

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

Applications

Heating control, installation, battery powered equipment



F0153-C

Approvals

UL E194065

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 voltage / max. switching voltage AC	250 / 400 V
Rated current	standard and bistable: 7 A sensitive: 5 A
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
Rated frequency of operation with / without load	10/300 min ⁻¹
Operate- / reset time	5/3 ms
Operate- / release time	standard: typ. 5/3 ms sensitive: typ. 7/3 ms
Bounce time NO / NC contact	typ. 2/10 ms

Contact ratings

Type	Contact	Load	Ambient temp. [°C]	Cycles
UL 508				
all	CO/NO/NC	7 A, 250 VAC, general purpose,	40°C	6.000

Coil data

	monostable	sensitive
Rated coil voltage range DC coil	6 ... 48 VDC	
Operative range to IEC 61810	2	

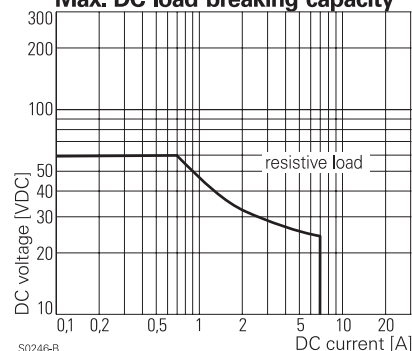
Coil versions, DC-coil

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ohm	Rated coil power mW
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

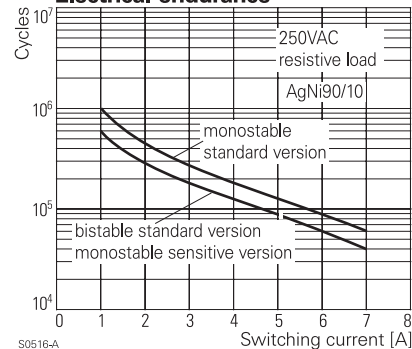
All figures are given for coil without preenergization, at ambient temperature +23°C

Other coil voltages on request

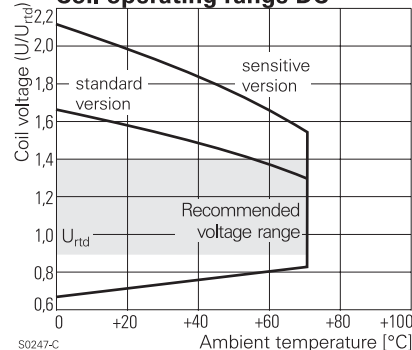
Max. DC load breaking capacity



Electrical endurance



Coil operating range DC



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 ± 10%	1091
005	12	9.4	3.0	119 ± 10%	1210
007	24	18.7	6.0	475 ± 10%	1213
008	48	37.4	12.0	1750 ± 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***
open contact circuit	4000 V _{rms} version V23148-*1***
Clearance / creepage coil-contact circuit	≥ 2.5 / 2.5 mm version V23148-*0***
	≥ 3.5 / 3.5 mm version V23148-*1***
Material group of insulation parts	≥ IIIa
Insulation to IEC 61810-1	
Type of insulation coil-contact circuit	basic
open contact circuit	micro disconnection
Rated insulation voltage	250 V
Pollution degree	2
Rated voltage system	230 / 400 V
Overvoltage category	II

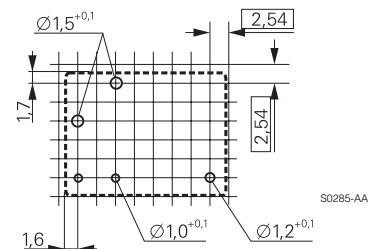
Other data

Mechanical endurance	20x10 ⁶ cycles
Material	
RoHS - Directive 2002/95/EC	compliant as per produc date code 0402
Environment	
Ambient temperature range	-25...+70°C
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
Processing	
Resistance to soldering heat wash-tight version	260°C / 5 s
Relay weight	9.5 g
Packaging unit	25 pcs

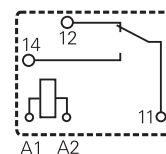
PCB layout / terminal assignment

Bottom view on solder pins

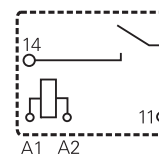
Monostable and bistable 1 coil



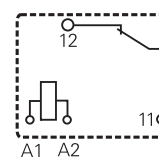
CO contact



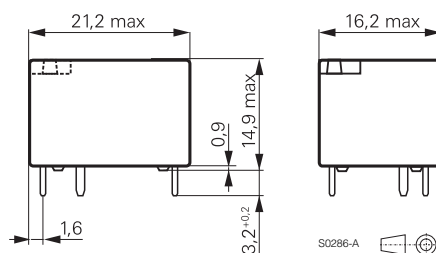
NO contact



NC contact



Dimensions



Power PCB Relay U/UB (Continued)

Product key	Typical product key	V23148	-A	0	007	-A	1	01
Type	V23148 Power PCB Relay U/UB							
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 monostable standard 0 bistable standard 1 sensitive							
Coil	03 6 VDC 07 24 VDC 05 12 VDC 08 48 VDC							
Contact configuration	A 1 CO contact (1 form C) C 1 NC contact (1 form B) B 1 NO contact (1 form A)							
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	1393203-4
V23148-A0003-B101				1 NO contact		1393203-5
V23148-A0005-A101				1 CO contact	12 VDC	1393203-8
V23148-A0005-B101				1 NO contact		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					12 VDC	2-1393203-1
V23148-A0107-A101			sensitive		24 VDC	2-1393203-4
V23148-A1005-A101					12 VDC	2-1393203-7
V23148-A1007-A101					24 VDC	2-1393203-8
V23148-A1105-A101					12 VDC	2-1393203-9
V23148-A1107-A101		4000 V _{rms} contact-coil	standard		24 VDC	3-1393203-1
V23148-B0003-A101					6 VDC	1393204-4
V23148-B0005-A101					12 VDC	1393204-7
V23148-B0007-A101					24 VDC	1-1393204-0
V23148-B0008-A101	bistable relay 'UB' AgNi10	2000 V _{rms} contact-coil	standard		48 VDC	1-1393204-3