**POWR-SPEED® Fuse**

**L75QS SERIES HIGH-SPEED ROUND BODY**

750 V dc • Very Fast Acting • 35–800 A

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**Description**

The L75QS series is a next generation high-speed fuse for the protection of power semiconductor devices and is designed in the traditional round body bolted style package.

L75QS series high-speed fuses rated at 750 V dc 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 L75QS 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.

**Features**

- Compliance with US and Canadian requirements
- Traditional North American bolted style dimensions
- 750 V dc performance
- Direct bus-bar mount or stud mount design
- Halogen free, RoHS and REACH compliant

**Applications**

- Power converters (inverters, rectifiers)
- Power supplies, UPS
- EV charging stations
- Variable speed drives
- Dc common bus

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**Specifications**

- **Voltage Rating**: Dc: 750 V
- **Amperage Rating**: 35–800 A
- **Interrupting Rating**: Dc: 50 kA
- **Time Constant**: 10 ms
- **Material**: Body: Melamine
  Caps: Copper Alloy
- **Approvals**: UL Recognized (E71611)
  cURus (E71611)
- **Environmental**: RoHS compliant, REACH
- **Country of Origin**: Mexico
- **Operating Temperature**: -55 °C to +125 °C
- **Storage Temperature**: Up to 35 °C with relative humidity <65 %

**Part Numbering System**

<table>
<thead>
<tr>
<th>Series</th>
<th>Body Type</th>
<th>Ampere Code</th>
<th>Package Quantity</th>
<th>Catalog Number</th>
<th>Ordering Number</th>
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<td>700 . X</td>
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**Recommended Fuse Blocks**

- LSCR101 (35–100 A)
- LSCR102 (125–800 A)
- LSCR103 (450–800 A)

**Web Resources**

Download technical documents: Littelfuse.com/L75QS

*Note: high-speed fuses are designed for fixed installations. They are not intended for use in moving vehicle applications.*
### Electrical Specifications

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<tr>
<th>CATALOG NUMBER</th>
<th>AMPERAGE RATING</th>
<th>VOLTAGE RATING</th>
<th>INTERRUPT RATING</th>
<th>MELTING (PRE-ARC) FT (A’s)</th>
<th>TOTAL CLEARING FT (A’s)</th>
<th>WATTS LOSS AT 80% RATED CURRENT</th>
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Dimensions
Millimeters [inches]

**Stud Size:** M8 (5/16")
**Recommended Torque:** 15 Nm (132.76 in-lb)

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**Recommended Torque:** 15 Nm (132.76 in-lb)

**Stud Size:** M8 (5/16")
**Recommended Torque:** 15 Nm (132.76 in-lb)

**Stud Size:** M12 (1/2")
**Recommended Torque:** 54 Nm (477.94 in-lb)

**Stud Size:** M12 (1/2")
**Recommended Torque:** 54 Nm (477.94 in-lb)
Time Current Curve

L75QS Series

**DC CURRENT IN AMPERE**

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

- **100A**
- **90A**
- **80A**
- **70A**
Time Current Curve

L75QS Series

- 200A
- 175A
- 150A
- 125A

DC CURRENT IN AMPERE

MELTING (PRE-ARCING) TIME IN SECONDS

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

BASIS FOR DATA:

DATE:
REVISION:
DRAWN BY:

POWR-SPEED® Fuse
L75QS SERIES HIGH-SPEED ROUND BODY
Time Current Curve
L75QS Series

BASIS FOR DATA:
TEST VOLTAGE:
TIME CONSTANT/POWER FACTOR:
FUSE CATALOG NUMBER:
DRAWN BY:
DATE:
REVISION:

DC CURRENT IN AMPERE
MELTING (PRE-ARCING) TIME IN SECONDS

- 400A
- 350A
- 300A
- 250A
- 225A

- 0.01
- 0.001
- 0.00001
- 0.000001

- 0.00000001
- 0.000000001
- 0.0000000001
- 0.00000000001

L75QS Series High-Speed Round Body Fuse

POWR-SPEED® Fuse
L75QS SERIES HIGH-SPEED ROUND BODY
Time Current Curve
L75QS Series

DC CURRENT IN AMPERE

MELTING (PRE-ARCING) TIME IN SECONDS

- 600A
- 500A
- 450A

- 600A
- 500A
- 450A

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

BASIS FOR DATA:
Time Current Curve
L75QS Series

- 800A
- 700A
Total Clearing $I^2T$ Correction Factor Curve

L75QS Series

![Graph showing Total Clearing $I^2T$ Correction Factor Curve for L75QS Series. The x-axis represents Operating Voltage in Volt, ranging from 200V to 800V, and the y-axis represents Total Clearing $I^2T$ Correction Factor, ranging from 0.1 to 1.0. The curve shows an increasing trend as voltage increases.]
Peak Arc Voltage Curve

L75QS Series
Watts Loss Correction Factor Curve

L75QS Series

- 35A - 800A

PERCENT OF RATED CURRENT (%) vs. WATTS LOSS CORRECTION FACTOR
Temperature De-rating Curve (temperature of air immediately surrounding fuse)

L75QS Series

![Temperature De-rating Curve Graph]

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