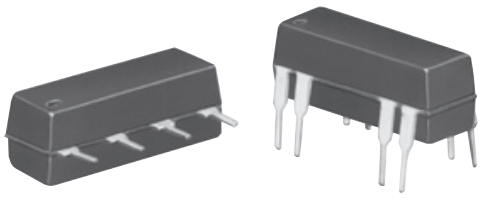
JWD/JWS Series Reed Relays

- **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	
JWD and JWS	1 form A (NO) contact
JWD only	1 form B (NC), 1 form C (CO), 2 form A (NO)
Rated voltage	
1 form A, 1 form B and 2 form A	20VDC, 500mA
1 form C (CO)	10 VDC, 500mA and 10VDC, 10mA
Max. switching voltage	
1 form A, 1 form B and 2 form A	100VDC
1 form C (CO)	28VDC
Rated current	
1 form A, 1 form B and 2 form A	500mA, 20VDC
1 form C (CO)	500mA, 10VDC
Limiting making current	500mA
Limiting breaking current	500mA
Switching power	
form A (NO) and form B (NC)	10W
form C (CO)	3W
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	
form A (NO) and form B (NC)	1.5/0.5ms
form C (CO)	1.5/3.0ms
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

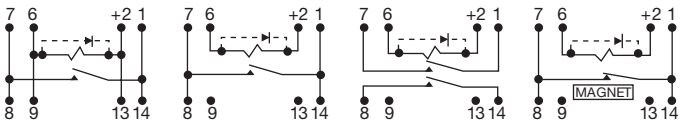
Other Data

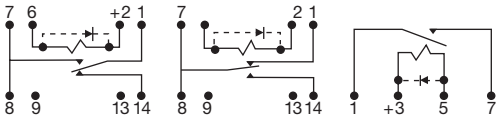
Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content	refer to the Product Compliance Support Center at www.te.com/customersupport/rohssupportcenter
Ambient temperature	-35°C to +85°C
Category of environmental protection	
IEC 61810	RTIII -wash tight
Vibration resistance (functional)	20g, 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

Dia. 1 Dia. 2 Dia. 3 Dia. 4





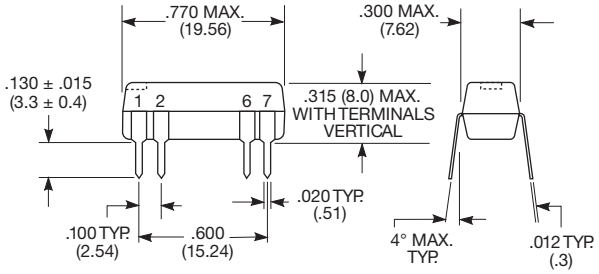
Dia. 5 Dia. 6 Dia. 7

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

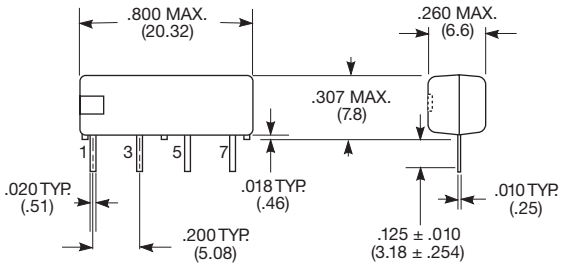
Note: Magnetic shielding may be required between relays when they are placed in very close proximity to one another.

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%.

LifeElectronics
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