

Miniature Power PCB Relay PB

- 1pole 10 A, 1 CO or 1 NO contact
- Environmentally-friendly cadmium-free contacts
- Class F coil system standard
- Compact and simple design gives high process security
- Versions PB1 and PB5: Product in accordance to IEC60335-1 (PB3 on request)
- RoHS compliant (Directive 2002/95/EC) as per product date code 0346



F0224-A

Applications

White goods, small home appliances, heating temperature controllers

Approvals

VDE REG.-Nr. 121560, c RU us E214025
Technical data of approved types on request

Contact data

Contact configuration	1 CO or 1 NO contact
Contact set	single contact
Type of interruption	micro-disconnection
Rated current	10 A
Rated voltage / max.switching voltage AC	240/400 VAC
Maximum breaking capacity AC	2500 VA
Limiting making capacity, max 4 s, duty factor 10%	15 A
Contact material	AgNi 90/10, AgSnO ₂
Mechanical endurance	5x10 ⁶ cycles
Rated frequency of operation with / without load	6/600 min ⁻¹

Contact ratings

Type	Load	Cycles
AgNi NO	10 A, 250 VAC, 85°C, resistive, 50Hz, EN61810	20x10 ³
AgSnO NO	10 A, 250 VAC, 85°C, resistive, 50Hz, EN61810	40x10 ³
AgNi NO	6 A, 250 VAC, 85°C, resistive, 50Hz, EN61810	100x10 ³
AgNi CO	10 A/3 A, 250 VAC, 85°C, resistive, 50Hz, EN61810	30x10 ³
AgNi CO	(NO tested), 10 A, 250 VAC, 85°C, resistive, 50Hz, EN61810	30x10 ³
AgNi CO	10 A/10 A, 250 VAC, 85°C, resistive, 50Hz, EN61810	1x10 ³

Coil data

	PB standard	PB 500 mW
Rated coil voltage range DC coil	5...48 VDC	5...24 VDC
Coil power DC coil	typ. 360 mW	typ. 500 mW
Operative range		2
Non-release voltage, % of rated coil voltage		50%

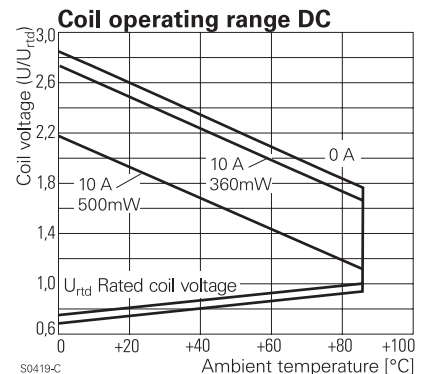
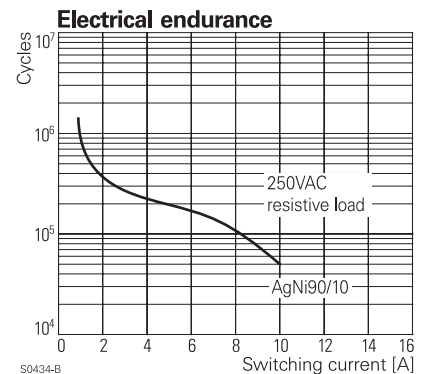
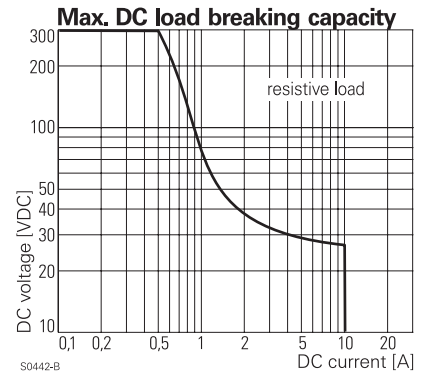
Coil versions, DC-coil

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ohm	Rated coil power mW
Coil versions, DC-coil, 360mW					
005	5	3.75	0.5	70±10%	357
006	6	4.5	0.6	100±10%	360
009	9	6.75	0.9	225±10%	360
012	12	9.0	1.2	400±10%	360
018	18	13.5	1.8	900±10%	360
022	22	16.5	2.2	1344±10%	360
024	24	18.0	2.4	1600±10%	360
048	48	36	4.8	6400±10%	360
Coil versions, DC-coil, 500mW					
005	5	3.75	0.5	48±10%	521
006	6	4.5	0.6	69±10%	522
012	12	9	1.2	274±10%	526
024	24	18	2.4	1097±10%	525

Coil versions, DC-coil, 500mW

005	5	3.75	0.5	48±10%	521
006	6	4.5	0.6	69±10%	522
012	12	9	1.2	274±10%	526
024	24	18	2.4	1097±10%	525

All figures are given for coil without preenergization, at ambient temperature +23°C
Other coil voltages on request

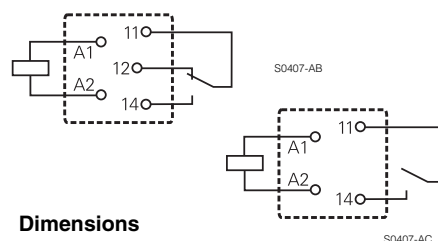
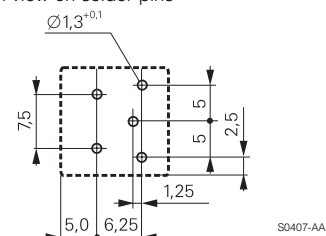


Miniature Power PCB Relay PB (Continued)

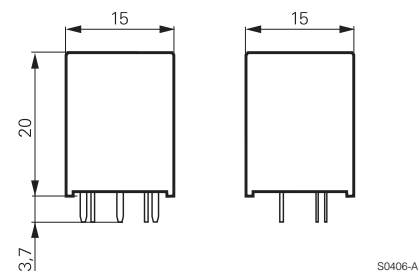
Insulation	PB1..	PB3..	PB5..
Dielectric strength coil-contact circuit		2500 V _{rms}	
open contact circuit		1000 V _{rms}	
Clearance / creepage coil-contact circuit		≥ 3/4 mm	
Material group of insulation parts		IIIa	
Tracking index of relay base	CTI 250	CTI 300	CTI 250
Insulation to IEC 60664-1			
Type of insulation coil-contact circuit		basic	
open contact circuit		functional	
Rated insulation voltage		250 V	
Pollution degree		3	
Rated voltage system		230/400 V	
Overvoltage category		III	

Other data	PB standard	PB 500 mW
RoHS - Directive 2002/95/EC	compliant as per product date code 0346	
Flammability class according to UL94	V-0	
For version PB1, PB5: GWFI to IEC 60695-2-12	≥ 850°C	
GWIT to IEC 60695-2-13	≥ 775°C	
Ambient temperature range	-40...85°C	
Operate- / release time	< 20 ms	
Bounce time NO / NC contact	< 15 ms	
Vibration resistance (function) NO / NC contact	>10/4g 30...400Hz	>10/8g 30...400Hz
Shock resistance (destruction)	100 g	
Category of protection	RTII - flux proof	
Mounting	pcb	
Resistance to soldering heat	270°C / 10s	
Relay weight	5.4 g	
Packaging unit	35/1050 pcs	

PCB layout / terminal assignment
Bottom view on solder pins



Dimensions



Product key

Type

Version

- | | |
|------------------------------------|------------------------------------|
| 1 standard version, CTI 250 | 3 high CTI version, CTI 300 |
| 5 500 mW version, CTI 250 | |

Contact configuration

- | | |
|-----------------------|-----------------------|
| 1 1 CO contact | 3 1 NO contact |
|-----------------------|-----------------------|

Contact material

- | | |
|-----------------------------|---------------------|
| 3 AgSnO ₂ | 4 AgNi 90/10 |
|-----------------------------|---------------------|

Coil

Coil code: please refer to coil versions table

Other types on request

Product key	Version	Contacts	Contact material	Coil	Part number
PB114005	standard CTI 250/class F	1 CO contact	AgNi 90/10	5 VDC	6-1415029-1
PB114006				6 VDC	7-1415029-1
PB114012				12 VDC	8-1415029-1
PB114024				24 VDC	9-1415029-1
PB134005	high CTI version CTI 300	1 NO contact		5 VDC	0-1415030-1
PB134006				6 VDC	1-1415030-1
PB134012				12 VDC	2-1415030-1
PB134024				24 VDC	3-1415030-1
PB314005	high CTI version CTI 300	1 CO contact		5 VDC	4-1415030-1
PB314006				6 VDC	5-1415030-1
PB314012				12 VDC	6-1415030-1
PB314024				24 VDC	7-1415030-1
PB334005		1 NO contact		5 VDC	8-1415030-1
PB334006				6 VDC	9-1415030-1
PB334012				12 VDC	0-1415031-1
PB334024				24 VDC	1-1415031-1