



Compared to other UL Listed fuses, Class CC fuses are the most current limiting, rating for rating. Because they are physically compact, they provide this superior protection in a fraction of the space required by other fuse classes. For example, when 600V three-pole, 30 ampere Class R fuse blocks are replaced by Littelfuse Class CC fuse blocks, panel mounting space is reduced approximately 70%. This is especially important when a panel contains many fuses to protect multiple circuit components.

APPLICATIONS

Three Types of Class CC Fuses, Specifically Designed to Protect Different Types of Components

- 1) **Motor protection** — CCMR series; dual-element, time-delay fuses specifically designed to protect motor circuits up to 40 HP**.
- 2) **Small transformer protection (control power transformers)** — KLDR series, time-delay fuses designed to withstand the high magnetizing inrush of transformers.
- 3) **General purpose protection of equipment requiring fast overload protection** — KLKR series, fast-acting fuses used for protection of equipment containing solid-state devices or other electronic components requiring fast response on overloads.

SAFETY

- 200,000 A.I.R. — Reliable interruption of all overcurrents up to 200,000 amperes.
- Extremely current limiting — Reduces damage caused by heating and magnetic effects of short-circuit currents . . . stops damaging short-circuit currents faster than any mechanical protective device.

SPACE SAVING

- Class CC fuses are the smallest 600V, 200,000 A.I.R. fuses approved for branch circuit protection.

ECONOMICAL

- Current limiting design often permits use of readily available, less costly equipment.

**Consult the Motor Protection Tables in the Fuseology section for specific motor sizing information

SPECIFICATIONS

- Voltage ratings:** AC: 600 Volts
 DC: 250 – 500 Volts (CCMR)†
 300 Volts (KLDR)
 300 Volts (KLKR)
- Interrupting ratings:** AC: 200,000 amperes rms symmetrical
 DC: 20,000 amperes
- Ampere range:** CCMR: 2/10 — 60 amperes
 KLDR: 1/10 — 30 amperes
 KLKR: 1/10 — 30 amperes
- Approvals:** CCMR: 2/10 — 30A: UL Listed Time-Delay Class CC fuses per UL 248 (formerly UL 198C) (File No. E81895). CSA Certified HRCI-MISC (File No. LR29862).
 35 — 60A: UL Listed Class CD fuses (File No. E71611). CSA Certified (File No. LR29862).
 KLDR: UL Listed Time-Delay Class CC fuses per UL 198C (File No. E81895) CSA Certified HRCI-MISC (File No. LR29862)
 KLKR: UL Listed Fast-Acting Class CC fuses per UL 198C (File No. E81895) CSA Certified HRCI-MISC (File No. LR29862)

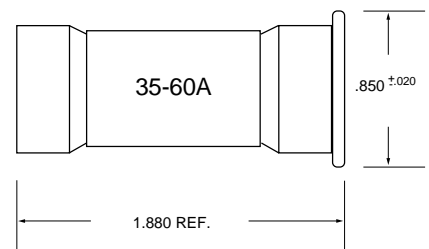
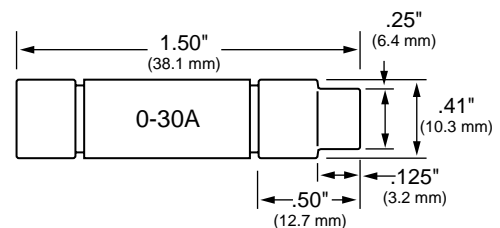
RECOMMENDED FUSE BLOCKS

L60030C series

L60060C series (for CCMR 35–60A)

Refer to Fuse Block section of this catalog for additional information.

†Refer to the POWR-PRO® section for additional information.



CCMR Series



For space-saving protection of motor circuits up to 40 HP**, we recommend Littelfuse POWR-PRO® CCMR series fuses. These fuses are the only true dual-element time-delay CC fuses specifically engineered for motor branch circuit protection. They provide Type II protection (no damage) to both NEMA-rated and the more sensitive IEC (International Electromechanical Commission) type motor circuit components. CCMR series fuses are now available in larger sizes — from 35 to 60 amperes! **No other 600V fuse is available with this current carrying capacity in a package this small.**

**Consult the Motor Protection Tables in the Fuseology section for specific motor sizing information

For more information on CCMR series Class CC fuses, see the CCMR series pages in the POWR-PRO® section of this catalog.

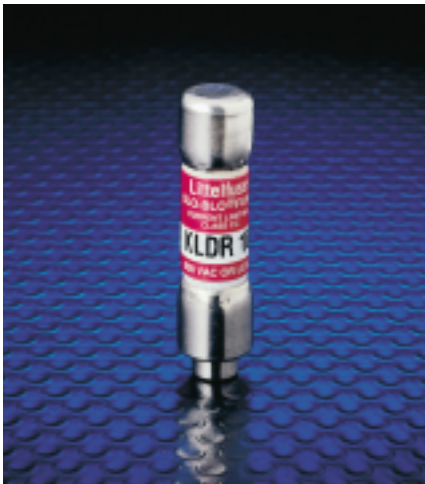
1/10 — 30A: UL Listed Time-Delay Class CC per UL 198C
35 — 60A: UL Listed Class CD

AMPERE RATINGS

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

Example part number (series & amperage): CCMR 30

KLDR Series



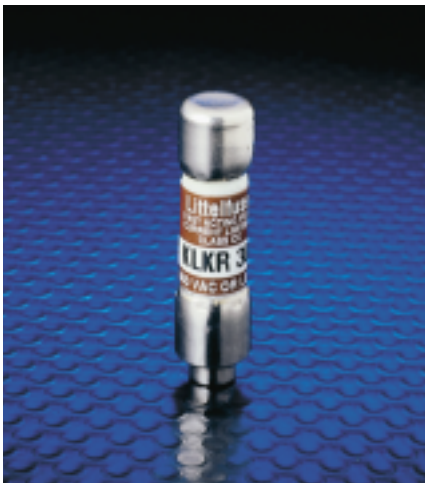
KLDR fuses are time-delay fuses specifically designed for the protection of control transformers, solenoids and similar inductive components with high magnetizing currents during the first half-cycle. They closely match most control power transformer characteristics, which permits the fuses to be sized in accordance with the latest revisions of UL 508 (Industrial Control) and UL 845 (Motor Control Centers). When the time delay of KLDR fuses is adequate to carry motor starting current, they provide excellent protection of motor branch circuits containing IEC or NEMA rated motor controllers or contactors.

AMPERE RATINGS

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

Example part number (series & amperage): KLDR 5 5/10

KLKR Series



KLKR series Class CC fuses are fast-acting fuses intended for general purpose branch circuit protection. Their compact size, fast-acting overload response, and their highly current limiting design make them ideal for use in OEM equipment and control panels. Solid-state devices such as SCRs and other electronic equipment generally require fast-acting protection.

AMPERE RATINGS

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

Example part number (series & amperage): KLKR 25

For performance data on Littelfuse CCMR series Class CC fuses, see the CCMR pages in the POWR-PRO® section of this catalog.

