

Bussmann LPJ-250SP

Bussmann LPJ-250SP Low-Peak Class J Time-Delay Fuse User Manual

Model: LPJ-250SP | Brand: Bussmann

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1. PRODUCT OVERVIEW

The Bussmann series LPJ-250SP is a Class J, dual-element, current-limiting, time-delay fuse designed for electrical circuit protection. This fuse is suitable for applications requiring protection against both overloads and short circuits, while also accommodating temporary inrush currents.

Common applications include power panelboards, branch circuit breaker panelboard mains, machinery disconnects, and industrial control systems.



Figure 1: Bussmann LPJ-250SP Low-Peak Class J Time-Delay Fuse. This image shows a yellow and gray cylindrical fuse with copper terminals extending from both ends. The label on the fuse body displays the Bussmann logo, "Low-Peak Ultimate Protection," "Dual-Element Time-Delay Current Limiting Class J Fuse," and "LPJ-250SP." It also specifies ratings: 600Vac, AC IR 300kA; 300Vdc, DC IR 100kA.

Key Features:

- **Dual-Element Design:** Incorporates separate elements for overload and short-circuit protection, allowing for temporary inrush currents without nuisance tripping.
- **Current-Limiting:** Reduces the magnitude and duration of fault currents, minimizing potential damage to electrical systems and connected equipment.
- **Time-Delay:** Permits temporary overloads, such as motor startup currents, without opening, while still providing protection against sustained overloads and short circuits.
- **High Interrupting Rating:** UL Listed and CSA Certified with a 300 kA interrupting rating for AC circuits and 100 kA for DC circuits, ensuring reliable fault interruption.
- **Class J Fuse:** Conforms to Class J fuse standards, ensuring compatibility and performance in appropriate fuse holders.

2. INSTALLATION

WARNING: Electrical work should only be performed by qualified personnel. Ensure all power is disconnected before installation to prevent electric shock or equipment damage.

1. **Power Disconnection:** Before beginning any work, ensure that the main power supply to the circuit where the fuse will be installed is completely disconnected and locked out according to safety procedures.
2. **Fuse Holder Compatibility:** Verify that the fuse holder is designed for Class J fuses and is rated for the voltage and current of the LPJ-250SP fuse (250 Amps, 600V AC / 300V DC).
3. **Inspection:** Visually inspect the fuse for any signs of damage before installation. Do not install a damaged fuse.
4. **Installation into Holder:** Carefully insert the LPJ-250SP fuse into the appropriate Class J fuse holder. Ensure a secure and proper fit to maintain good electrical contact.
5. **Secure Connections:** Confirm that the fuse is firmly seated and that any retaining clips or screws on the fuse holder are tightened as per manufacturer specifications.
6. **Power Restoration:** Once the fuse is securely installed and all connections are verified, restore power to the circuit.

For detailed wiring diagrams and specific installation instructions related to your equipment, refer to the equipment manufacturer's manual.

3. OPERATION

The Bussmann LPJ-250SP fuse operates passively to protect electrical circuits and equipment from overcurrent conditions. Its function is to interrupt the flow of current when an overload or short circuit occurs, thereby preventing damage to wiring, motors, transformers, and other components.

How it Works:

- **Normal Operation:** Under normal operating conditions, the fuse allows current to flow unimpeded through the circuit.
- **Overload Protection (Time-Delay):** If a sustained overload current (e.g., a motor starting up) exceeds the fuse's rated current but is within its time-delay characteristics, the fuse will allow this temporary surge to pass without opening. If the overload persists beyond the time-delay period, the fuse will open to protect the circuit.
- **Short-Circuit Protection (Current-Limiting):** In the event of a severe short circuit, the fuse's current-limiting feature rapidly interrupts the fault current, often within half a cycle. This quick interruption significantly reduces the total electrical energy delivered to the fault, mitigating potential damage and reducing the risk of arc flash incidents.

The fuse is a one-time protective device. Once it has interrupted an overcurrent event, it must be replaced.

4. MAINTENANCE

The Bussmann LPJ-250SP fuse is a sealed, maintenance-free component. It does not require periodic inspection or servicing under normal operating conditions.

Inspection and Replacement:

- **Post-Fault Inspection:** If an overcurrent event occurs and the fuse opens (blows), it must be replaced. Visually inspect the fuse holder and surrounding components for any signs of damage (e.g., discoloration, melting) that may have resulted from the fault.

- **Replacement Procedure:**

- a. Disconnect all power to the circuit.
- b. Carefully remove the blown fuse from its holder.
- c. Install a new fuse of the exact same type and rating (Bussmann LPJ-250SP). Using a fuse with a different rating or type can compromise safety and protection.
- d. Restore power to the circuit after verifying proper installation.

- **Environmental Conditions:** Ensure the fuse operates within its specified environmental conditions (temperature, humidity) to ensure optimal performance and lifespan.

CAUTION: Never attempt to repair or bypass a blown fuse. Always replace it with an identical, new fuse.

5. TROUBLESHOOTING

Fuses are designed to be the first line of defense against electrical faults. If a Bussmann LPJ-250SP fuse opens (blows), it indicates an overcurrent condition has occurred in the circuit it protects.

Symptom: Fuse Opens (Circuit Loses Power)

Possible Causes and Solutions:

- **Overload:**

- **Cause:** Too many devices are connected to the circuit, drawing more current than the circuit or fuse is rated for.
- **Solution:** Disconnect some devices or redistribute loads across different circuits. Ensure the total current draw does not exceed the fuse's 250 Amp rating.

- **Short Circuit:**

- **Cause:** A direct connection between live and neutral/ground wires, or a fault within an appliance, causing a sudden, very high current flow.
- **Solution:** Disconnect all appliances from the affected circuit. Replace the fuse. If the new fuse blows immediately, there is a persistent short circuit in the wiring or a connected device. Professional electrical inspection is required.

- **Equipment Malfunction:**

- **Cause:** A connected motor, transformer, or other electrical equipment has an internal fault.
- **Solution:** Isolate the faulty equipment. If the fuse stops blowing after disconnecting a specific piece of equipment, that equipment is likely the cause. Have the equipment inspected or repaired by a qualified technician.

- **Incorrect Fuse Rating:**

- **Cause:** An incorrect fuse (e.g., lower amperage) was installed previously.
- **Solution:** Always ensure the replacement fuse is the correct Bussmann LPJ-250SP model with a 250 Amp rating.

IMPORTANT: If a fuse repeatedly blows after replacement, do not continue to replace it without identifying and rectifying the underlying fault. This indicates a serious electrical issue that requires immediate attention from a qualified electrician.

6. SPECIFICATIONS

Feature	Detail
Model Number	LPJ-250SP
Brand	Bussmann (Cooper Bussmann)
Fuse Type	Class J, Low-Peak, Dual-Element, Current-Limiting, Time-Delay
AC Voltage Rating	600 Volts AC
DC Voltage Rating	300 Volts DC
AC Interrupting Rating (IR)	300 kA
DC Interrupting Rating (IR)	100 kA
Current Rating	250 Amps
Material	Copper (terminals)
Product Dimensions (L x W x H)	7.5 x 2.5 x 2.5 inches
Package Weight	1.1 Pounds
Country of Origin	United States

Package Contents:

- One (1) Bussmann series LPJ 250 Amp, 600 Vac and IR 300 kA / 300 Vdc and IR 100 kA fuse.

7. WARRANTY AND SUPPORT

Warranty Information:

Bussmann products are manufactured to high-quality standards. For specific warranty details regarding the LPJ-250SP fuse, please refer to the official Bussmann (Eaton) warranty documentation available on their corporate website or contact their customer service directly. Fuses are consumable protective devices and are typically not covered under warranty once they have operated to clear a fault, as this indicates they have performed their intended function.

Customer Support:

For technical assistance, product inquiries, or further information, please contact Bussmann (an Eaton brand) customer support:

- **Website:** Visit the official Eaton Bussmann website for product documentation, FAQs, and contact information.
- **Technical Support:** Contact details for technical support are typically available on the Bussmann website.

When contacting support, please have your product model number (LPJ-250SP) and any relevant details about your application or issue ready.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question