

# CCMR SERIES POWR-PRO® FUSES

**POWR-PRO®** 600 Vac • Dual Element • Time-Delay • 2/10-60 A



## 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.

## Features/Benefits

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

## Applications

- Motor and motor branch circuit protection

## Specifications

### Voltage Rating

AC: 600 Vac or less  
 DC: 250 V (CCMR 2/10–2 A)  
 (CCMR 4 1/2–10 A)  
 (CCMR 35–60 A)  
 300 V (CCMR 2 1/4–4 A)  
 500 V (CCMR 12–30 A)

### Ampere Rating

2/10 – 60 A

### Interrupting Rating

AC: 200 kA rms symmetrical  
 300 kA Littelfuse self-certified  
 DC: 20 kA

### Approvals

AC: Standard 248-4, Class CC  
 UL Listed 2/10-30 A (File: E81895)  
 Standard 248, Class CD  
 UL Listed 35-60 A (File: E81895)  
 CSA Certified (File: LR29862)

### Material

DC: Littelfuse self-certified  
 2/10-30 A: Melamine body,  
 Bronze cap (nickel plated)

### Environmental

RoHS Compliant (except 35-60 A)

### Country of Origin

Mexico

\*Consult Motor Protection Tables on page 208 in the Technical Application Guide section for specific motor sizing information.

## Ordering Information

AMPERE RATINGS						
2/10	1	2	3 1/2	6 1/4	12	35
1/4	1 1/4	2 1/4	4	7	15	40
3/10	1 4/10	2 1/2	4 1/2	7 1/2	17 1/2	45
1/2	1 1/2	2 8/10	5	8	20	50
6/10	1 6/10	3	5 6/10	9	25	60
8/10	1 8/10	3 2/10	6	10	30	

SERIES	AMP	ROHS	CATALOG NUMBER	ORDERING NUMBER
CCMR	10	•	CCMR010	CCMR010.TXP
CCMR	45		CCMR045	CCMR045.T

## Web Resources

Download TC Curves, CAD drawings and other technical information: [littelfuse.com/ccmr](http://littelfuse.com/ccmr)

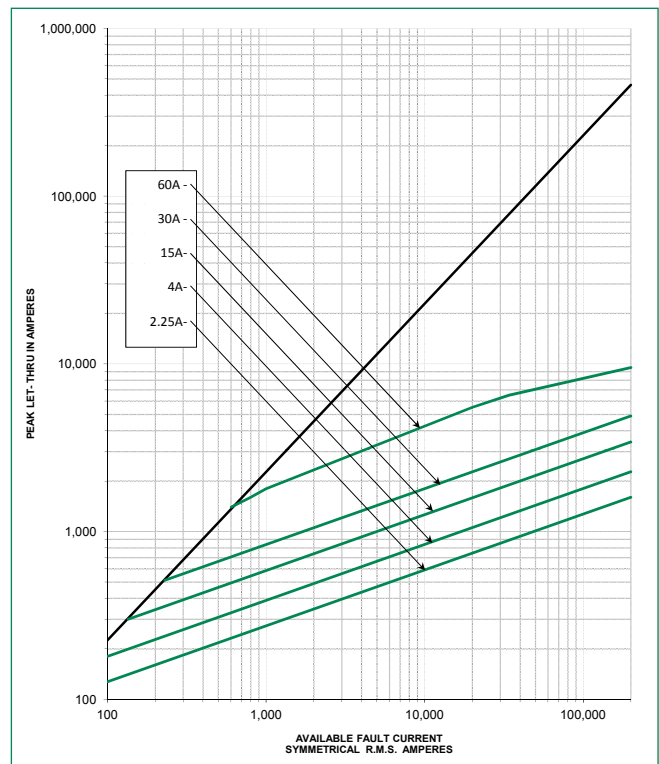
## Recommended Fuse Holders

LFC600 Series .....	101
L60030C Series .....	101
LFPSC Touch-Safe Series .....	110

## Dimensions

Please refer to the Class CC/CD dimensions ..... 29

## Peak Let-Thru Curve



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

# KLDR / KLKR SERIES FUSES

UL Class CC Fuses

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## KLDR Series 600 Vac/300 Vdc • Time-Delay • 1/10-30 A



### 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

<b>Voltage Rating</b>	AC: 600 Vac or less DC: 300 Vdc
<b>Ampere Range</b>	1/10 – 30 A
<b>Interrupting Rating</b>	AC: 200 kA rms symmetrical DC: 20 kA
<b>Approvals</b>	AC: Standard 248-4, Class CC UL Listed 1/10-30 A (File: E81895) CSA Certified 1/10-30 A (File: LR29862) DC: Littelfuse self-certified
<b>Material</b>	Melamine body Bronze caps (nickel plated)
<b>Environmental</b>	RoHS Compliant
<b>Country of Origin</b>	Mexico

### 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 8/10	4	9	—

SERIES	AMP	CATALOG NUMBER	ORDERING NUMBER
KLDR	10	KLDR010	KLDR010.TXP

### Web Resources

For additional information, visit:  
[littelfuse.com/klkr](http://littelfuse.com/klkr)

### Recommended Fuse Holders

L60030C Series .....	101
LFPSC Touch-Safe Series .....	110

### Dimensions

Please refer to the Class CC dimensions..... 29

## KLKR Series 600 Vac/300 Vdc • Fast-Acting • 1/10-30 A



### 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

<b>Voltage Rating</b>	AC: 600 Vac or less DC: 300 Vdc
<b>Ampere Range</b>	1/10 – 30 A
<b>Interrupting Rating</b>	AC: 200 kA rms symmetrical DC: 20 kA
<b>Approvals</b>	AC: Standard 248-4, Class CC UL Listed 1/10-30 A (File: E81895) CSA Certified 1/10-30 A (File: LR29862) DC: Littelfuse self-certified
<b>Material</b>	Melamine body Bronze caps (nickel plated)
<b>Environmental</b>	RoHS Compliant
<b>Country of Origin</b>	Mexico

### 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	AMP	CATALOG NUMBER	ORDERING NUMBER
KLKR	12	KLKR012	KLKR012.T

### Web Resources

For additional information, visit:  
[littelfuse.com/klkr](http://littelfuse.com/klkr)

### Recommended Fuse Holders

L60030C Series .....	101
LFPSC Touch-Safe Series .....	110

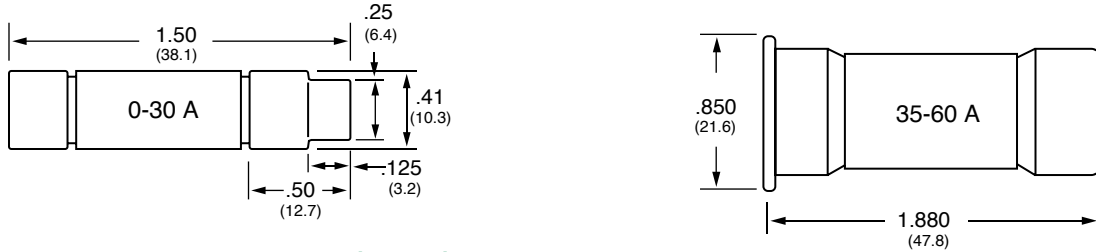
### Dimensions

Please refer to the Class CC dimensions..... 29

# CLASS CC / CD DIMENSIONS AND CURRENT-LIMITING EFFECTS

Gross Automation 3680 N. 126th St., Brookfield, WI 53005 Toll-Free: 877-268-3700 sales@grossautomation.com

## Dimensions Inches (mm)

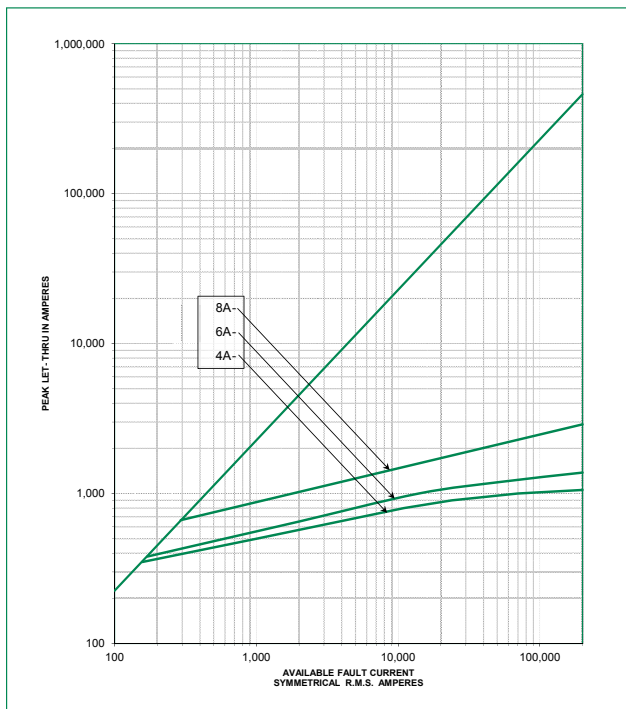


## Current-Limiting Effects of CCMR (600 V) fuses

SHORT CIRCUIT CURRENT*	APPARENT RMS SYMMETRICAL CURRENT FOR VARIOUS FUSE RATINGS																		
	2.25A	2.5A	3A	4A	5A	6.25A	7.5A	8A	10A	12A	15A	20A	30A	35A	40A	45A	50A	60A	
5,000	203	224	287	289	460	472	442	437	359	369	435	355	621	1,170	1,240	1,320	1,070	1,525	
10,000	256	282	361	364	580	595	557	551	452	465	548	447	783	1,480	1,565	1,670	1,355	1,930	
15,000	293	323	413	416	664	681	637	631	517	532	627	512	896	1,695	1,795	1,915	1,555	2,200	
20,000	323	356	455	458	730	750	702	694	569	585	690	563	987	1,870	1,980	2,110	1,710	2,430	
25,000	348	383	490	493	787	808	756	748	613	630	743	607	1,063	2,015	2,135	2,275	1,845	2,620	
30,000	370	407	521	524	836	858	803	795	651	670	790	645	1,129	2,145	2,270	2,420	1,965	2,780	
35,000	389	429	548	552	880	903	845	837	686	705	832	679	1,189	2,260	2,390	2,550	2,070	2,885	
40,000	407	448	573	577	920	944	884	875	717	737	870	709	1,243	2,360	2,500	2,665	2,165	3,025	
50,000	438	483	617	622	991	1,017	952	942	772	794	937	764	1,339	2,545	2,695	2,875	2,330	3,200	
60,000	466	513	656	661	1,053	1,081	1,012	1,001	821	844	995	812	1,423	2,705	2,865	3,055	2,480	3,350	
80,000	513	564	722	727	1,159	1,190	1,114	1,102	903	929	1,096	894	1,566	2,985	3,160	3,365	2,730	3,540	
100,000	552	608	778	783	1,249	1,282	1,200	1,187	973	1,001	1,180	963	1,687	3,215	3,405	3,630	2,945	3,685	
150,000	632	696	890	897	1,430	1,467	1,373	1,359	1,114	1,146	1,351	1,102	1,931	3,685	3,905	4,160	3,375	4,030	
200,000	696	766	980	987	1,574	1,615	1,511	1,496	1,226	1,261	1,487	1,213	2,125	4,060	4,300	4,580	3,720	4,230	

\*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

