

## CCMR Series POWR-PRO® Class CC and CD Fuses

600 VAC • Dual-Element, Time-Delay • 2/10 – 60 Amperes



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 fuses that come in a small package specifically engineered for motor branch circuit protection. CCMR series fuses provide Type 2 "No Damage" protection to both NEMA-rated and the more sensitive IEC (International Electrotechnical Commission) type motor circuit components.

Rating for rating, CCMR fuses are the most current-limiting fuses available. They also provide superior short-circuit protection since their time-delay characteristics permit the use of smaller fuse ratings in motor

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

### Specifications

<b>Voltage Ratings:</b>	AC: 600 Volts DC: 250 Volts (CCMR $\frac{2}{10}$ — 2A) (CCMR 4 $\frac{1}{2}$ — 10A) (CCMR 35 — 60A) 300 Volts (CCMR 2 $\frac{1}{4}$ — 4A) 500 Volts (CCMR 12 — 30A)
<b>Interrupting Ratings:</b>	AC: 200,000 amperes rms symmetrical 300,000 amperes rms symmetrical (Littelfuse self-certified)
<b>Ampere Range:</b>	DC: 20,000 amperes $\frac{2}{10}$ — 60 amperes
<b>Approvals:</b>	AC: Standard 248-4, Class CC UL Listed $\frac{2}{10}$ — 30 amps (File No: E81895) Standard 248, Class CD UL Listed 35 — 60 amps (File No: E81895) CSA Certified $\frac{2}{10}$ — 60 amps (File No: LR29862) DC: Littelfuse self-certified

circuits than would be possible if using fast-acting fuses. CCMR series fuses provide 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, mounting space requirements may be reduced 70% or more. This is especially important when a panel contains control devices for many motors.

In addition to the UL Listed smaller sizes, Littelfuse CCMR series fuses are now available in larger sizes — from 35 to 60 amperes! **No other fuse is available with this current carrying capacity in a package this small. In fact, the 60 ampere CCMR fuse is the smallest 60A fuse available rated at 600 volts.**

### Applications

CCMR series fuses are specifically designed to withstand sustained starting currents of small motors  
Provide short-circuit protection for motor branch circuits  
Use with IEC- and NEMA-rated motor controllers and contactors  
General purpose circuits up to 60 amps

### Features/Benefits

- Space savings — No other fuse class approved for branch circuit protection has a 600 volt rating and 300,000 A.I.R. in such a small package.
- 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.
- Excellent time-delay — Eliminates needless downtime caused by power surges or equipment demands. Permits selection of fuse sizes closer to actual load conditions, which provides better protection.
- 300kA Interrupting Rating — Littelfuse self-certified to 300,000 amperes as standard. Meets future trend towards higher available short-circuit currents.

*\*Consult the Motor Protection Tables in the Fuseology section for specific motor sizing 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 $\frac{1}{10}$	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 $\frac{9}{10}$	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 $\frac{3}{10}$	6	10	30	

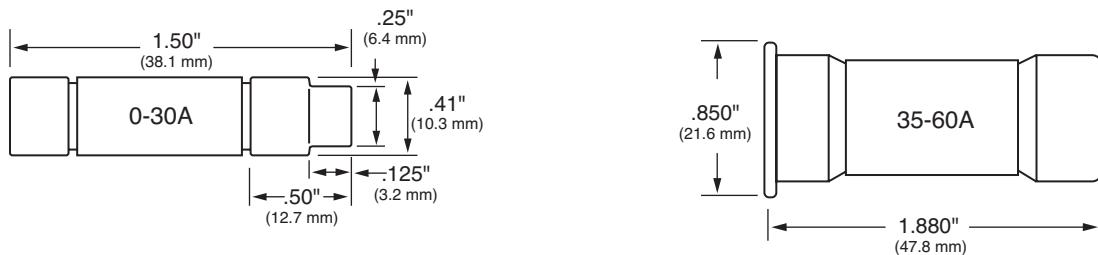
Example part number (series & amperage): CCMR 40

### Recommended Fuse Blocks

LPSC (CCMR  $\frac{2}{10}$  — 30A)  
L60030C series (CCMR  $\frac{2}{10}$  — 30A)  
L60060C series (CCMR 35 — 60A)  
Refer to Blocks & Holders section of this catalog for additional information.

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POWR-PRO® Fuses

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

Short Circuit Current*	Apparent RMS Symmetrical For Various Fuse Ratings							
	2A	4A	6 1/4 A	10A	12A	15A	20A	30A
<b>5,000</b>	160	190	330	370	525	600	625	750
<b>10,000</b>	180	220	400	440	600	700	725	875
<b>15,000</b>	200	250	430	480	675	775	800	950
<b>20,000</b>	220	260	460	520	720	825	850	1,000
<b>25,000</b>	230	280	480	550	750	850	900	1,050
<b>30,000</b>	240	290	500	570	800	900	950	1,125
<b>35,000</b>	245	300	520	590	825	925	975	1,175
<b>40,000</b>	255	310	550	600	850	975	1,000	1,200
<b>50,000</b>	260	330	570	640	875	1,000	1,100	1,300
<b>60,000</b>	280	340	600	670	900	1,050	1,125	1,350
<b>80,000</b>	300	360	625	700	1,000	1,125	1,200	1,400
<b>100,000</b>	310	380	650	750	1,050	1,200	1,250	1,500
<b>150,000</b>	340	420	700	800	1,150	1,300	1,400	1,600
<b>200,000</b>	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*

