

# **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.



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### Approvals

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

### **Contact Data**

oomaor bata					
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)	ЗW				
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. bou	nce				
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), resi	stive load, +25°C				
20VDC, 500mA	1x10 <sup>6</sup> ops.				
20VDC, 250mA	20x10 <sup>6</sup> ops.				
5VDC, 1mA	100x10 <sup>6</sup> ops.				
form C (CO) contact, resistive load	d, +25°C				
10VDC, 500mA	1x10 <sup>6</sup> ops.				
10VDC, 250mA	20x10 <sup>6</sup> ops.				
5VDC, 1mA	100x10 <sup>6</sup> ops.				
Contact ratings					
1 form A, 1 form B and 2 form A	500mA, 20VDC				
1 form C (CO)	500mA, 10VDC				
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		
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 <sup>10</sup> 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	t 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.					

Datasheets and product specification according to IEC 61810-1 and to be used only together with the 'Definitions' section.

Datasheets and product data is subject to the terms of the disclaimer and all chapters of the 'Definitions' section, available at <a href="http://relays.te.com/definitions">http://relays.te.com/definitions</a>

Datasheets, product data, 'Definitions' section, application notes and all specifications are subject to change. 1



# JWD/JWS Series Reed Relays (Continued)



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

#### Dimensions



JWS Series



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

Product code	Contacts	Max.	Diode	Coil	Coil	Operate	Coil	Wiring	Part number
JWD-107-1	1 form A	10W	No	voltage 5/6VDC	5000hm	voltage 3.8VDC	50/72mW	diagram	1393771-3
JWD-107-1	1 form A, 1 NO contact	1000	Yes	5/6VDC	5000hm		50/72mW		1393771-5
	TINO contact		No	12VDC		3.8VDC 9.6VDC	120mW	1	
JWD-107-3 JWD-107-7			Yes	12VDC 12VDC	1200ohm	9.6VDC 9.6VDC		1	1393771-4 1393771-6
JWD-171-5			No	24VDC	1200ohm 2150ohm	19.2VDC	120mW 268mW	2	2-1393771-0
JWD-171-5 JWD-171-10			Yes	24VDC 24VDC		19.2VDC 19.2VDC	268mW		1393771-7
JWD-171-10	2 form A,		No	5/6VDC	2150ohm 200ohm	3.8VDC	125/180mW	2	1-1393771-7
			Yes	5/6VDC	2000nm 2000hm	3.8VDC 3.8VDC	125/180mW		
JWD-171-25	2 NO contacts							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,	ЗW	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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