

**Miniature Power PCB Relay MSR**

- 1 pole 8/10A, 1form C (CO) or 1 form A (NO) contact
- High inrush currents with AgSnO<sub>2</sub> contacts (TV4 0 65A)
- 4kV/8mm coil-contact
- Reinforced insulation (protection class II)
- Ambient temperature up to 85°C at 8A
- Plastic materials according to IEC 60335-1 (domestic appliances)



F0143-E



**Typical applications**

HVAC, interface technology. PLC's, power supplies, TV-/monitor control, domestic appliances, Hi-Fi products, timers

**Approvals**

VDE REG.-Nr 3919, UL E214024  
Technical data of approved types on request

**Contact Data**

Contact arrangement	1 form C (CO) or 1 form A (NO)
Rated voltage	250VAC
Max. switching voltage	400VAC
Rated current	
versions A,B	8A
versions C, D	10A
Limiting making current, max 4s, df 10%	15A
version A302, max 20ms	65A
Breaking capacity max.	2000VA
Contact material	AgSnO <sub>2</sub> , AgNi90/10
Frequency of operation, with/without load	6/1200min-1
Operate/release time max.	10/5ms
Bounce time max., form A/form B	3/10ms

**Contact ratings**

Type	Contact	Load	Cycles
<b>IEC 61810</b>			
V23061-A1***-A302	A (NO)	8A, 250VAC, cosφ=1, 85°C	100x10 <sup>3</sup>
V23061-C2***-A802	A (NO)	10A, 250VAC, cosφ=1, 85°C	100x10 <sup>3</sup>
V23061-C2***-A802	A (NO)	5A, 250VAC, cosφ=1, 105°C	100x10 <sup>3</sup>
<b>UL 508</b>			
V23061-A1***-A302	A (NO)	TV4, Tungsten, 120VAC, 40°C	25x10 <sup>3</sup>
V23061-A1***-A302	A (NO)	Pilot duty, A300, 40°C	6x10 <sup>3</sup>
V23061-C2***-A802	A (NO)	10A, 240VAC, general purpose, 40°C	30x10 <sup>3</sup>
<b>EN60730-1</b>			
V23061-A1***-A302	A (NO)	2(2)A, 250VAC, 85°C	100x10 <sup>3</sup>
V23061-C2***-A802	A (NO)	4(4)A, 250VAC, 85°C	100x10 <sup>3</sup>

Mechanical endurance, DC coil 10x10<sup>6</sup> operations



**Coil Data**

Coil voltage range	3 to 60VDC
Operative range, IEC 61810	2
Coil insulation system according UL	classA or classF

**Coil versions, DC coil**

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10% <sup>1)</sup>	Rated coil power mW
001	3	2.1	0.3	40	225
002	5	3.4	0.5	118	212
003	6	4.1	0.6	165	218
004	9	6.1	0.9	364	223
005	12	8.2	1.2	652	221
007	24	16.3	2.4	2270	254
009	48	32.6	4.8	8790	262
010	60	40.8	6.0	15265 <sup>1)</sup>	236

1) Coil resistance ±15%  
All figures are given for coil without pre-energization, at ambient temperature +23°C  
Other coil voltages on request



**Insulation Data**

Initial dielectric strength	
between open contacts	1000V <sub>rms</sub>
between contact and coil	4000V <sub>rms</sub>
Clearance/creepage	
between contact and coil	≥8/8mm
Material group of insulation parts	IIIa

**Miniature Power PCB Relay MSR (Continued)**

**Other Data**

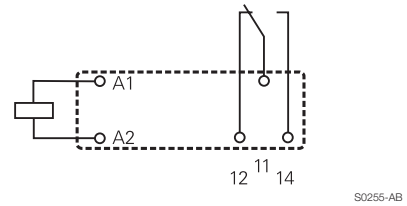
Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at [www.te.com/customersupport/rohssupportcenter](http://www.te.com/customersupport/rohssupportcenter)

Ambient temperature	- 40 to +85°C	
Category of environmental protection	IEC 61810	
	RTII - flux proof,	
	RTIII - wash tight	
Vibration resistance (functional)	10/4g	
form A (NO) / form B (NC)		
Vibration resistance (destructive)	20/5g	
form A (NO) / form B (NC)		
Shock resistance (destructive)	100g	
Terminal type	PCB-THT	
Weight	11g	
Resistance to soldering heat THT	IEC 60068-2-20	
	RTII: 270°C/10s	
	RTIII: 260°C/5s	
Packaging/unit	tube/20 pcs., box/1000 pcs.	

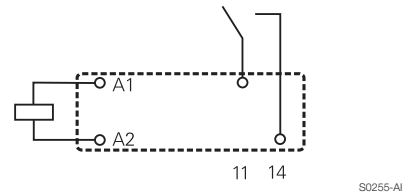
**PCB layout / terminal assignment**

Bottom view on solder pins

1 form C, 1 CO contact, 3.2mm

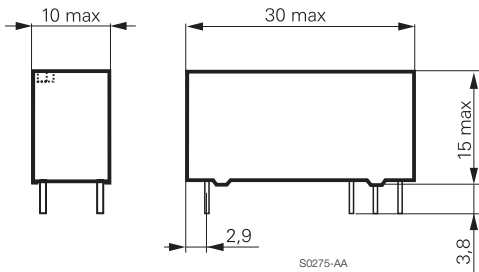


1 form A, 1 NO contact, 5mm

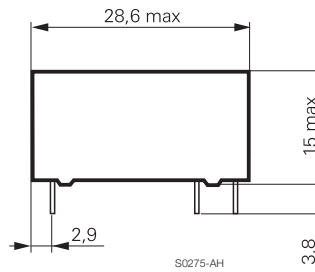


**Dimensions**

1 form C, 1 CO contact, 3.2mm



1 form A, 1 NO contact, 5mm



**Miniature Power PCB Relay MSR** (Continued)

<b>Product code structure</b>		Typical product code		<b>V23061</b>	<b>-A</b>	<b>1</b>	<b>007</b>	<b>-A</b>	<b>3</b>	<b>02</b>
<b>Type</b>		<b>V23061</b> Miniature Power PCB Relay MSR								
<b>Version</b>		<b>A</b> 1 form A contact (1 NO), UL-class A <b>B</b> 1 form C contact (1 CO), UL-class A <b>C</b> 1 form A contact (1 NO), UL-class F <b>D</b> 1 form C contact (1 CO), UL-class F								
<b>Version</b>		<b>1</b> Wash tight		<b>2</b> Flux proof						
<b>Coil</b>		Coil code: please refer to coil versions table								
<b>Contact system</b>		<b>A</b> Standard								
<b>Contact material</b>		<b>3</b> AgSnO <sub>2</sub>			<b>8</b> AgNi 90/10					
<b>Contact configuration</b>		<b>01</b> 1 form C (CO) contact				<b>02</b> 1 form A (NO) contact				

Other types on request

Product code	Version	Contacts	Contact material	Coil	Part number
V23061-A1002-A302	Wash tight	1 form A	AgSnO <sub>2</sub>	5VDC	1393222-4
V23061-A1003-A302		1 NO contact		6VDC	1393222-9
V23061-A1005-A302				12VDC	2-1393222-0
V23061-A1007-A302				24VDC	3-1393222-9
V23061-B1002-A301	Flux proof	1 form C	AgNi90/10	5VDC	7-1393222-2
V23061-B1005-A301		1 CO contact		12VDC	9-1393222-1
V23061-B1007-A301				24VDC	1-1393223-7
V23061-B1009-A301				48VDC	3-1393223-7
V23061-C2001-A802		1 form A		3VDC	5-1416200-3
V23061-C2002-A802		1 NO contact		5VDC	5-1416200-4
V23061-C2003-A802		6VDC	5-1416200-5		
V23061-C2004-A802		9VDC	5-1416200-6		
V23061-C2005-A802		12VDC	5-1416200-7		
V23061-C2007-A802		24VDC	5-1416200-8		
V23061-C2009-A802		48VDC	6-1416200-0		
V23061-C2010-A802		60VDC	6-1416200-1		
V23061-D2001-A801	Flux proof	1 form C	AgNi90/10	3VDC	6-1416200-2
V23061-D2002-A801		1 CO contact		5VDC	6-1416200-3
V23061-D2003-A801				6VDC	6-1416200-4
V23061-D2004-A801				9VDC	6-1416200-5
V23061-D2005-A801				12VDC	6-1416200-6
V23061-D2007-A801				24VDC	6-1416200-7
V23061-D2009-A801				48VDC	6-1416200-9
V23061-D2010-A801				60VDC	7-1416200-0