

Class J Fuses

JTD Series

POWR-PRO® 600 V ac • Time Delay • $\frac{1}{10}$ -600 A



Description

The JTD Series time-delay, dual-element fuses carry the Littelfuse POWR-PRO® advanced technology designation and are specifically designed for circuits where space is at a premium. They are ideal for use in systems with high in-rush currents. The JTD fuses offer a patented design that reduces nuisance fuse openings. In addition, they provide Type 2 “No Damage” protection for both NEMA- and IEC-type motor circuit components. These fuses help lower the costs associated with downtime, provide longer fuse life by minimizing nuisance openings, increase system performance by minimizing equipment damage, and improve safety by minimizing accidents.

The POWR-PRO performance brand offers advanced technology protection features, such as self-certification to 300,000 A rms symmetrical and superior current-limiting capability. The self-certification at 300,000 A meets the current trend toward higher short-circuit current ratings (SCCR). Self-certification testing was conducted at a nationally recognized testing laboratory, and the tests were UL witnessed.

*Also available in blown fuse indicating version

Features & Benefits

| FEATURES | BENEFITS |
|-----------------------------|---|
| POWR-PRO® technology | Superior protection against electrical system damage |
| Dual-element | Provides extra time-delay protection with dual-element construction |
| Patented design | Reduces nuisance fuse openings |
| Current-limiting | POWR-PRO current limitation is $\frac{1}{10}$ -600 A. Reduces damage caused by heating and magnetic effects of short-circuit currents |

Applications

- Motor control centers
- Fused combination motor controllers
- Transformers
- UL listed series-rated molded case circuit breaker panels
- General purpose circuits

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Specifications

| | |
|-----------------------------|---|
| Voltage Ratings | Ac: 600 V Dc: 300 V ($\frac{1}{10}$ –100 A) 500 V (110–600 A) |
| Ampere Range | $\frac{1}{10}$ –600 A |
| Interrupting Rating | Ac: 200 kA rms symmetrical 300 kA rms symmetrical (Littelfuse self-certified) Dc: 20 kA Littelfuse self-certified |
| Material | Body: Melamine Caps: Nickel-plated Bronze ($\frac{1}{10}$ –60 A) Brass (70–200 A) Brass Cap with Copper Blade (225–600 A) |
| Applicable Standards | UL 248-8, Class J |
| Country of Origin | Mexico |

Certification & Compliance

| | |
|-------------|--|
| UL | UL Listed (File: E81895) |
| CSA | CSA Certified (File: LR29862) |
| CE | EU_DOC-JTD_210701 (225–600 A only) |
| RoHS | RoHS 2 Directive 2011/65/EU; Directive (EU) 2015/863 (225–600 A only) |

Accessories

LFJ60 series fuse holder
LFPSJ series ($\frac{1}{10}$ – 60 A) fuse holder

Ordering Information

| AMPERE | CATALOG NUMBER | PRODUCT MARKING | PACK QUANTITY | ORDERING NUMBER | UPC | AGENCY APPROVALS | | |
|--------|----------------|-----------------------|---------------|-----------------|-------------|------------------|-----|------|
| | | | | | | UL | CSA | ROHS |
| 0.8 | JTD.800 | JTD $\frac{1}{10}$ | 10 | OJTD.800T | 07945800792 | • | • | |
| 1 | JTD001 | JTD 1 | 10 | OJTD001.T | 07945820201 | • | • | |
| 1.25 | JTD1.25 | JTD 1- $\frac{1}{4}$ | 10 | OJTD1.25T | 07945800793 | • | • | |
| 1.5 | JTD01.5 | JTD 1- $\frac{1}{2}$ | 10 | OJTD01.5T | 07945820202 | • | • | |
| 1.6 | JTD01.6 | JTD 1- $\frac{6}{10}$ | 10 | OJTD01.6T | 07945803197 | • | • | |
| 1.8 | JTD01.8 | JTD 1- $\frac{9}{10}$ | 10 | OJTD01.8T | 07945803198 | • | • | |
| 2 | JTD002 | JTD-2 | 10 | OJTD002.T | 07945820203 | • | • | |
| 2.25 | JTD2.25 | JTD 2- $\frac{1}{4}$ | 10 | OJTD2.25T | 07945803199 | • | • | |
| 2.5 | JTD02.5 | JTD 2- $\frac{1}{2}$ | 10 | OJTD02.5T | 07945800794 | • | • | |
| 2.8 | JTD02.8 | JTD 2- $\frac{8}{10}$ | 10 | OJTD02.8T | 07945803200 | • | • | |
| 3 | JTD003 | JTD 3 | 10 | OJTD003.T | 07945820204 | • | • | |
| 3.2 | JTD03.2 | JTD 3- $\frac{2}{10}$ | 10 | OJTD03.2T | 07945803201 | • | • | |
| 3.5 | JTD03.5 | JTD 3- $\frac{1}{2}$ | 10 | OJTD03.5T | 07945803202 | • | • | |
| 4 | JTD004 | JTD 4 | 10 | OJTD004.T | 07945820205 | • | • | |

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|--------|----------------|-----------------|---------------|-----------------|-------------|------------------|-----|------|
| | | | | | | UL | CSA | ROHS |
| 4.5 | JTD04.5 | JTD 4.5 | 10 | QJTD04.5T | 07945805364 | • | • | |
| 5 | JTD005 | JTD 5 | 10 | QJTD005.T | 07945820206 | • | • | |
| 5.6 | JTD05.6 | JTD 5.6 | 10 | QJTD05.6T | 07945805365 | • | • | |
| 6 | JTD006 | JTD 6 | 10 | QJTD006.T | 07945820207 | • | • | |
| 7 | JTD007 | JTD 7 | 10 | QJTD007.T | 07945805366 | • | • | |
| 8 | JTD008 | JTD 8 | 10 | QJTD008.T | 07945820208 | • | • | |
| 9 | JTD009 | JTD 9 | 10 | QJTD009.T | 07945805367 | • | • | |
| 10 | JTD010 | JTD 10 | 10 | QJTD010.T | 07945820209 | • | • | |
| 12 | JTD012 | JTD 12 | 10 | QJTD012.T | 07945820210 | • | • | |
| 15 | JTD015 | JTD 15 | 10 | QJTD015.T | 07945820211 | • | • | |
| 17.5 | JTD17.5 | JTD 17½ | 10 | QJTD17.5T | 07945820212 | • | • | |
| 20 | JTD020 | JTD 20 | 10 | QJTD020.T | 07945820213 | • | • | |
| 25 | JTD025 | JTD 25 | 10 | QJTD025.T | 07945820214 | • | • | |
| 30 | JTD030 | JTD 30 | 10 | QJTD030.T | 07945820215 | • | • | |
| 35 | JTD035 | JTD 35 | 10 | QJTD035.T | 07945820216 | • | • | |
| 40 | JTD040 | JTD 40 | 10 | QJTD040.T | 07945820217 | • | • | |
| 45 | JTD045 | JTD 45 | 10 | QJTD045.T | 07945820218 | • | • | |
| 50 | JTD050 | JTD 50 | 10 | QJTD050.T | 07945820219 | • | • | |
| 60 | JTD060 | JTD 60 | 10 | QJTD060.T | 07945820220 | • | • | |
| 70 | JTD070 | JTD 70 | 5 | QJTD070.V | 07945820221 | • | • | |
| 80 | JTD080 | JTD 80 | 5 | QJTD080.V | 07945820222 | • | • | |
| 90 | JTD090 | JTD 90 | 5 | QJTD090.V | 07945820223 | • | • | |
| 100 | JTD100 | JTD 100 | 5 | QJTD100.V | 07945820224 | • | • | |
| 110 | JTD110 | JTD 110 | 1 | QJTD110.X | 07945820225 | • | • | |
| 125 | JTD125 | JTD 125 | 1 | QJTD125.X | 07945820226 | • | • | |
| 150 | JTD150 | JTD 150 | 1 | QJTD150.X | 07945820227 | • | • | |
| 175 | JTD175 | JTD 175 | 1 | QJTD175.X | 07945820228 | • | • | |
| 200 | JTD200 | JTD 200 | 1 | QJTD200.X | 07945820229 | • | • | |
| 225 | JTD225 | JTD 225 | 1 | QJTD225.X | 07945820230 | • | • | • |
| 250 | JTD250 | JTD 250 | 1 | QJTD250.X | 07945820231 | • | • | • |
| 300 | JTD300 | JTD 300 | 1 | QJTD300.X | 07945820232 | • | • | • |
| 350 | JTD350 | JTD 350 | 1 | QJTD350.X | 07945820233 | • | • | • |
| 400 | JTD400 | JTD 400 | 1 | QJTD400.X | 07945820234 | • | • | • |
| 450 | JTD450 | JTD 450 | 1 | QJTD450.X | 07945820235 | • | • | • |
| 500 | JTD500 | JTD 500 | 1 | QJTD500.X | 07945820236 | • | • | • |
| 600 | JTD600 | JTD 600 | 1 | QJTD600.X | 07945820237 | • | • | • |

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Electrical Specifications

| AMPERAGE RATING | VOLTAGE RATING | | INTERRUPTING RATING | | WATTS LOSS AT 100 % RATED CURRENT (W) | WATTS LOSS AT 80 % RATED CURRENT (W) | TOTAL CLEARING I ² T (A ² SEC) 200 KA |
|-----------------|----------------|-----|---------------------|-------|---------------------------------------|--------------------------------------|---|
| | AC | DC | AC | DC | | | |
| 3 | 600 | 300 | 200 kA | 20 kA | 4.537 | 2.801 | 820 |
| 10 | 600 | 300 | 200 kA | 20 kA | 4.087 | 2.418 | 1690 |
| 30 | 600 | 300 | 200 kA | 20 kA | 4.247 | 2.92 | 4754 |
| 60 | 600 | 300 | 200 kA | 20 kA | 6.447 | 3.83 | 10450 |
| 100 | 600 | 300 | 200 kA | 20 kA | 7.463 | 4.447 | 68150 |
| 200 | 600 | 500 | 200 kA | 20 kA | 18.39 | 10.187 | 159000 |
| 400 | 600 | 500 | 200 kA | 20 kA | 40.037 | 23.463 | 1055000 |
| 600 | 600 | 500 | 200 kA | 20 kA | 61.187 | 34.983 | 1970000 |

Fuse Weight

| AMPERAGE | POUNDS | GRAMS |
|------------|--------|---------|
| 1/10-3 1/2 | 0.084 | 38.10 |
| 4-12 | 0.086 | 39.01 |
| 15-30 | 0.086 | 39.01 |
| 35-60 | 0.176 | 79.83 |
| 70-100 | 0.238 | 107.95 |
| 110-200 | 0.770 | 349.27 |
| 225-400 | 1.700 | 771.11 |
| 450-600 | 3.120 | 1415.21 |

Dimensions

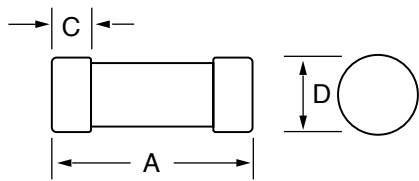


Fig. 1

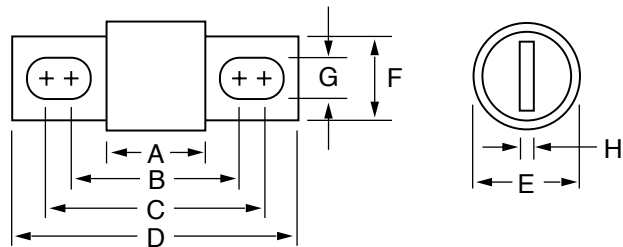


Fig. 2

| AMPERAGE | FIG. NO. | VOLTAGE RATING | | | | | | | |
|-----------|----------|----------------|-----------------|-----------------|---------------|--------------|--------------|--------------|------------|
| | | A | B | C | D | E | F | G | H |
| 1 - 30 | 1 | 2 1/4 (57.2) | — | 1/2 (12.7) | 1 9/16 (20.6) | — | — | — | — |
| 35 - 60 | 1 | 2 3/8 (60.3) | — | 5/8 (15.9) | 1 1/16 (27.0) | — | — | — | — |
| 70 - 100 | 2 | 2 5/8 (66.7) | 3 1/32 (89.7) | 3 3/32 (94.5) | 4 5/8 (117.5) | 1 1/8 (28.6) | 3/4 (19.1) | 5/32 (7.1) | 1/8 (3.2) |
| 110 - 200 | 2 | 3 (76.2) | 4 5/32 (108.7) | 4 15/32 (113.5) | 5 3/4 (146.1) | 1 1/2 (38.1) | 1 1/8 (28.6) | 5/32 (7.1) | 3/16 (4.8) |
| 225 - 400 | 2 | 3 3/8 (85.7) | 5 1/8 (130.2) | 5 3/8 (136.5) | 7 1/8 (181.0) | 2 (50.8) | 1 5/8 (41.3) | 13/32 (10.3) | 1/4 (6.4) |
| 450 - 600 | 2 | 3 3/4 (95.3) | 5 27/32 (148.4) | 6 5/32 (156.4) | 8 (203.2) | 2 1/2 (63.5) | 2 (50.8) | 17/32 (13.5) | 3/8 (9.5) |

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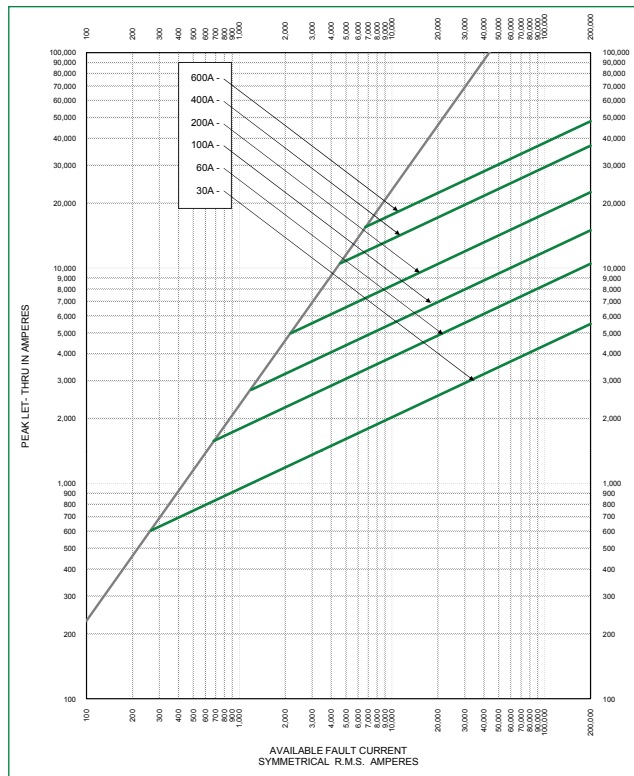
Current-Limiting Effects

| SHORT CIRCUIT CURRENT* | APPARENT RMS SYMMETRICAL CURRENT FOR VARIOUS FUSE RATINGS | | | | | |
|------------------------|---|-------|-------|-------|--------|--------|
| | 30 A | 60 A | 100 A | 200 A | 400 A | 600 A |
| 5,000 | 699 | 1,331 | 1,903 | 2,858 | 4,702 | - |
| 10,000 | 881 | 1,676 | 2,397 | 3,601 | 5,925 | 7,689 |
| 15,000 | 1,008 | 1,919 | 2,744 | 4,123 | 6,782 | 8,802 |
| 20,000 | 1,110 | 2,112 | 3,020 | 4,537 | 7,464 | 9,687 |
| 25,000 | 1,196 | 2,275 | 3,254 | 4,888 | 8,041 | 10,436 |
| 30,000 | 1,271 | 2,418 | 3,457 | 5,194 | 8,545 | 11,089 |
| 35,000 | 1,338 | 2,545 | 3,640 | 5,468 | 8,995 | 11,674 |
| 40,000 | 1,398 | 2,661 | 3,805 | 5,717 | 9,405 | 12,205 |
| 50,000 | 1,506 | 2,867 | 4,099 | 6,158 | 10,131 | 13,148 |
| 60,000 | 1,601 | 3,046 | 4,356 | 6,544 | 10,766 | 13,972 |
| 80,000 | 1,762 | 3,353 | 4,795 | 7,203 | 11,849 | 15,378 |
| 100,000 | 1,898 | 3,612 | 5,165 | 7,759 | 12,764 | 16,565 |
| 150,000 | 2,173 | 4,134 | 5,912 | 8,882 | 14,611 | 18,963 |
| 200,000 | 2,391 | 4,551 | 6,507 | 9,776 | 16,082 | 20,871 |

*Prospective RMS Symmetrical Amperes Short-Circuit Current

Note: Data Derived from Peak Let-Thru Curve

Peak Let-Thru Curves



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