

Power PCB Relay U/UB

- 1 pole 7 A, mono or bistable
- 1 CO or 1 NO or 1 NC contact
- Bistable and DC-version
- Wash tight version
- Version for 10 A on request
- RoHS compliant (Directive 2002/95/EC) as per product date code 0402



Applications

Heating control, installation, battery powered equipment

Approvals

CE E 194065

Technical data of approved types on request

Contact data

Contact configuration	1 CO, 1 NO or 1 NC
Contact set	single contact
Type of interruption	micro disconnection
Rated current	standard and bistable: 7 A sensitive: 5 A
Rated voltage / max. switching voltage AC	240/400 V
Maximum breaking capacity AC	standard and bistable: 1750 VA sensitive: 1250 VA
Limiting making capacity, max 4 s, duty factor 10%	12 A
Contact material	AgNi 90/10
Mechanical endurance	20x10 ⁴ cycles
Rated frequency of operation with / without load	10/300 min ⁻¹

Contact ratings

Type	Load	Cycles
standard and bistable	7 A, 250 VAC, resistive	5x10 ⁴
standard	5 A, 250 VAC, resistive	1,5x10 ⁵
sensitive	5 A, 250 VAC, resistive	1x10 ⁵
bistable	5 A, 250 VAC, resistive	1x10 ⁵
standard and bistable	7 A, 24 VDC, resistive	5x10 ⁴
sensitive	5 A, 24 VDC, resistive	3x10 ⁴

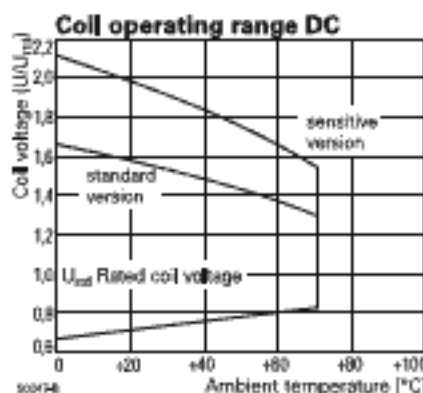
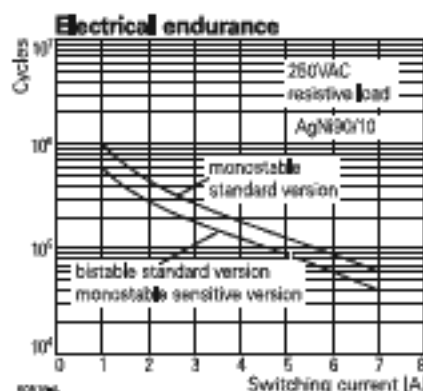
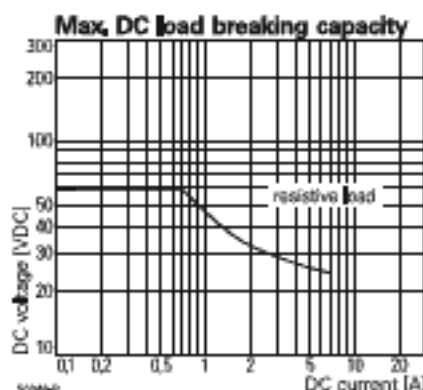
Coil data

	monostable		sensitive
Rated coil voltage range DC coil	6 ... 48 VDC		
Coil power DC coil	3.24 VDC	450 mW	330 mW
	48 VDC	610 mW	570 mW
Operative range	2		

Coil versions, DC-coil

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ohm	Rated coil power mW
standard coil					
003	6	4.2	0.6	80±10%	450
005	12	8.4	1.2	320±10%	450
007	24	16.8	2.4	1280±10%	450
008	48	33.6	4.8	3800±10%	606
sensitive coil					
103	6	4.4	0.6	110±10%	327
105	12	8.8	1.2	440±10%	327
107	24	17.5	2.4	1780±10%	324
108	48	35.0	4.8	4000±10%	576

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



Power PCB Relay U/UB (Continued)

Coil data		bistable	
Rated coil voltage range	6 ... 48 VDC		
Rated operate power	900...1300 mW / 20 ms		
Reset voltage min., % of rated coil voltage	25%		
Reset voltage max., % of rated coil voltage	45%		

Coil versions, bistable

Coil code	Rated voltage VDC	Operate voltage VDC	Reset voltage VDC	Coil resistance Ohm	Rated coil power mW
003	6	4.7	1.5	$33 \pm 10\%$	1091
005	12	9.4	3.0	$119 \pm 10\%$	1210
007	24	18.7	6.0	$475 \pm 10\%$	1213
008	48	37.4	12.0	$1750 \pm 10\%$	1317

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

Insulation

Dielectric strength coil-contact circuit	2000 V _{rms} version V23148-*0*** 4000 V _{rms} version V23148-*1***
open contact circuit	1000 V _{rms}
Clearance / creepage coil-contact circuit	$\geq 2.5 / 2.5$ mm version V23148-*0*** $\geq 3.5 / 3.5$ mm version V23148-*1***
Material group of insulation parts	\geq IIIa
Insulation to IEC 80864-1	
Type of insulation coil-contact circuit	basic
open contact circuit	functional
Rated insulation voltage	250 V
Pollution degree	2
Rated voltage system	230/400 V
Overvoltage category	II

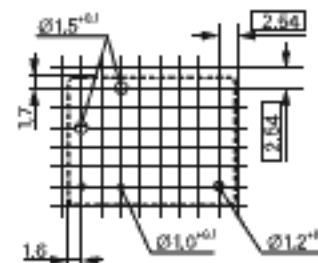
Other data

RoHS - Directive 2002/95/EC	compliant as per produc date code 0402
Flammability class according to UL94	V-0
Ambient temperature range	-25...+70°C
Operate- / release time	standard: 5/3 ms sensitive: 7/3 ms
Operate- / reset time	5/3 ms
Bounce time NO / NC contact	2/10 ms
Vibration resistance (function) NO / NC contact	10/10 g
Shock resistance (function) NO / NC contact	10/10 g
Category of protection	RT III - wash tight
Resistance to soldering heat wash-tight version	260°C / 5 s
Relay weight	9.5 g
Packaging unit	25 pcs

PCB layout / terminal assignment

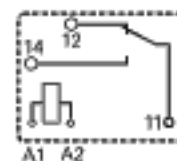
Bottom view on solder pins

Monostable and bistable 1 coil



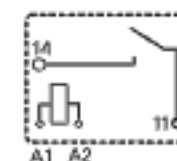
8028-A-A

CO contact



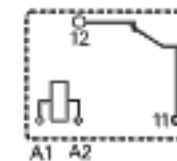
8028-A-B

NO contact



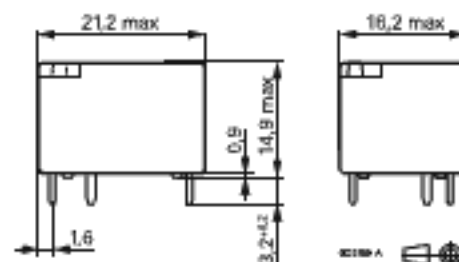
8028-A-C

NC contact



8028-A-C

Dimensions



8028-A

Power PCB Relay U/UB (Continued)

Product key

V 2 3 1 4 8 - - - - - 1 0 1

Type

Version

- A monostable (Miniature power relay U)
- B bistable (Miniature power relay UB, remanence version)

Dielectric strength coil-contact

- 0 2 kV_{rms} 1 4 kV_{rms}

Version

- 0 standard
- 1 sensitive
- 0 standard
- 0 standard

Coil

- 03 6 VDC
- 05 12 VDC
- 07 24 VDC
- 08 48 VDC

Contact configuration

- A 1 CO contact
- B 1 NO contact
- C 1 NC contact

Contact material

- 101 AgNi10

Other types on request

Product key	Version	Dielectric	Version	Configuration	Coil	Part number	
V23148-A0003-A101	monostable relay 'U' AgNi10	2000 V _{rms} contact-coil	standard	1 CO contact	6 VDC	0-1393203-4	
V23148-A0003-B101				1 NO contact		0-1393203-5	
V23148-A0005-A101				1 CO contact	12 VDC	0-1393203-8	
V23148-A0005-B101				1 NO contact		0-1393203-9	
V23148-A0007-A101				1 CO contact	24 VDC	1-1393203-1	
V23148-A0007-B101				1 NO contact		1-1393203-2	
V23148-A0008-A101				1 CO contact	48 VDC	1-1393203-4	
V23148-A0105-A101			sensitive	4000 V _{rms} contact-coil	standard	12 VDC	2-1393203-1
V23148-A0107-A101						24 VDC	2-1393203-4
V23148-A1005-A101						12 VDC	2-1393203-7
V23148-A1007-A101			sensitive	4000 V _{rms} contact-coil	standard	24 VDC	2-1393203-8
V23148-A1105-A101						12 VDC	2-1393203-9
V23148-A1107-A101						24 VDC	3-1393203-1
V23148-B0003-A101			bistable relay 'UB' AgNi10	2000 V _{rms} contact-coil	standard	6 VDC	0-1393204-4
V23148-B0005-A101	12 VDC	0-1393204-7					
V23148-B0007-A101	24 VDC	1-1393204-0					
V23148-B0008-A101	48 VDC	1-1393204-3					