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$_2$
	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
IEC 61810			
PE014	C (CO)	5A, 250VAC, cosφ=1, 85°C	100x10³
PE014	A (NO)	5A, 30VDC, 0 ms, 85°C	100x10³
PE034	NO	6A, 250VAC cosφ=1, 70°C	20x10³
UL 508			
PE013	C (CO)	5A, 240VAC, resistive, 85°C	30x10³
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	50x10³
PE014	C/A/B	5A, 250VAC, resistive, 85°C	100x10³
PE034	A (NO)	6A, 250VAC, resistive, 70°C	100x10³
Mechanical endurance		>5x10⁶ operations.	

Max. DC load breaking capacity

Electrical endurance
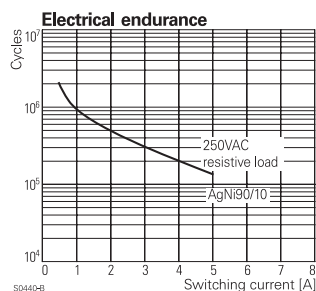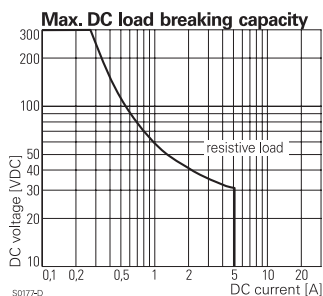
Coil Data

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[1]/1min at <10% duty factor

1) Information on reduced pulse duration with higher energization voltages on demand.
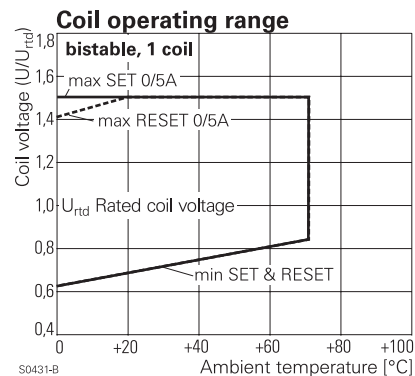
Coil versions, bistable 1 coil

Coil code[2]		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

2) 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				

Coil operating range

Catalog and product specification according to IEC 61810-1 and to be used only together with the 'Definitions' section.

Miniature PCB Relay PE bistable (Continued)

Insulation Data

Initial dielectric strength

between open contacts	1000V$_{rms}$
between contact and coil	4000V$_{rms}$

Initial insulation resistance

open contact circuit	>10x10^{9}Ω
coil-contact circuit	>10x10^{9}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
www.te.com/customersupport/rohssupportcenter

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

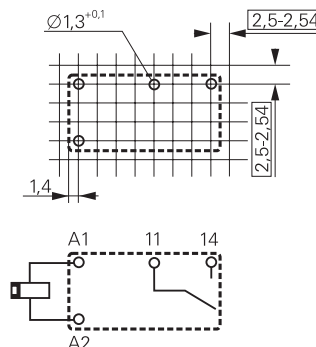|	
IEC 60068-2-20	260°C/10s (flux proof version)
	260°C/5s (wash tight version)
Packaging/unit	tube/25 pcs., box/500 pcs.

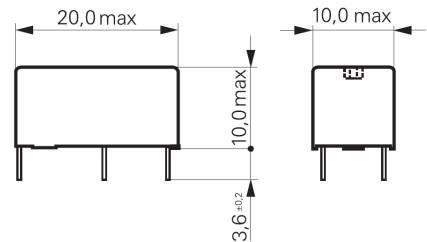### PCB Layout / terminal assignment

Bottom view on solder pins

1 form C (CO) version
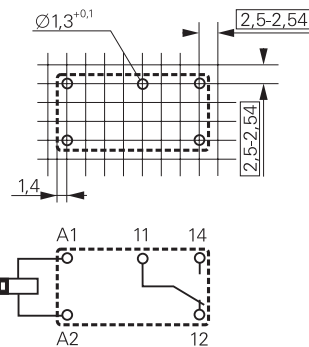
1 form A (NO) version

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$_2$	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			bistable	2-1415539-0
PE014F02	flux proof	1 form C	AgNi 90/10	polarity F	9-1415389-1
PE014F03		1 CO contact			1415390-1
PE014F05					1-1415390-1
PE014F06					2-1415390-1
PE014F12					3-1415390-1
PE014F24					5-1415390-1
PE014H02				bistable	7-1415390-1
PE014H03				polarity H	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	3-1415542-4
PE034F09		1formA	AgNi 90/10	polarity F	1415543-7
PE034F12		1 NO contact			1415544-4

2

Catalog and product specification according
to IEC 61810-1 and to be used only together
with the 'Definitions' section.

Catalog and product data is subject to the
terms of the disclaimer and all chapters of
the 'Definitions' section, available at
http://relays.te.com/definitions

Catalog product data, 'Definitions' section,
application notes and all specifications are
subject to change.