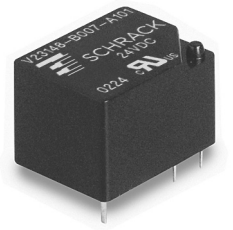
Power PCB Relay U/UB

- **1 pole 7A, mono or bistable**
- **1 form C (CO) or 1 form A (NO) or 1 form B (NC) contact**
- **Bistable and DC version**
- **Wash tight version**
- **Version for 10A on request**



Typical applications
Heating control, installation, battery powered equipment

F0153-C

Approvals

UL E214024

Technical data of approved types on request

Contact Data

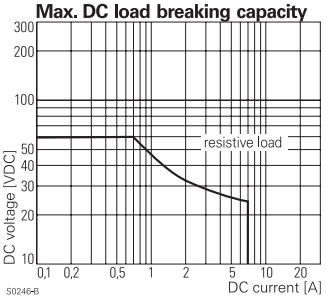
Contact Data	Standard	Bistable	Sensitive
Contact arrangement		1 form C (CO) or 1 form A (NO) or 1 form B (NC)	
Rated voltage		250VAC	
Max. switching voltage		400VAC	
Rated current	7A	7A	5A
Limiting making current, max 4 s, duty factor 10%	12A	12A	12A
Breaking capacity max.	1750VA	1750VA	1250VA
Contact material	AgNi 90/10	AgNi 90/10	AgNi 90/10
Frequency of operation, with/without load		600/18000h^{-1}	
Operate/release time typ.	5/ 3 ms	-	7/3 ms
Set/reset time typ.	-	5/ 3 ms	-
Bounce time typ., form A/form B	2/10ms	2/10ms	2/10ms

Contact ratings

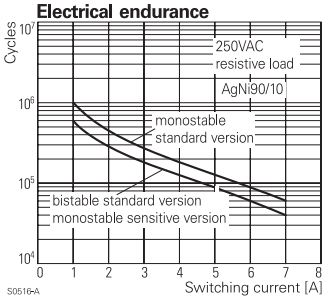
Type	Contact	Load	Cycles
UL 508			
U/UB	C/A/B (CO/NO/NC)	7A, 250VAC,general purpose, 40°C	6.000

Mechanical endurance, DC coil >20x10^6 operations

Max. DC load breaking capacity



Electrical endurance



Coil Data

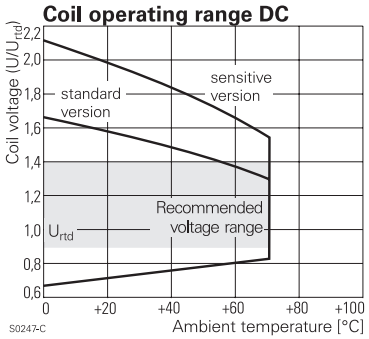
Coil Data	Standard	Bistable	Sensitive
Coil voltage range	6 to 48 VDC	6 to 48 VDC	6 to 48 VDC
Operative range IEC 61810	2	2	2
Reset voltage min., % of rated coil voltage	-	25%	-
Reset voltage max., % of rated coil voltage	-	45%	-
Rated operate power	-	900 to 1300 mW/20ms	-

Coil versions, DC coil

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

All figures are given for coil without pre-energization, at ambient temperature +23°C.
Other coil voltages on request.

Coil operating range DC



Coil versions, bistable 1 coil

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

All figures are given for coil without pre-energization, at ambient temperature +23°C.
Other coil voltages on request.

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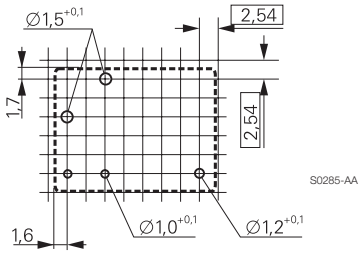
Power PCB Relay U/UB (Continued)

Insulation Data	$2kV_{rms}$	$4kV_{rms}$
	Version V23148-*0***	Version V23148-*1***
Initial dielectric strength		
between open contacts	$1000V_{rms}$	$1000V_{rms}$
between contact and coil	$2000V_{rms}$	$4000V_{rms}$
Clearance/creepage		
between contact and coil	≥2.5/2.5mm	≥3.5/3.5mm
Material group of insulation parts	≥IIIa	≥IIIa

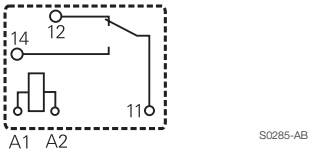
Other Data	
Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customersupport/rohssupportcenter	
Ambient temperature	-25 to +70°C
Category of environmental protection	
IEC 61810	RTIII - wash tight
Vibration resistance (functional), form A/form B	10/10g
Shock resistance (functional), form A/form B	10/10g
Terminal type	PCB-THT
Weight	9.5 g
Resistance to soldering heat THT	
IEC 60068-2-20, wash tight version	260°C/5 s
Packaging unit	25 pcs.

PCB layout / terminal assignment
Bottom view on solder pins

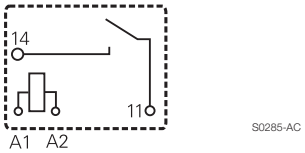
Monostable and bistable 1 coil



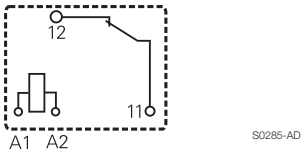
Form C contact (CO)



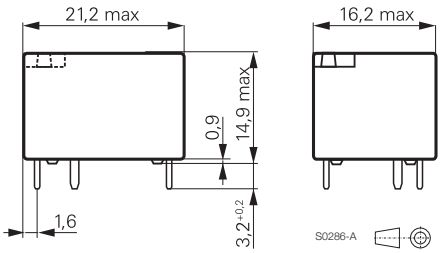
Form A contact (NO)



Form B contact (NC)



Dimensions



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Power PCB Relay U/UB (Continued)

Product code structure Typical product code **V23148 -A 0 0 07 -A 101**

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 2kV$_{rms}$ **1** 4kV$_{rms}$

Version

	Monostable		Bistable
0	Standard	**0**	Standard
1	Sensitive		

Coil
03 6VDC **07** 24VDC
05 12VDC **08** 48VDC

Contact configuration
A 1 form C contact (1 CO) **C** 1 form B contact (1 NC)
B 1 form A contact (1 NO)

Contact material
101 AgNi10

Other types on request

Product code	Version	Dielectric	Version	Arrangement	Part number
V23148-A0003-A101	Monostable	2000 V$_{rms}$	Standard	1 form C (CO)	1393203-4
V23148-A0003-B101	relay ‚U'	contact-coil		1 form A (NO)	1393203-5
V23148-A0005-A101	AgNi10			1 form C (CO)	1393203-8
V23148-A0005-B101				1 form A (NO)	1393203-9
V23148-A0007-A101				1 form C (CO)	1-1393203-1
V23148-A0007-B101				1 form A (NO)	1-1393203-2
V23148-A0008-A101				1 form C (CO)	1-1393203-4
V23148-A0105-A101			Sensitive		2-1393203-1
V23148-A0107-A101					2-1393203-4
V23148-A1005-A101		4000 V$_{rms}$	Standard		2-1393203-7
V23148-A1007-A101		contact-coil			2-1393203-8
V23148-A1105-A101			Sensitive		2-1393203-9
V23148-A1107-A101					3-1393203-1
V23148-B0003-A101	Bistable	2000 V$_{rms}$	Standard		1393204-4
V23148-B0005-A101	relay ‚UB'	contact-coil			1393204-7
V23148-B0007-A101	AgNi10				1-1393204-0
V23148-B0008-A101					1-1393204-3

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