

JWD/JWS Series Reed Relays

- JWD has dual in-line package (DIP) configuration (14-pin DIP)
- JWS has single in-line package (SIP) configuration
- Low cost, dry reed reliability with various contact arrangements
- Wave solderable and immersion cleanable molded epoxy package
- Optional coil suppression diode

Typical applications

Telecommunications, measurement and control, automated test equipment, security systems, medical equipment.



Approvals

UL E29244, CSA LR81479
Technical data of approved types on request

Contact Data

| | |
|--|--------------------------------|
| Contact arrangement | 1 form A (NO) contact |
| JWD and JWS | 1 form B (NC), 1 form C (CO), |
| JWD only | 2 form A (NO) |
| Rated voltage | 20VDC, 500mA |
| 1 form A, 1 form B and 2 form A | 10 VDC, 500mA and 10VDC, 10mA |
| 1 form C (CO) | |
| Max. switching voltage | 100VDC |
| 1 form A, 1 form B and 2 form A | 28VDC |
| 1 form C (CO) | |
| Rated current | 500mA, 20VDC |
| 1 form A, 1 form B and 2 form A | 500mA, 10VDC |
| 1 form C (CO) | |
| Limiting making current | 500mA |
| Limiting breaking current | 500mA |
| Switching power | 10W |
| form A (NO) and form B (NC) | 3W |
| form C (CO) | |
| Contact material | Ruthenium |
| Min. recommended contact load | 10mV, 10mA |
| Minimum switching voltage | 10mV |
| Initial contact resistance | 200mΩ max. at 10mA, 6VDC |
| Frequency of operation | 100Hz |
| Operate/release time max., incl. bounce | 1.5/0.5ms |
| form A (NO) and form B (NC) | 1.5/3.0ms |
| form C (CO) | |
| Electrical endurance | |
| form A (NO) and form B (NC), resistive load, +25°C | |
| 20VDC, 500mA | 1x10 ⁶ ops. |
| 20VDC, 250mA | 20x10 ⁶ ops. |
| 5VDC, 1mA | 100x10 ⁶ ops. |
| form C (CO) contact, resistive load, +25°C | |
| 10VDC, 500mA | 1x10 ⁶ ops. |
| 10VDC, 250mA | 20x10 ⁶ ops. |
| 5VDC, 1mA | 100x10 ⁶ ops. |
| Contact ratings | |
| 1 form A, 1 form B and 2 form A | 500mA, 20VDC |
| 1 form C (CO) | 500mA, 10VDC |
| Mechanical endurance | 100x10 ⁶ operations |

Coil Data

| | |
|-------------------------------------|-----------------------|
| Coil voltage range | 5 to 24VDC |
| Min./Max. energization duration | continuous |
| Max. coil temperature | 105° C |
| Thermal resistance | approximately 100°C/W |
| Coil insulation system according UL | class A |

Insulation Data

| | |
|-----------------------------------|------------------------------|
| Initial dielectric strength | |
| between open contacts | |
| form A (NO) and form B (NC) | 250VDC, |
| form C (CO) | 175VDC |
| between contact and coil | 500VDC |
| between adjacent contacts | |
| 2 form A (NO) of JWD only | 500VDC |
| Initial insulation resistance | |
| between insulated elements | 10 ¹⁰ Ω at 100VDC |
| Capacitance between open contacts | typ. 0.5pF |

Other Data

| | |
|--|--|
| Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content | refer to the Product Compliance Support Center at www.te.com/customer-support/rohssupportcenter |
| Ambient temperature | -35°C to +85°C |
| Category of environmental protection | IEC 61810 |
| IEC 61810 | RTIII -wash tight |
| Vibration resistance (functional) | 20g, 10 to 2000 Hz |
| Shock resistance (functional), 3 planes, half sine pulse, 8ms | |
| form A (NO) | 100g |
| form B (NC) and form C (CO) | 50g |
| Terminal type | PCB-THT |
| Mounting position | any |
| Weight | approximately 2.3g (0.08 oz.) |
| Resistance to soldering heat THT | |
| IEC 60068-2-20, wave solder | max. 260°C/10s |
| Ultrasonic cleaning | no |
| Conformal coating | yes |
| Packaging/unit | tray/50 pcs., bundle/250 pcs., box/500 pcs. |

JWD/JWS Series Reed Relays (Continued)

Terminal assignment

TOP view on component side of PCB



Note: Terminal numbers are for reference only and do not appear on relays.

Note: Magnetic shielding may be required between relays when they are placed in very close proximity to one another.

Dimensions

JWD Series



JWS Series



| Product code | Contacts | Max. rating | Diode | Coil voltage | Coil resistance ¹⁾ | Operate voltage | Coil power | Wiring diagram | Part number |
|--------------|---------------|-------------|-------|--------------|-------------------------------|-----------------|------------|----------------|-------------|
| JWD-107-1 | 1 form A, | 10W | No | 5/6VDC | 500ohm | 3.8VDC | 50/72mW | 1 | 1393771-3 |
| JWD-107-5 | 1 NO contact | | Yes | 5/6VDC | 500ohm | 3.8VDC | 50/72mW | 1 | 1393771-5 |
| JWD-107-3 | | | No | 12VDC | 1200ohm | 9.6VDC | 120mW | 1 | 1393771-4 |
| JWD-107-7 | | | Yes | 12VDC | 1200ohm | 9.6VDC | 120mW | 1 | 1393771-6 |
| JWD-171-5 | | | No | 24VDC | 2150ohm | 19.2VDC | 268mW | 2 | 2-1393771-0 |
| JWD-171-10 | | | Yes | 24VDC | 2150ohm | 19.2VDC | 268mW | 2 | 1393771-7 |
| JWD-171-21 | 2 form A, | | No | 5/6VDC | 200ohm | 3.8VDC | 125/180mW | 3 | 1-1393771-4 |
| JWD-171-25 | 2 NO contacts | | Yes | 5/6VDC | 200ohm | 3.8VDC | 125/180mW | 3 | 1-1393771-7 |
| JWD-171-23 | | | No | 12VDC | 500ohm | 9.6VDC | 288mW | 3 | 1-1393771-5 |
| JWD-171-27 | | | Yes | 12VDC | 500ohm | 9.6VDC | 288mW | 3 | 1-1393771-8 |
| JWD-171-24 | | | No | 24VDC | 2200ohm | 19.2VDC | 262mW | 3 | 1-1393771-6 |
| JWD-171-28 | | | Yes | 24VDC | 2200ohm | 19.2VDC | 262mW | 3 | 1-1393771-9 |
| JWD-171-12 | 1 form B, | | No | 5/6VDC | 500ohm | 3.8VDC | 50/72mW | 4 | 1393771-8 |
| JWD-171-17 | 1 NCO contact | | Yes | 5/6VDC | 500ohm | 3.8VDC | 50/72mW | 4 | 1-1393771-1 |
| JWD-171-14 | | | No | 12VDC | 1200ohm | 9.6VDC | 120mW | 4 | 1393771-9 |
| JWD-171-19 | | | Yes | 12VDC | 1200ohm | 9.6VDC | 120mW | 4 | 1-1393771-2 |
| JWD-171-15 | | | No | 24VDC | 2200ohm | 19.2VDC | 262mW | 4 | 1-1393771-0 |
| JWD-171-20 | | | Yes | 24VDC | 2200ohm | 19.2VDC | 262mW | 4 | 1-1393771-3 |
| JWD-172-1 | 1 form C, | 3W | No | 5/6VDC | 200ohm | 3.8VDC | 125/180mW | 5 | 2-1393771-1 |
| JWD-172-5 | 1 CO contact | | Yes | 5/6VDC | 200ohm | 3.8VDC | 125/180mW | 5 | 2-1393771-9 |
| JWD-172-3 | | | No | 12VDC | 500ohm | 9.6VDC | 288mW | 5 | 2-1393771-7 |
| JWD-172-7 | | | Yes | 12VDC | 500ohm | 9.6VDC | 288mW | 5 | 3-1393771-0 |
| JWD-172-4 | | | No | 24VDC | 2200ohm | 19.2VDC | 262mW | 5 | 2-1393771-8 |
| JWD-172-8 | | | Yes | 24VDC | 2200ohm | 19.2VDC | 262mW | 5 | 3-1393771-1 |
| JWD-172-155 | | | No | 5/6VDC | 200ohm | 3.8VDC | 125/180mW | 6 | 2-1393771-2 |
| JWD-172-159 | | | Yes | 5/6VDC | 200ohm | 3.8VDC | 125/180mW | 6 | 2-1393771-4 |
| JWD-172-161 | | | Yes | 12VDC | 1000ohm | 9.6VDC | 144mW | 6 | 2-1393771-5 |
| JWD-172-158 | | | No | 24VDC | 2150ohm | 19.2VDC | 268mW | 6 | 2-1393771-3 |
| JWD-172-162 | | | Yes | 24VDC | 2150ohm | 19.2VDC | 268mW | 6 | 2-1393771-6 |
| JWS-117-1 | 1 form A, | 10W | No | 5VDC | 500ohm | 3.8VDC | 50mW | 7 | 3-1393771-2 |
| JWS-117-6 | 1 NO contact | | Yes | 5VDC | 500ohm | 3.8VDC | 50mW | 7 | 3-1393771-8 |
| JWS-117-3 | | | No | 12VDC | 530ohm | 9.6VDC | 272mW | 7 | 3-1393771-4 |
| JWS-117-8 | | | Yes | 12VDC | 530ohm | 9.6VDC | 272mW | 7 | 3-1393771-6 |
| JWS-117-18 | | | Yes | 12VDC | 1850ohm | 9.6VDC | 78mW | 7 | 3-1393771-3 |
| JWS-117-5 | | | No | 24VDC | 2150ohm | 19.2VDC | 268mW | 7 | 3-1393771-5 |

1) Coil resistance ±10%.

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