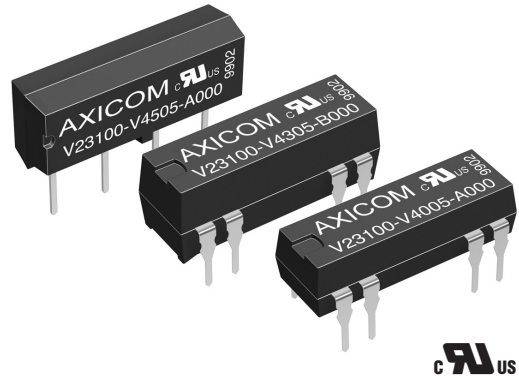


**Reed Relay V23100 -V4**

- 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	Release voltage VDC	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<sub>I</sub> Minimum voltage at 23°C after pre-energizing with rated voltage without contact current

U<sub>II</sub> Maximum continuous voltage at 23°C

The operating voltage limits U<sub>I</sub> and U<sub>II</sub> depend on the temperature according to the formula:

U<sub>I t<sub>amb</sub></sub> K<sub>I</sub> × U<sub>I</sub> 23°C and

U<sub>II t<sub>amb</sub></sub> K<sub>II</sub> × U<sub>II</sub> 23°C

t<sub>amb</sub> Ambient temperature

U<sub>I t<sub>amb</sub></sub> Minimum voltage at ambient temperature, t<sub>amb</sub>

U<sub>II t<sub>amb</sub></sub> Maximum voltage at ambient temperature, t<sub>amb</sub>

K<sub>I</sub>, K<sub>II</sub> 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**

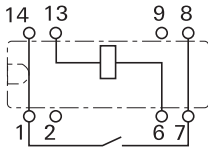
	form A	form C
Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at <a href="http://www.te.com/customer-support/rohssupportcenter">www.te.com/customer-support/rohssupportcenter</a>		
Ambient temperature	-40 to +85°C	
Category of environmental protection IEC 61810	RT-III - immersion cleanable	
Degree of protection, IEC 60529	IP67	
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	
Mini SIL	50g	
Terminal type	PCB-THT	
Resistance to soldering heat THT IEC 60068-2-20	265 °C / 10 s	

**Terminal assignment**

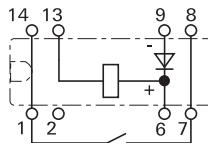
TOP view on component side of PCB

**DIP, flat version**

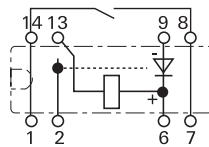
1 form A (NO)  
standard  
V23100-V4xxx-A000



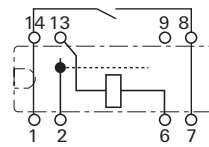
1 form A (NO)  
with diode  
V23100-V4xxx-A010



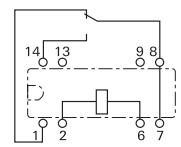
1 form A (NO)  
with electrostatic shield + diode  
V23100-V4xxx-A011



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

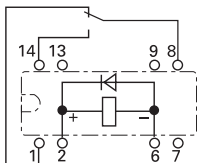


1 form C (CO)  
standard  
V23100-V4xxx-C000

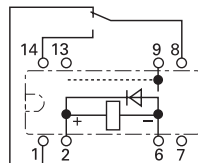


**DIP, high version**

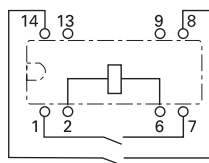
1 form C (CO)  
with diode  
V23100-V4xxx-C010



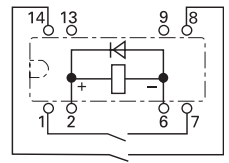
1 form C (CO)  
with electrostatic shield + diode  
V23100-V4xxx-C011



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

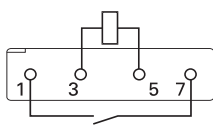


2 form A (NO)  
with diode  
V23100-V43xx-B010

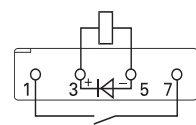


**SIL version**

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

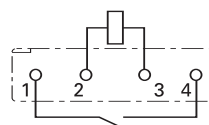


1 form A (NO)  
with diode  
V23100-V45xx-A010

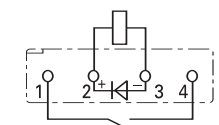


**Mini SIL version**

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



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

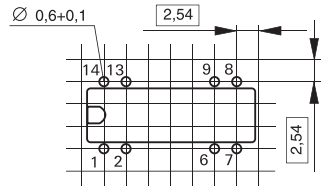


**Reed Relay V23100 -V4** (Continued)

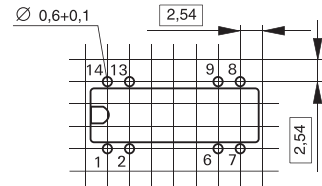
**PCB layout**

TOP view on component side of PCB

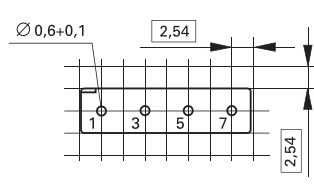
**DIP, flat version**



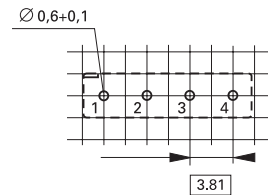
**DIP, high version**



**SIL version**

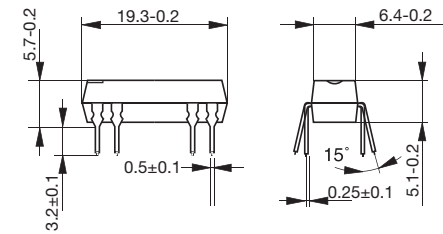


**Mini SIL version**

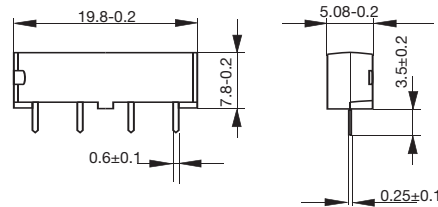


**Dimensions**

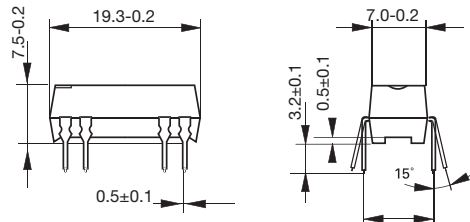
**DIP, flat version**



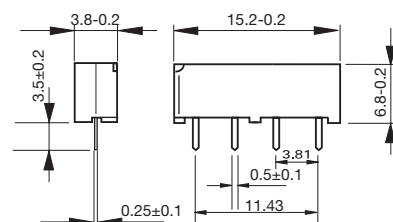
**SIL version**



**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

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

Product Code	Version	Coil	Arrangement	Diode/shield	Part number		
V23100-V4005-A000	DIP flat	5VDC	1 form A (NO)	Standard	1393763-1		
V23100-V4012-A000		12VDC			1393763-6		
V23100-V4015-A000		15VDC		1-1393763-0			
V23100-V4024-A000		24VDC		1-1393763-4			
V23100-V4005-A010		5VDC		Diode	1393763-4		
V23100-V4012-A010		12VDC			1393763-8		
V23100-V4015-A010		15VDC			1-1393763-2		
V23100-V4024-A010		24VDC			1-1393763-6		
V23100-V4305-C000		5VDC			1 form C (CO)	Standard	2-1393763-0
V23100-V4312-C000		12VDC					2-1393763-8
V23100-V4315-C000	15VDC	3-1393763-4					
V23100-V4324-C000	24VDC	4-1393763-0					
V23100-V4005-A011	5VDC	1 form A (NO)	Diode and shield	1393763-3			
V23100-V4012-A011	12VDC			1393763-9			
V23100-V4015-A011	15VDC		1-1393763-3				
V23100-V4024-A011	24VDC		1-1393763-7				
V23100-V4305-B000	DIP high	5VDC	2 form A (NO)	Standard	1-1393763-8		
V23100-V4312-B000		12VDC			2-1393763-6		
V23100-V4315-B000		15VDC		3-1393763-2			
V23100-V4324-B000		24VDC		3-1393763-8			
V23100-V4305-B010		5VDC		Diode	1-1393763-9		
V23100-V4312-B010		12VDC			2-1393763-7		
V23100-V4315-B010		15VDC			3-1393763-3		
V23100-V4324-B010		24VDC			3-1393763-9		
V23100-V4305-C010		5VDC			1 form C (CO)	Standard	2-1393763-2
V23100-V4312-C010		12VDC					3-1393763-0
V23100-V4315-C010	15VDC	3-1393763-6					
V23100-V4324-C010	24VDC	4-1393763-2					
V23100-V4305-C011	5VDC	Diode and shield	2-1393763-3				
V23100-V4312-C011	12VDC		3-1393763-1				
V23100-V4315-C011	15VDC		3-1393763-7				
V23100-V4324-C011	24VDC		4-1393763-3				
V23100-V4505-A000	SIL	5VDC	1 form A (NO)	Standard	4-1393763-4		
V23100-V4512-A000		12VDC			4-1393763-7		
V23100-V4515-A000		15VDC		4-1393763-9			
V23100-V4524-A000		24VDC		5-1393763-1			
V23100-V4505-A010		5VDC		Diode	4-1393763-5		
V23100-V4512-A010		12VDC			4-1393763-8		
V23100-V4515-A010		15VDC			5-1393763-0		
V23100-V4524-A010		24VDC			5-1393763-2		
V23100-V4605-A000		Mini SIL			5VDC	Standard	1422026-2
V23100-V4612-A000					12VDC		1422026-3
V23100-V4605-A010	5VDC		Diode	1422026-5			
V23100-V4612-A010	12VDC			1422026-6			