

**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	1x10 <sup>6</sup> ops.
form A (NO) and form B (NC), resistive load, +25°C	20x10 <sup>6</sup> ops.
20VDC, 500mA	100x10 <sup>6</sup> ops.
20VDC, 250mA	
5VDC, 1mA	
form C (CO) contact, resistive load, +25°C	1x10 <sup>6</sup> ops.
10VDC, 500mA	20x10 <sup>6</sup> ops.
10VDC, 250mA	
5VDC, 1mA	
Contact ratings	500mA, 20VDC
1 form A, 1 form B and 2 form A	500mA, 10VDC
1 form C (CO)	
Mechanical endurance	100x10 <sup>6</sup> 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	250VDC,
between open contacts	175VDC
form A (NO) and form B (NC)	500VDC
form C (CO)	
between contact and coil	
between adjacent contacts	
2 form A (NO) of JWD only	
Initial insulation resistance	10 <sup>10</sup> Ω at 100VDC
between insulated elements	
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 <a href="http://www.te.com/customer-support/rohssupportcenter">www.te.com/customer-support/rohssupportcenter</a>
Ambient temperature	-35°C to +85°C
Category of environmental protection	RTIII -wash tight
IEC 61810	
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 <sup>1)</sup>	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%.