

**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**

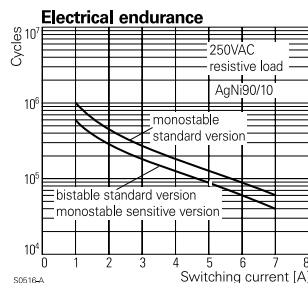
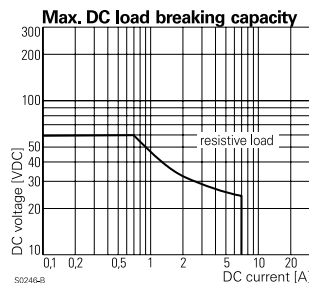
cULus E214024  
Technical data of approved types on request

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 <sup>-1</sup>		
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
<b>UL 508</b>			
U/UB	C/A/B (CO/NO/NC)	7A, 250VAC, general purpose, 40°C	6.000

Mechanical endurance, DC coil >20x10<sup>6</sup> operations

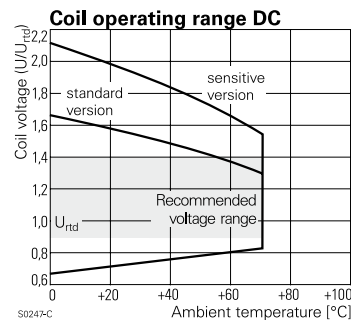


Coil Data	Standard	Bistable	Sensitive
Coil voltage range	6 to 48 VDC	6 to 48 VDC	6 to 48 VDC
Operative range IEC 61810	2	2	2
Reset voltage min., % of rated coil voltage	-	25%	-
Reset voltage max., % of rated coil voltage	-	45%	-
Rated operate power	-	900 to 1300 mW/20ms	-

**Coil versions, DC coil**

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10%	Rated coil power mW
<b>Standard coil</b>					
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
<b>Sensitive coil</b>					
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 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.

**Power PCB Relay U/UB (Continued)**

Insulation Data	2kV <sub>rms</sub>	4kV <sub>rms</sub>
	Version V23148-~0***	Version V23148-~1***
Initial dielectric strength		
between open contacts	1000V <sub>rms</sub>	1000V <sub>rms</sub>
between contact and coil	2000V <sub>rms</sub>	4000V <sub>rms</sub>
Clearance/creepage		
between contact and coil	≥2.5/2.5mm	≥3.5/3.5mm
Material group of insulation parts	≥IIIa	≥IIIa

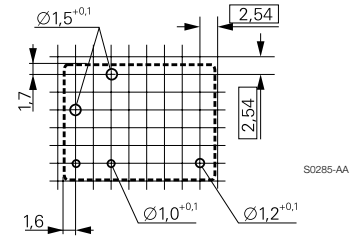
**Other Data**

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at <a href="http://www.tycoelectronics.com/customer-support/rohssupportcenter">www.tycoelectronics.com/customer-support/rohssupportcenter</a>	
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.

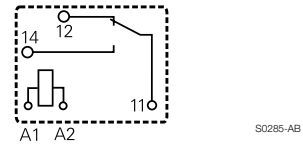
**PCB layout / terminal assignment**

Bottom view on solder pins

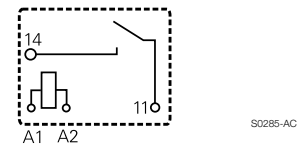
Monostable and bistable 1 coil



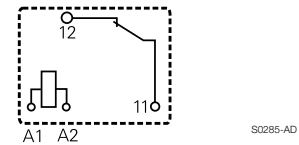
Form C contact (CO)



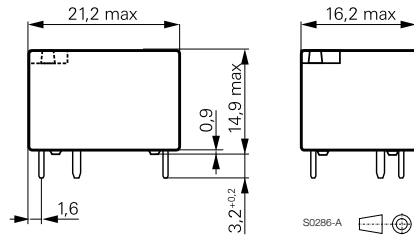
Form A contact (NO)



Form B contact (NC)



**Dimensions**



**Power PCB Relay U/UB** (Continued)

**Product code structure**

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

<b>Type</b>		V23148 Power PCB Relay U/UB	
<b>Version</b>		A Monostable (Miniature power relay U) B Bistable (Miniature power relay UB, remanence version)	
<b>Dielectric strength coil-contact</b>		0 2kV <sub>rms</sub> 1 4kV <sub>rms</sub>	
<b>Version</b>		0 Monostable Standard                      0 Bistable Standard 1 Monostable Sensitive	
<b>Coil</b>		03 6VDC                                      07 24VDC 05 12VDC                                    08 48VDC	
<b>Contact configuration</b>		A 1 form C contact (1 CO)                      C 1 form B contact (1 NC) B 1 form A contact (1 NO)	
<b>Contact material</b>		101 AgNi10	

Other types on request

Product code	Version	Dielectric	Version	Arrangement	Part number
V23148-A0003-A101	Monostable relay ,U' AgNi10	2000 V <sub>rms</sub> 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			Sensitive	1 form C (CO)	1-1393203-4
V23148-A0105-A101					2-1393203-1
V23148-A0107-A101			Standard		2-1393203-4
V23148-A1005-A101					2-1393203-7
V23148-A1007-A101		4000 V <sub>rms</sub> contact-coil	Sensitive		2-1393203-8
V23148-A1105-A101					2-1393203-9
V23148-A1107-A101					3-1393203-1
V23148-B0003-A101					1393204-4
V23148-B0005-A101	Bistable relay ,UB' AgNi10	2000 V <sub>rms</sub> contact-coil	Standard		1393204-7
V23148-B0007-A101					1-1393204-0
V23148-B0008-A101					1-1393204-3