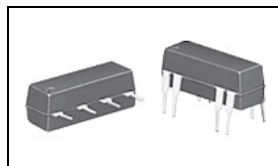


JWD-171-10 Product Details



JWD-171-10

TE Internal Number: 1393771-7



Active

Communications/Signal PC Board Relays



Always EU RoHS/ELV Compliant (Statement of Compliance)

Product Highlights:

- JWD/JWS Series
- Contact - Current Class = 0A to 2A Class
- Contact - Rated Current = .5 A
- Terminal Type = PCB-THT
- Contact - Arrangement = 2 Form A (NO)

Documentation & Additional Information

Product Drawings:

- None Available

Catalog Pages/Data Sheets:

- [JWD/JWS Dual In-Line Package & Single In-Line Packag...](#) (PDF, English)

Product Specifications:

- None Available

Application Specifications:

- None Available

Instruction Sheets:

- None Available

CAD Files: (CAD Format & Compression Information)

- [2D Drawing](#) (DXF, Version 0303)
- [3D Model](#) (IGES, Version 0303)
- [3D Model](#) (STEP, Version 0303)

Additional Information:

- [Product Line Information](#)

Additional Product Images:

- [Wiring Diagram](#)

Related Products:

- [Tooling](#)

Product Features (Please use the Product Drawing for all design activity)

Product Type Features:

- Series = JWD/JWS
- Terminal Type = PCB-THT

Electrical Characteristics:

- Contact - Current Class = 0A to 2A Class
- Contact - Rated Current (A) = 0.5
- Contact - Limiting Continuous Current (A) = 0.5
- Contact - Limiting Making Current (A) = 0.5
- Contact - Limiting Breaking Current (A) = 0.5
- Insulation - Initial Dielectric Between Coil/Contact Class = 0 to 500V Class
- Insulation - Initial Dielectric Between Open Contacts (V rms) = 250
- Insulation - Initial Dielectric Between Contacts and Coil (V rms) = 500
- Contact - Rated Voltage (VDC) = 20
- Contact - Switching Voltage Max. (VDC) = 100
- Contact - Limiting Short-Time Current (A) = 0.5
- Coil - Rated Voltage (VDC) = 24
- [Coil - Resistance \(Ω\)](#) = 2150
- Coil - Rated Power, DC (mW) = 268
- Coil - Rated Power Class = 200mW to 300mW Class
- Insulation - Initial Dielectric Between Adjacent Contacts (V rms) = 500
- Insulation - Initial Insulation Resistance (MΩ) = 10000000
- Contact - Switching Recommended Load, Min. = 10mA at 0.01V

Dimensions:

- Mechanical - Length Class = 16mm to 20mm Class
- Length (mm [in]) = 19.60 [0.771]
- Mechanical - Width Class = 6mm to 8mm Class
- Width (mm [in]) = 7.59 [0.2988]

Body Features:

- Weight (g [oz]) = 2.30 [0.0811]
- Mount Type = PCB

Contact Features:

- Contact Material = Ruthenium
- Contact - Number of Poles = 2
- Contact - Special Features = Reed Contacts

Configuration Features:

- [Contact - Arrangement](#) = 2 Form A (NO)
- [Coil - Magnetic System](#) = Monostable, DC
- Coil - Special Features = UL Coil Insulation Class A, Coil Suppression Diode

Industry Standards:

- [RoHS/ELV Compliance](#) = RoHS compliant, ELV compliant
- [Lead Free Solder Processes](#) = Wave solder capable to 260°C, Wave solder capable to 240°C
- RoHS/ELV Compliance History = Always was RoHS compliant
- Approved/Registered Standards = CSA, UL

Environmental:

- Environmental - Category of Protection = RTIII
- Environmental - Ambient Temperature, Max. (°C [°F]) = 85 [185]
- Environmental - Ambient Temperature Class = 70°C to 85°C Class

Packaging Features:

- Packaging Method = Tray

Other:

- Brand = Potter & Brumfield

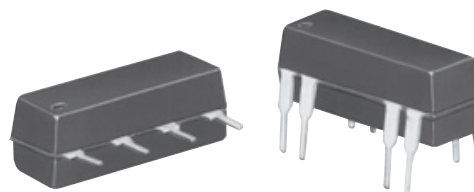
<ul style="list-style-type: none">• Mechanical - Height Class = 7mm to 8mm Class• Height (mm [in]) = 8.00 [0.315]	
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JWD/JWS Series Reed Relays

- 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

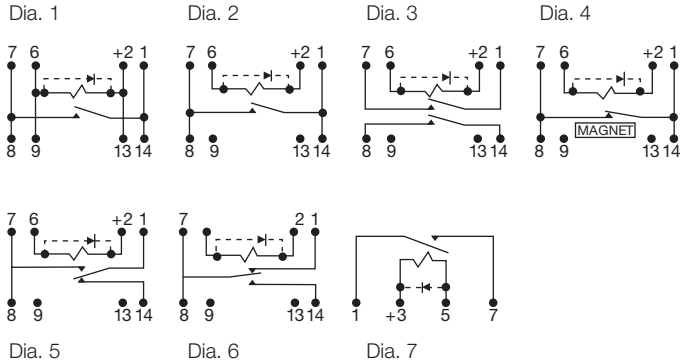
Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customer-support/rohssupportcenter

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

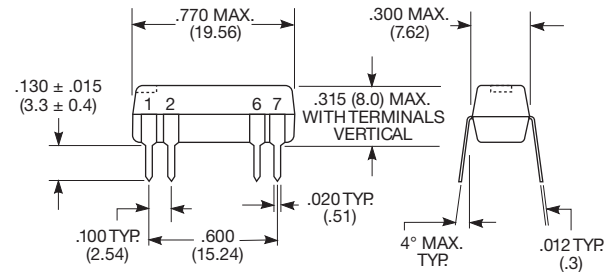


Note: Terminal numbers are for reference only and do not appear on relays.

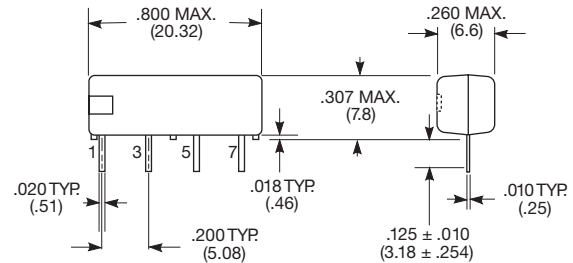
Note: Magnetic shielding may be required between relays when they are placed in very close proximity to one another.

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%.