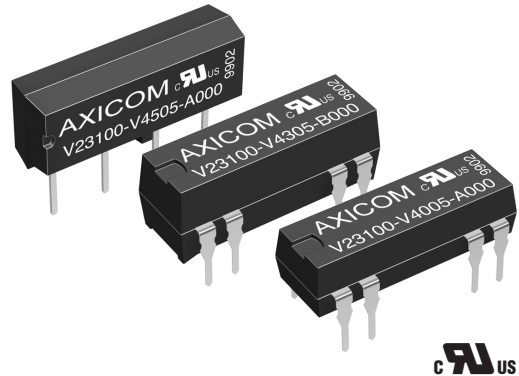


**Reed Relay V23100 -V4**

- Direct coil control with TTL-signals possible
- Highly reliable switching
- High switching rates
- Ultrasonic cleanable
- High vibration and shock resistance

Typical applications

In-circuit tester, measuring and control systems, telecom equipment, alarm and security equipment.



**Approvals**

UL File No. 111441

Technical data of approved types on request.

Contact Data	form A	form C
Contact arrangement	1 form A (1 NO), 2 form A (2 NO)	1 form C (CO)
Max. switching voltage		
at rated coil voltage 5VDC	200VDC/VAC <sub>peak</sub>	175VDC
at rated coil voltage 12to 24VDC	200VDC/VAC <sub>peak</sub>	175VDC <sub>peak</sub>
Limiting continuous current	1A	1.2A
Switching power	10W, 10VA	3W, 3VA
Contact material	Ruthenium	
Contact style	reed contact	
Initial contact resistance	<150mΩ	
Operate / release time max.	0.75/0.15ms	1.1/1.6ms
Electrical endurance		
at 12V/10mA	50x10 <sup>6</sup> operations	
at 24V/400mA	5x10 <sup>6</sup> operations	

**Coil Data**

Magnetic system	neutral
Coil voltage range	5 to 24VDC
Max. coil temperature	105°C
Thermal resistance	< 75K/W

**Coil versions, monostable**

Coil code	Rated voltage VDC	Operate voltage VDC <sub>min.</sub>	Release voltage VDC <sub>min.</sub>	Coil resistance Ω±10%	Rated coil power mW
<b>1 form A (1 NO) contact</b>					
05	5VDC	3.5	0.75	500	50
12	12VDC	8.4	1.80	1000	144
15	15VDC	10.5	2.25	2000	112
24	24VDC	16.8	3.60	2000	288
<b>2 form A (2 NO) or 1 form C (1 CO) contact</b>					
05	5VDC	3.5	0.75	200	125
12	12VDC	8.4	1.80	500	288
15	15VDC	10.5	2.25	2000	112
24	24VDC	16.8	3.60	2000	288

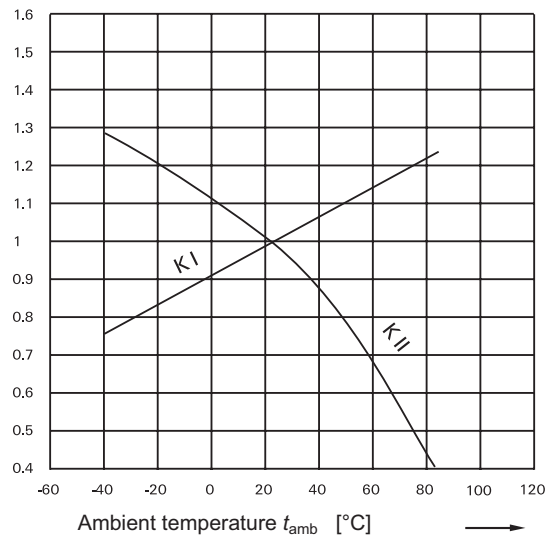
All figures are given for coil without pre-energization, at ambient temperature +23°C.

**Coil Data (continued)**

**Coil versions, limiting operate voltage**

Coil code	DIP flat, SIL, 1 form A	DIP flat, 1 form A with diode	DIP high 1 form C	DIP high 2 form A std, diode	DIP high 1 form C diode+ shield	Mini SIL 1 form A
	VDC	VDC	VDC	VDC	VDC	VDC
05	22.0	14.0	13.0	14.0	14.5	13.6
12	33.0	25.0	22.0	25.0	23.5	21.6
15	44.0	47.0	44.0	47.0	14.5	-
24	44.0	47.0	44.0	47.0	49.0	-

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



Coil operative range

Coil operative range graphs

$U_I$  Minimum voltage at 23°C after pre-energizing with rated voltage without contact current

$U_{II}$  Maximum continuous voltage at 23°C

The operating voltage limits  $U_I$  and  $U_{II}$  depend on the temperature according to the formula:

$U_{I\ t_{amb}}$   $K_I \times U_I$  23°C and

$U_{II\ t_{amb}}$   $K_{II} \times U_{II}$  23°C

$t_{amb}$  Ambient temperature

$U_{I\ t_{amb}}$  Minimum voltage at ambient temperature,  $t_{amb}$

$U_{II\ t_{amb}}$  Maximum voltage at ambient temperature,  $t_{amb}$

$K_I, K_{II}$  Factors (dependent on temperature), see diagram

**Reed Relay V23100 -V4** (Continued)

**Insulation Data**

Initial dielectric strength	
between open contacts	
DIP and SIL, 1 form A (NO), 2 form A (2 NO)	250VDC
DIP, 1 form C (CO)	200VDC
Mini SIL, 1 form A (NO)	225VDC
between contact and coil	1500VDC
Initial insulation resistance at 500 VDC	>10 <sup>9</sup> Ω
Capacitance	
between open contacts	max. 1pF
between contact and coil	max. 2pF
between adjacent contacts	max. 1pF

**Other Data**

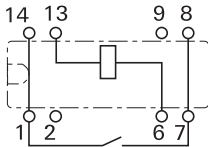
	form A	form C
Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at <a href="http://www.te.com/customer-support/rohssupportcenter">www.te.com/customer-support/rohssupportcenter</a>		
Ambient temperature	-40 to +85°C	
Category of environmental protection	IEC 61810	
Vibration resistance (functional)	30g, 10 to 2000Hz	30g, 50 to 2000Hz
Shock resistance (functional), IEC 60068-2-27 (half sine), DIP and SIL 150g	50g	-
Terminal type	PCB-THT	
Resistance to soldering heat THT	IEC 60068-2-20	
	260°C / 10s	

**Terminal assignment**

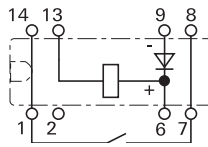
TOP view on component side of PCB

**DIP, flat version**

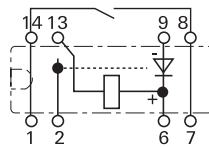
1 form A (NO)  
standard  
V23100-V4xxx-A000



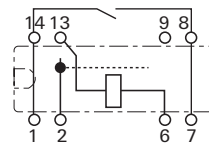
1 form A (NO)  
with diode  
V23100-V4xxx-A010



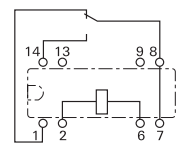
1 form A (NO)  
with electrostatic shield + diode  
V23100-V4xxx-A011



1 form A (NO)  
with electrostatic shield  
V23100-V4xxx-A001

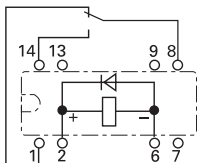


1 form C (CO)  
standard  
V23100-V4xxx-C000

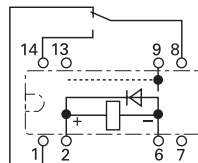


**DIP, high version**

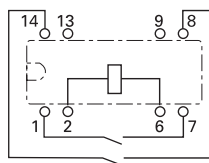
1 form C (CO)  
with diode  
V23100-V4xxx-C010



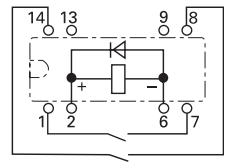
1 form C (CO)  
with electrostatic shield + diode  
V23100-V4xxx-C011



2 form A (NO)  
standard  
V23100-V43xx-B000



2 form A (NO)  
with diode  
V23100-V43xx-B010

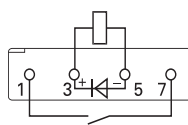


**SIL version**

1 form A (NO)  
standard  
V23100-V45xx-A000

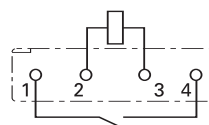


1 form A (NO)  
with diode  
V23100-V45xx-A010

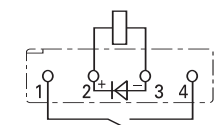


**Mini SIL version**

1 form A (NO)  
standard  
V23100-V46xx-A000



1 form A (NO)  
with diode  
V23100-V46xx-A010

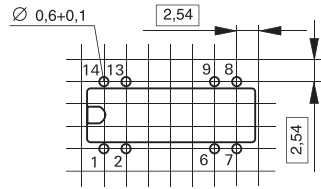


**Reed Relay V23100 -V4** (Continued)

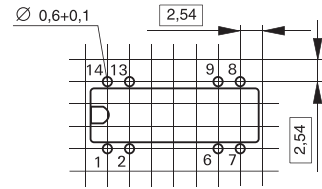
**PCB layout**

TOP view on component side of PCB

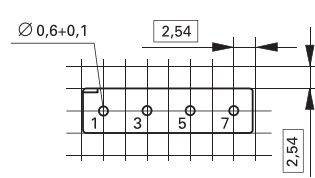
**DIP, flat version**



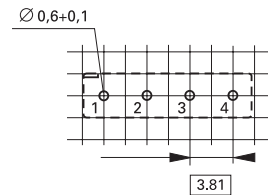
**DIP, high version**



**SIL version**

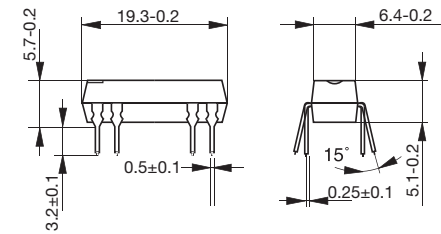


**Mini SIL version**

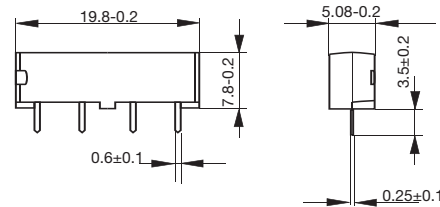


**Dimensions**

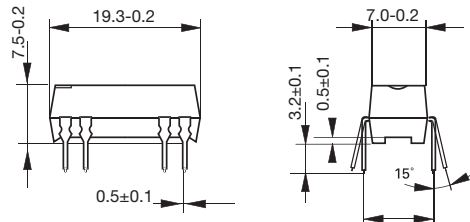
**DIP, flat version**



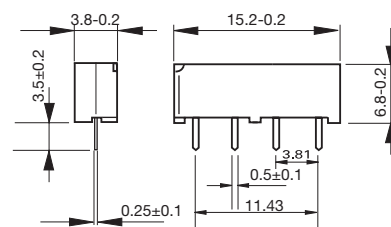
**SIL version**



**DIP, high version**



**Mini SIL version**



**Product code structure**

Typical product code **V23100-V4** 0 05 A0 10

<b>Type</b> V23100-V4 Reed Relay, V23100-V4 Series	
<b>Version</b>	
0	DIP flat, 1 form A (NO) contact or 1 form C (CO) contact without diode
3	DIP high, 2 form A (NO) or 1 form C (CO) contacts
5	SIL, 1 form A (NO) contact
6	Mini SIL, 1 form A (NO) contact
<b>Coil</b>	
Coil code: please refer to coil versions table	
05	5VDC coil
12	12VDC coil
15	15VDC coil
24	24VDC coil
<b>Contact arrangement</b>	
A0	1 form A (NO) contact, DIP flat or SIL package
B0	2 form A (NO) contacts, DIP high package
C0	1 form C (CO) contact, DIP high package
<b>Coil circuit</b>	
00	Standard
10	With diode
11	With diode and electrostatic shield