

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

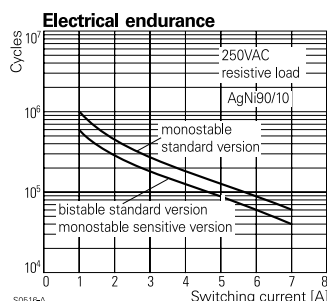
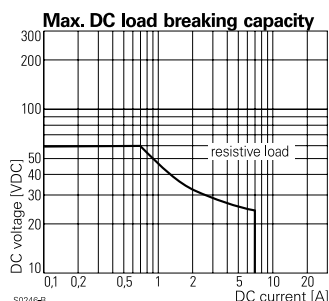
cULus E214024
Technical data of approved types on request

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 >20x10⁶ operations

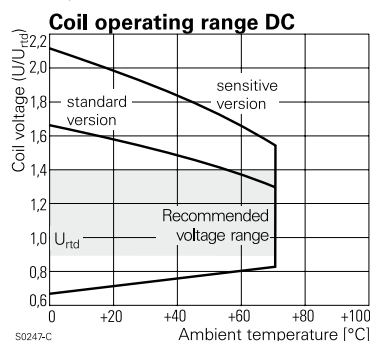


Coil Data	Standard	Bistable	Sensitive
Coil voltage range	6 to 48 VDC	6 to 48 VDC	6 to 48 VDC
Operative range IEC 61810	2	2	2
Reset voltage min., % of rated coil voltage	-	25%	-
Reset voltage max., % of rated coil voltage	-	45%	-
Rated operate power	-	900 to 1300 mW/20ms	-

Coil versions, DC coil

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance $\Omega \pm 10\%$	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 versions, bistable 1 coil

Coil code	Rated voltage VDC	Set voltage VDC	Reset voltage VDC	Coil resistance $\Omega \pm 10\%$	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.

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

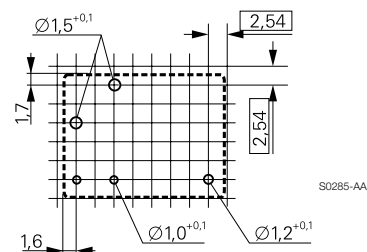
Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.tycoelectronics.com/customersupport/rohssupportcenter

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.

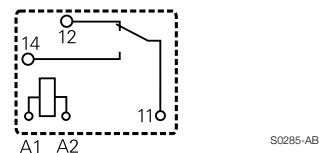
PCB layout / terminal assignment

Bottom view on solder pins

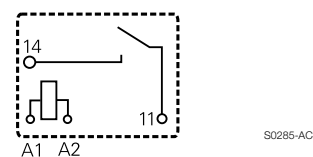
Monostable and bistable 1 coil



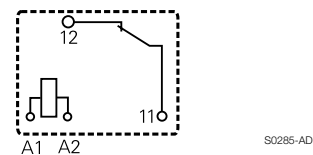
Form C contact (CO)



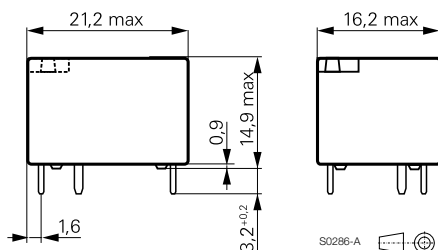
Form A contact (NO)



Form B contact (NC)



Dimensions



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

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

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 relay ,U' AgNi10	2000 V _{rms} contact-coil	Standard	1 form C (CO)	1393203-4
V23148-A0003-B101				1 form A (NO)	1393203-5
V23148-A0005-A101				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
V23148-A0107-A101			2-1393203-4		
V23148-A1005-A101		4000 V _{rms} contact-coil	Standard		2-1393203-7
V23148-A1007-A101					2-1393203-8
V23148-A1105-A101			Sensitive		2-1393203-9
V23148-A1107-A101					3-1393203-1
V23148-B0003-A101	Bistable relay ,UB' AgNi10	2000 V _{rms} contact-coil	Standard		1393204-4
V23148-B0005-A101					1393204-7
V23148-B0007-A101					1-1393204-0
V23148-B0008-A101					1-1393204-3