

JTD_ID Series Indicator® POWR-PRO® Class J Fuses

600 VAC • Time Delay • 8/10 – 600 Amperes



The Littelfuse POWR-PRO JTD_ID Indicator Class J fuse provides visual blown fuse indication and maximum protection in a compact package. The compact Class J package was designed specifically for circuits where space is at a premium. The current-limiting time delay JTD_ID offers a patented, true dual-element design that is ideal for use in circuits with high, in-rush currents. The Superior performance characteristics of JTD_ID Indicator fuses reduce nuisance fuse opening, and the blown fuse indication reduces downtime while increasing safety.

Applications

- Fused combination motor controllers to provide IEC Type 2 (“No Damage”) motor branch circuit short-circuit and ground fault protection
- Motor control centers
- Transformer protection
- Protection for UL Listed series rated molded case circuit breaker panels
- General purpose circuits — mains, feeders and branch circuits — especially when space is limited.

Features/Benefits

- Reduce downtime — A glance at the indicating window of a JTD_ID Indicator fuse pinpoints open fuses immediately. If the indicating window is dark, the fuse has opened. It’s that simple.
- Reduce nuisance opening — Indicator fuses have superior time-delay and cycling characteristics which can lengthen fuse life and decrease needless opening.
- Reduce fuse inventory — JTD_ID Indicator fuses have superior performance characteristics, which means they can be used on a variety of applications; therefore, decreasing fuse inventory.
- Reduce equipment damage — Indicator fuses provide superior overload and short-circuit protection that can reduce equipment damage. Indicator fuses also provide IEC Type 2 “No Damage” protection to IEC and NEMA type motor starters.
- Reduce accidents — The JTD_ID Indicator fuse improves safety by minimizing exposure to live circuits. Unlike other forms of blown fuse indication, once the indicating window darkens, it stays dark. It does not matter if the power is on or off or if the fuse is in a tool box. Other forms of indication require the power to remain on, which is a safety hazard for personnel.

POWR-PRO® Fuses

Specifications

| | |
|------------------------------|---|
| Voltage Ratings: | AC: 600 Volts |
| | DC: 300 Volts (1/10 - 100A) |
| | 500 Volts (110 - 600A) |
| Interrupting Ratings: | AC: 200,000 amperes rms symmetrical |
| | 300,000 amperes rms symmetrical (Littelfuse self-certified) |
| Ampere Range: | 8/10 – 600 amperes |
| Approvals: | AC: Standard 248-8, Class J |
| | UL Listed (File No: E81895) |
| | CSA Certified (File No: LR29862) |
| | DC: Littelfuse self-certified |
| | 1/10 - 100A: 300VDC self certified |
| | 110 - 600A: 500VDC self certified |

Ampere Ratings

| | | | | | |
|--------|--------|--------|----|-----|-----|
| 1/10 | 2 1/10 | 7 | 30 | 100 | 350 |
| 1 | 3 | 8 | 35 | 110 | 400 |
| 1 1/4 | 3 1/10 | 9 | 40 | 125 | 450 |
| 1 1/2 | 3 1/2 | 10 | 45 | 150 | 500 |
| 1 3/10 | 4 | 12 | 50 | 175 | 600 |
| 1 1/2 | 4 1/2 | 15 | 60 | 200 | |
| 2 | 5 | 17 1/2 | 70 | 225 | |
| 2 1/4 | 5 1/10 | 20 | 80 | 250 | |
| 2 1/2 | 6 | 25 | 90 | 300 | |

Example part number (series & amperage): JTD 60 ID

Recommended Fuse Blocks

LJ600 series, LPSJ series
Refer to Blocks & Holders section of this catalog for additional information.

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An Inside Look . . .

Superior Short-Circuit Elements

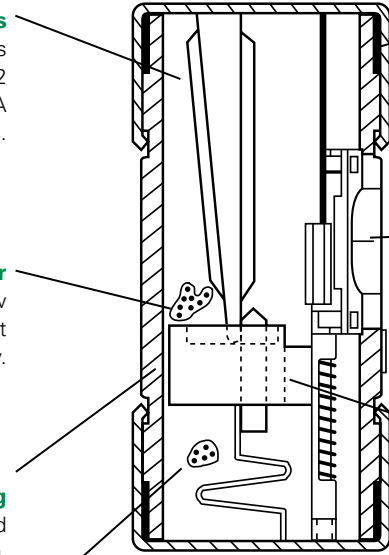
Reduce damage to equipment and enables the Littelfuse JTD_ID to provide IEC Type 2 “No Damage” protection to IEC and NEMA motor starters.

Stone-Sand Filler

Helps provide I^2t and I_{peak} values well below UL maximum limits and improves heat dissipation and reliability.

Elastomeric Silicone EPR Plug

A space-age material used in the patented overload section of the Littelfuse JTD_ID.



Plated End Caps

Help reduce corrosion and provide superior contact for lower heat generation.

Blown Fuse Indicator

Incorporates precision wound elements to provide consistent and reliable blown fuse indication.

Solid State Overload Section

Patented thermally reversible design utilizes high-tech aircraft grade polymers to ensure reliable operation every time.

Granular Quartz Filler

Assists in quenching the arc that occurs during overload conditions.

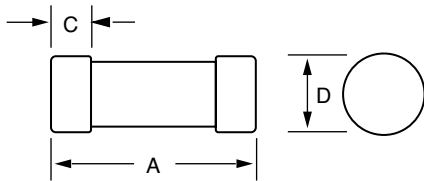


FIG. 1

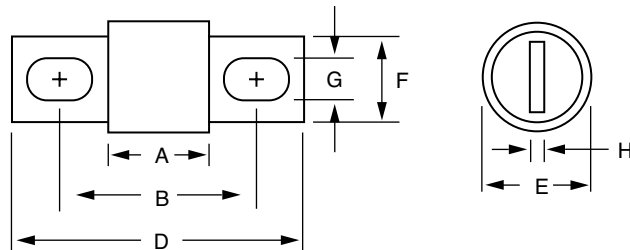


FIG. 2

| Amperes | Refer to Fig. No. | Dimensions in Inches (mm in parentheses) | | | | | | | |
|---------|-------------------|--|--------------|------------|--------------|-------------|-------------|--------------|------------|
| | | A | B | C | D | E | F | G | H |
| 8/10–30 | 1 | 2¼ (57.2) | — | ½ (12.7) | 13/16 (20.6) | — | — | — | — |
| 35–60 | 1 | 2½ (60.3) | — | 5/8 (15.9) | 1¼ (27.0) | — | — | — | — |
| 70–100 | 2 | 25/8 (66.7) | 35/8 (92.1) | — | 45/8 (117.5) | 1½ (28.6) | ¾ (19.1) | 9/32 (7.1) | 1/8 (3.2) |
| 110–200 | 2 | 3 (76.2) | 45/8 (111.1) | — | 5¾ (146.1) | 15/8 (41.3) | 1½ (28.6) | 9/32 (7.1) | 3/16 (4.8) |
| 225–400 | 2 | 33/8 (85.7) | 5¼ (133.4) | — | 7½ (181.0) | 2½ (54.0) | 15/8 (41.3) | 13/32 (10.3) | ¼ (6.4) |
| 450–600 | 2 | 3¾ (95.3) | 6 (152.4) | — | 8 (203.2) | 25/8 (66.7) | 2 (50.8) | 17/32 (13.5) | 3/8 (9.5) |

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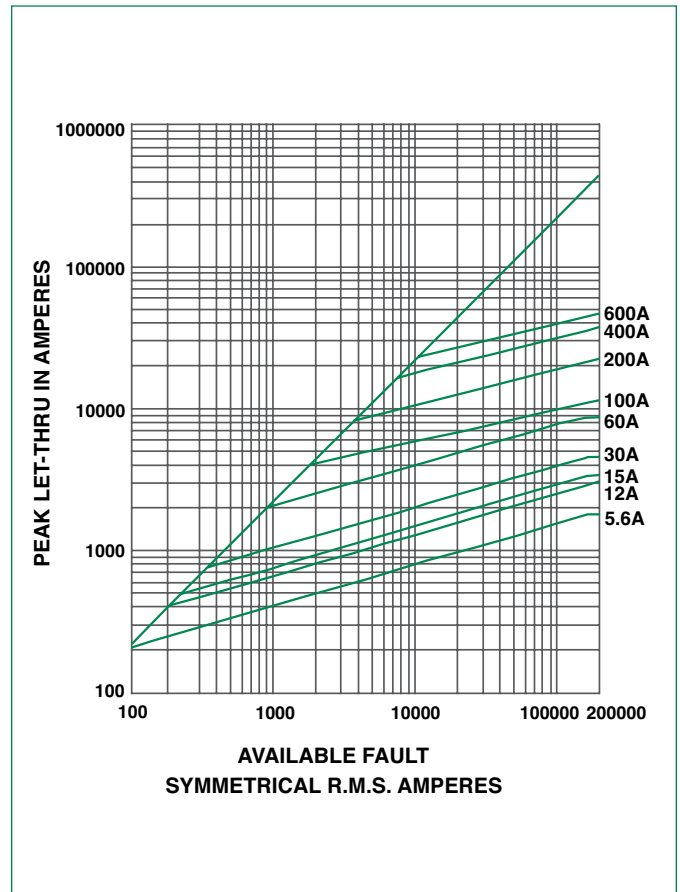
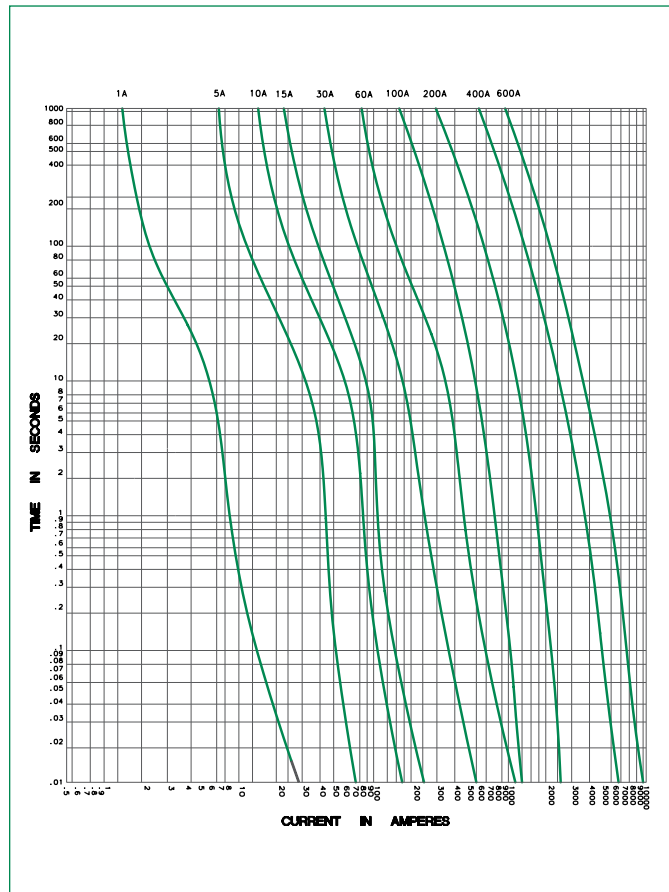
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Current-Limiting Effects of JTD_ID (600V) fuses

| Short Circuit Current* | Apparent RMS Symmetrical for Various Fuse Ratings | | | | | | |
|------------------------|---|-------|-------|-------|--------|--------|--------|
| | 15A | 30A | 60A | 100A | 200A | 400A | 600A |
| 5,000 | 565 | 750 | 1,500 | 1,800 | 2,800 | 4,800 | 5,000 |
| 10,000 | 675 | 925 | 1,900 | 2,450 | 3,600 | 5,700 | 7,750 |
| 15,000 | 775 | 1,050 | 2,100 | 2,800 | 4,100 | 6,500 | 9,000 |
| 20,000 | 825 | 1,125 | 2,300 | 3,000 | 4,400 | 7,250 | 9,700 |
| 25,000 | 900 | 1,200 | 2,500 | 3,300 | 5,000 | 8,000 | 10,500 |
| 30,000 | 950 | 1,300 | 2,600 | 3,500 | 5,100 | 8,400 | 11,000 |
| 35,000 | 1,000 | 1,350 | 2,700 | 3,700 | 5,400 | 9,000 | 12,000 |
| 40,000 | 1,050 | 1,400 | 2,800 | 3,900 | 5,600 | 9,200 | 12,500 |
| 50,000 | 1,100 | 1,500 | 3,000 | 4,200 | 6,000 | 10,000 | 13,000 |
| 60,000 | 1,200 | 1,600 | 3,200 | 4,500 | 6,400 | 10,500 | 14,000 |
| 80,000 | 1,300 | 1,700 | 3,400 | 4,900 | 7,200 | 11,200 | 15,500 |
| 100,000 | 1,375 | 1,800 | 3,600 | 5,200 | 7,800 | 12,200 | 16,500 |
| 150,000 | 1,500 | 2,000 | 3,950 | 6,000 | 9,000 | 14,500 | 19,000 |
| 200,000 | 1,600 | 2,175 | 4,000 | 6,500 | 10,000 | 16,000 | 20,500 |

* Prospective RMS Symmetrical Amperes Short-Circuit Current

Note: Data derived from Peak Let-Thru Curves



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