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**
- **Product in accordance to IEC60335-1**

F0224-C

Applications

White goods, small home appliances, heating temperature controllers

Approvals

VDE REG.-Nr. 121560, cULus 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 voltage / max. switching voltage AC	250 / 400 VAC
Rated current	10 A
Maximum breaking capacity AC	2500 VA
Limiting making capacity, max 4 s, duty factor 10%	15 A
Contact material	AgNi 90/10, $AgSnO_2$
Rated frequency of operation with / without load	6/600 min^{-1}
Operate- / release time	max 10 / 20 ms
Bounce time NO / NC contact	max 10 / 15 ms

Contact ratings

Type	Contact	Load	Ambient temp. [°C]	Cycles
IEC 61810				
PB114; PB113	NO/NC	10 A/3 A, 250 VAC, cosφ=1	85°C	$30x10^3$
PB114	NO of CO	10 A, 250 VAC, cosφ=1	85°C	$30x10^3$
PB134; PB133	NO	10 A, 250 VAC, cosφ=1	85°C	$20x10^3$
PB134	NO	6.5 A, 440 VAC, cosφ=1	85°C	$50x10^3$
PB634	NO	8.5 A, 250 VAC, cosφ=1	85°C	$100x10^3$
PB634	NO	10 A, 250 VAC, cosφ=1	85°C	$60x10^3$
UL 508				
PB1x4	NO	10 A, 250 VAC, cosφ=1	85°C	$20x10^3$

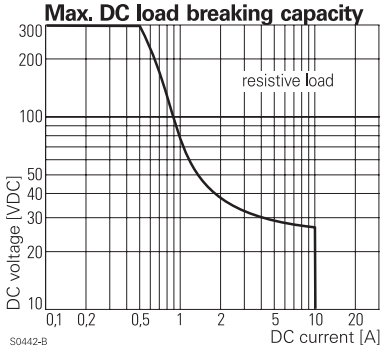
Coil data

	PB1..	PB5.., PB6..
Rated coil voltage range DC coil	5...48 VDC	5...24 VDC
Operative range to IEC 61810	2	

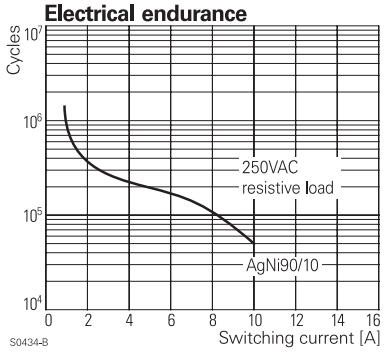
Coil versions, DC-coil

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

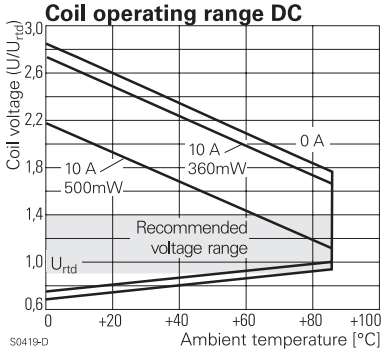
Max. DC load breaking capacity



Electrical endurance



Coil operating range DC



Datasheet Rev. IJ1
Issued 2009/10
www.tycoelectronics.com
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Dimensions are in mm unless otherwise specified and are shown for reference purposes only.

Product specification according to IEC 61810-1. Product data, technical parameters, test conditions and processing information only to be used together with the 'Definitions' section in the catalogue or at schrackrelays.com in the 'Schrack' section.

Specifications subject to change.

Miniature Power PCB Relay PB (Continued)

Coil versions, DC-coil, 500mW

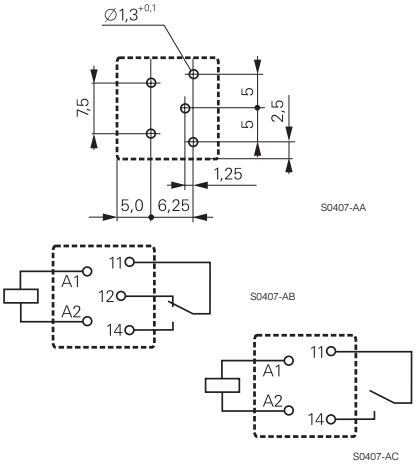
005	5	3. 75	0.5	48±10%	521
006	6	4.5	0.6	69±10%	522
012	12	9	1.2	274±10%	526
024	24	18	2.4	1097±10%	525

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

Insulation			
Dielectric strength coil-contact circuit		2500 V_{rms}	
open contact circuit		1000 V_{rms}	
Clearance / creepage coil-contact circuit	CO version	≥ 3/4 mm	
	NO version	≥ 4/5 mm	
Material group of insulation parts		IIIa	
Tracking index of relay base		PTI 250	
Insulation to IEC 61810-1			
Type of insulation coil-contact circuit		basic	
open contact circuit		micro disconnection	
Rated insulation voltage		250 V	
Pollution degree	3		2
Rated voltage system	240 V		230 / 400 V
Overvoltage category		III	

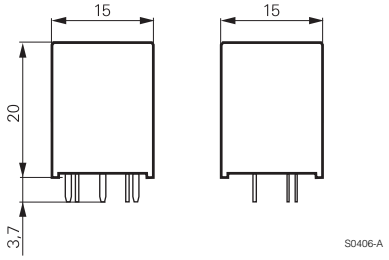
Other data	**PB1.., PB6..**	**PB5..**
Mechanical endurance	5x10^6 cycles	
Material		
RoHS - Directive 2002/95/EC	compliant as per product date code 0346	
Resistance to heat and fire, version PB1, PB5 according EN60335, par.30		
Environment		
Ambient temperature range	-40...85°C	
Vibration resistance (function) NO / NC cont.	>10 / 4g 30...400Hz	>10/6g 30...400Hz
Shock resistance (destruction)	100 g	
Category of protection	RTII - flux proof	
Procesing		
Mounting	pcb	
Resistance to soldering heat	270°C / 10s	
Relay weight	5.4 g	
Packaging unit	35/1050 pcs	

PCB layout[1] / terminal assignment
Bottom view on solder pins



[1] Layout note:
No openings (e.g. holes, slots, cutouts, unused pins, open through connections, etc.) allowed under the relay base. The relay base must be fully covered by the pcb, recommended minimum distance between the relay and the edge of the printed circuit board is 5 mm.
For more information, please contact our application support.

Dimensions



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Product key — Typical product key: **PB 1 1 4 012**

Type
PB Miniature Power PCB Relay PB

Version
1 standard version
5 500 mW version
6 high performance version (NO version only)

Contact configuration
1 1 CO contact (1 form C)
3 1 NO contact (1 form A)

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	1 CO contact	AgNi 90/10	5 VDC	6-1415029-1
PB114006	class F			6 VDC	7-1415029-1
PB114012				12 VDC	8-1415029-1
PB114024				24 VDC	9-1415029-1
PB134005		1 NO contact		5 VDC	1415030-1
PB134006				6 VDC	1-1415030-1
PB134012				12 VDC	2-1415030-1
PB134024				24 VDC	3-1415030-1
PB514012	500 mW	1 CO contact		12 VDC	2-1415538-5
PB514024	version			24 VDC	5-1415535-6
PB634005	high	1 NO contact		5 VDC	3-1415541-8
PB634006	performance			6 VDC	3-1415541-9
PB634012	version			12 VDC	4-1415541-1
PB634024				24 VDC	4-1415541-2

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