

# JLLN/JLLS CLASS T FUSES

300/600 VAC • Fast-Acting • 1-600 Amperes



## Specifications

|                              |     |                                                                                                                                                                                                                      |
|------------------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Voltage Ratings:</b>      | AC: | 300 V (JLLN); 600 V (JLLS)                                                                                                                                                                                           |
|                              | DC: | 125 V (JLLN 1 – 30 A)<br>160 V (JLLN 35 – 60 A)<br>125 V (JLLN 70 – 100 A)<br>125 V (JLLN 110 – 1200 A)<br>300 V (JLLS)                                                                                              |
| <b>Interrupting Ratings:</b> | AC: | 200 kA rms symmetrical                                                                                                                                                                                               |
|                              | DC: | 20 kA<br>(JLLN 70 – 100 A)<br>(JLLN 110 – 1200 A)<br>(JLLS 1 – 1200 A)                                                                                                                                               |
| <b>Ampere Range:</b>         |     | 1 – 1200 A                                                                                                                                                                                                           |
| <b>Approvals:</b>            | AC: | Standard 248-15, Class T<br>UL Listed (File No. E81895):<br>JLLN (1-1200 A)<br>JLLS (1-800 A)<br>UL Recognized (File No. E71611)<br>JLLS (900 – 1200 A)<br>CSA Certified (File No. LR29862)<br>JLLN/JLLS (1 – 600 A) |
|                              | DC: | UL Listed (File No. E81895):<br>JLLN (35 – 1200 A)<br>Littelfuse self-certified:<br>JLLN (1-30 A)<br>JLLS (1 – 1200 A)                                                                                               |

## Description

JLLN/JLLS fuses are less than 1/3 the size of comparable Class R fuses and are typically used for short circuit protection of drives and surge sensitive components. When rated in accordance with the NEC®, JLLN/JLLS fuses provide fast-acting overload and short circuit protection for non-inductive circuits and equipment.

## Applications

- Variable speed drive protection
- Compact mains switches

## Features/Benefits

- Extremely current-limiting
- Compact design
- 200 kA Interrupting Rating
- JLLN Series is RoHS Compliant

## Ordering Information

| AMPERE RATINGS |    |     |     |      |
|----------------|----|-----|-----|------|
| 1              | 30 | 90  | 250 | 800  |
| 2              | 35 | 100 | 300 | 900* |
| 3              | 40 | 110 | 350 | 1000 |
| 6              | 45 | 125 | 400 | 1100 |
| 10             | 50 | 150 | 450 | 1200 |
| 15             | 60 | 175 | 500 |      |
| 20             | 70 | 200 | 600 |      |
| 25             | 80 | 225 | 700 |      |

\*JLLS only

Note: Contact the factory for RoHS compliant Class T fuses.

| SERIES | VOLTAGE | AMPERAGE | CATALOG NUMBER | SYSTEM NUMBER |
|--------|---------|----------|----------------|---------------|
| JLLS   | 600 V   | 6        | JLLS006        | JLLS006.T     |
| JLLN   | 300 V   | 10       | JLLN010        | JLLN010.T     |

## Web Resources

TC Curves, downloadable CAD drawings and other technical information: [www.littelfuse.com/jlln](http://www.littelfuse.com/jlln)  
[www.littelfuse.com/jlls](http://www.littelfuse.com/jlls)

## Recommended Fuseholders

LFT30 Series  
LFT60 Series  
LSCR Series for 700-800 A

# JLLN/JLLS CLASS T FUSES

## Dimensions in inches (mm)

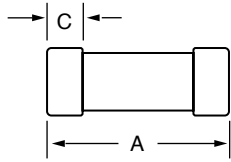


Fig. 1

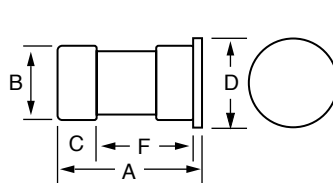


Fig. 2

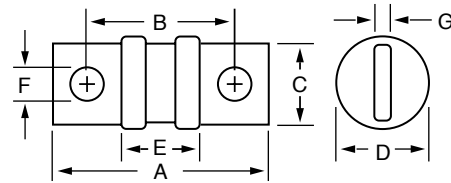


Fig. 3

| AMPERES    | REFER TO FIG. NO. | SERIES | DIMENSIONS IN INCHES (mm) |                         |                        |                         |                         |                        |                       |
|------------|-------------------|--------|---------------------------|-------------------------|------------------------|-------------------------|-------------------------|------------------------|-----------------------|
|            |                   |        | A                         | B                       | C                      | D                       | E                       | F                      | G                     |
| 1 – 30     | 1                 | JLLN   | $\frac{7}{16}$ (22.2)     | —                       | $\frac{9}{32}$ (7.1)   | $\frac{13}{32}$ (10.3)  | —                       | —                      | —                     |
|            |                   | JLLS   | $\frac{1}{2}$ (38.1)      | —                       | $\frac{9}{32}$ (7.1)   | $\frac{9}{16}$ (14.3)   | —                       | —                      | —                     |
| 35 – 60    | 1                 | JLLN   | $\frac{7}{16}$ (22.2)     | —                       | $\frac{9}{32}$ (7.1)   | $\frac{9}{16}$ (14.3)   | —                       | —                      | —                     |
|            |                   | JLLS   | $\frac{19}{16}$ (39.7)    | $\frac{13}{16}$ (20.6)  | $\frac{13}{32}$ (10.3) | 1 (25.4)                | $\frac{1}{16}$ (1.6)    | $\frac{13}{32}$ (27.8) | —                     |
| 70 – 100   | 3                 | JLLN   | $2\frac{5}{32}$ (54.8)    | $\frac{19}{16}$ (39.7)  | $\frac{3}{4}$ (19.1)   | $\frac{13}{16}$ (20.6)  | $\frac{27}{32}$ (21.4)  | $\frac{9}{32}$ (7.1)   | $\frac{1}{8}$ (3.2)   |
|            |                   | JLLS   | $2\frac{61}{64}$ (75.0)   | $2\frac{23}{64}$ (59.9) | $\frac{3}{4}$ (19.1)   | $\frac{13}{16}$ (20.6)  | $\frac{141}{64}$ (41.7) | $\frac{9}{32}$ (7.1)   | $\frac{1}{8}$ (3.2)   |
| 110 – 200  | 3                 | JLLN   | $2\frac{7}{16}$ (61.9)    | $1\frac{11}{16}$ (42.9) | $\frac{7}{8}$ (22.2)   | $1\frac{1}{16}$ (27.0)  | $\frac{27}{32}$ (21.4)  | $\frac{11}{32}$ (8.7)  | $\frac{3}{16}$ (4.8)  |
|            |                   | JLLS   | $3\frac{3}{4}$ (82.6)     | $2\frac{1}{2}$ (63.5)   | $\frac{7}{8}$ (22.2)   | $1\frac{1}{16}$ (27.0)  | $\frac{121}{32}$ (42.1) | $\frac{11}{32}$ (8.7)  | $\frac{3}{16}$ (4.8)  |
| 225 – 400  | 3                 | JLLN   | $2\frac{3}{4}$ (69.9)     | $1\frac{27}{32}$ (46.8) | 1 (25.4)               | $1\frac{5}{16}$ (33.3)  | $\frac{53}{64}$ (21.0)  | $\frac{13}{32}$ (10.3) | $\frac{1}{4}$ (6.4)   |
|            |                   | JLLS   | $3\frac{5}{8}$ (92.1)     | $2\frac{23}{32}$ (69.1) | 1 (25.4)               | $1\frac{19}{32}$ (40.5) | $\frac{123}{32}$ (43.7) | $\frac{13}{32}$ (10.3) | $\frac{1}{4}$ (6.4)   |
| 450 – 600  | 3                 | JLLN   | $3\frac{1}{16}$ (77.8)    | $2\frac{1}{32}$ (51.6)  | $1\frac{1}{4}$ (31.8)  | $1\frac{19}{32}$ (40.5) | $\frac{7}{8}$ (22.2)    | $\frac{31}{64}$ (12.3) | $\frac{5}{16}$ (7.9)  |
|            |                   | JLLS   | $3\frac{63}{64}$ (101.2)  | $2\frac{61}{64}$ (75.0) | $1\frac{1}{4}$ (31.8)  | $2\frac{1}{16}$ (52.4)  | $\frac{149}{64}$ (44.8) | $\frac{31}{64}$ (12.3) | $\frac{5}{16}$ (7.9)  |
| 700 – 800  | 3                 | JLLN   | $3\frac{3}{8}$ (85.7)     | $2\frac{7}{32}$ (64.3)  | $1\frac{3}{4}$ (44.5)  | $2\frac{1}{16}$ (52.4)  | $\frac{7}{8}$ (22.2)    | $\frac{35}{64}$ (13.9) | $\frac{3}{8}$ (9.5)   |
|            |                   | JLLS   | $4\frac{21}{64}$ (109.9)  | $3\frac{11}{64}$ (80.6) | $1\frac{3}{4}$ (44.5)  | $2\frac{1}{2}$ (63.5)   | $\frac{155}{64}$ (47.2) | $\frac{35}{64}$ (13.9) | $\frac{3}{8}$ (9.5)   |
| 900 – 1200 | 3                 | JLLN   | 4 (101.6)                 | $2\frac{17}{32}$ (64.3) | 2 (50.8)               | $2\frac{1}{2}$ (63.5)   | $1\frac{1}{32}$ (26.2)  | $\frac{39}{64}$ (15.5) | $\frac{7}{16}$ (11.1) |
|            |                   | JLLS   | 5.27 (133.9)              | 3.80 (96.5)             | 2 (50.8)               | 2.63 (66.8)             | 2.30 (58.4)             | 0.67 (15.5)            | 0.44 (11.2)           |

## Current-Limiting Effects of JLLN (300 V) fuses

| SHORT CIRCUIT CURRENT* | APPARENT RMS SYMMETRICAL CURRENT FOR VARIOUS FUSE RATINGS |       |       |       |        |        |        |        |
|------------------------|-----------------------------------------------------------|-------|-------|-------|--------|--------|--------|--------|
|                        | 30 A                                                      | 60 A  | 100 A | 200 A | 400 A  | 600 A  | 800 A  | 1200 A |
| 5,000                  | 700                                                       | 775   | 1,100 | 1,650 | 3,500  | 4,000  | 5,000  | 5,000  |
| 10,000                 | 900                                                       | 1,000 | 1,400 | 2,100 | 4,400  | 5,100  | 6,750  | 8,250  |
| 15,000                 | 1,000                                                     | 1,100 | 1,600 | 2,400 | 5,000  | 5,900  | 7,750  | 10,000 |
| 20,000                 | 1,100                                                     | 1,250 | 1,800 | 2,700 | 5,500  | 6,500  | 8,750  | 11,000 |
| 25,000                 | 1,230                                                     | 1,300 | 1,950 | 2,900 | 6,000  | 7,000  | 9,500  | 12,000 |
| 30,000                 | 1,300                                                     | 1,475 | 2,050 | 3,100 | 6,400  | 7,500  | 10,000 | 12,500 |
| 35,000                 | 1,330                                                     | 1,575 | 2,150 | 3,300 | 6,750  | 7,750  | 10,500 | 13,500 |
| 40,000                 | 1,430                                                     | 1,600 | 2,300 | 3,500 | 7,000  | 8,000  | 11,000 | 14,000 |
| 50,000                 | 1,500                                                     | 1,750 | 2,400 | 3,700 | 7,500  | 8,750  | 12,000 | 15,000 |
| 60,000                 | 1,700                                                     | 1,900 | 2,700 | 4,000 | 8,000  | 9,500  | 12,500 | 16,000 |
| 80,000                 | 1,850                                                     | 2,100 | 2,800 | 4,400 | 9,000  | 10,500 | 14,000 | 17,500 |
| 100,000                | 2,000                                                     | 2,250 | 3,150 | 4,800 | 9,750  | 11,500 | 15,000 | 18,500 |
| 150,000                | 2,300                                                     | 2,600 | 3,600 | 5,500 | 11,000 | 13,000 | 17,500 | 22,000 |
| 200,000                | 2,600                                                     | 2,800 | 3,900 | 6,000 | 12,000 | 14,500 | 19,500 | 24,000 |

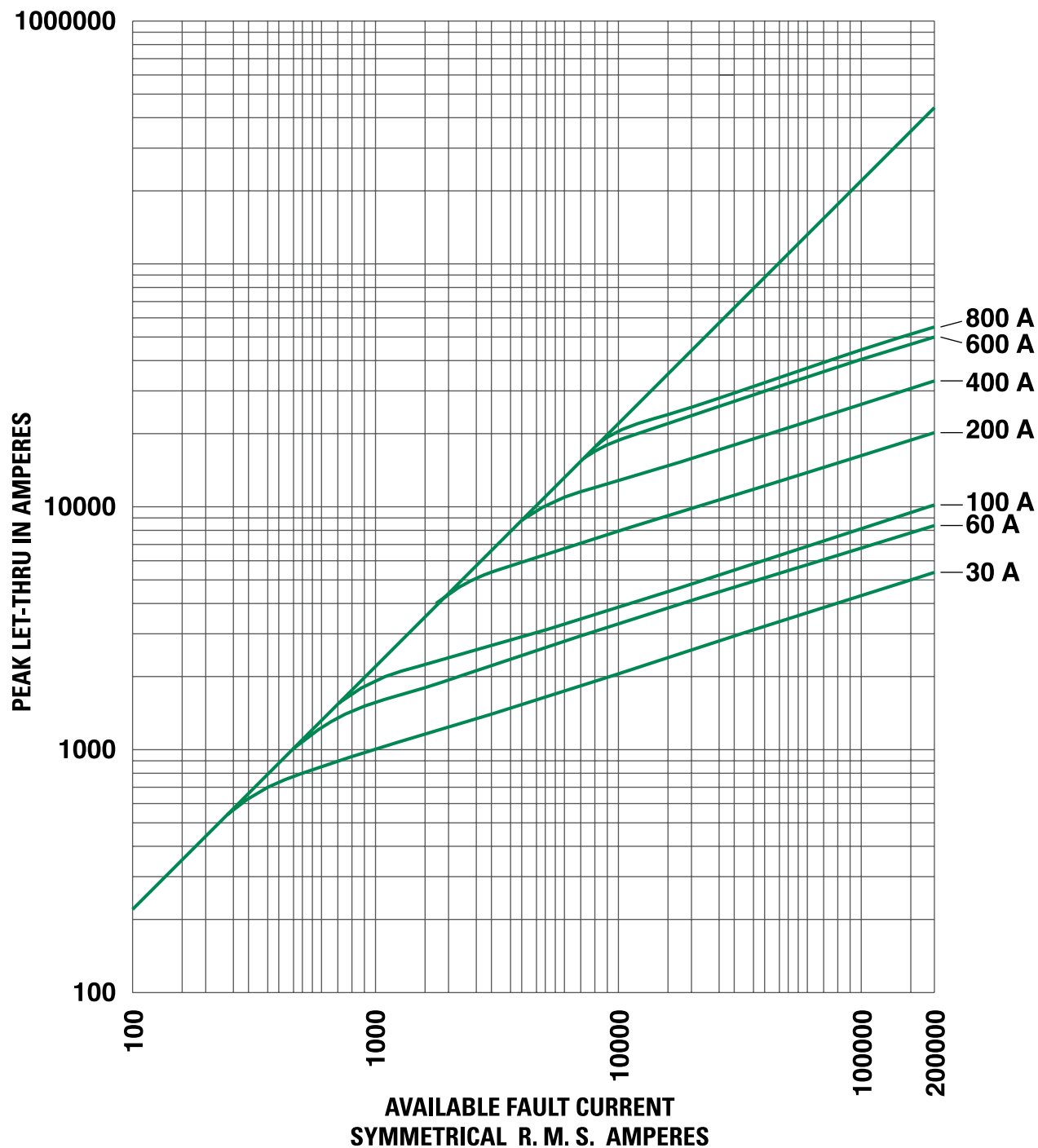
\*Prospective RMS Symmetrical Amperes Short-Circuit Current  
Note: Data Derived from Peak Let-Thru Curves

## Current-Limiting Effects of JLLS (600 V) fuses

| SHORT CIRCUIT CURRENT* | APPARENT RMS SYMMETRICAL CURRENT FOR VARIOUS FUSE RATINGS |       |       |       |        |        |        |        |
|------------------------|-----------------------------------------------------------|-------|-------|-------|--------|--------|--------|--------|
|                        | 30 A                                                      | 60 A  | 100 A | 200 A | 400 A  | 600 A  | 800 A  | 1200 A |
| 5,000                  | 750                                                       | 1,225 | 1,400 | 2,850 | 4,600  | 5,000  | 5,000  | 5,000  |
| 10,000                 | 945                                                       | 1,525 | 1,700 | 3,600 | 6,000  | 8,500  | 9,400  | 10,000 |
| 15,000                 | 1,050                                                     | 1,700 | 2,000 | 4,050 | 6,600  | 9,750  | 10,500 | 13,000 |
| 20,000                 | 1,150                                                     | 1,900 | 2,200 | 4,450 | 7,250  | 10,500 | 11,000 | 14,750 |
| 25,000                 | 1,300                                                     | 2,050 | 2,400 | 4,800 | 8,000  | 11,500 | 12,500 | 15,500 |
| 30,000                 | 1,375                                                     | 2,150 | 2,450 | 5,000 | 8,250  | 12,000 | 13,750 | 16,500 |
| 35,000                 | 1,400                                                     | 2,250 | 2,600 | 5,100 | 8,500  | 13,000 | 14,000 | 17,000 |
| 40,000                 | 1,425                                                     | 2,400 | 2,800 | 5,200 | 8,700  | 14,000 | 14,750 | 18,000 |
| 50,000                 | 1,600                                                     | 2,450 | 2,900 | 6,000 | 9,500  | 14,500 | 16,000 | 20,000 |
| 60,000                 | 1,650                                                     | 2,625 | 3,100 | 6,250 | 10,000 | 15,500 | 17,300 | 21,000 |
| 80,000                 | 1,825                                                     | 2,800 | 3,400 | 7,000 | 11,000 | 17,000 | 18,750 | 23,000 |
| 100,000                | 2,000                                                     | 3,100 | 3,700 | 7,250 | 12,000 | 18,000 | 20,000 | 25,000 |
| 150,000                | 2,250                                                     | 3,400 | 4,300 | 8,500 | 13,000 | 21,000 | 23,000 | 28,500 |
| 200,000                | 2,450                                                     | 3,800 | 4,600 | 9,000 | 15,000 | 23,000 | 25,000 | 31,000 |

\*Prospective RMS Symmetrical Amperes Short-Circuit Current  
Note: Data Derived from Peak Let-Thru Curves

## Peak Let-Thru Curve JLLS



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