

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 ($\%_{10}$ –100 A) 500 V (110–600 A)
Ampere Range	$\%_{10}$ –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 ($\%_{10}$ –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-R_230111 (JTD-R 35-60A only) EU_DOC-JTD_210701 (225–600 A only)
RoHS	RoHS 2 Directive 2011/65/EU; Directive (EU) 2015/863 (see Ordering Information table)

Accessories

LFJ60 series fuse holder
LFPSJ series ($\%_{10}$ – 60 A) fuse holder

Ordering Information

AMPERE	CATALOG NUMBER	PRODUCT MARKING	PACK QUANTITY	ORDERING NUMBER	UPC CODE	AGENCY APPROVALS		
						UL	CSA	ROHS
0.8	JTD.800	JTD $\%_{10}$	10	QJTD.800T	07945800792	•	•	
1	JTD001	JTD 1	10	QJTD001.T	07945820201	•	•	
1.25	JTD1.25	JTD 1- $\frac{1}{4}$	10	QJTD1.25T	07945800793	•	•	
1.5	JTD01.5	JTD 1- $\frac{1}{2}$	10	QJTD01.5T	07945820202	•	•	
1.6	JTD01.6	JTD 1- $\frac{3}{4}$	10	QJTD01.6T	07945803197	•	•	
1.8	JTD01.8	JTD 1- $\frac{3}{4}$	10	QJTD01.8T	07945803198	•	•	
2	JTD002	JTD-2	10	QJTD002.T	07945820203	•	•	
2.25	JTD2.25	JTD 2- $\frac{1}{4}$	10	QJTD2.25T	07945803199	•	•	
2.5	JTD02.5	JTD 2- $\frac{1}{2}$	10	QJTD02.5T	07945800794	•	•	
2.8	JTD02.8	JTD 2- $\frac{3}{4}$	10	QJTD02.8T	07945803200	•	•	
3	JTD003	JTD 3	10	QJTD003.T	07945820204	•	•	
3.2	JTD03.2	JTD 3- $\frac{1}{4}$	10	QJTD03.2T	07945803201	•	•	
3.5	JTD03.5	JTD 3- $\frac{1}{2}$	10	QJTD03.5T	07945803202	•	•	
4	JTD004	JTD 4	10	QJTD004.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 17 ½	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	•	•	
35	JTD035R	JTD 35R	10	QJTD035.TXR	07945837736	•	•	•
40	JTD040	JTD 40	10	QJTD040.T	07945820217	•	•	
40	JTD040R	JTD 40R	10	QJTD040.TXR	07945837737	•	•	•
45	JTD045	JTD 45	10	QJTD045.T	07945820218	•	•	
45	JTD045R	JTD 45R	10	QJTD045.TXR	07945837738	•	•	•
50	JTD050	JTD 50	10	QJTD050.T	07945820219	•	•	
50	JTD050R	JTD 50R	10	QJTD050.TXR	07945837739	•	•	•
60	JTD060	JTD 60	10	QJTD060.T	07945820220	•	•	
60	JTD060R	JTD 60R	10	QJTD060.TXR	07945837740	•	•	•
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

* For RoHS compliant product, contact Littelfuse Technical Service at 1-800-TEC-FUSE or techline@littelfuse.com

Fuse Weight

AMPERAGE	POUNDS	GRAMS
$\frac{5}{16}$ –3 $\frac{1}{2}$	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

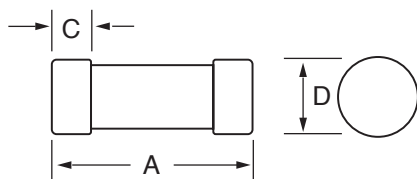


Fig. 1

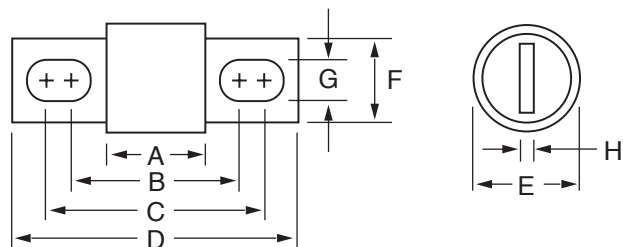


Fig. 2

AMPERAGE	FIG. NO.	DIMENSIONS INCHES (MM)							
		A	B	C	D	E	F	G	H
1 – 30	1	2 $\frac{1}{4}$ (57.2)	—	$\frac{1}{2}$ (12.7)	$\frac{1}{16}$ (20.6)	—	—	—	—
35 – 60	1	2 $\frac{3}{8}$ (60.3)	—	$\frac{5}{8}$ (15.9)	1 $\frac{1}{16}$ (27.0)	—	—	—	—
70 – 100	2	2 $\frac{3}{8}$ (66.7)	3 $\frac{1}{32}$ (89.7)	3 $\frac{23}{32}$ (94.5)	4 $\frac{1}{8}$ (117.5)	1 $\frac{1}{8}$ (28.6)	$\frac{3}{4}$ (19.1)	$\frac{9}{32}$ (7.1)	$\frac{1}{8}$ (3.2)
110 – 200	2	3 (76.2)	4 $\frac{9}{32}$ (108.7)	4 $\frac{15}{32}$ (113.5)	5 $\frac{1}{4}$ (146.1)	1 $\frac{1}{2}$ (38.1)	1 $\frac{1}{8}$ (28.6)	$\frac{9}{32}$ (7.1)	$\frac{3}{16}$ (4.8)
225 – 400	2	3 $\frac{3}{8}$ (85.7)	5 $\frac{1}{8}$ (130.2)	5 $\frac{3}{8}$ (136.5)	7 $\frac{1}{8}$ (181.0)	2 (50.8)	1 $\frac{1}{8}$ (41.3)	$\frac{13}{32}$ (10.3)	$\frac{1}{4}$ (6.4)
450 – 600	2	3 $\frac{3}{4}$ (95.3)	5 $\frac{27}{32}$ (148.4)	6 $\frac{9}{32}$ (156.4)	8 (203.2)	2 $\frac{1}{2}$ (63.5)	2 (50.8)	$\frac{17}{32}$ (13.5)	$\frac{3}{8}$ (9.5)

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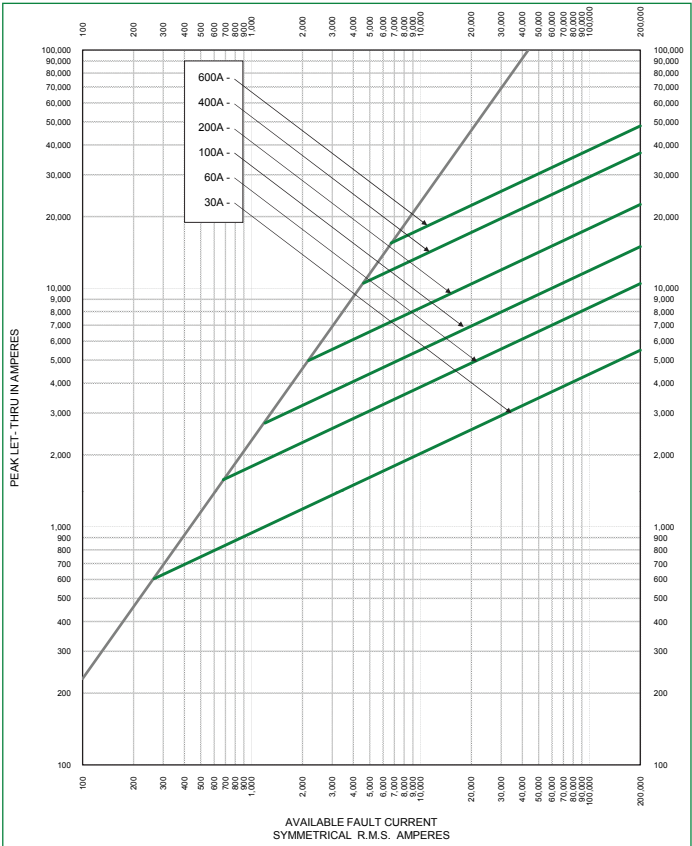
Current-Limiting Effects

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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