L50QS SERIES HIGH-SPEED ROUND BODY FUSES

500 Vac/dc • 35-800 A • Traditional Round Body Bolted Style

Specifications

- **Voltage Rating**
  - AC: 500V
  - DC: 500V
- **Amperage Rating**
  - 35 - 800 A
- **Interrupting Rating**
  - AC: 200 kA
  - DC: 50 kA
- **Time Constant**
  - 10ms
- **Material**
  - Body: Melamine
  - Caps: Copper Alloy (Silver Plated)
- **Approvals**
  - UL Recognized (E71611)
  - c-UR-us (E71611)
- **Environmental**
  - RoHS Compliant, REACH
- **Country of Origin**
  - Mexico
- **Operating Temperature**
  - -55C to +125C
- **Storage Temperature**
  - Up to 35C with Relative Humidity <65%

Description

The L50QS Series is a next generation High-Speed Fuse for the protection of power semiconductor devices and is designed in the Traditional North American Bolted Style package.

L50QS Series High-Speed Fuses are extremely current limiting and are used to protect power converters, drives and control circuit applications. Designed with lower $I^2t$ performance characteristics, these fuses provide balanced performance to extend longevity while lowering potentially damaging heat energy to the devices being protected.

In addition L50QS Series fuses have been designed with a universal mounting option to meet customer requirements for installation into a variety of application configurations.

Littelfuse POWR-SPEED™ products offer optimized circuit protection at the extremely fast speed required to protect modern day, sensitive, high-power semiconductor devices. Such products are commonly found in various industries including pulp and paper industries, cranes and heavy-lifting equipment, processing industries, wastewater treatment plants and large factories and MRO facilities.

Features

- Compliance with US and Canadian Requirements
- Traditional North American Bolted Style dimensions
- Class aR performance
- Direct bus-bar mount or stud mount design
- Halogen Free, RoHS and REACH Compliant

Applications

- Power Converters (Inverters, Rectifiers)
- Power Supplies
- UPS
- Variable Speed Drives
- Control Circuits
- Soft Starters

Part Numbering System

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Recommended Fuse Blocks

- LSCR001 (35-200A)
- LSCR002 (225-800A)

Web Resources

Download technical documents: littelfuse.com/L50QS
# Electrical Specifications

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# L50QS SERIES HIGH-SPEED ROUND BODY FUSES

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L50QS SERIES HIGH-SPEED ROUND BODY FUSES

Dimensions
Millimeters [inches]

Document Number: OL-L50QS000

**35-100A**
- **Stud Size:** M8 (5/16”)
- **Recommended Torque:** 15 Nm (132.76 in-lb)

**125-200A**
- **Stud Size:** M8 (5/16”)
- **Recommended Torque:** 15 Nm (132.76 in-lb)

**225-400A**
- **Stud Size:** M8 (5/16”)
- **Recommended Torque:** 15 Nm (132.76 in-lb)

**450-600A**
- **Stud Size:** M8 (5/16”)
- **Recommended Torque:** 15 Nm (132.76 in-lb)

**700-800A**
- **Stud Size:** M12 (1/2”)
- **Recommended Torque:** 54 Nm (477.94 in-lb)
Time Current Curve
L50QS Series
Time Current Curve

L50QS Series

PROSPECTIVE R.M.S CURRENT IN AMPERE

MELTING (PRE-ARcing) TIME IN SECONDS

- 600A
- 500A
- 450A
- 200A
- 175A
- 150A
- 125A

TEST VOLTAGE: 500V
TIME CONSTANT/POWER FACTOR: FUSE CATALOG NUMBER:

REV: 110317

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POWR-SPEED™ Fuse Datasheet

L50QS SERIES HIGH-SPEED ROUND BODY FUSES

L50QS 35A - 800A

- THIS DATA IS GENERATED IN EXCEL -
### Time Current Curve

**L50QS Series**

![Time Current Curve Diagram]

- **- 800A**
- **- 700A**
- **- 400A**
- **- 350A**
- **- 325A**
- **- 300A**
- **- 275A**
- **- 250A**
- **- 225A**
- **- 100A**
- **- 90A**
- **- 80A**
- **- 70A**

**PROSPECTIVE R.M.S CURRENT IN AMPERE**

**MELTING (PRE-ARCING) TIME IN SECONDS**

**TEST VOLTAGE: 500V**

**TIME CONSTANT/POWER FACTOR:**

**FUSE CATALOG NUMBER:**

**DRAWN BY:**

**DATE:** 10/14/2015

**REVISION:** A

**LL: 100000 90000 80000 70000 60000 50000 40000 30000 20000 10000 9000 8000 7000 6000 5000 4000 3000 2000 1000 900 800 700 600 500 400 300 200 100 90 80 70 60 50 40 30 20 10 7 6 5 4 3 2 1**

**- THIS DATA IS GENERATED IN EXCEL -**

**L50QS 35A - 800A**
Peak Let-Thru Curve
L50QS Series

- 800A -
- 600A -
- 400A -
- 200A -
- 100A -
- 60A -

Available Fault Current
Symmetrical R.M.S. Amperes
Temperature De-rating Curve (Temperature of Air Immediately Surrounding Fuse)
L50QS Series

Temperature De-rating Curve (Temperature of Air Immediately Surrounding Fuse)
L50QS Series

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L50QS Series

Temperature De-rating Curve (Temperature of Air Immediately Surrounding Fuse)
L50QS Series
Total Clearing $I^2t$ Correction Factor Curve

L50QS Series
Watts Loss Correction Factor Curve
L50QS Series

BASIS FOR DATA:
TEST VOLTAGE: 500V
TIME CONSTANT/POWER FACTOR: FUSE CATALOG NUMBER:
DRAWN BY:
DATE:
REVISION:
DRAWING NO.: SHEET

LITTELFUSE, INC.
CHICAGO, IL. USA

- This data is generated in Excel -
Peak Arc Voltage Curve
L50QS Series

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