

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

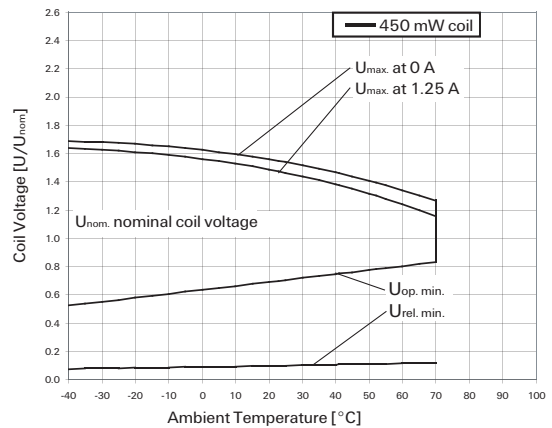
| | |
|-----------------------|--------------|
| Magnetic system | neutral |
| Coil voltage range | 1.5 to 24VDC |
| Max. coil temperature | 130°C |
| Thermal resistance | < 125K/W |

Coil versions, monostable

| Coil code | Rated voltage VDC | Operate voltage VDC _{min.} | Limiting Voltage VDC _{max.} | Release voltage VDC _{min.} | 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 |

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.te.com/customersupport/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



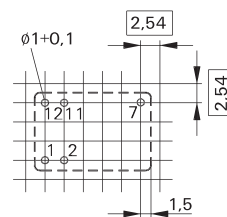
PCB layout

TOP view on component side of PCB

6 pin version



5 pin version

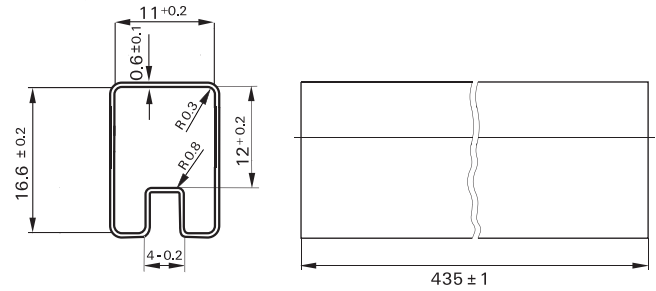


W11 Relay V23101 (Continued)

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 | | | | Asymmetrical | 1-1422028-3 | |
| V23101-D0101-A201 | 6 pins version | Sensitive coil | 1.5VDC | | Symmetrical | AgPd, Au plated |
| 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 | | AgNi | 4-1393779-5 | | |
| V23101-D1106-A401 | | Symmetrical | AgNi, Au plated | 1-1422028-4 | | |
| V23101-D1106-B401 | | | | Asymmetrical | 1-1422028-5 | |

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