

**Miniature Power PCB Relay MSR**

- 1 pole 8 / 10 A, 1CO or 1NO contact
- High inrush currents with AgSnO contacts (TV4 = 65 A)
- 4 kV/8 mm coil-contact
- Reinforced insulation (protection class II)
- Ambient temperature up to 85°C at 8 A
- Plastic materials according to IEC60335-1 (domestic appliances)



F0143-E

**Applications**

HVAC, interface technology, power supplies, TV- / Monitor control, computer- / communication technology, domestic appliances, Hi-Fi products, timers

**Approvals**

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

**Contact data**

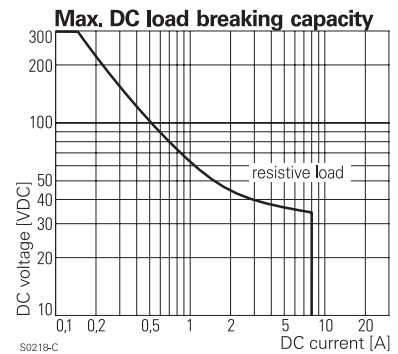
Contact configuration	1CO or 1NO
Contact set	single contact
Type of interruption	micro disconnection
Rated voltage / max. switching voltage AC	250 / 400 VAC
Rated current	versions A,B: 8 A versions C,D: 10 A
Maximum breaking capacity AC	2000 VA
Limiting making capacity, max 20 ms max 4 s, duty factor 10%	A302: 65 A 15 A
Contact material	AgSnO <sub>2</sub> , AgNi90/10
Rated frequency of operation with / without load	6 / 1200 min <sup>-1</sup>
Operate- / release time	max 10 / 5 ms
Bounce time NO / NC contact	max 3 / 10 ms

**Contact ratings**

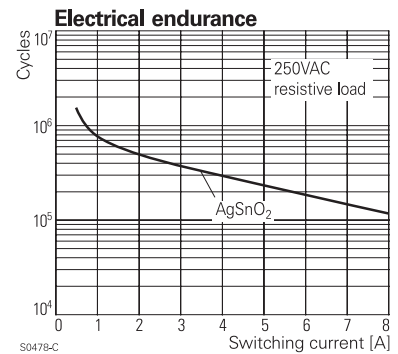
Type	Contact	Load	Ambient temp. [°C]	Cycles
<b>IEC 61810</b>				
V23061-A1***-A302	NO	8 A, 250 VAC, cosφ=1	85°C	100x10 <sup>3</sup>
V23061-C2***-A802	NO	10 A, 250 VAC, cosφ=1	85°C	100x10 <sup>3</sup>
V23061-C2***-A802	NO	5 A, 250 VAC, cosφ=1	105°C	100x10 <sup>3</sup>
<b>UL 508</b>				
V23061-A1***-A302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

**Coil data**

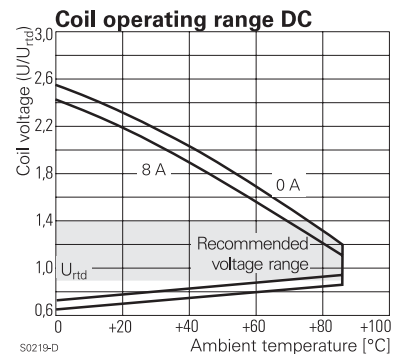
Rated coil voltage range DC coil	3...60 VDC
Operative range to IEC 61810	2
Coil insulation system according UL1446	Class A, Class F



S0218-C



S0478-C



S0219-D

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

**Coil versions, DC-coil**

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ohm	Rated coil power mW
001	3	2.1	0.3	40±10%	225
002	5	3.4	0.5	118±10%	212
003	6	4.1	0.6	165±10%	218
004	9	6.1	0.9	364±10%	223
005	12	8.2	1.2	652±10%	221
007	24	16.3	2.4	2270±10%	254
009	48	32.6	4.8	8790±10%	262
010	60	40.8	6.0	15265±15%	236

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

Insulation	CO contact	NO contact
Dielectric strength coil-contact circuit	4000 V <sub>rms</sub>	
open contact circuit	1000 V <sub>rms</sub>	
Clearance / creepage coil-contact circuit	≥ 8 / 8 mm	
Material group of insulation parts	IIIa	IIIa
Insulation to IEC 61810-1		
Type of insulation coil-contact circuit	reinforced	reinforced
open contact circuit	micro disconn.	micro disconn.
Rated insulation voltage	250 V	250 V
Pollution degree	3	2
Rated voltage system	240 V	230 / 400 V
Overvoltage category	III	III

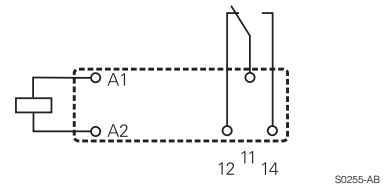
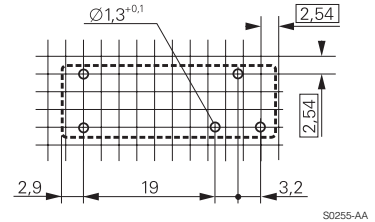
**Other data**

Mechanical endurance	10x10 <sup>6</sup> cycles
Material	
RoHS - Directive 2002/95/EC	compliant as per product date code 0404
Resistance to heat and fire	according EN60335-1, par.30
Environment	
Ambient temperature range	-40...+85°C
Vibration resistance (function) NO / NC contact	10 / 4 g
Shock resistance (function) NO / NC contact	20 / 5 g
Shock resistance (destruction)	100 g
Category of protection	RTII - flux proof; RTIII - wash tight
Processing	
Mounting	pcb
Mounting position	any
Minimum mounting distance	≥ 0 mm
Resistance to soldering heat flux-proof version	270°C / 10 s
wash-tight version	260°C / 5s
Relay weight	11 g
Packaging unit	20 / 1000 pcs

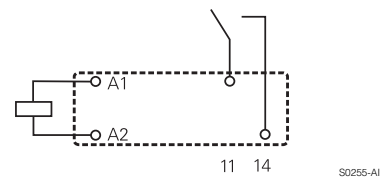
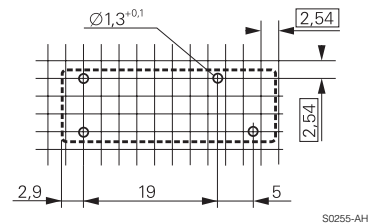
**PCB layout / terminal assignment**

Bottom view on solder pins

1 CO contact, 3.2 mm

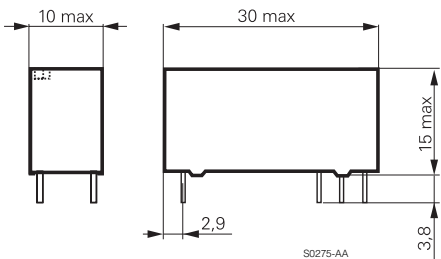


1 NO contact, 5 mm

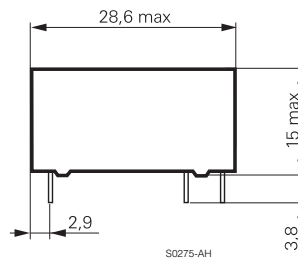


**Dimensions**

1 CO contact, 3.2 mm



1 NO contact, 5 mm



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

<b>Product key</b>	Typical product key	<b>V23061</b>	<b>-A</b>	<b>1</b>	<b>007</b>	<b>-A</b>	<b>3</b>	<b>02</b>
<b>Type</b>	V23061 Miniature Power PCB Relay MSR							
<b>Version</b>	<b>A</b> 1 NO contact (1 form A), UL-class A <b>B</b> 1 CO contact (1 form C), UL-class A <b>C</b> 1 NO contact (1 form A), UL-class F <b>D</b> 1 CO contact (1 form C), 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 CO contact (1 form C)			<b>02</b> 1 NO contact (1 form A)				

Other types on request

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