

Section Overview

For over 80 years Littelfuse® has been providing fuses to the electrical market. You can continue to count on our manufacturing and supply chain processes to deliver high quality fuses when you need them. At Littelfuse we leverage our global reach to stay on top of the latest applications and standards. Whether your circuit protection needs are focused on OEM, MRO, or construction, we are committed to being your circuit protection partner and appreciate your business.



FUSES

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KLPC SERIES POWR-PRO® FUSES

POWR-PRO® 600 VAC • Time-Delay • 200-6000 Amperes



Description

KLPC series POWR-PRO® fuses meet or exceed the most stringent project specifications, such as silver links, silver-plated copper end bells, glass-reinforced melamine bodies, O-ring seals between body and end bells, and granular quartz fillers.

Applications

- Switchboard mains and feeders
- Motor control center mains
- Large motor branch circuits
- Protection of power circuit breakers

Features/Benefits

- POWR-PRO Performance (see pg. 3)
- Best in class time-delay withstand
- Current-Limiting
- Easily coordinated with other system components
- 300 kA AC Interrupting Rating (self certified)

Specifications

Voltage Ratings:	AC: 600 V
	DC: 480 V
Interrupting Ratings:	AC: 200 kA rms symmetrical
	300 kA rms symmetrical (Littelfuse self-certified)
	DC: 20,000 A
Ampere Range:	200 – 6000 A
Approvals:	AC: Standard 248-10, Class L
	UL Listed 601–6000 A (File No. E81895)
	UL Recognized 200–600 A (File No. E71611)
	CSA Certified 200–6000 A (File No. LR29862)
	Federal Specifications 700–6000 A (QPL-W-F-1814)
	DC: Littelfuse self-certified

Ordering Information

AMPERE RATINGS					
200	500	800	1350	2000	3000
250	600	900	1400	2100	3500
300	601	1000	1500	2200	4000
350	650	1100	1600	2300	4500
400	700	1200	1800	2400	5000
450	750	1300	1900	2500	6000

SERIES	AMPERAGE	CATALOG NUMBER	SYSTEM NUMBER
KLPC	800	KLPC800	KLPC800.X

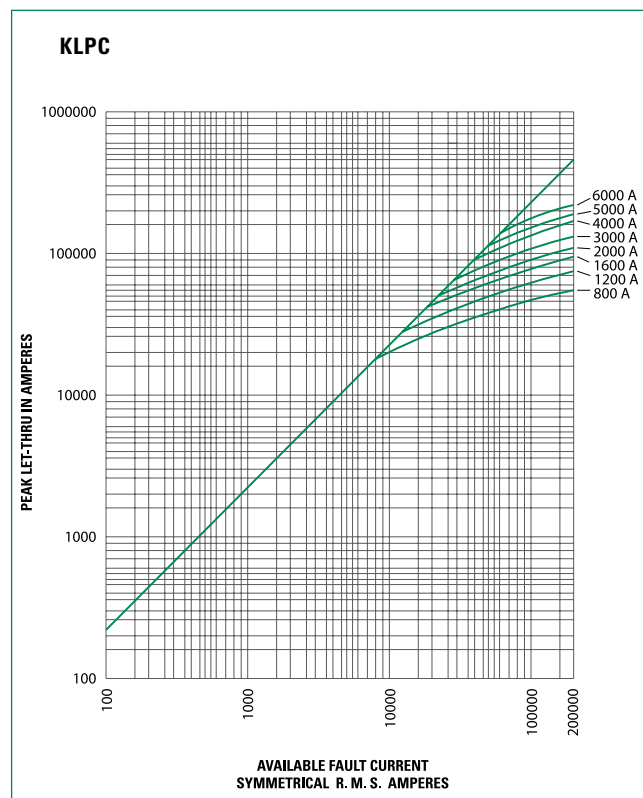
Web Resources

TC Curves, downloadable CAD drawings and other technical information: www.littelfuse.com/klpc

Dimensions

Please refer to Class L dimensions pg. 15

Peak Let-Thru Curve



Note: For more information, see Peak Let-Thru Table on pg. 14

KLLU SERIES FUSES

600 VAC • Time-Delay • 601-4000 Amperes



Ordering Information

AMPERE RATINGS					
601	750	1000	1400	1800	3000
650	800	1200	1500	2000	3500
700	900	1350	1600	2500	4000

SERIES	AMPERAGE	CATALOG NUMBER	SYSTEM NUMBER
KLLU	601	KLLU601	KLLU601.X

Web Resources

TC Curves, downloadable CAD drawings and other technical information: www.littelfuse.com/kllu

Dimensions

Please refer to the Class L dimensions pg. 15

Description

KLLU series fuses meet or exceed UL requirements for UL Class L fuses. The KLLU series offers an economical alternative to KLPC POWR-PRO® fuse with a slightly higher peak let through current.

Applications

- Service switches
- Switchboard mains and feeders
- Motor control center mains
- Large motor branch circuits
- Circuit breaker protection

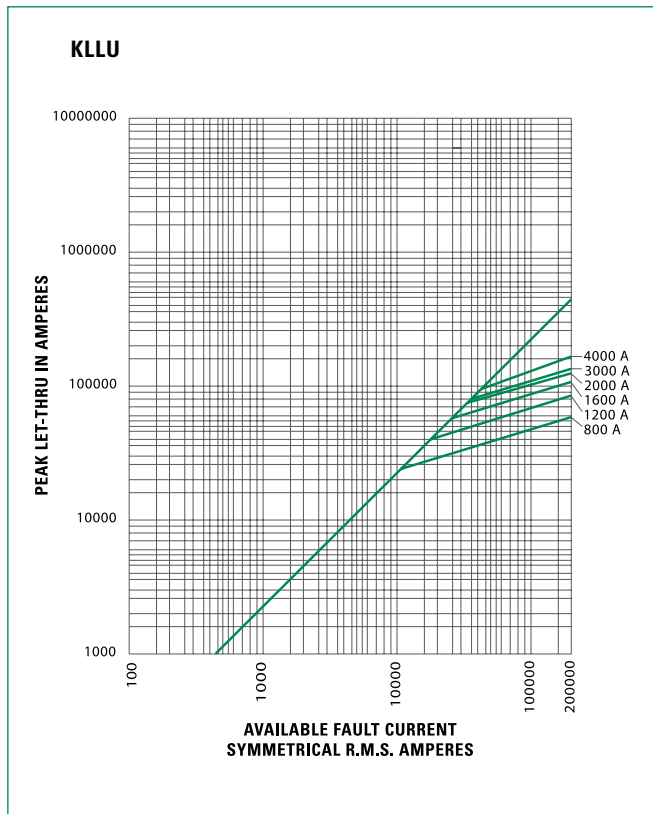
Features/Benefits

- Current-Limiting
- Easily coordinated with other system components
- 200 kA AC Interrupting Rating

Specifications

Voltage Ratings:	AC: 600 V
	DC: 300 V
Interrupting Ratings:	AC: 200 kA
	DC: 20 kA
Ampere Range:	601–4000 A
Approvals:	Standard 248-10, Class L
	UL Listed (File No. E81895)
	CSA Certified (File No. LR29862)
	DC: Littelfuse self-certified

Peak Let-Thru Curve



Note: For more information, see Peak Let-Thru Table on pg. 14

LDC SERIES POWR-PRO® FUSES

POWR-PRO® 600 V AC/DC • Time-Delay • 150-2000 Amperes



Description

High DC voltage and interrupting ratings make the POWR-PRO LDC ideal for DC applications. The DC interrupting performance exceeds UL listing requirements.

Applications

- Solar inverter and array protection
- UPS protection especially for large battery circuits
- DC distribution and variable speed drives
- Mass transit systems

Features/Benefits

- POWR-PRO Performance (see pg. 3)
- Extremely Current-Limiting
- 600 V AC/DC rated
- 200 kA AC Interrupting Rating
- 50 kA DC Interrupting Rating

Specifications

Voltage Ratings:	AC:	600 V
	DC:	600 V
Interrupting Ratings:	AC:	200 kA rms symmetrical
	DC:	50 kA (16 millisecond time-constant)
Ampere Range:	150–2000 A	
Approvals:	Standard 248-10, Class L	
	UL Listed 601–2000 A (File No. E81895)	
	UL Recognized 150–600 A (File No. E71611)	
	CSA Certified 150–2000 A (File No. LR29862)	

Ordering Information

AMPERE RATINGS				
150	450	750	1201	1601
200	500	800	1300	1800
250	600	900	1350	1900
300	601	1000	1400	2000
350	650	1100	1500	
400	700	1200	1600	

SERIES	AMPERAGE	CATALOG NUMBER	SYSTEM NUMBER
LDC	700	LDC700	0LDC700.X

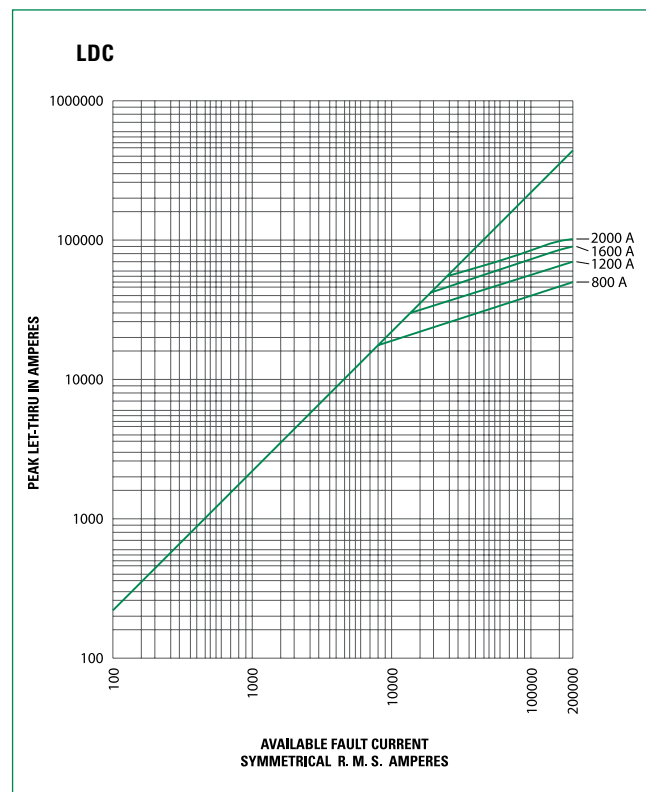
Web Resources

TC Curves, downloadable CAD drawings and other technical information: www.littelfuse.com/ldc

Dimensions

Please refer to the Class L dimensions pg. 15

Peak Let-Thru Curve



Note: For more information, see Peak Let-Thru Table on pg. 14

CLASS L CURRENT-LIMITING EFFECTS

Current-Limiting Effects of KLPC (600 V) Fuses

SHORT CIRCUIT CURRENT*	APPARENT RMS SYMMETRICAL CURRENT FOR VARIOUS FUSE RATINGS							
	800 A	1200 A	1600 A	2000 A	3000 A	4000 A	5000 A	6000 A
5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
10,000	8,800	10,000	10,000	10,000	10,000	10,000	10,000	10,000
15,000	10,500	13,500	15,000	15,000	15,000	15,000	15,000	15,000
20,000	12,000	15,000	19,000	20,000	20,000	20,000	20,000	20,000
25,000	13,000	16,000	21,000	24,000	25,000	25,000	25,000	25,000
30,000	14,000	18,000	23,000	26,000	30,000	30,000	30,000	30,000
35,000	15,000	19,000	24,000	27,000	32,000	35,000	35,000	35,000
40,000	16,000	20,000	25,000	28,000	34,000	40,000	40,000	40,000
50,000	17,000	22,000	27,000	31,000	37,000	42,500	50,000	50,000
60,000	18,000	24,000	29,000	34,000	40,000	46,000	52,000	60,000
80,000	20,000	26,000	32,000	37,000	44,000	51,000	57,000	70,000
100,000	21,000	27,000	34,000	40,000	46,000	57,000	65,000	75,000
150,000	23,000	31,000	38,000	44,000	54,000	67,000	75,000	87,000
200,000	24,000	34,000	42,000	46,000	57,000	70,000	80,000	95,000

Current-Limiting Effects of KLLU (600 V) Fuses

SHORT-CIRCUIT CURRENT*	APPARENT RMS SYMMETRICAL CURRENT FOR VARIOUS FUSE RATINGS					
	800 A	1200 A	1600 A	2000 A	3000 A	4000 A
5,000	5,000	5,000	5,000	5,000	5,000	5,000
10,000	10,000	10,000	10,000	10,000	10,000	10,000
15,000	11,900	15,000	15,000	15,000	15,000	15,000
20,000	13,000	18,500	20,000	20,000	20,000	20,000
25,000	14,000	20,000	25,000	25,000	25,000	25,000
30,000	14,500	21,000	26,500	30,000	30,000	30,000
35,000	15,000	22,000	28,500	34,000	35,000	35,000
40,000	16,000	23,000	30,000	35,000	37,000	40,000
50,000	17,000	24,000	32,000	38,000	39,000	44,000
60,000	18,000	26,000	34,000	42,000	43,000	50,000
80,000	19,000	28,000	36,000	44,000	46,000	54,500
100,000	21,000	30,000	38,000	46,000	48,000	57,500
150,000	24,000	35,000	44,000	50,000	51,000	68,000
200,000	26,000	38,000	48,000	53,000	60,000	74,000

Current-Limiting Effects of LDC (600 V) Fuses

SHORT CIRCUIT CURRENT*	APPARENT RMS SYMMETRICAL CURRENT FOR VARIOUS FUSE RATINGS			
	800 A	1200 A	1600 A	2000 A
5,000	5,000	5,000	5,000	5,000
10,000	8,500	10,000	10,000	10,000
15,000	9,750	14,000	15,000	15,000
20,000	10,500	15,000	19,000	20,000
25,000	11,500	16,000	21,000	25,000
30,000	12,000	17,000	22,000	26,000
35,000	12,500	18,000	23,000	28,000
40,000	13,500	19,000	24,000	30,000
50,000	14,000	21,000	26,000	32,000
60,000	15,000	22,000	28,000	34,000
80,000	16,000	24,000	30,000	36,000
100,000	18,000	25,000	33,000	40,000
150,000	20,000	30,000	38,000	44,000
200,000	23,000	32,000	41,000	46,000

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

CLASS L SERIES DIMENSIONS

Dimensions in inches (mm)

AMPERES	FIG. NO.	DIMENSIONS IN INCHES (mm)												
		A	B	C	D	E	F	G	H	J	K	L	M	N
200-800	1	3 ³ / ₄ (95.3)	5 ³ / ₄ (146.1)	6 ³ / ₄ (171.5)	—	—	8 ⁵ / ₈ (219.1)	—	—	2 (50.8)	2 ¹ / ₂ (63.5)	3 ⁸ / ₁₆ (9.5)	5 ⁸ / ₁₆ x 1 ¹ / ₈ (15.9) x (28.6)	—
900-1200	2	3 ³ / ₄ (95.3)	5 ³ / ₄ (146.1)	6 ³ / ₄ (171.5)	9 ¹ / ₄ (235.0)	9 ¹ / ₂ (241.3)	10 ³ / ₄ (273.1)	—	—	2 (50.8)	2 ¹ / ₂ (63.5)	3 ⁸ / ₁₆ (9.5)	5 ⁸ / ₁₆ x 3 ⁴ / ₄ (15.9) x (19.1)	5 ⁸ / ₁₆ x 1 ¹ / ₈ (15.9) x (28.6)
1300-1600	2	3 ³ / ₄ (95.3)	5 ³ / ₄ (146.1)	6 ³ / ₄ (171.5)	9 ¹ / ₄ (235.0)	9 ¹ / ₂ (241.3)	10 ³ / ₄ (273.1)	—	—	2 ³ / ₈ (60.3)	3 (76.2)	7 ¹ / ₁₆ (11.1)	5 ⁸ / ₁₆ x 3 ⁴ / ₄ (15.9) x (19.1)	5 ⁸ / ₁₆ x 1 ¹ / ₈ (15.9) x (28.6)
1800-2000	2	3 ³ / ₄ (95.3)	5 ³ / ₄ (146.1)	6 ³ / ₄ (171.5)	9 ¹ / ₄ (235.0)	9 ¹ / ₂ (241.3)	10 ³ / ₄ (273.1)	—	—	2 ³ / ₄ (69.9)	3 ¹ / ₂ (88.9)	1 ¹ / ₂ (12.7)	5 ⁸ / ₁₆ x 3 ⁴ / ₄ (15.9) x (19.1)	5 ⁸ / ₁₆ x 1 ¹ / ₈ (15.9) x (28.6)
2100-2500	3	4 (101.6)	5 ³ / ₄ (146.1)	6 ³ / ₄ (171.5)	9 ¹ / ₄ (235.0)	9 ¹ / ₂ (241.3)	10 ³ / ₄ (273.1)	1 ⁵ / ₈ (41.3)	1 ³ / ₄ (44.5)	3 ¹ / ₂ (88.9)	5 (127.0)	3 ⁴ / ₁₆ (19.1)	5 ⁸ / ₁₆ x 3 ⁴ / ₄ (15.9) x (19.1)	5 ⁸ / ₁₆ x 1 ¹ / ₈ (15.9) x (28.6)
2501-3000	3	4 (101.6)	5 ³ / ₄ (146.1)	6 ³ / ₄ (171.5)	9 ¹ / ₄ (235.0)	9 ¹ / ₂ (241.3)	10 ³ / ₄ (273.1)	1 ⁵ / ₈ (41.3)	1 ³ / ₄ (44.5)	4 (101.6)	5 (127.0)	3 ⁴ / ₁₆ (19.1)	5 ⁸ / ₁₆ x 3 ⁴ / ₄ (15.9) x (19.1)	5 ⁸ / ₁₆ x 1 ¹ / ₈ (15.9) x (28.6)
3500-4000	4	4 (101.6)	5 ³ / ₄ (146.1)	6 ³ / ₄ (171.5)	9 ¹ / ₄ (235.0)	9 ¹ / ₂ (241.3)	10 ³ / ₄ (273.1)	1 ³ / ₄ (44.5)	3 ³ / ₄ (82.6)	4 ³ / ₄ (120.7)	5 ³ / ₄ (146.1)	3 ⁴ / ₁₆ (19.1)	5 ⁸ / ₁₆ x 1 ³ / ₈ (15.9) x (34.9)	5 ⁸ / ₁₆ x 1 ³ / ₈ (15.9) x (34.9)
4500-5000	5	4 (101.6)	5 ³ / ₄ (146.1)	—	9 ¹ / ₄ (235.0)	—	10 ³ / ₄ (273.1)	1 ⁵ / ₈ (41.3)	3 ³ / ₄ (82.6)	5 ¹ / ₄ (133.4)	7 ¹ / ₈ (181.0)	1 (25.4)	5 ⁸ / ₁₆ DIA. (15.9)	—
6000	5	4 (101.6)	5 ³ / ₄ (146.1)	—	9 ¹ / ₄ (235.0)	—	10 ³ / ₄ (273.1)	1 ⁵ / ₈ (41.3)	3 ³ / ₄ (82.6)	5 ¹ / ₄ (133.4)	7 ¹ / ₈ (181.0)	1 (25.4)	5 ⁸ / ₁₆ DIA. (15.9)	—

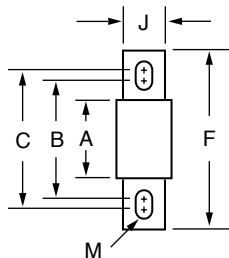


FIG. 1

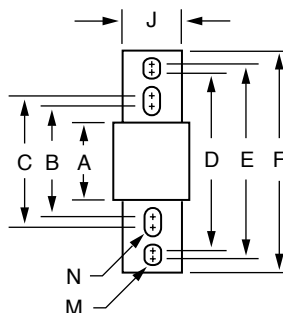


FIG. 2

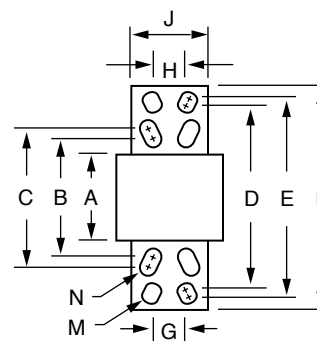


FIG. 3

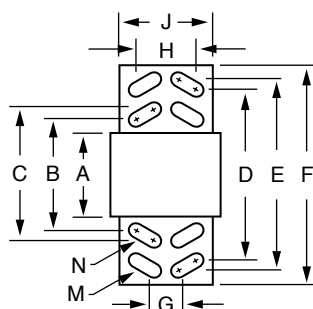


FIG. 4

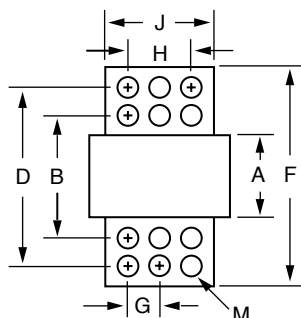
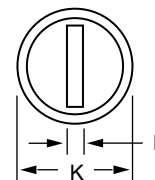


FIG. 5



LLNRK/LLSRK/LLSRK_ID SERIES INDICATOR® POWR-PRO® FUSES

POWR-PRO® 250/600 VAC • Dual Element • Time-Delay • 1/10-600 Amperes



Description

RK1 fuses are extremely current-limiting fuses meaning they greatly reduce or eliminate damage to circuits and equipment under short-circuit conditions. Replacing existing Class H, K and RK5 fuses with RK1 fuses is one of the easiest ways to immediately improve the protection of plant workers and equipment.

Applications

- All general purpose circuits
- Motors
- Transformers
- Safety upgrades

Features/Benefits

- POWR-PRO Performance (see pg. 3)
- Indication
- Dual-element design
- Extremely Current-Limiting
- IEC Type 2 “No Damage” protection to IEC and NEMA type motor starters
- Indicating and DIN mount fuseholders available

Specifications

Voltage Ratings:	600 VAC/300 VDC (LLSRK/LLSRK_ID) 250 VAC/125 VDC (LLNRK)
Interrupting Ratings:	AC: 200 kA rms symmetrical 300 kA rms symmetrical (Littelfuse self-certified) DC: 20 kA
Ampere Range:	1/10 – 600 A
Approvals:	AC: Standard 248-12, Class RK1 UL Listed (File No. E81895) CSA Certified (File No. LR29862) DC: Littelfuse self-certified Federal Specification WF-1814 (QPL- W-F-1814)

Recommended Fuseholders

LFR60 Series	pg. 90
LFR25 Series	pg. 90

Ordering Information

AMPERE RATINGS						
1/10	1	2 8/10	6 1/4	25	80	250
15/100	1 1/8	3	7	30	90	300
2/10	1 1/4	3 2/10	8	35	100	350
1/4	1 4/10	3 1/2	9	40	110	400
3/10	1 6/10	4	10	45	125	450
4/10	1 8/10	4 1/2	12	50	150	500
1/2	2	5	15	60	175	600
6/10	2 1/4	5 6/10	17 1/2	70	200	
8/10	2 1/2	6	20	75*	225	

Note: All LLSRK_ID fuses rated 1 amp and above are Indicator® fuses.

*75 A is only available for the 600 V.

600 V

TYPE	SERIES	AMPERAGE	CATALOG NUMBER	SYSTEM NUMBER
INDICATING	LLSRK_ID	60	LLSRK060ID	LSRK060.TXID
NON-INDICATING	LLSRK	60	LLSRK060	LSRK060.T

250 V

TYPE	SERIES	AMPERAGE	CATALOG NUMBER	SYSTEM NUMBER
NON-INDICATING	LLNRK	80	LLNRK080	LNK080.V

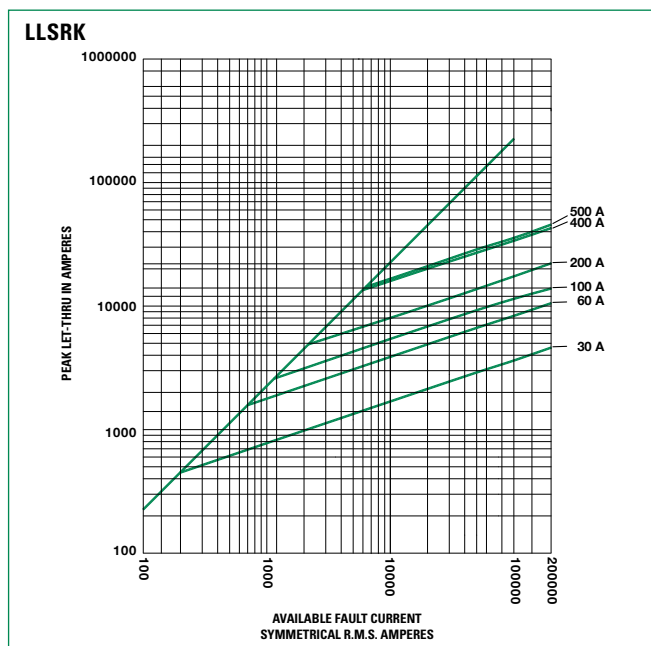
Web Resources

TC Curves, downloadable CAD drawings and other technical information: www.littelfuse.com/llsrk
www.littelfuse.com/llnrk

Dimensions

Please refer to the Class R dimensions..... pg. 22

Peak Let-Thru Curve (600 V)



Note: For more information, see Peak Let-Thru Table on pg. 18

KLNR/KLSR SERIES FUSES

250/600 VAC • Fast-Acting • 1-600 Amperes



Description

KLNR/KLSR fuses are an economical single element design providing the safety of an RK1 fuse.

Applications

- Resistance heaters
- Lighting circuits
- Non-inductive loads

Features/Benefits

- Extremely Current-Limiting
- Indicating and DIN mount fuseholders available

Specifications

Voltage Ratings:	AC:	250 V (KLNR); 600 V (KLSR)
	DC:	125 V (1 – 600 A KLNR); 250 V (1 – 30 A KLSR); 300 V (35 – 600 A KLSR).
Interrupting Ratings:	AC:	200 kA rms symmetrical
	DC:	20 kA
Ampere Range:		1 – 600 A
Approvals:	AC:	Standard 248-12, Class RK1 UL Listed (File No. E81895) CSA Certified (File No. LR29862)
	DC:	Littelfuse self-certified

Recommended Fuseholders

LFR60 Series	pg. 90
LFR25 Series	pg. 90

Dimensions

Please refer to the Class R dimensions..... pg. 22

Ordering Information

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

600 V

SERIES	AMPERAGE	CATALOG NUMBER	SYSTEM NUMBER
KLSR	90	KLSR090	KLSR090.V

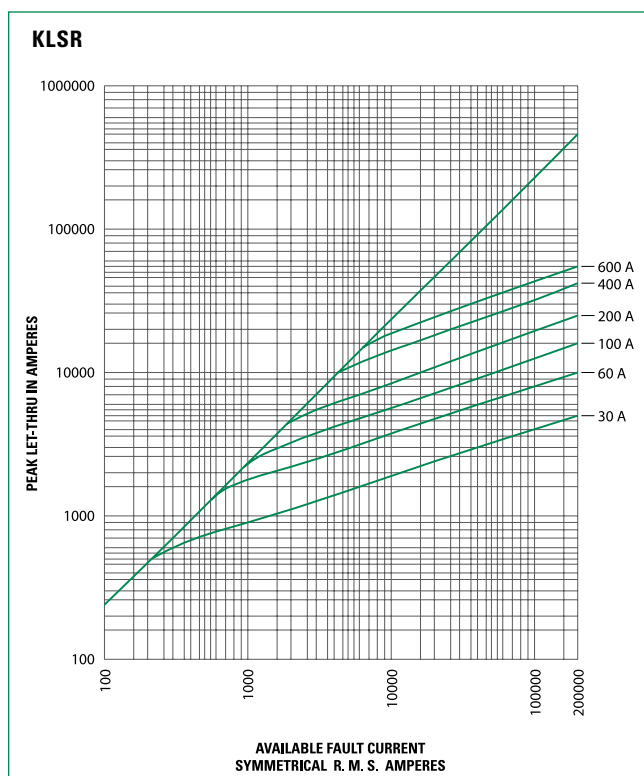
250 V

SERIES	AMPERAGE	CATALOG NUMBER	SYSTEM NUMBER
KLNR	90	KLNR090	KLNR090.V

Web Resources

TC Curves, downloadable CAD drawings and other technical information: www.littelfuse.com/klsr
www.littelfuse.com/klnr

Peak Let-Thru Curve



Note: For more information, see Peak Let-Thru Table on pg. 18

CLASS RK1 CURRENT LIMITING EFFECTS

Class RK1 Fuses 1

Current-Limiting Effects of LLSRK and LLSRK_ID (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
5,000	1,060	1,600	2,100	2,600	4,100	--
10,000	1,350	2,000	2,800	3,400	5,250	8,000
15,000	1,600	2,300	3,200	3,900	6,000	9,000
20,000	1,700	2,600	3,600	4,500	6,700	10,000
25,000	1,900	2,800	3,800	4,800	7,500	11,000
30,000	2,000	3,000	4,100	5,200	8,000	12,000
35,000	2,100	3,100	4,400	5,700	8,500	12,500
40,000	2,200	3,300	4,600	6,000	9,000	13,000
50,000	2,400	3,500	4,900	6,500	9,500	14,000
60,000	2,500	3,800	5,200	7,000	10,000	15,000
80,000	2,700	4,000	5,700	7,750	11,000	17,000
100,000	2,900	4,200	6,200	8,500	12,000	18,000
150,000	3,200	4,600	7,300	10,000	14,000	21,000
200,000	3,300	4,700	8,000	11,000	16,000	23,000

Visit www.littelfuse.com/llsrk for 600 V Current-Limiting effects

Current-Limiting Effects of LLNRK (250 V) Fuses

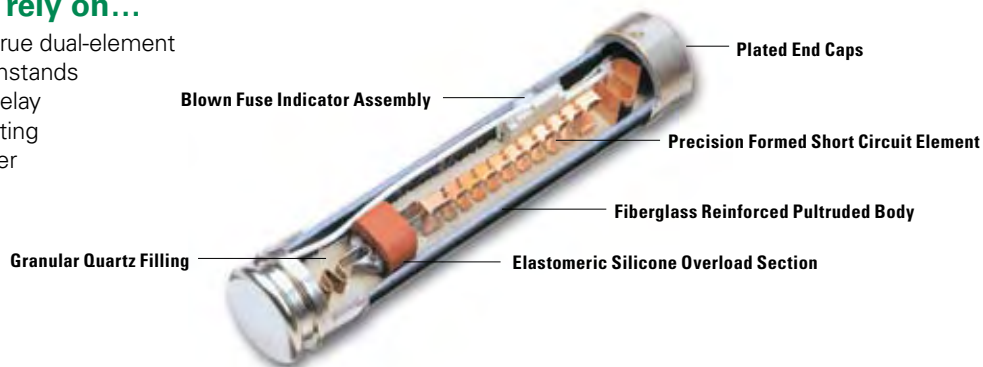
SHORT CIRCUIT CURRENT*	APPARENT RMS SYMMETRICAL CURRENT FOR VARIOUS FUSE RATINGS					
	30 A	60 A	100 A	200 A	400 A	600 A
5,000	900	1,400	2,000	2,700	4,800	5,000
10,000	1,100	1,900	2,700	3,500	6,200	8,500
15,000	1,250	2,100	3,100	4,200	7,000	9,500
20,000	1,400	2,400	3,500	4,600	8,000	10,800
25,000	1,500	2,600	3,900	5,000	8,300	11,500
30,000	1,600	2,800	4,000	5,250	9,000	12,000
35,000	1,700	2,850	4,300	5,500	9,500	12,500
40,000	1,800	3,000	4,600	5,800	9,800	13,500
50,000	1,900	3,200	4,800	6,300	10,200	14,000
60,000	2,000	3,500	5,200	6,700	11,000	15,000
80,000	2,200	3,900	5,700	7,200	12,200	16,000
100,000	2,300	4,000	6,000	8,100	12,700	17,000
150,000	2,500	4,500	6,700	9,100	14,000	19,000
200,000	2,600	4,800	7,000	9,700	15,000	20,000

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

Visit www.littelfuse.com/llnrk for 250 V Current-Limiting effects

LLSRK_ID Fuses—Quality Construction for performance you can rely on...

Littelfuse **LLSRK_ID** Fuses feature true dual-element construction. This robust design withstands repeated surges within rated time delay without opening needlessly, eliminating needless downtime caused by power surges or equipment demands.



IDSR SERIES INDICATOR® POWR-PRO® FUSES

POWR-PRO® 600 V AC/DC • Time-Delay • 1/10-600 Amperes



Description

The IDSR combines a 600 VDC capability with indication to provide an ideal solution for many DC applications.

Applications

- DC circuits
- Solar inverters
- Motors
- Transformers
- Solenoids
- Fluorescent lighting

Features/Benefits

- POWR-PRO Performance (see pg. 3)
- Indication

Specifications

Voltage Ratings:	AC:	600 V
	DC:	600 V
Interrupting Ratings:	AC:	200 kA rms symmetrical
		300 kA rms symmetrical (Littelfuse self-certified)
	DC:	20 kA
Ampere Range:		1/10 – 600 A
Approvals:		Standard 248-12 and UL 198M, Class RK5
		UL Listed (File No. E81895)
		CSA Certified (File No. LR29862)

Ordering Information

AMPERE RATINGS							
1/10	6/10	1 8/10	4	8	30	80	225
1/8	8/10	2	4 1/2	9	35	90	250
15/100	1	2 1/4	5	10	40	100	300
2/10	1 1/8	2 1/2	5 8/10	12	45	110	350
3/4	1 1/4	2 8/10	6	15	50	125	400
3/10	1 4/10	3	6 1/4	17 1/2	60	150	450
4/10	1 1/2	3 2/10	7	20	70	175	500
1/2	1 6/10	3 1/2	7 1/2	25	75	200	600

Note: All fuses rated 1A and above are Indicator® fuses.

SERIES	AMPERAGE	CATALOG NUMBER	SYSTEM NUMBER
IDSR	30	IDSR30	IDSR030.T

Web Resources

TC Curves, downloadable CAD drawings and other technical information: www.littelfuse.com/idsr

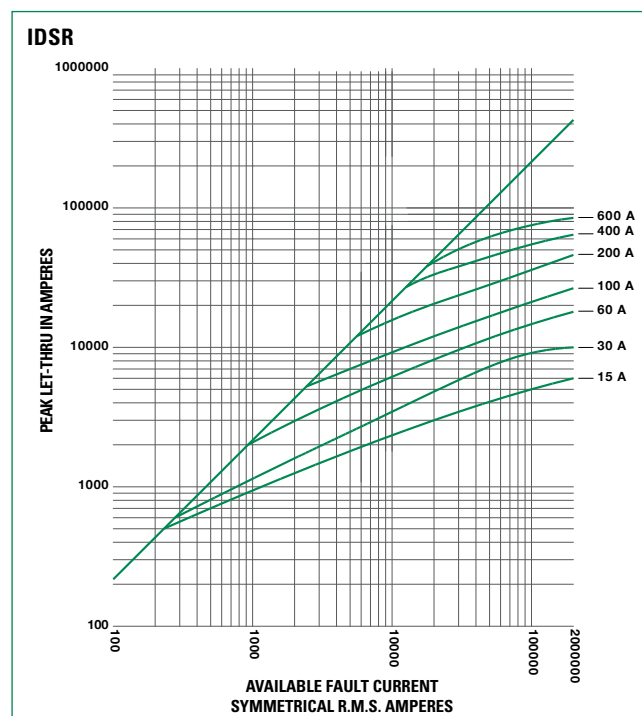
Recommended Fuseholders

LFR60 Series pg. 90
 Additional information in Blocks & Holders section pg. 90-94

Dimensions

Please refer to the Class R dimensions..... pg. 22

Peak Let-Thru Curve



Note: For more information, see Peak Let-Thru Table on pg. 21

FLNR_ID/FLSR_ID SERIES INDICATOR® FUSES

250/600 VAC • Dual Element • Time Delay • 1/10-600 Amperes



Description

Available in both Indicating and Non-Indicating versions, the FLNR/FLSR series of fuses sets the standard for general purpose fuses. The dual element design provides advanced short circuit and overload protection. FLSR series fuses provide excellent protection for all types of circuits especially those containing motors.

Applications

- Service entrance switches
- Switchboard mains and feeders
- Motor control central mains and motor branch circuits
- All general purpose circuits

Features/Benefits

- Indication
- Dual element design
- Available without indication
- Current limiting

Specifications

Voltage Ratings: AC: 250 V (FLNR_ID); 600 V (FLSR_ID)
DC: 125 V (FLNR 1/10 – 30 A);
125 V (FLNR_ID 35 – 600 A);
300 V (FLSR_ID)

Interrupting Ratings: AC: 200 kA rms symmetrical
300 kA rms symmetrical
(Littelfuse self-certified)
DC: 20 kA

Ampere Range: 1/10 – 600 A

Approvals: Standard 248-12, Class RK5
UL Listed (File No. E81895)
CSA Certified (File No. LR29862)
Federal Specification WF-1814
(QPL- W-F-1814)

Dimensions

Please refer to the Class R dimensions..... pg. 22
Refer to the FLNR Series dimensions for FLNR_ID,
and FLSR dimensions for FLSR_ID.

Ordering Information

AMPERE RATINGS							
1/10	6/10	1 8/10	4	8	30	80	225
1/8 *	8/10	2	4 1/2	9	35	90	250
15/100	1	2 1/4	5	10	40	100	300
2/10	1 1/8	2 1/2	5 8/10	12	45	110	350
1/4	1 1/4	2 9/10	6	15	50	125	400
3/10 †	1 4/10	3	6 1/4	17 1/2	60	150	450
4/10	1 1/2	3 2/10	7	20	70	175	500
1/2	1 9/10	3 1/2	7 1/2	25	75 **	200	600

*FLNR only. †FLNR, FLSR, FLSR_ID only. **FLNR, FLSR, FLSR_ID only
Note: For 1/10 – 30A 250 volt fuses, order non-indicating FLNR series fuses.

TYPE	VOLTAGE	SERIES	AMP	CATALOG NUMBER	SYSTEM NUMBER
NON-INDICATING	600 V	FLSR	15	FLSR015	FLSR015.T
INDICATING	600 V	FLSR_ID	15	FLSR015ID	FLSR015.TXID
NON-INDICATING	250 V	FLNR	60	FLNR060	FLNR060.T
INDICATING	250 V	FLNR_ID	60	FLNR060ID	FLNR060.TXID

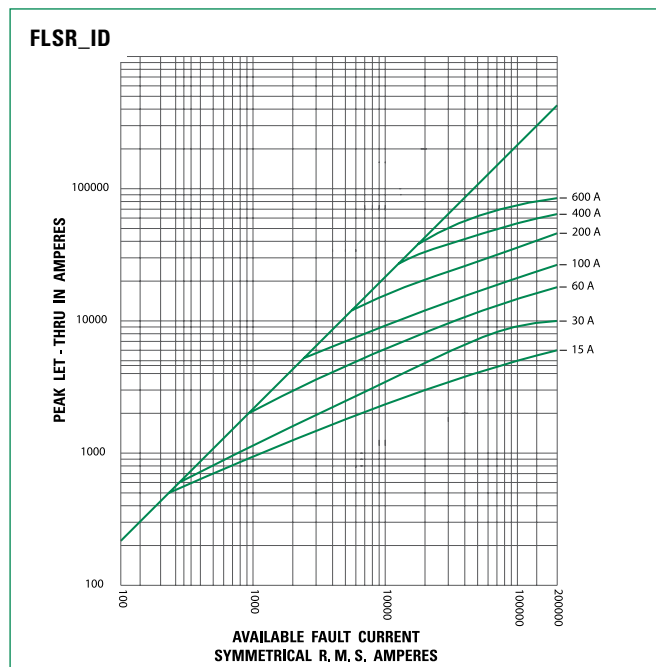
Web Resources

TC Curves, downloadable CAD drawings and other technical information: www.littelfuse.com/flsr
www.littelfuse.com/flnr

Recommended Fuseholders

LFR60 Series pg. 90
LFR25 Series pg. 90

Peak Let-Thru Curve



Note: For more information, see Peak Let-Thru Table on pg. 21

CLASS RK5 CURRENT-LIMITING EFFECTS

Current-Limiting Effects of IDSR (600 V) Fuses

SHORT CIRCUIT CURRENT*	APPARENT RMS SYMMETRICAL CURRENT FOR VARIOUS FUSE RATINGS						
	15 A	30 A	60 A	100 A	200 A	400 A	600 A
5,000	800	1,100	2,100	3,200	5,000	5,000	5,000
10,000	1,100	1,600	2,900	4,300	7,300	10,000	10,000
15,000	1,300	1,900	3,400	5,000	8,600	13,700	15,000
20,000	1,400	2,200	3,800	5,600	9,500	15,500	19,000
25,000	1,500	2,500	4,100	6,100	10,300	16,700	21,500
30,000	1,600	2,700	4,500	6,500	11,000	17,700	23,500
35,000	1,700	2,900	4,700	6,800	11,600	18,600	25,200
40,000	1,800	3,100	5,000	7,200	12,100	19,400	26,600
50,000	1,900	3,400	5,400	7,800	13,100	20,800	29,500
60,000	2,000	3,600	5,800	8,300	13,900	22,000	30,600
80,000	2,200	4,000	6,300	9,100	15,400	24,000	33,200
100,000	2,300	4,200	6,800	9,800	16,700	25,500	35,100
150,000	2,600	4,500	7,700	11,200	19,300	28,100	38,000
200,000	2,800	4,600	8,400	12,400	21,400	30,000	39,600

Current-Limiting Effects of FLNR and FLNR_ID (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
5,000	1,250	2,100	3,200	5,000	5,000	5,000
10,000	1,600	2,850	4,300	7,250	10,000	10,000
15,000	1,800	3,400	5,000	8,500	13,500	15,000
20,000	2,250	3,800	5,500	9,500	15,750	19,000
25,000	2,450	4,100	5,700	10,250	17,000	21,000
30,000	2,700	4,500	6,400	10,750	18,000	23,000
35,000	2,900	4,800	6,700	11,500	19,000	24,250
40,000	3,000	5,000	7,250	12,000	19,500	27,000
50,000	3,400	5,250	7,750	13,000	21,000	29,000
60,000	3,600	5,750	8,100	14,000	22,000	30,500
80,000	3,900	6,250	9,000	15,000	24,000	33,000
100,000	4,300	6,750	9,750	16,500	26,000	35,000
150,000	4,500	7,600	11,100	19,000	28,000	38,000
200,000	4,600	8,400	12,250	21,500	30,000	40,000

Current-Limiting Effects of FLNR and FLNR_ID (250V) Fuses

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	1,400	2,100	3,100	5,000	5,000	5,000
10,000	1,550	2,500	3,900	6,500	9,500	10,000
15,000	2,000	3,150	4,400	7,250	10,500	14,000
20,000	2,250	3,400	5,000	8,250	12,000	16,000
25,000	2,400	3,750	5,250	9,000	12,500	16,500
30,000	2,550	4,100	5,600	9,500	13,500	18,000
35,000	2,650	4,300	5,800	9,750	14,000	19,000
40,000	2,800	4,400	6,250	10,250	15,000	20,000
50,000	3,000	5,000	6,500	10,500	16,000	21,000
60,000	3,200	5,250	7,000	11,500	17,000	23,000
80,000	3,400	5,750	7,500	12,500	19,000	25,500
100,000	3,850	6,000	8,000	13,500	21,000	27,500
150,000	4,100	7,000	9,000	15,200	24,000	31,500
200,000	4,300	7,500	9,750	16,500	26,000	34,000

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

CLASS R SERIES DIMENSIONS

Dimensions in inches (mm)

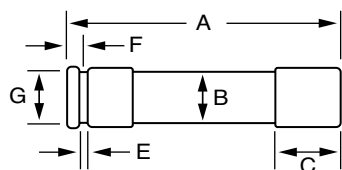


FIG. 1

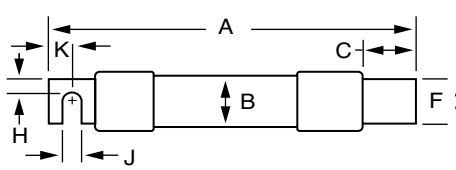


FIG. 2

70-600A

AMPS	REFER TO FIG. NO.	SERIES	DIMENSIONS IN INCHES (mm)									
			A	B	C	D	E	F	G	H	J	K
1/10-30	1	LLNRK/FLNR	2 (50.8)	1/2 (12.7)	1/2 (12.7)	9/16 (14.3)	5/64 (2.0)	5/32 (4.0)	3/8 (9.5)	—	—	—
		LLSRK/FLSR/IDSR	5 (127.0)	3/4 (19.1)	5/8 (15.9)	13/16 (20.6)	3/32 (2.4)	3/16 (4.8)	5/8 (15.9)	—	—	—
35-60	1	LLNRK/FLNR	3 (76.2)	3/4 (19.1)	5/8 (15.9)	13/16 (20.6)	3/32 (2.4)	3/16 (4.8)	5/8 (15.9)	—	—	—
		LLSRK/FLSR/IDSR	5 1/2 (139.7)	1 (25.4)	5/8 (15.9)	1 1/16 (27.0)	3/32 (2.4)	1/4 (6.4)	7/8 (22.2)	—	—	—
70-100	2	LLNRK/FLNR	5 7/8 (149.2)	1 (25.4)	1 1/16 (27.0)	1 1/16 (27.0)	1/8 (3.2)	3/4 (19.1)	—	1/4 (6.4)	9/32 (7.1)	1/2 (12.7)
		LLSRK/FLSR/IDSR	7 7/8 (200.0)	1 1/4 (31.8)	1 1/16 (27.0)	1 5/16 (33.3)	1/8 (3.2)	3/4 (19.1)	—	1/4 (6.4)	9/32 (7.1)	1/2 (12.7)
110-200	2	LLNRK/FLNR	7 7/8 (181.0)	1 1/2 (38.1)	1 15/32 (37.3)	1 19/32 (40.5)	3/16 (4.8)	1 1/8 (28.6)	—	7/16 (11.1)	9/32 (7.1)	1 1/16 (17.5)
		LLSRK/FLSR/IDSR	9 5/8 (244.5)	1 3/4 (44.5)	1 15/32 (37.3)	1 27/32 (46.8)	3/16 (4.8)	1 1/8 (28.6)	—	7/16 (11.1)	9/32 (7.1)	1 1/16 (17.5)
225-400	2	LLNRK/FLNR	8 5/8 (219.1)	2 (50.8)	1 5/16 (49.2)	2 3/32 (53.2)	1/4 (6.4)	1 5/8 (41.3)	—	5/8 (15.9)	13/32 (10.3)	1 5/16 (23.8)
		LLSRK/FLSR/IDSR	11 5/8 (295.3)	2 1/2 (63.5)	2 (50.8)	2 19/32 (65.9)	1/4 (6.4)	1 5/8 (41.3)	—	5/8 (15.9)	13/32 (10.3)	1 5/16 (23.8)
450-600	2	LLNRK/FLNR	10 3/8 (263.5)	2 1/2 (63.5)	2 3/8 (60.3)	2 19/32 (65.9)	1/4 (6.4)	2 (50.8)	—	3/4 (19.1)	17/32 (13.5)	1 1/8 (28.6)
		LLSRK/FLSR/IDSR	13 3/8 (339.7)	3 (76.2)	2 13/32 (61.1)	3 3/32 (78.6)	1/4 (6.4)	2 (50.8)	—	3/4 (19.1)	17/32 (13.5)	1 1/8 (28.6)

SPFR SERIES 1000 VDC HIGH-AMPERAGE SOLAR FUSES

1000 VDC • Fast-Acting • 250-400 Amperes



Description

The SPFR series was designed to meet the growing needs of the solar industry with higher amperage and voltage requirements. It was developed specifically for solar applications ranging from 250 A to 400 A.

Applications

- Solar inverters
- High-amperage combiner boxes

Features/Benefits

- DC voltage rating meets European system requirements and North American utility scale requirements
- Multiple amperage ratings
- UL Class H Dimensions
- Full range protection

Web Resources

Downloadable CAD drawings and other technical information:
www.littelfuse.com/spfr



Look for this logo to indicate products that are used in solar applications. Visit our website www.littelfuse.com/green for the latest updates on approvals, certifications, codes and standards.

Specifications

Voltage Rating:	1000 VDC
Ampere Ratings:	250, 300, 350 and 400 A
Interrupting Rating:	10,000 A; Time Constant less than 1ms
Fuse Type:	Fast-Acting
Approvals:	UL Recognized 1000 VDC UL 248 (File No. 71611) CSA Certified (File No. 29862)

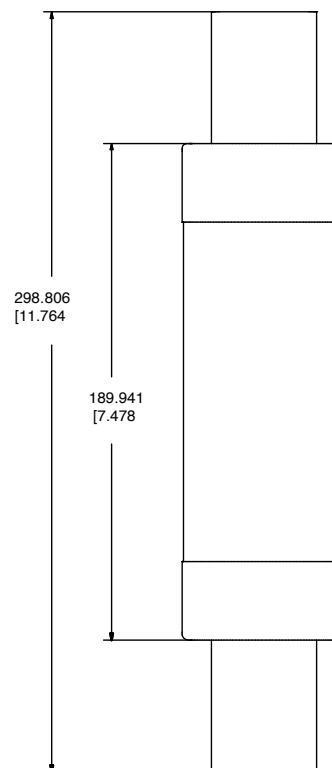
Ordering Information

CATALOG NUMBER	SYSTEM NUMBER	AMPERAGE
SPFR 250	SPFR250.X	250
SPFR 300	SPFR300.X	300
SPFR 350	SPFR350.X	350
SPFR 400	SPFR400.X	400

Recommended Fuseholders

SPFRHV Series pg. 106

Dimensions in mm (inches)



NLN/NLS SERIES (ONE-TIME) FUSES

250/600 VAC • “One-Time” • 1-600 Amperes



Class K/H Fuses 1



Description

NLN/NLS fuses provide low cost protection for general purpose feeder and branch circuits when available short circuit currents are less than 50 kA.

Canadian Electrical Code NLKP Type P fuse available. See Web Resources links for more information.

Applications

- General purpose residential and commercial circuits with little or no motor load.

Features/Benefits

- Economical
- 50 kA interrupting rating
- Indicating and DIN mount holders available

Specifications

Voltage Ratings:	AC:	250 V	(NLN)
		600 V	(NLS)
	DC:	250 V	(NLN)
		400 V	(NLS 35 – 60 A)
		500 V	(NLS 8 – 30 A)
		600 V	(NLS 225 – 600 A)
Interrupting Ratings:			(NLS 1 – 7 A)
			(NLS 70 – 200 A)
	AC:	50 kA rms symmetrical	(NLN/NLS)
	DC:	20 kA (NLN/NLS 1 – 60 A)	
Ampere Range:		1 – 600 amperes	(NLN/NLS)
	Approvals:	NLN/NLS: Standard 248-9, Class K5 UL Listed (File No. E81895) CSA Certified (File No. LR29862)	

Ordering Information

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

*NLKP series available only in those amperages preceded by an asterisk.

SERIES	AMPERAGE	CATALOG NUMBER	SYSTEM NUMBER
NLS	20	NLS020	ONLS020.T
NLN	15	NLN015	ONLN015.T

Web Resources

TC Curves, downloadable CAD drawings and other technical information: www.littelfuse.com/nln

www.littelfuse.com/nls

www.littelfuse.com/nlkp

Recommended Fuseholders

LFH60 Series	pg. 90
LFH25 Series	pg. 89

Dimensions

Please refer to the Class K/H dimensions pg. 89

RLN/RLS SERIES RENEWABLE FUSES AND LKN/LKS SERIES LINKS

250/600 VAC • Renewable • 1-600 Amperes



Ordering Information

AMPERE RATINGS						
1	6	20	45	90	175	350†
2	8*	25	50	100	200	400†
3	10	30	60	110	225†	450†
4	12*	35	70	125	250†	500†
5	15	40	80	150	300†	600†

*RLS only.

†These ampere ratings require two links per fuse.

TYPE	VOLTAGE	CATALOG NUMBER	SYSTEM NUMBER
FUSE	600	RLS020	ORLS020.T
FUSE	250	RLN020	ORLN020.T
LINK	600	LKS025	OLKS025.S
LINK	250	LKN030	OLKN030.S

Web Resources

TC Curves, downloadable CAD drawings and other technical information: www.littelfuse.com/rln
www.littelfuse.com/rls

Description

Littelfuse RLN and RLS series renewable fuses are a quality product that have traditionally been used to provide low cost protection of general purpose feeder and branch circuits where available short-circuit currents do not exceed 10,000 amperes. However, generally increased levels of available fault current and the distinct possibility that renewable fuses may be improperly renewed, have rendered them unsafe. The use of these fuses in new applications is prohibited by law.

Applications

- General purpose residential and commercial circuits with little or no motor load.
- Replacement only

Features/Benefits

- Replaceable fuse links
- 10 kA Interrupting Rating

Specifications

Voltage Ratings:	AC: 250 V (RLN); 600 V (RLS)
Interrupting Ratings:	AC: 10 kA rms symmetrical
Ampere Range:	1 – 600 A
Approvals:	Standard 248-6, Class H UL Listed (File No. E81895) CSA Certified (File No. LR29862)
Fuse Links:	To order, specify LKN (250V) or LKS (600V) plus ampere rating.

Recommended Fuseholders

LFH60 Series	pg. 90
LFH25 Series	pg. 89

Dimensions

Please refer to the Class K/H dimensions pg. 26

Still using Class H fuses?

Littelfuse offers several fuse and fuseblock combinations that can greatly improve electrical safety.

LLNRK/LLSRK	pg. 16
FLNR/FLSR fuses	pg. 20
LFR fuseholders	pg. 88-94

Renewable Fuse Guide for Proper Usage

- Renewable fuses should only be used where short-circuit currents are known to be less than 10,000 amperes, and where correct replacement of open links is assured.
- Renewable fuses and links are not recommended for new applications.

CLASS K/H DIMENSIONS

Dimensions in inches (mm)

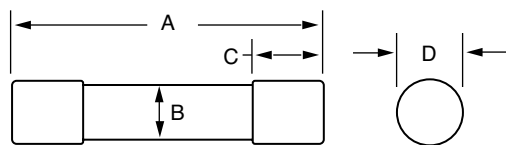


FIG. 1

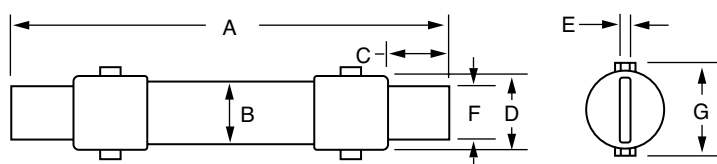


FIG. 2

AMPERES	REFER TO FIG. NO.	SERIES	DIMENSIONS IN INCHES (mm IN PARENTHESES)						
			A	B	C	D	E	F	G
1 – 30	1	NLN/RLN	2 (50.8)	½ (12.7)	½ (12.7)	⅞ (14.3)	—	—	—
		NLS/RLS	5 (127.0)	¾ (19.1)	⅝ (15.9)	1⅜ (20.6)	—	—	—
35 – 60	1	NLN/RLN	3 (76.2)	¾ (19.1)	⅝ (15.9)	1⅜ (20.6)	—	—	—
		NLS/RLS	5½ (139.7)	1 (25.4)	⅝ (15.9)	1⅞ (27.0)	—	—	—
70 – 100	2	NLN/RLN	5⅞ (149.2)	1 (25.4)	1 (25.4)	1⅞ (27.0)	⅞ (3.2)	¾ (19.1)	1⅞ (33.3)
		NLS/RLS	7⅞ (200.0)	1¼ (31.8)	1 (25.4)	1⅞ (33.3)	⅞ (3.2)	¾ (19.1)	1⅞ (39.7)
110 – 200	2	NLN/RLN	7⅞ (181.0)	1½ (38.1)	1⅞ (34.9)	1⅞ (39.7)	⅞ (4.8)	1⅞ (28.6)	1⅞ (47.6)
		NLS/RLS	9⅞ (244.5)	1¾ (44.5)	1⅞ (34.9)	1⅞ (46.8)	⅞ (4.8)	1⅞ (28.6)	2⅞ (53.2)
225 – 400	2	NLN/RLN	8⅞ (219.1)	2 (50.8)	1⅞ (47.6)	2⅞ (53.2)	⅞ (6.4)	1⅞ (41.3)	2⅞ (61.1)
		NLS/RLS	11⅞ (295.3)	2½ (63.5)	1⅞ (47.6)	2⅞ (65.9)	⅞ (6.4)	1⅞ (41.3)	2⅞ (73.0)
450 – 600	2	NLN/RLN	10⅞ (263.5)	2½ (63.5)	2¼ (57.2)	2⅞ (65.9)	⅞ (6.4)	2 (50.8)	2⅞ (73.0)
		NLS/RLS	13⅞ (339.7)	3 (76.2)	2¼ (57.2)	3⅞ (78.6)	⅞ (6.4)	2 (50.8)	3⅞ (87.3)

JTD_ID SERIES INDICATOR® POWR-PRO® FUSES

POWR-PRO® 600 VAC • Time Delay • $\frac{8}{10}$ -600 Amperes



Description

The Littelfuse POWR-PRO JTD_ID Indicator Class J fuse provides visual blown fuse indication and maximum protection in a compact package. The current-limiting time delay JTD_ID offers a patented design which reduces nuisance fuse openings.

Applications

- Fused combination motor controllers and motor control centers
- Transformer protection
- Protection for series rated molded case circuit-breaker panels
- General purpose circuits

Features

- Current-Limiting
- IEC Type 2 Protection
- Indication and non-indication version available
- POWR-PRO Performance (see pg. 3)
- Indicating and DIN mount holders available

Specifications

Voltage Ratings:	AC:	600 V
	DC:	300 V ($\frac{8}{10}$ -100 A); 500 V (110-600 A)
Interrupting Rating:	AC:	200 kA rms symmetrical 300 kA rms symmetrical
	DC:	20 kA
Ampere Range:		$\frac{8}{10}$ -600 A
Approvals:	AC:	Standard 248-8, Class J UL Listed (File No. E81895) CSA Certified (File No. LR29862)
	DC:	Littelfuse self-certified

Ordering Information

AMPERE RATINGS							
$\frac{8}{10}$	$2\frac{1}{4}$	$4\frac{1}{2}$	10	35	90	225	600
1	$2\frac{1}{2}$	5	12	40	100	250	
$1\frac{1}{4}$	$2\frac{8}{10}$	$5\frac{8}{10}$	15	45	110	300	
$1\frac{1}{2}$	3	6	$17\frac{1}{2}$	50	125	350	
$1\frac{9}{10}$	$3\frac{2}{10}$	7	20	60	150	400	
$1\frac{9}{10}$	$3\frac{1}{2}$	8	25	70	175	450	
2	4	9	30	80	200	500	

TYPE	SERIES	AMPERAGE	CATALOG NUMBER	SYSTEM NUMBER
INDICATING	JTD_ID	60	JTD60ID	QJTD060.TXID
NON-INDICATING	JTD	60	JTD60	QJTD060.T

Web Resources

Time-current curves, data sheets and additional technical information: www.littelfuse.com/jtd

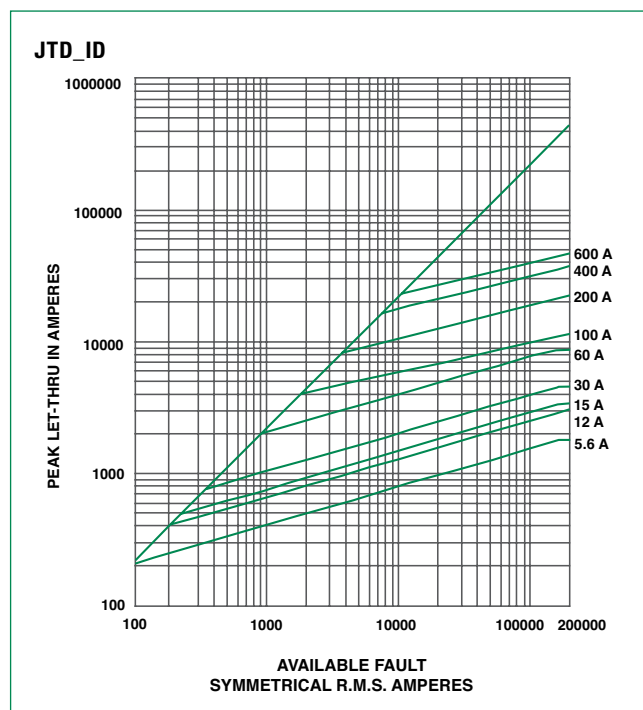
Recommended Fuseholders

LFJ60 Series	pg. 85
LPSJ Series	pg. 114

Dimensions

Please refer to the Class J dimensions pg. 29

Peak Let-Thru Curve



Note: For more information, see Peak Let-Thru Table on pg. 29

JLS SERIES FUSES

600 VAC • Fast-Acting • 1-600 Amperes



Description

JLS series fuses provide space saving, fast-acting overload and short-circuit protection for non-inductive loads. For applications where short-duration surges and spikes may cause nuisance fuse opening, consider the use of Littelfuse POWR-PRO® JTD or JTD_ID series time-delay fuses.

Applications

- General purpose circuits with little or no motor load.
- Resistive loads, such as resistance electric heat.
- Loads requiring fast-acting overload protection, such as equipment containing solid-state devices.

Specifications

Voltage Ratings:	600 VAC
Interrupting Ratings:	200 kA rms symmetrical
Ampere Range:	1–600 A
Approvals:	Standard 248-8, Class J UL Listed (File No. E81895) CSA Certified (File No. LR29862) Federal Specification WF-1814 (QPL-W-F-1814)

Dimensions

Please refer to the Class J dimensions pg. 29

Ordering Information

AMPERE RATINGS					
1	20	45	90	175	350
3	25	50	100	200	400
6	30	60	110	225	450
10	35	70	125	250	500
15	40	80	150	300	600

TYPE	SERIES	AMPERAGE	CATALOG NUMBER	SYSTEM NUMBER
NON-INDICATING	JLS	110	JLS110	QJLS110.X

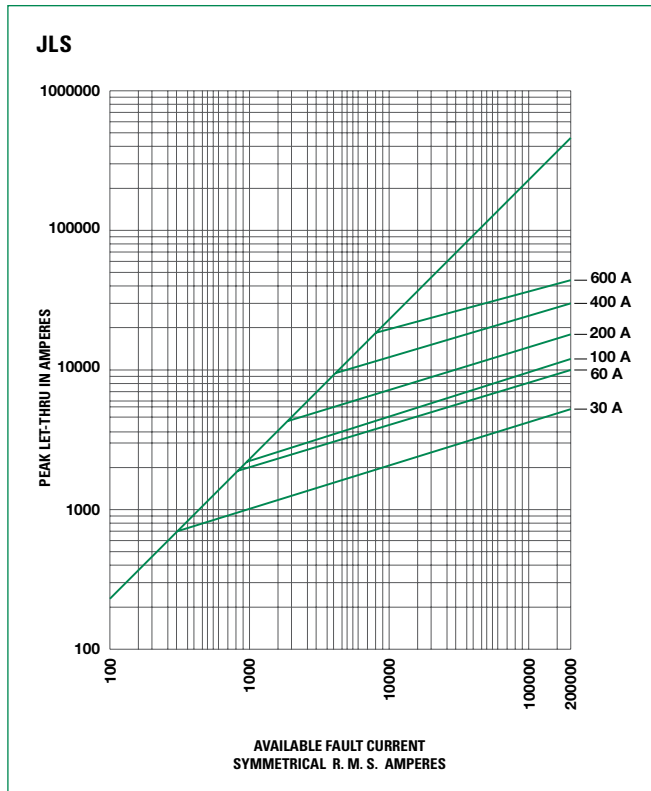
Web Resources

TC curves, downloadable CAD drawings and other technical information: www.littelfuse.com/jls

Recommended Fuseholders

LFJ60 Series	pg. 85
LPSJ Series	pg. 114

Peak Let-Thru Curve



CLASS J DIMENSIONS AND CURRENT-LIMITING EFFECTS

Dimensions in inches (mm)

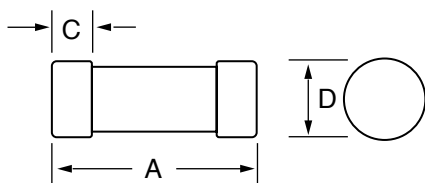


Fig. 1

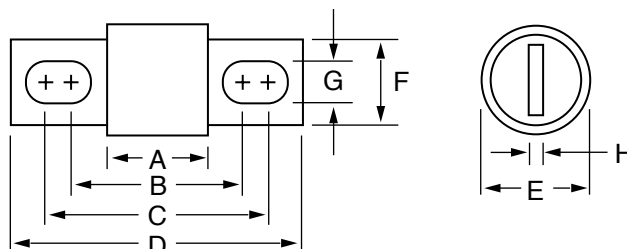


Fig. 2

Dimensions JTD_ID, JTD and JLS

AMPERES	REFER TO FIG. NO.	DIMENSIONS IN INCHES (mm)							
		A	B	C	D	E	F	G	H
1 – 30	1	2¼ (57.2)	—	½ (12.7)	13/16 (20.6)	—	—	—	—
35 – 60	1	2¾ (60.3)	—	5/8 (15.9)	1¼ (27.0)	—	—	—	—
70 – 100	2	2⅝ (66.7)	3 17/32 (89.7)	3 23/32 (94.5)	4 5/8 (117.5)	1/8 (28.6)*	¾ (19.1)	9/32 (7.1)	1/8 (3.2)
110 – 200	2	3 (76.2)	4 9/32 (108.7)	4 15/32 (113.5)	5 3/4 (146.1)	1½ (38.1)	1 1/8 (28.6)	9/32 (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)	¼ (6.4)
450 – 600	2	3 ¾ (95.3)	5 27/32 (148.4)	6 5/32 (156.4)	8 (203.2)	2½ (63.5)	2 (50.8)	17/32 (13.5)	3/8 (9.5)

*70-100 A JLS dimension = 1 (25.4)

Current-Limiting Effects of JTD_ID (600 V) Fuses

SHORT CIRCUIT CURRENT†	APPARENT RMS SYMMETRICAL CURRENT FOR VARIOUS FUSE RATINGS						
	15 A	30 A	60 A	100 A	200 A	400 A	600 A
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

JLLN/JLLS CLASS T FUSES

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



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

Specifications

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

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
www.littelfuse.com/jlls

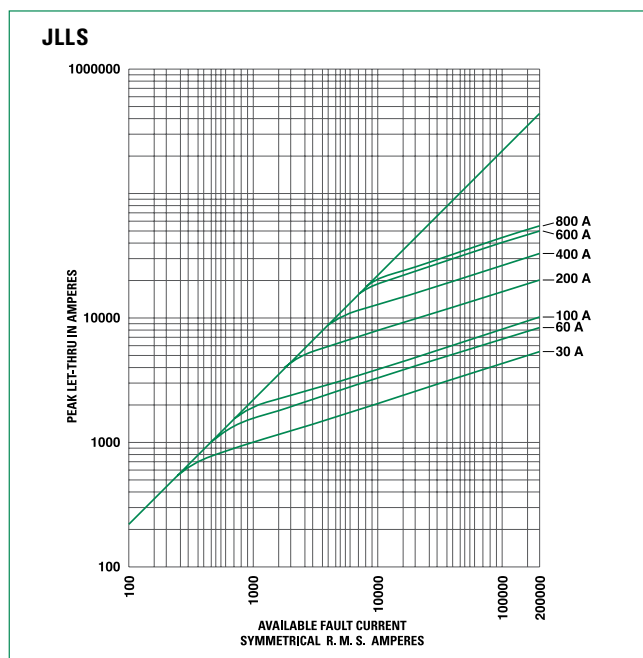
Recommended Fuseholders

LFT30 Series.....	pg. 95
LFT60 Series.....	pg. 95
LSCR Series for 700-800 A.....	pg. 120

Dimensions

Please refer to the Class T dimensions.....pg. 31

Peak Let-Thru Curve



Note: For more information, see Peak Let-Thru Table on pg. 31

CLASS T DIMENSIONS AND CURRENT-LIMITING EFFECTS

Dimensions in inches (mm)

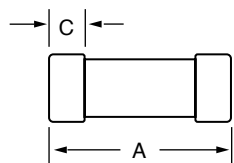


Fig. 1

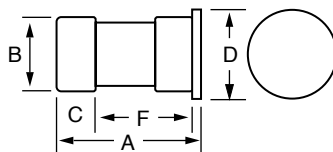


Fig. 2

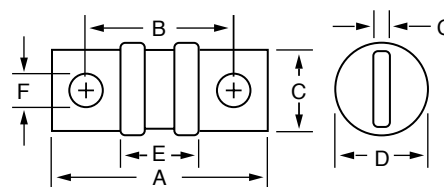


Fig. 3

AMPERES	REFER TO FIG. NO.	SERIES	DIMENSIONS IN INCHES (mm)						
			A	B	C	D	E	F	G
1 – 30	1	JLLN	$\frac{7}{8}$ (22.2)	—	$\frac{9}{32}$ (7.1)	$\frac{13}{32}$ (10.3)	—	—	—
		JLLS	$1\frac{1}{2}$ (38.1)	—	$\frac{9}{32}$ (7.1)	$\frac{9}{16}$ (14.3)	—	—	—
35 – 60	1	JLLN	$\frac{7}{8}$ (22.2)	—	$\frac{9}{32}$ (7.1)	$\frac{9}{16}$ (14.3)	—	—	—
		JLLS	$1\frac{1}{16}$ (39.7)	$\frac{13}{16}$ (20.6)	$\frac{13}{32}$ (10.3)	1 (25.4)	$\frac{1}{16}$ (1.6)	$1\frac{3}{32}$ (27.8)	—
70 – 100	3	JLLN	$2\frac{5}{32}$ (54.8)	$1\frac{1}{16}$ (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)	$1\frac{41}{64}$ (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	$3\frac{1}{4}$ (82.6)	$2\frac{1}{2}$ (63.5)	$\frac{7}{8}$ (22.2)	$1\frac{1}{16}$ (27.0)	$1\frac{21}{32}$ (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)	$1\frac{23}{32}$ (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)	$1\frac{49}{64}$ (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)	$1\frac{55}{64}$ (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

SLC CLASS G FUSES

480/600 VAC • Time-Delay • 1/2-60 Amperes



Description

Littelfuse SLC fuses provide cost effective branch circuit protection. Fuse length varies to prevent over-fusing. Compact Class G fuses were the first fuse series to approach midjet fuse dimensions and meet NEC® requirements for branch-circuit protection.

Applications

- Branch circuit protection

Features/Benefits

- Branch circuit rated
- Current-limiting
- 100 kA interrupting rating
- 600 VAC rated 1/2-20 A

Specifications

Voltage Ratings: 600 VAC (1/2 – 20 A)
480 VAC (25 – 60 A)
170 VDC (1/2 – 30 A) (Littelfuse self-certified)

Interrupting Ratings: AC: 100 kA rms symmetrical
DC: 10 kA

Ampere Range: 1/2 – 60 A

Approvals: Standard 248-5, Class G
UL Listed (File No. E81895)
CSA Certified (File No. LR29862)
Federal Specification WF-1814
(QPL-W-F-1814)

Ordering Information

AMPERE RATINGS						
1/2	3	6	12	25	40	60
1	4	8	15	30	45	
2	5	10	20	35	50	

SERIES	AMPERAGE	CATALOG NUMBER	SYSTEM NUMBER
SLC	10	SLC010	OSLC010.T

Web Resources

TC Curves, downloadable CAD drawings and other technical information: www.littelfuse.com/slc

Recommended Fuseholders

LG300 Series..... pg. 100
L30030G Series..... pg. 100

AMPERES	REFER TO FIG. NO.	DIMENSIONS IN INCHES (mm)			
		A	B	C	D
1/2 – 15	1	1 5/16 (33.3)	3/8 (9.5)	9/32 (7.1)	13/32 (10.3)
20	1	1 13/32 (35.7)	3/8 (9.5)	9/32 (7.1)	13/32 (10.3)
25, 30	1	1 5/8 (41.3)	3/8 (9.5)	9/32 (7.1)	13/32 (10.3)
35 – 60	1	2 1/4 (57.2)	3/8 (9.5)	1/2 (12.7)	13/32 (10.3)

Dimensions in inches (mm)

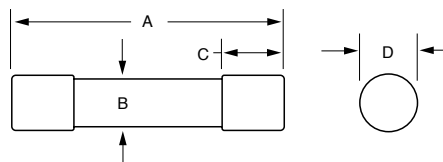


Fig 1

CCMR SERIES POWR-PRO® FUSES

POWR-PRO® 600 VAC • Dual Element • Time-Delay • $\frac{2}{10}$ -60 Amperes


Description

The CCMR series is ideal for space saving protection of motors up to 40 hp*. It was designed specifically to withstand sustained starting currents of small motors. The CCMR 60 fuse is the smallest 60 A fuse available rated at 600 V. Compared to other UL Listed fuses, Class CC fuses are the most current-limiting, rating for rating.

Applications

- Motor and motor branch circuit protection

Features/Benefits

- POWR-PRO Performance (see pg. 3)
- Extremely current-limiting
- Ratings up to 60 Amps
- 300 kA Interrupting Rating (self-certified)

Specifications

Voltage Ratings:	AC:	600 V	
	DC:	250 V	(CCMR $\frac{2}{10}$ –2 A) (CCMR $\frac{4}{2}$ –10 A) (CCMR 35–60 A)
		300 V	(CCMR $\frac{2}{10}$ –4 A)
		500 V	(CCMR 12–30 A)
Interrupting Ratings:	AC:	200 kA rms symmetrical 300 kA Littelfuse self-certified	
	DC:	20 kA	
Ampere Range:		$\frac{2}{10}$ – 60 A	
Approvals:	AC:	Standard 248-4, Class CC	
		UL Listed $\frac{1}{10}$ -30 A (File No. E81895)	
		Standard 248, Class CD	
		UL Listed 35-60 A (File No. E81895)	
		CSA Certified $\frac{1}{10}$ -30 A (File No. LR29862)	
	DC:	Littelfuse self-certified	

*Consult Motor Protection Tables on pg. 203 in the Technical Application Guide section for specific motor sizing information.

Ordering Information

AMPERE RATINGS						
$\frac{2}{10}$	1	2	$3\frac{1}{2}$	$6\frac{1}{4}$	12	35
$\frac{1}{4}$	$1\frac{1}{4}$	$2\frac{1}{4}$	4	7	15	40
$\frac{3}{10}$	$1\frac{4}{10}$	$2\frac{1}{2}$	$4\frac{1}{2}$	$7\frac{1}{2}$	$17\frac{1}{2}$	45
$\frac{1}{2}$	$1\frac{1}{2}$	$2\frac{8}{10}$	5	8	20	50
$\frac{6}{10}$	$1\frac{6}{10}$	3	$5\frac{6}{10}$	9	25	60
$\frac{8}{10}$	$1\frac{8}{10}$	$3\frac{2}{10}$	6	10	30	

SERIES	AMPERAGE	CATALOG NUMBER	SYSTEM NUMBER
CCMR	45	CCMR045	CCMR045.T

Web Resources

TC Curves, downloadable CAD drawings and other technical information: www.littelfuse.com/ccmr

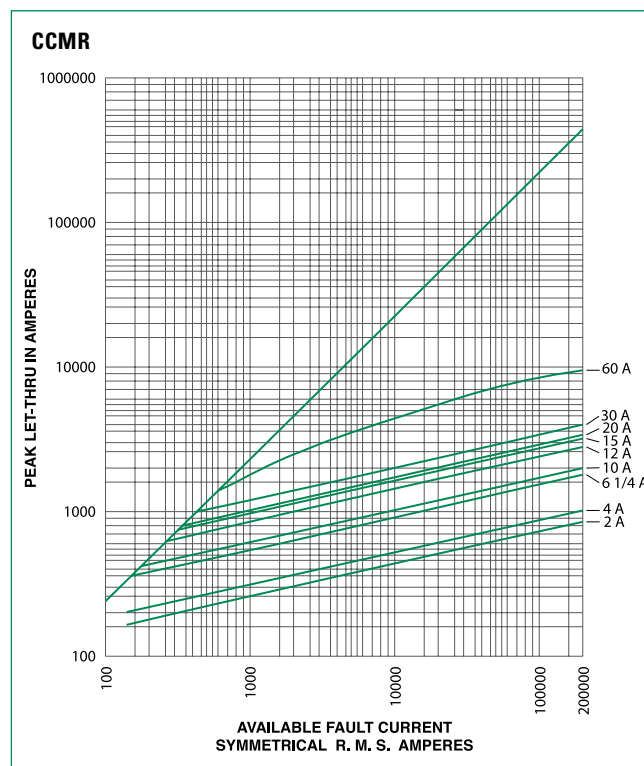
Recommended Fuseholders

LPSC Series.....	pg. 108
L60030C Series.....	pg. 101
L60060C Series.....	pg. 101

Dimensions

Please refer to the Class CC/CD dimensions pg. 35

Peak Let-Thru Curve



Note: For more information, see Peak Let-Thru Table on pg. 35

CLASS CC FUSES



KLDR Series

600 VAC/300 VDC • Time-Delay • 1/10-30 Amperes



Description

KLDR fuses are time-delay fuses designed to protect control transformers, solenoids and similar inductive components with high magnetizing currents during the first half-cycle. They provide excellent protection of motor branch circuits containing IEC or NEMA rated motor controllers or contactors.

Specifications

Voltage Ratings:	AC:	600 V
	DC:	300 V
Interrupting Ratings:	AC:	200 kA rms symmetrical
	DC:	20 kA
Ampere Range:		1/10 – 30 A
Approvals:	AC:	Standard 248-4, Class CC
		UL Listed 1/10-30 A
		(File No. E81895)
		CSA Certified 1/10-30 A
		(File No. LR29862)
	DC:	Littelfuse self-certified

Ordering Information

AMPERE RATINGS				
1/10	6/10	1 8/10	4 1/2	10
1/8	3/4	2	5	12
15/100	8/10	2 1/4	5 6/10	15
3/16	1	2 1/2	6	17 1/2
2/10	1 1/8	2 8/10	6 1/4	20
1/4	1 1/4	3	7	25
3/10	1 4/10	3 2/10	7 1/2	30
4/10	1 1/2	3 1/2	8	—
1/2	1 6/10	4	9	—

SERIES	AMPERAGE	CATALOG NUMBER	SYSTEM NUMBER
KLDR	10	KLDR010	KLDR010.T

Web Resources

For additional information, visit:

www.littelfuse.com/klldr

Recommended Fuseholders

LPSC Series.....pg. 108
L60030C Seriespg. 101

Dimensions

Please refer to the Class CC/CD dimensions... pg. 35

KLKR Series

600 VAC/300 VDC • Fast-Acting • 1/10-30 Amperes



Description

KLKR Series Class CC fuses are fast-acting fuses intended for general purpose branch circuit protection. Their compact size, fast-acting overload response, and highly current-limiting design make them ideal for use in OEM equipment and control panels.

Specifications

Voltage Ratings:	AC:	600 V
	DC:	300 V
Interrupting Ratings:	AC:	200 kA rms symmetrical
	DC:	20 kA
Ampere Range:		1/10 – 30 A
Approvals:	AC:	Standard 248-4, Class CC
		UL Listed 1/10-30 A
		(File No. E81895)
		CSA Certified 1/10-30 A
		(File No. LR29862)
	DC:	Littelfuse self-certified

Ordering Information

AMPERE RATINGS				
1/10	1/2	2 1/2	6	12
1/8	3/4	3	7	15
2/10	1	3 1/2	8	20
1/4	1 1/2	4	9	25
3/10	2	5	10	30

SERIES	AMPERAGE	CATALOG NUMBER	SYSTEM NUMBER
KLKR	12	KLKR012	KLKR012.T

Web Resources

For additional information, visit:

www.littelfuse.com/klkr

Recommended Fuseholders

LPSC Series.....pg. 108
L60030C Seriespg. 101

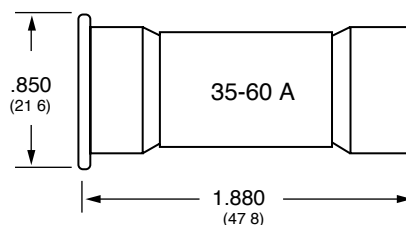
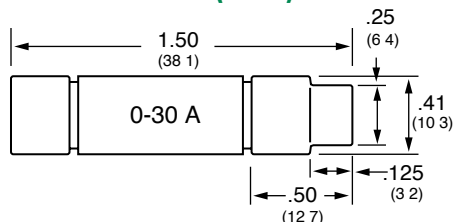
Dimensions

Please refer to the Class CC/CD dimensions... pg. 35



CLASS CC/CD DIMENSIONS AND CURRENT-LIMITING EFFECTS

Dimensions in inches (mm)



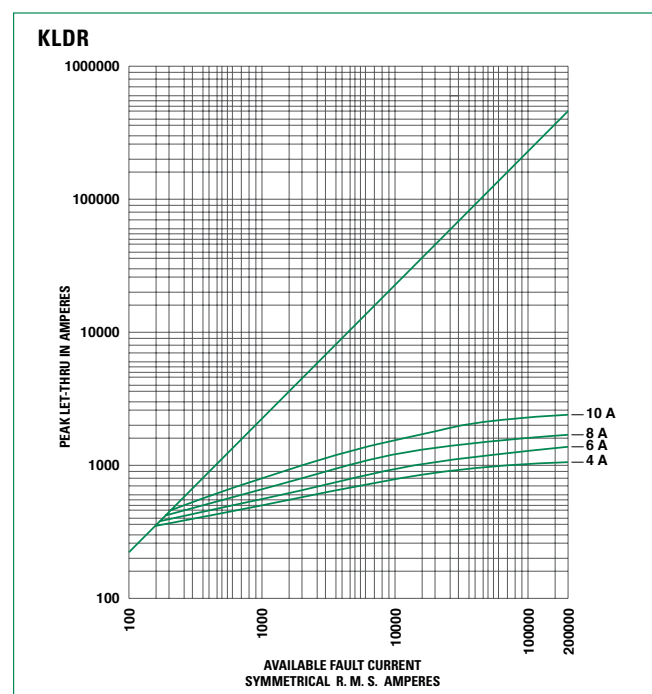
Current-Limiting Effects of CCMR (600 V) fuses

SHORT CIRCUIT CURRENT*	APPARENT RMS SYMMETRICAL CURRENT FOR VARIOUS FUSE RATINGS							
	2 A	4 A	6 1/4 A	10 A	12 A	15 A	20 A	30 A
5,000	160	190	330	370	525	600	625	750
10,000	180	220	400	440	600	700	725	875
15,000	200	250	430	480	675	775	800	950
20,000	220	260	460	520	720	825	850	1,000
25,000	230	280	480	550	750	850	900	1,050
30,000	240	290	500	570	800	900	950	1,125
35,000	245	300	520	590	825	925	975	1,175
40,000	255	310	550	600	850	975	1,000	1,200
50,000	260	330	570	640	875	1,000	1,100	1,300
60,000	280	340	600	670	900	1,050	1,125	1,350
80,000	300	360	625	700	1,000	1,125	1,200	1,400
100,000	310	380	650	750	1,050	1,200	1,250	1,500
150,000	340	420	700	800	1,150	1,300	1,400	1,600
200,000	350	440	750	850	1,200	1,400	1,450	1,750

*Prospective RMS Symmetrical Amperes Short-Circuit Current

Note: Data Derived from Peak Let-Thru Curves

Peak Let-Thru Curve KLDR



Peak Let-Thru Curve KLKR

