Series JW

High Inrush 10 & 16 Amp Rockers

General Specifications

Electrical Capacity (Resistive Load)

Power Level:
- 10A @ 125/250V AC for JWM & JWMW models;
- 10A @ 30V DC for JWMW;
- 16A @ 125/250V AC for JWL & JWLW models;
- 5A @ 72V DC for telecommunication applications

Other Ratings

Contact Resistance: 10 milliohms maximum for JWM & JWMW; 20 milliohms maximum for JWL & JWLW
Insulation Resistance: 1,000 megohms minimum @ 500V DC
Dielectric Strength: 2,000V AC minimum between contacts for 1 minute minimum;
- 4,000V AC minimum between contacts & case for 1 minute minimum
Mechanical Life: 25,000 operations minimum
Electrical Life: 25,000 operations minimum
Nominal Operating Force: JWM & JWMW Single Pole 3.92N & Double Pole 7.84N
JWL Single Pole 5.00N & Double Pole 10.00N; JWLW Double Pole 10.00N
Angle of Throw: 26°

Materials & Finishes

Rocker: Polyphenylene ether (UL94V-0)
Case/Base: Melamine (UL94V-0)
Housing/Frame & Barrier: Polyamide (UL94V-0)
Contacts: Silver alloy with silver plating
Interior Seal for JWM & JWL: Polyphenylene sulfide (UL94V-0)
Terminals: Brass with silver plating

Environmental Data

Operating Temperature Range: 
-25°C through +70°C (–13°F through +158°F) for JWM & JWL;
-25°C through +85°C (–13°F through +185°F) for panel seal JWMW & JWLW models
Humidity: 90 ~ 95% humidity for 96 hours @ 40°C (104°F)
Vibration: 10 ~ 55Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range & returning in 1 minute; 3 right angled directions for 2 hours
Shock: 50G (490m/s²) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)
Sealing: IP67 of IEC60529 standard for panel seal JWMW & JWLW models; dust resistant inner seal for others

Installation


Standards & Certifications

Flammability Standards: UL94V-0 for rocker, housing, seal & case/base of JWL, JWM, JWMW & JWLW models
TV Ratings for UL & CSA:
JWM (TV-5) Overload Test @ 120V AC for 50 operations:
Steady State Current (rms) 7.5A; Minimum Inrush Current (peak) 111A.
JWM (TV-5) Endurance Test @ 120V AC for 25,000 operations:
Steady State Current (rms) 5A; Minimum Inrush Current (peak) 78A.
JWL (TV-8) Overload Test @ 120V AC for 50 operations:
Steady State Current (rms) 12A; Minimum Inrush Current (peak) 163A.
JWL (TV-8) Endurance Test @ 120V AC for 25,000 operations:
Steady State Current (rms) 8A; Minimum Inrush Current (peak) 117A.

UL: File No. E44145
JWM & JWMW models recognized at 10A @ 250V AC.
JWMW recognized at 10A @ 30V DC.
JWL & JWLW models recognized at 16A @ 250V AC; JWL at 5A @ 72V DC.
JWMW: add “/U” to end of part number to order UL mark on switch; add “/CUL” to end of part number to order cULus mark on switch.
JWL: add “/U-DC” to end of part number to request UL rating on DC rated switch.

CSA: File No. 023535_0_000
JWM & JWMW models certified at 10A @ 250V AC; JWL models certified at 16A @ 250V AC.

VDE: License No. 115637
JWM models approved at steady state 5A, inrush 80A, resistive 10A, & motor load 6A all at 250V AC; JWL models approved at steady state inrush 128A, resistive 16A, & motor load 8A all at 250V AC.
Note: JWM & JWL Double Pole, Single Throw models approved only with the international ON-OFF symbols on the actuator.
Industry’s first molded rocker with TV rating. Designed to handle large inrush current, with high electrical capacity of 10 and 16 Amps. JWM models certified for TV-5 rating and JWL models for TV-8 rating.

JWMW and JWLW panel seal versions meet IP67 of IEC60529 Standards (similar to NEMA 4 and 6).

Prominent external insulating barriers increase insulation resistance and dielectric strength.

Uniquely constructed to break light contact welds.

Increased electrical life with specially designed plate to minimize contact bounce.

Constructed for dust resistance with interior cover between actuator and contact area.

Terminals are molded in and epoxy sealed to lock out flux, dust, and other contaminants.

Solder lug/quick connect terminals can be used with connector.

Housing and case of heat resistant resin meet UL94V-0 standard.
**Series JW**

**High Inrush 10 & 16 Amp Rockers**

**TYPICAL SWITCH ORDERING EXAMPLE**

**Ratings**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>Panel Seal</td>
<td>10A @ 125/250V AC</td>
</tr>
<tr>
<td>MW</td>
<td>Panel Seal</td>
<td>10A @ 125/250V AC</td>
</tr>
<tr>
<td>L</td>
<td>Panel Seal</td>
<td>16A @ 125/250V AC</td>
</tr>
<tr>
<td>LW</td>
<td>Panel Seal</td>
<td>16A @ 125/250V AC</td>
</tr>
</tbody>
</table>

**Barrier Types**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>R</td>
<td>No Barrier</td>
</tr>
<tr>
<td>B</td>
<td>With Barrier</td>
</tr>
</tbody>
</table>

Note: JWMW & JWLW combine with code R only.

**Housing Colors**

<table>
<thead>
<tr>
<th>Code</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Black</td>
</tr>
<tr>
<td>B</td>
<td>Ivory</td>
</tr>
<tr>
<td>H</td>
<td>Gray</td>
</tr>
</tbody>
</table>

Note: JWMW & JWLW available with black only.

**Poles**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SPST</td>
</tr>
<tr>
<td>2</td>
<td>DPST</td>
</tr>
</tbody>
</table>

Notes: DPST must have international ON-OFF symbols for VDE approval. JWLW available in DPST & DPDT only.

**Cap Colors**

<table>
<thead>
<tr>
<th>Code</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Black</td>
</tr>
<tr>
<td>B</td>
<td>Ivory</td>
</tr>
<tr>
<td>C</td>
<td>Red</td>
</tr>
<tr>
<td>H</td>
<td>Gray</td>
</tr>
</tbody>
</table>

Note: JWMW & JWLW available with black or red caps only.

**Inscription Orientation**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Horizontal</td>
</tr>
<tr>
<td>2</td>
<td>Vertical</td>
</tr>
</tbody>
</table>

These are inscriptions for Single Throw models only.

**Circuits**

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<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ON NONE OFF</td>
</tr>
<tr>
<td>2</td>
<td>ON NONE ON</td>
</tr>
</tbody>
</table>

**Barrier Colors**

<table>
<thead>
<tr>
<th>Code</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
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<tr>
<td>B</td>
<td>Ivory</td>
</tr>
<tr>
<td>H</td>
<td>Gray</td>
</tr>
</tbody>
</table>

Note: Wire harness & cable assemblies offered only in Americas.

**IMPORTANT:**


**DESCRIPTION FOR TYPICAL ORDERING EXAMPLE**

JWLW21RA1A ↔ NEW

Black Rocker Cap with International ON-OFF Symbols in Horizontal Orientation

DPST ON-NONE-OFF Circuit

Black Housing

16A @ 125/250V AC
# High Inrush 10 & 16 Amp Rockers

## Series JW

### RATINGS

<table>
<thead>
<tr>
<th>M</th>
<th>Power Level</th>
<th>10A @ 125/250V AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>Power Level</td>
<td>16A @ 125/250V AC</td>
</tr>
</tbody>
</table>

### POLES & CIRCUITS

<table>
<thead>
<tr>
<th>Pole</th>
<th>Model</th>
<th>Rocker Position</th>
<th>Connected Terminals</th>
<th>Throw &amp; Schematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP</td>
<td>JWM11</td>
<td>ON</td>
<td>1-1b OPEN</td>
<td>SPST</td>
</tr>
<tr>
<td></td>
<td>JWMW11</td>
<td>NONE</td>
<td>1-1b OPEN</td>
<td></td>
</tr>
<tr>
<td></td>
<td>JWL11</td>
<td>OFF</td>
<td>OPEN</td>
<td></td>
</tr>
<tr>
<td>SP</td>
<td>JWM12</td>
<td>ON</td>
<td>1-1b OPEN</td>
<td>SPDT</td>
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<td>JWMW12</td>
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<td>1-1a</td>
<td></td>
</tr>
<tr>
<td></td>
<td>JWL12</td>
<td>ON</td>
<td>1-1a</td>
<td></td>
</tr>
<tr>
<td>DP</td>
<td>JWM21</td>
<td>ON</td>
<td>1-1b 2-2b</td>
<td>DPST</td>
</tr>
<tr>
<td></td>
<td>JWMW21</td>
<td>NONE</td>
<td>OPEN</td>
<td></td>
</tr>
<tr>
<td></td>
<td>JWL21</td>
<td>OFF</td>
<td>OPEN</td>
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</tr>
<tr>
<td></td>
<td>JWLW21</td>
<td>ON</td>
<td>2-2a</td>
<td></td>
</tr>
</tbody>
</table>

Note: Terminal numbers are not actually on the switch. Actuator positions oriented with switch part number facing front.

### BARRIER TYPES & COLORS

- **R** No Barrier
- **B** With Barrier

JWMW and JWLW panel seal devices have exterior seal of acrylonitrile butadiene rubber covering the flange.

**Barrier Colors Available:**
- **A** Black
- **B** Ivory
- **H** Gray

**Barrier Material:** Polyamide

**Finish:** Matte

### CAP COLORS

- **Cap Material:** Polyphenylene Oxide
- **Finish:** Matte

JWMW and JWLW available with black or red caps only.

**Cap Colors Available:**
- **A** Black
- **B** Ivory
- **C** Red
- **H** Gray
Series JW

High Inrush 10 & 16 Amp Rockers

INSCRIPTIONS

No Code No Inscription

1 Inscription for Horizontal Mounting

2 Inscription for Vertical Mounting

DPST models without inscriptions do not have VDE approval.

The IEC symbols for On-Off are supplied with Single Throw models only. Orientation of inscription must be selected.

Inscription Colors: Black ink on Ivory or Gray cap. White ink on Black or Red cap. Contact factory for other inscriptions.

HOUSING

Material: Polyamide

Finish: Matte

Colors Available: A Black  B Ivory  H Gray

JWMW and JWLW panel seal models available with black housing only.

TERMINALS

Solder Lug/Quick Connect .110” (2.8mm)

Solder Lug/Quick Connect .187” (4.75mm)

JWM & JWMW

JWL & JWLW

PANEL CUTOUTS

Panel Thickness Range

Without Barrier (JWM & JWMW): .039” ~ .157” (1.0mm ~ 4.0mm)

With Barrier (JWM): .024” ~ .126” (0.6mm ~ 3.2mm)

Without Barrier (JWL & JWLW): .039” ~ .157” (1.0mm ~ 4.0mm)

With Barrier (JWL): .024” ~ .126” (0.6mm ~ 3.2mm)
TYPICAL SWITCH DIMENSIONS FOR JWM & JWMW

Single & Double Pole

No Barrier • 10 Amp

With Barrier • 10 Amp

Panel Seal • No Barrier • 10 Amp

Single pole double throw models do not have terminals 2a, 2, & 2b; single throw models do not have 1a & 2a.
### TYPICAL SWITCH DIMENSIONS FOR JWL & JWLW

#### No Barrier • 16 Amp

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>JWL21RC2A</td>
<td><img src="image1" alt="Dimensions" /></td>
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</tbody>
</table>

Single pole double throw models do not have terminals 2a, 2, & 2b; single throw models do not have 1a & 2a.

#### With Barrier • 16 Amp

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Dimensions</th>
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</thead>
<tbody>
<tr>
<td>JWL11BCA-H</td>
<td><img src="image2" alt="Dimensions" /></td>
</tr>
</tbody>
</table>

Single pole double throw models do not have terminals 2a, 2, & 2b; single throw models do not have 1a & 2a.

#### Panel Seal • 16 Amp • Inscription

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>JWLW21RA1A</td>
<td><img src="image3" alt="Dimensions" /></td>
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</table>

Double Pole Single Throw

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<table>
<thead>
<tr>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>JWL21RC2A</td>
</tr>
<tr>
<td>JWL11BCA-H</td>
</tr>
<tr>
<td>JWLW21RA1A</td>
</tr>
</tbody>
</table>
High Inrush 10 & 16 Amp Rockers

TYPICAL SWITCH DIMENSIONS FOR JWLW

Double Pole Double Throw NEW Panel Seal • 16 Amp • No Inscription

AT4126
Dust Cover for JWL Rocker
When installed, the Dust Cover protects the switch from an environment containing small particles and dust. The switch is operable with the Dust Cover in place.

Materials:
Lid: Clear Polyvinyl Chloride
Base: Black Polyamide

Recommended Temperature Range:
−10° ~ +70°C (+14°F ~ +158°F)
Loses pliability below 0°C (+32°F)

Recommended Panel Thickness:
.031” ~ .134” (0.8mm ~ 3.4mm)

Assembly Instructions:
1. Insert bottom of switch through the base until the tabs lock into place.
2. Snap the switch into the panel.
3. Seat the lid into the grooves of the base.

Notes
1. The dust cover is not for use with JWLW.
2. The dust cover cannot be used with the barrier option.
PRECAUTIONS FOR HANDLING & STORAGE FOR JWMW/LW (PANEL SEAL TYPES)

Operating Environment

- Do not install switch where heavy dust collection occurs. Dust build-up under rocker may affect switch actuation.
- Do not actuate switch if submerged in water or oil.
- Installation is not recommended on horizontal surface in an environment where frequent splashing of water may occur. In such an environment, a minimum 30° angle installation is advisable. If there is a possibility of freezing, install vertically so no moisture will be retained within switch housing.

Panel Mounting

- Before snapping a switch into the panel, align the gasket evenly under bezel of the switch.
- When mounting into a panel, apply equal pressure to sides of bezel and insert parallel to panel.
- After mounting a switch, be sure there are no gaps between switch and panel. Lightly push into panel.
- After installing into panel, do not apply excessive force.
- After panel installation and wiring is completed, do not apply force horizontally or vertically from behind panel.
- Behind the panel, cut area should be squared. If front of panel is painted, do not allow any paint to collect in corners of cutout to prevent level mounting.
- Avoid reinstalling a switch once it has been mounted in a panel. This may cause deterioration of panel sealability.