

W11 Relay V23101



- Multi purpose relay
- Small size permitting high packing density
- 1 form C contact (1 CO, 1 changeover contact)
- 200mW and 450mW coils
- 1A and 3A contacts
- High shock resistance of 30g
- Ambient temperature for sensitive version up to 85°C
- Immersion cleanable



Typical applications

Security devices, electric door openers, duplex intercommunication systems, measurement and controls

Approvals

UL 508 File No. E 111441
 Technical data of approved types on request

Contact Data	1.25A	3A
Contact arrangement	1 form C (CO)	
Max. switching voltage	120VDC, 125VAC	
Rated current	1.25A	3A
Limiting continuous current, 85°C	1.25A	3A
Switching power	30W, 62.5VA	72W, 360VA
Contact material	AgPd, gold plated AgNi, gold plated	AgNi
Min. recommended contact load	10mA at 20 mV	
Minimum switching voltage	100µV	
Initial contact resistance	100mΩ at 10mA, 20mV	
Frequency of operation, without load	max. 20 operations/s	
Operate / release time max.	7ms/5ms	
Bounce time max., form A/form B	2/10ms	
Electrical endurance,		
standard version		
at 24VDC / 1.25A	min. 3x10 ⁵ ops.	
at 24VDC / 3A		min. 2x10 ⁵ ops.
at 120VAC / 1.25A	min. 1.5x10 ⁵ ops.	
at 120VAC / 3A		min. 4x10 ⁵ ops.
sensitive version		
at 24VDC / 1.25A	min. 2x10 ⁵ ops.	
at 24VDC / 3A		min. 1x10 ⁵ ops.
at 120VAC / 1.25A	min. 1x10 ⁵ ops.	
at 120VAC / 3A		min. 3x10 ⁵ ops.
Mechanical endurance	typ. 10x10 ⁶ operations	

Coil Data

Magnetic system	neutral
Coil voltage range	1.5 to 24VDC
Max. coil temperature	130°C
Thermal resistance	< 125K/W

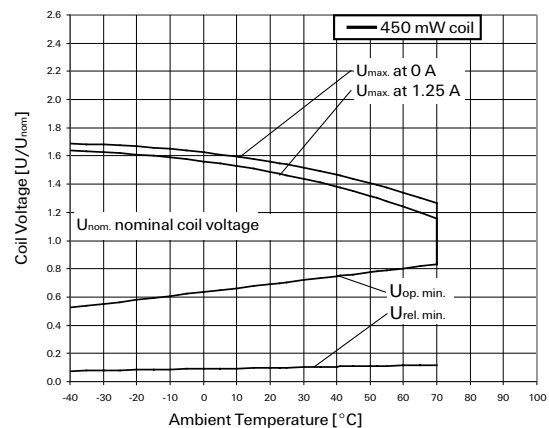
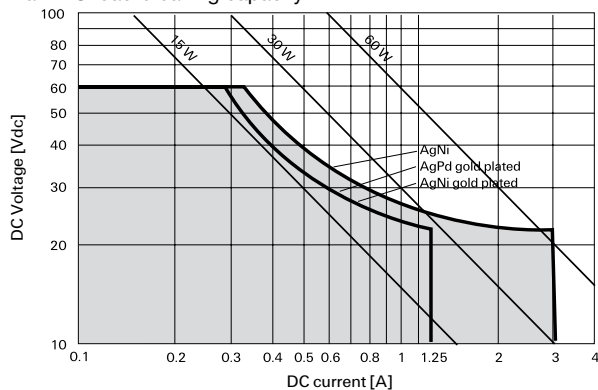
Coil versions, monostable

Coil code	Rated voltage VDC	Operate voltage VDC	Limiting Voltage VDC	Release voltage VDC	Coil resistance Ω±10%	Rated coil power mW
Standard coil, 450mW						
001	1.5	1.3	2.6	0.15	6	375
002	3	2.1	4.7	0.30	20	450
003	5	3.5	7.9	0.50	56	446
004	6	4.2	9.5	0.60	80	450
005	9	6.3	14.2	0.90	180	450
006	12	8.4	19.0	1.20	320	450
007	24	16.8	38.0	2.40	1280	450
Sensitive coil, 200mW						
101	1.5	1.1	3.6	0.15	12	188
102	3	2.3	7.1	0.30	45	200
103	5	3.8	11.6	0.50	120	208
104	6	4.5	14.2	0.60	180	200
105	9	6.8	21.2	0.90	400	203
106	12	9.0	28.0	1.20	700	206
107	24	18.0	56.0	2.40	2800	206
108	18	13.5	33.0	1.80	1620	200

Sensitive coil, 200mW

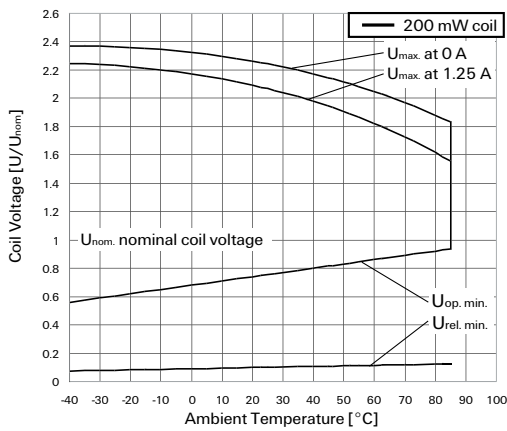
All figures are given for coil without pre-energization, at ambient temperature +23°C.

Max. DC load breaking capacity



W11 Relay V23101 (Continued)

Coil Data (continued)



Coil operative range graphs

- U_{nom} Nominal coil voltage
- U_{max} Upper limit of the operative range of the coil voltage (limiting voltage) when coils are continuously energized
- $U_{op. min.}$ Lower limit of the operative range of the coil voltage (reliable operate voltage)
- $U_{rel. min.}$ Lower limit of the operative range of the coil voltage (reliable release voltage)

Insulation Data

Initial dielectric strength	
between open contacts	750Vrms
between contact and coil	1000Vrms
Initial insulation resistance at 500VDC	> 109Ω
Capacitance	
between open contacts	max. 2pF
between contact and coil	max. 10pF

Other Data

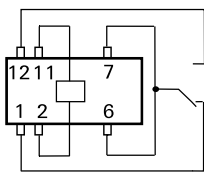
Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.tycoelectronics.com/customer-support/rohssupportcenter

Ambient temperature	-40 to +85°C
Category of environmental protection	
IEC 61810	RT III - immersion cleanable
Degree of protection, IEC 60529	IP 67
Vibration resistance (functional)	10g, 10 to 200Hz
Shock resistance (functional)	
IEC 60068-2-27 (half sine)	30g
Shock resistance (destructive)	100g
Terminal type	PCB-THT
Weight	max. 4g
Resistance to soldering heat THT	
IEC 60068-2-20	265°C/10s
Ultrasonic cleaning	not recommended
Packaging/unit	tube/25 pcs. box/625 pcs.

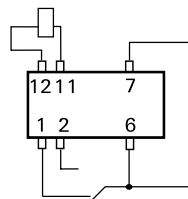
Terminal assignment

TOP view on component side of PCB

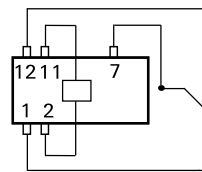
6 pin version with symmetrical coil assignment
V23101-D0xxx-Axxx



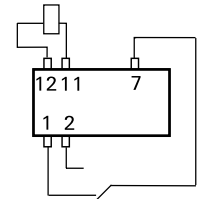
6 pin version with asymmetrical coil assignment
V23101-D0xxx-Bxxx



5 pin version with symmetrical coil assignment
V23101-D1xxx-Axxx



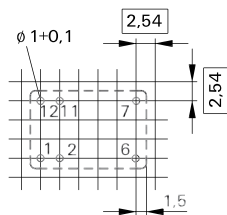
5 pin version with asymmetrical coil assignment
V23101-D1xxx-Bxxx



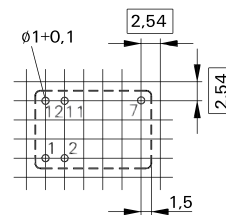
PCB layout

TOP view on component side of PCB

6 pin version

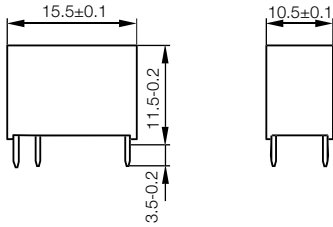


5 pin version

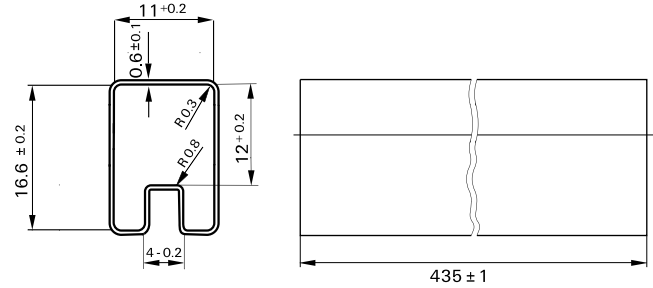


W11 Relay V23101 (Continued)

Dimensions



Packing



Product code structure		Typical product code		V23101	D0	104	B	401
Type	V23101 W11 Series Signal Relay							
Pinning	D0 6 pin version (standard) D1 5-pin version (without pin no. 6)							
Coil	Coil code: please refer to coil versions table							
Coil terminal assignment	A Symmetrical coil assignment B Asymmetrical coil assignment							
Contacts	201 1 form C (CO), AgPd, gold plated 301 1 form C (CO), AgNi 401 1 form C (CO), AgNi, gold plated							

W11 Relay V23101 (Continued)

Product Code	Pinning	Coil	Coil voltage	Coil assignment	Cont.material	Part number							
V23101-D0001-A201	6 pins version	Standard coil	1.5VDC	Symmetrical	AgPd, Au plated	1393779-1							
V23101-D0002-A201			3VDC			1393779-3							
V23101-D0003-A201			5VDC			1393779-5							
V23101-D0004-A201			6VDC			1393779-8							
V23101-D0005-A201			9VDC			1-1393779-1							
V23101-D0006-A201			12VDC			1-1393779-3							
V23101-D0007-A201			24VDC			1-1393779-8							
V23101-D0001-B201			1.5VDC			Asymmetrical	1393779-2						
V23101-D0002-B201			3VDC				1393779-4						
V23101-D0003-B201			5VDC				1393779-6						
V23101-D0004-B201			6VDC				1-1393779-0						
V23101-D0005-B201			9VDC				1-1393779-2						
V23101-D0006-B201			12VDC				1-1393779-6						
V23101-D0007-B201			24VDC				2-1393779-2						
V23101-D0006-A301	12VDC	Symmetrical	AgNi	4-1419172-4									
V23101-D0003-B301	5VDC			Asymmetrical	1393779-7								
V23101-D0006-B301	12VDC				1-1393779-7								
V23101-D0007-B301	24VDC				2-1393779-1								
V23101-D0003-A401	5VDC				Symmetrical		AgNi, Au plated	1422028-2					
V23101-D0006-A401	12VDC							1422028-3					
V23101-D0007-A401	24VDC							1422028-5					
V23101-D0006-B401	12VDC					Asymmetrical		1422028-4					
V23101-D0007-B401	24VDC							1422028-6					
V23101-D1006-A201	12VDC							Symmetrical	AgPd, Au plated	4-1393779-1			
V23101-D1003-B201	5VDC									Asymmetrical	4-1393779-0		
V23101-D1006-B201	12VDC										4-1393779-2		
V23101-D1007-B201	24VDC										1413012-1		
V23101-D1006-A401	12VDC										Symmetrical	AgNi, Au plated	1-1422028-2
V23101-D1006-B401	12VDC	Asymmetrical	1-1422028-3										
V23101-D0101-A201	1.5VDC		Symmetrical	AgPd, Au plated									2-1393779-2
V23101-D0102-A201	3VDC												2-1393779-4
V23101-D0103-A201	5VDC												2-1393779-6
V23101-D0104-A201	6VDC				2-1393779-8								
V23101-D0105-A201	9VDC				3-1393779-0								
V23101-D0106-A201	12VDC				3-1393779-2								
V23101-D0107-A201	24VDC				3-1393779-5								
V23101-D0108-A201	18VDC				3-1393779-9								
V23101-D0101-B201	1.5VDC				Asymmetrical	2-1393779-3							
V23101-D0102-B201	3VDC					2-1393779-5							
V23101-D0103-B201	5VDC					2-1393779-7							
V23101-D0104-B201	6VDC					2-1393779-9							
V23101-D0105-B201	9VDC					3-1393779-1							
V23101-D0106-B201	12VDC	3-1393779-3											
V23101-D0107-B201	24VDC	3-1393779-8											
V23101-D0106-A301	12VDC	Symmetrical	AgNi	1422037-2									
V23101-D0107-A301	24VDC			3-1393779-7									
V23101-D0106-B301	12VDC			Asymmetrical		3-1393779-4							
V23101-D0103-A401	5VDC					Symmetrical	AgNi, Au plated	1422028-7					
V23101-D0106-A401	12VDC							1422028-8					
V23101-D0107-A401	24VDC							1422028-9					
V23101-D0108-A401	18VDC							1-1422028-1					
V23101-D0107-B401	24VDC				Asymmetrical			1-1422028-0					
V23101-D1106-A201	12VDC							Symmetrical	AgPd, Au plated	4-1393779-3			
V23101-D1107-A201	24VDC									4-1393779-6			
V23101-D1106-B201	12VDC									Asymmetrical	4-1393779-4		
V23101-D1107-B201	24VDC										4-1393779-7		
V23101-D1106-B301	12VDC										Symmetrical	AgNi	4-1393779-5
V23101-D1106-A401	12VDC												Asymmetrical
V23101-D1106-B401	12VDC	1-1422028-5											