact arrangement	1 form C (CO) or 1 form A (NO)
Rated voltage	250VAC
Max. switching voltage	400VAC
Rated current	5A (CO - types) 6A (NO - AgNi - types)
Breaking capacity max.	1250VA (CO - types) 1500VA (NO AgNi - types)
Contact material	AgNi 90/10, AgSnO <sub>2</sub> AgNi 90/10 HTV (gold plated)
Frequency of operation, with/without load	360/72000 ops/h
Set/reset time	typ. 8/8ms
Bounce time, form A/form B	4/7ms

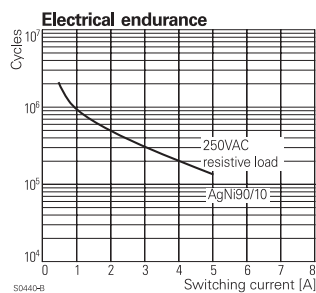
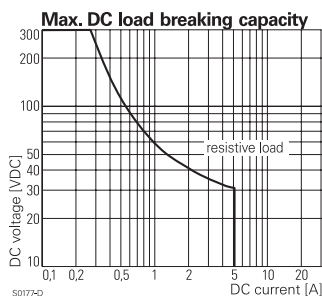
### Contact ratings

Type	Contact	Load	Cycles
<b>IEC 61810</b>			
PE014	C (CO)	5A, 250VAC, cosφ=1, 85°C	100x10 <sup>3</sup>
PE014	A (NO)	5A, 30VDC, 0 ms, 85°C	100x10 <sup>3</sup>
PE034	NO	6A, 250VAC cosφ=1, 70°C	20x10 <sup>3</sup>

### UL61810-1 (UL 508)

PE013	C (CO)	5A, 240VAC, resistive, 85°C	30x10 <sup>3</sup>
PE014	NO (of CO) B300		6.000
PE514	NO (of CO) R300		6.000
PE514	C (CO)	5A, 250VAC, general purpose, 85°C	6.000
PE033	N (NO)	5A, 240VAC, resistive, 85°C	50x10 <sup>3</sup>
PE014	C/A/B	5A, 250VAC, resistive, 85°C	100x10 <sup>3</sup>
PE034	A (NO)	6A, 250VAC, resistive, 70°C	100x10 <sup>3</sup>

Mechanical endurance >5x10<sup>6</sup> operations.



### Coil Data

Magnetic system	bistable, polarized
Coil voltage range	2.2 to 48VDC
Operative range, IEC 61810	2
Reset voltage max., % of rated coil voltage	120% at -40°C
Min./Max. energization duration	20ms <sup>1)</sup> /1min at <10% duty factor

1) Information on reduced pulse duration with higher energization voltages on demand.

### Coil versions, bistable 1 coil

Coil code <sup>2)</sup>	Rated voltage VDC	Set voltage VDC	Reset voltage VDC	Coil resistance Ω±10%	Rated coil power mW
F02 H02	2.2	1.65	1.65	22	220
F03 H03	3	2.25	2.25	41	220
F05 H05	5	3.75	3.75	125	200
F06 H06	6	4.5	4.5	180	200
F12 H12	12	9.0	9.0	650	222
F24 H24	24	18.0	18.0	2750	209

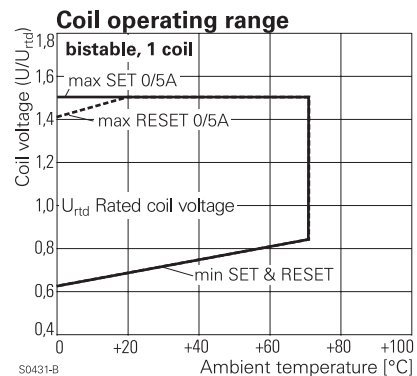
<sup>2)</sup> Coil codes F.. and H.. have opposite polarity; refer to coil operation table.

All figures are given for coil without pre-energization, at ambient temperature +23°C. Other coil voltages on request.

### Coils - operation

Version	F..	H..
Coil terminals	A1 A2	A1 A2
Operate	+ -	- +
Reset	- +	+ -

Contact position not defined at delivery



## Miniature PCB Relay PE bistable (Continued)

### Insulation Data

Initial dielectric strength	
between open contacts	1000V <sub>rms</sub>
between contact and coil	4000V <sub>rms</sub>
Initial insulation resistance	
open contact circuit	>10x10 <sup>9</sup> Ω
coil-contact circuit	>10x10 <sup>9</sup> Ω
Clearance/creepage	
between contact and coil	≥3.2/4mm
Material group of insulation parts	IIIa
Tracking index of relay base	PTI250V

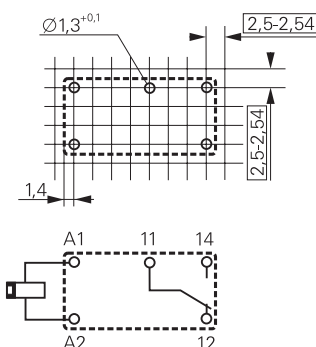
### Other Data

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content	refer to the Product Compliance Support Center at <a href="http://www.te.com/customer-support/rohssupportcenter">www.te.com/customer-support/rohssupportcenter</a>
Resistance to heat and fire	according EN60335, par.30
Ambient temperature	-40 to 85°C 70°C at 100% duty factor
Category of environmental protection	IEC 61810 RTII - flux proof RTIII - wash tight on request
Shock resistance (destructive)	>100g
Shock resistance (functional/ 11ms), form A/form B	>15/5g
Terminal type	PCB-THT
Resistance to soldering heat THT	IEC 60068-2-20 260°C/10s (flux proof version) 260°C/5s (wash tight version)
Packaging/unit	tube/25 pcs., box/500 pcs.

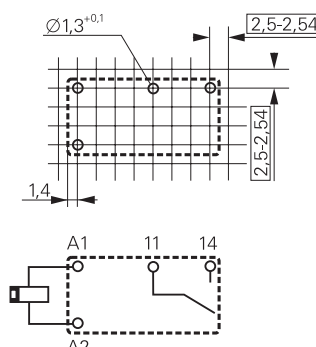
### PCB Layout / terminal assignment

Bottom view on solder pins

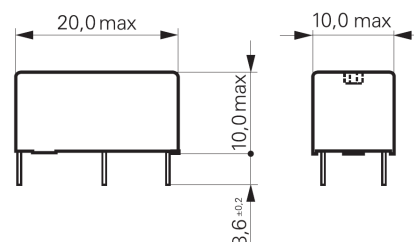
1 form C (CO) version



1 form A (NO) version



### Dimensions



### Product code structure

Typical product code **PE 0 1 4 F12**

Type	PE Miniature PCB Relay PE bistable				
Version	0 Flux proof		5 Wash tight (on request)		
Contact configuration	1 1 form C (CO) contact		3 1 form A (NO) contact		
Contact material	4 AgNi 90/10		3 AgSnO <sub>2</sub>		5 AgNi 90/10 HTV (gold plated)
Coil	Coil code: please refer to coil versions table				

Product code	Version	Contacts	Contact material	Coil	Part number
PE514F03	wash tight	1 form C 1 CO contact	AgNi 90/10	bistable polarity F	2-1415539-0
PE014F02	flux proof				9-1415389-1
PE014F03					1415390-1
PE014F05					1-1415390-1
PE014F06					2-1415390-1
PE014F12					3-1415390-1
PE014F24				5-1415390-1	
PE014H02				bistable polarity H	7-1415390-1
PE014H03					8-1415390-1
PE014H05					9-1415390-1
PE014H06					1415391-1
PE014H12					1-1415391-1
PE014H24		2-1415391-1			
PE015F05		1 form C	AgNi 90/10 HTV	bistable polarity F	3-1415542-4
PE034F09		1formA	AgNi 90/10		1415543-7
PE034F12		1 NO contact			1415544-4

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