

# Class CC/CD Fuses

## CCMR Series

**POWR-PRO**® 600 V ac • Dual Element • Time-Delay • 1/16"–60 A



### Description

The CCMR Series dual-element, time-delay fuses carry the Littelfuse POWR-PRO® advanced technology designation. These fuses are ideal for space-saving protection of motor circuits up to 40 hp\* and are specifically designed to withstand sustained starting currents of small motors. Their superior time-delay capability eliminates needless downtime caused by power surges or equipment demands. They provide Type 2 “No Damage” protection for both NEMA- and IEC-type motor circuit components. Rating for rating, CCMR Series fuses are the most current-limiting fuses available.

POWR-PRO performance brand products offer advanced technology protection features such as high-interrupt capabilities up to 300 kA, low energy losses, and superior current limitation. 300 kA short-circuit testing for POWR-PRO products is self-certified and conducted at a nationally recognized testing laboratory.

### Features & Benefits

FEATURES	BENEFITS
<b>POWR-PRO® technology</b>	Superior protection against electrical system damage
<b>Dual-element, time-delay protection</b>	Provides reliable time-delay characteristics to avoid unwanted fuse opening from surge currents in small horsepower motors
<b>Extremely current-limiting</b>	Reduces damage caused by heating and magnetic effects of short-circuit currents
<b>Available up to 60 A</b>	Smallest footprint 600 V UL listed branch circuit fuse
<b>Type 2 “No Damage” protection</b>	Easy to coordinate and offer protection for both NEMA- and IEC-type motor circuit components

### Applications

- Motor and motor branch circuit protection
- Contactor protection
- Heating and general industrial protection

\*Consult Motor Protection Tables on [www.littelfuse.com](http://www.littelfuse.com) or call 800-TEC-FUSE for specific motor sizing information.

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### Specifications

<b>Voltage Rating</b>	Ac: 600 V Dc: 250 V (CCMR 35–60 A) 300 V (CCMR 3/10–10 A) 500 V (CCMR 12–30 A)
<b>Ampere Range</b>	3/10 – 60 A
<b>Interrupting Ratings</b>	Ac: 200 kA rms symmetrical 300 kA Littelfuse self-certified Dc: 20 kA Littelfuse self-certified
<b>Applicable Standards</b>	UL 248-4; Class CC (CCMR 3/10–30 A) UL 248-18; Class CD (CCMR 35–60 A)
<b>Environmental</b>	RoHS Compliant (CCMR 3/10–30 A)
<b>Country of Origin</b>	Mexico

### Certification & Compliance

<b>UL</b>	UL Listed (File: E81895)
<b>CSA</b>	CSA Certified (File: LR29862)
<b>CE</b>	Declaration of Conformity: CCMR_P_210701_1 (3/10–30A)
<b>RoHS</b>	RoHS 2 Directive 2011/65/EU; Directive (EU) 2015/863 (3/10–30A)

### Accessories

- LFC600 series fuse blocks (35–60 A Only)
- L60030C series fuse blocks (3/10–30 A Only)
- LPSC & LFPSC series dead-front fuse holders (3/10–30 A Only)
- 571 & 572 series panel-mount fuse holders (3/10–30 A Only)

### Ordering Information

AMPERE	CATALOG NUMBER	PRODUCT MARKING	PACK QUANTITY	ORDERING NUMBER	UPC	AGENCY APPROVALS		
						UL	CSA	ROHS
0.2	CCMR.200	CCMR 3/10 A	10	CCMR.200TXP	07945896805	•	•	•
			100	CCMR.200HXP	07945896841	•	•	•
0.25	CCMR.250	CCMR 1/4 A	10	CCMR.250TXP	07945896806	•	•	•
			100	CCMR.250HXP	07945896842	•	•	•
0.3	CCMR.300	CCMR 3/10 A	10	CCMR.300TXP	07945896807	•	•	•
			100	CCMR.300HXP	07945896843	•	•	•
0.5	CCMR.500	CCMR 1/2 A	10	CCMR.500TXP	07945896808	•	•	•
			100	CCMR.500HXP	07945896844	•	•	•
0.6	CCMR.600	CCMR 3/10 A	10	CCMR.600TXP	07945896809	•	•	•
			100	CCMR.600HXP	07945896845	•	•	•
0.8	CCMR.800	CCMR 3/10 A	10	CCMR.800TXP	07945896810	•	•	•
			100	CCMR.800HXP	07945896846	•	•	•
1	CCMR001	CCMR 1 A	10	CCMR001.TXP	07945896811	•	•	•
			100	CCMR001.HXP	07945896847	•	•	•
1.25	CCMR1.25	CCMR 1 1/4 A	10	CCMR1.25TXP	07945896812	•	•	•
			100	CCMR1.25HXP	07945896848	•	•	•
1.4	CCMR01.4	CCMR 1 3/10 A	10	CCMR01.4TXP	07945896813	•	•	•
			100	CCMR01.4HXP	07945896849	•	•	•

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1.5	CCMR01.5	CCMR 1 1/2 A	10	CCMR01.5TXP	07945896814	•	•	•
			100	CCMR01.5HXP	07945896850	•	•	•
1.6	CCMR01.6	CCMR 1 5/10 A	10	CCMR01.6TXP	07945896815	•	•	•
			100	CCMR01.6HXP	07945896851	•	•	•
1.8	CCMR01.8	CCMR 1 5/10 A	10	CCMR01.8TXP	07945896816	•	•	•
			100	CCMR01.8HXP	07945896852	•	•	•
2	CCMR002	CCMR 2A	10	CCMR002.TXP	07945896817	•	•	•
			100	CCMR002.HXP	07945896853	•	•	•
2.25	CCMR2.25	CCMR 2 1/4 A	10	CCMR2.25TXP	07945896818	•	•	•
			100	CCMR2.25HXP	07945896854	•	•	•
2.5	CCMR02.5	CCMR 2 1/2 A	10	CCMR02.5TXP	07945896819	•	•	•
			100	CCMR02.5HXP	07945896855	•	•	•
2.8	CCMR02.8	CCMR 2 5/10 A	10	CCMR02.8TXP	07945896820	•	•	•
			100	CCMR02.8HXP	07945896856	•	•	•
3	CCMR003	CCMR 3A	10	CCMR003.TXP	07945896821	•	•	•
			100	CCMR003.HXP	07945896857	•	•	•
3.2	CCMR03.2	CCMR 3 2/10 A	10	CCMR03.2TXP	07945896822	•	•	•
			100	CCMR03.2HXP	07945896858	•	•	•
3.5	CCMR03.5	CCMR 3 1/2 A	10	CCMR03.5TXP	07945896823	•	•	•
			100	CCMR03.5HXP	07945896859	•	•	•
4	CCMR004	CCMR 4A	10	CCMR004.TXP	07945896824	•	•	•
			100	CCMR004.HXP	07945896860	•	•	•
4.5	CCMR04.5	CCMR 4 1/2 A	10	CCMR04.5TXP	07945896825	•	•	•
			100	CCMR04.5HXP	07945896861	•	•	•
5	CCMR005	CCMR 5A	10	CCMR005.TXP	07945896826	•	•	•
			100	CCMR005.HXP	07945896862	•	•	•
5.6	CCMR05.6	CCMR 5 5/10 A	10	CCMR05.6TXP	07945896827	•	•	•
			100	CCMR05.6HXP	07945896863	•	•	•
6	CCMR006	CCMR 6A	10	CCMR006.TXP	07945896828	•	•	•
			100	CCMR006.HXP	07945896864	•	•	•
6.25	CCMR6.25	CCMR 6 1/4 A	10	CCMR6.25TXP	07945896829	•	•	•
			100	CCMR6.25HXP	07945896865	•	•	•
7	CCMR007	CCMR 7A	10	CCMR007.TXP	07945896830	•	•	•
			100	CCMR007.HXP	07945896866	•	•	•
7.5	CCMR07.5	CCMR 7 1/2 A	10	CCMR07.5TXP	07945896831	•	•	•
			100	CCMR07.5HXP	07945896867	•	•	•
8	CCMR008	CCMR 8A	10	CCMR008.TXP	07945896832	•	•	•
			100	CCMR008.HXP	07945896868	•	•	•
9	CCMR009	CCMR 9A	10	CCMR009.TXP	07945896833	•	•	•
			100	CCMR009.HXP	07945896869	•	•	•
10	CCMR010	CCMR 10A	10	CCMR010.TXP	07945896834	•	•	•
			100	CCMR010.HXP	07945896870	•	•	•
12	CCMR012	CCMR 12A	10	CCMR012.TXP	07945896835	•	•	•
			100	CCMR012.HXP	07945896871	•	•	•
15	CCMR015	CCMR 15A	10	CCMR015.TXP	07945896836	•	•	•
			100	CCMR015.HXP	07945896872	•	•	•
17.5	CCMR17.5	CCMR 17 1/2 A	10	CCMR17.5TXP	07945896837	•	•	•
			100	CCMR17.5HXP	07945896873	•	•	•

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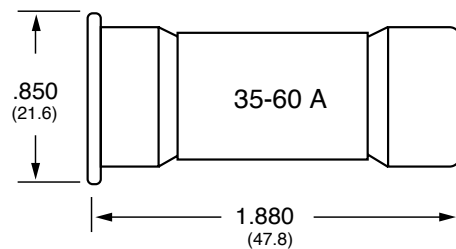
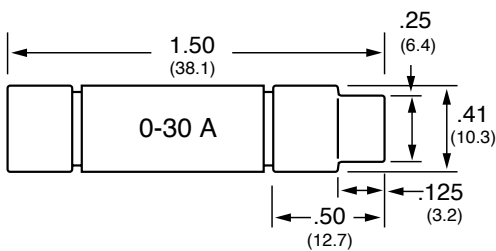
### Ordering Information

AMPERE	CATALOG NUMBER	PRODUCT MARKING	PACK QUANTITY	ORDERING NUMBER	UPC	AGENCY APPROVALS		
						UL	CSA	ROHS
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			100	CCMR020.HXP	07945896874	•	•	•
25	CCMR025	CCMR 25A	10	CCMR025.TXP	07945896839	•	•	•
			100	CCMR025.HXP	07945896875	•	•	•
30	CCMR030	CCMR 30A	10	CCMR030.TXP	07945896840	•	•	•
			100	CCMR030.HXP	07945896876	•	•	•
35	CCMR035	CCMR 35	10	CCMR035.T	07945801706	•	•	
40	CCMR040	CCMR 40	10	CCMR040.T	07945801707	•	•	
45	CCMR045	CCMR 45	10	CCMR045.T	07945801708	•	•	
50	CCMR050	CCMR 50	10	CCMR050.T	07945801709	•	•	
60	CCMR060	CCMR 60	10	CCMR060.T	07945801710	•	•	

### 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 <sup>2</sup> T (A <sup>2</sup> SEC) 200 KA
	AC	DC	AC	DC			
2¼	600	300	200 kA	20 kA	1.55	0.99	351
2½	600	300	200 kA	20 kA	1.99	1.26	192
3	600	300	200 kA	20 kA	1.55	1.02	286
4	600	300	200 kA	20 kA	1.62	1.04	1870
5	600	300	200 kA	20 kA	1.89	1.20	1060
6¼	600	300	200 kA	20 kA	1.72	1.08	797
7½	600	300	200 kA	20 kA	1.72	1.09	983
8	600	300	200 kA	20 kA	1.39	0.83	431
10	600	300	200 kA	20 kA	1.49	0.90	1250
15	600	500	200 kA	20 kA	1.77	1.03	1120
20	600	500	200 kA	20 kA	2.3	1.39	918
30	600	500	200 kA	20 kA	2.75	1.62	1790

### Dimensions Inches (mm)

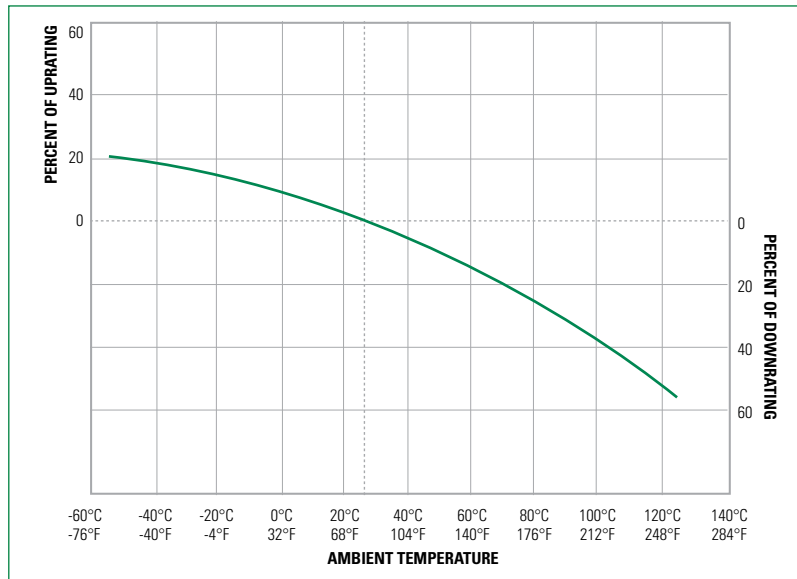


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### Temperature Derating Curve

Ambient temperature: temperature of air immediately surrounding fuse



### Current-Limiting Effects

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

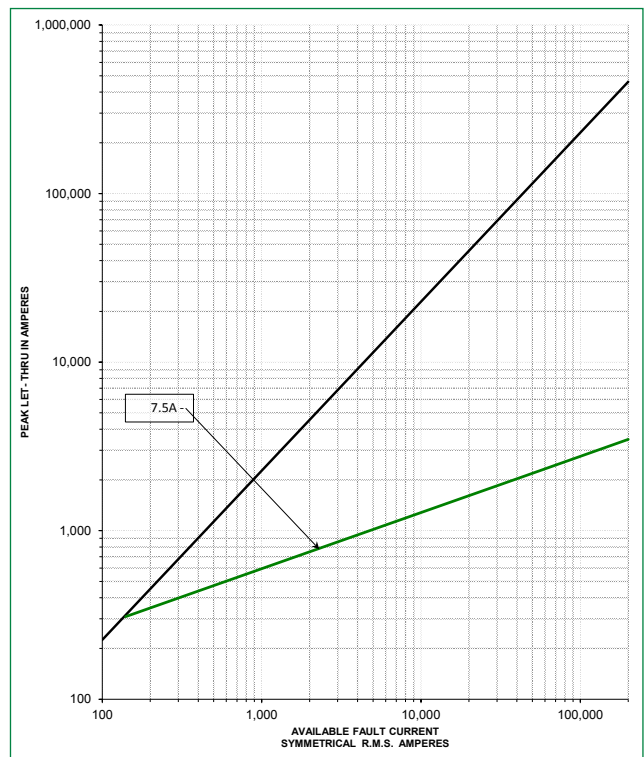
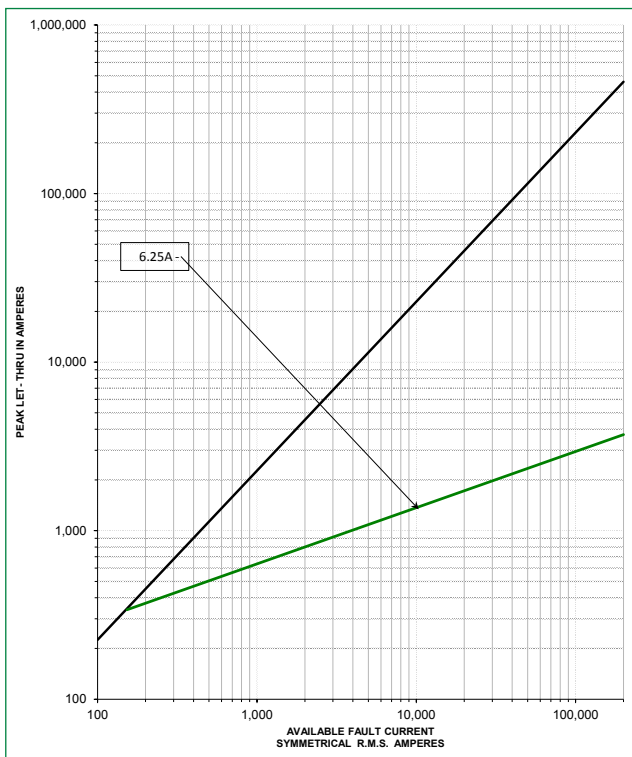
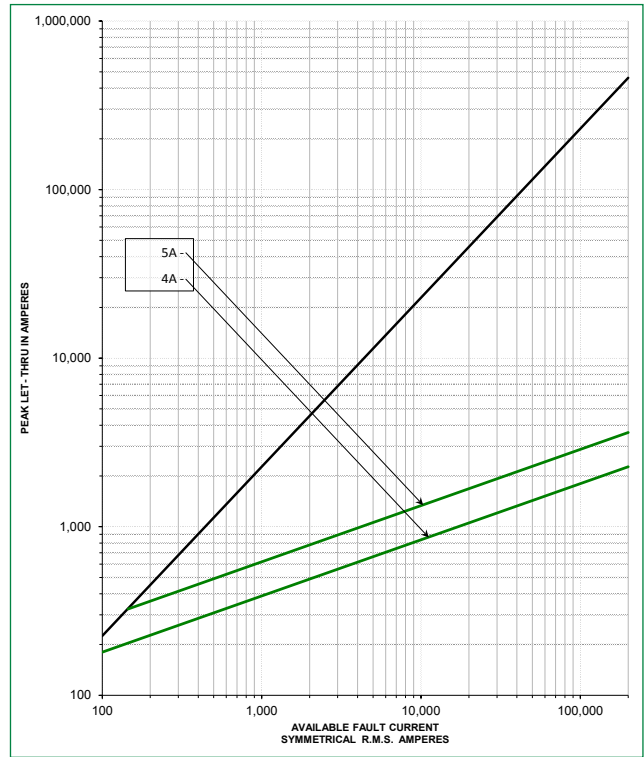
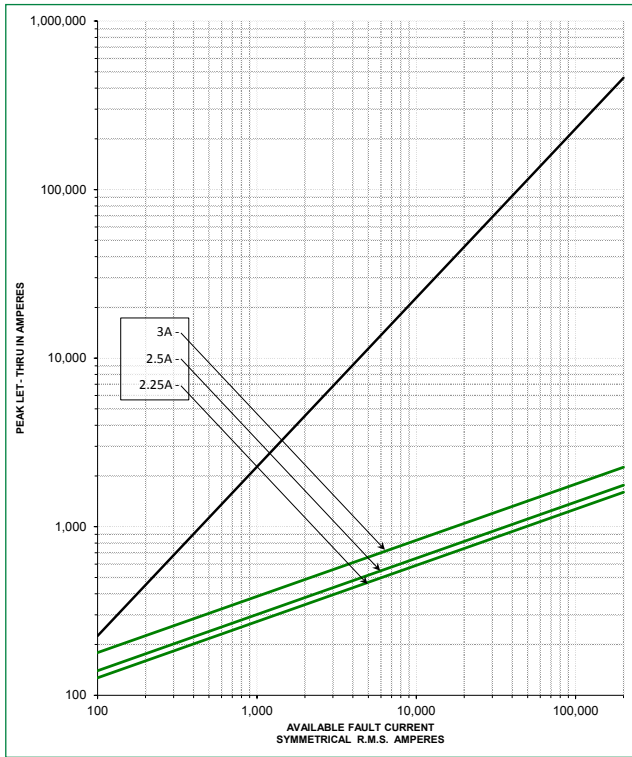
\*Prospective RMS Symmetrical Amperes Short-Circuit Current

Note: Data Derived from Peak Let-Thru Curve

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## CCMR Series

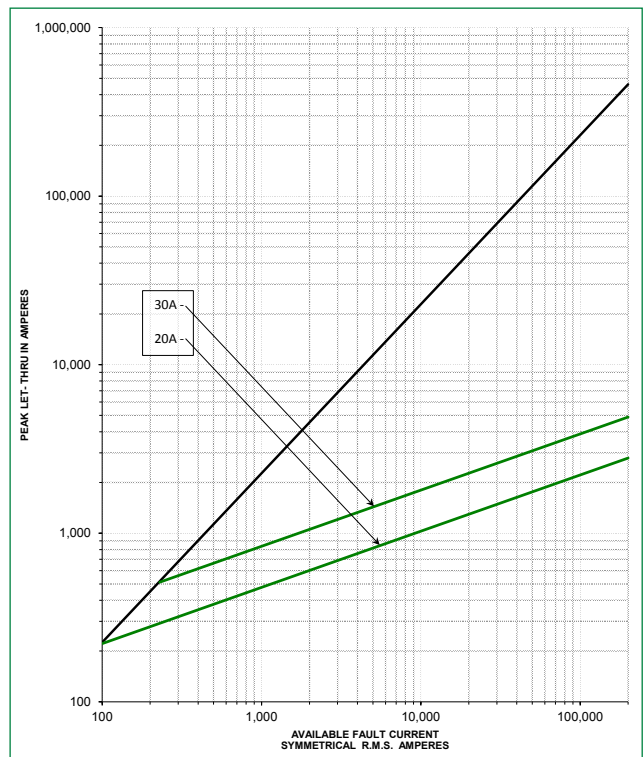
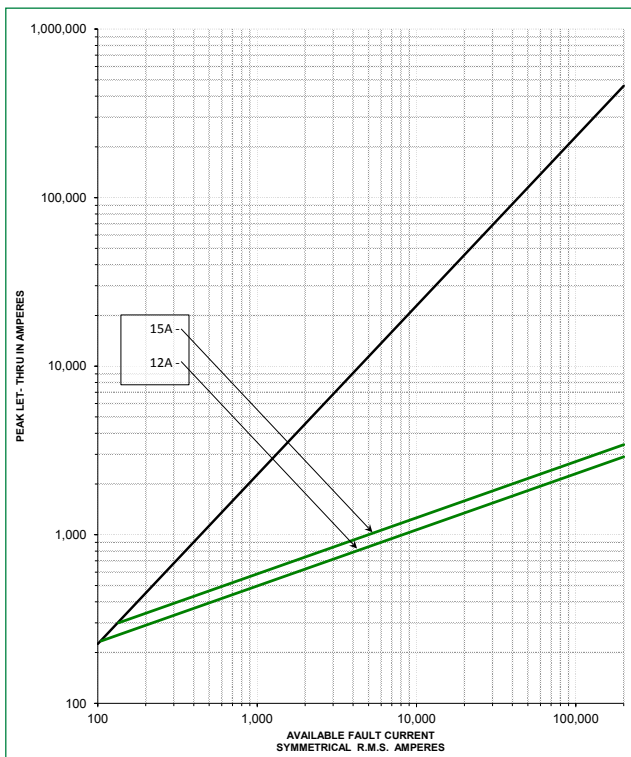
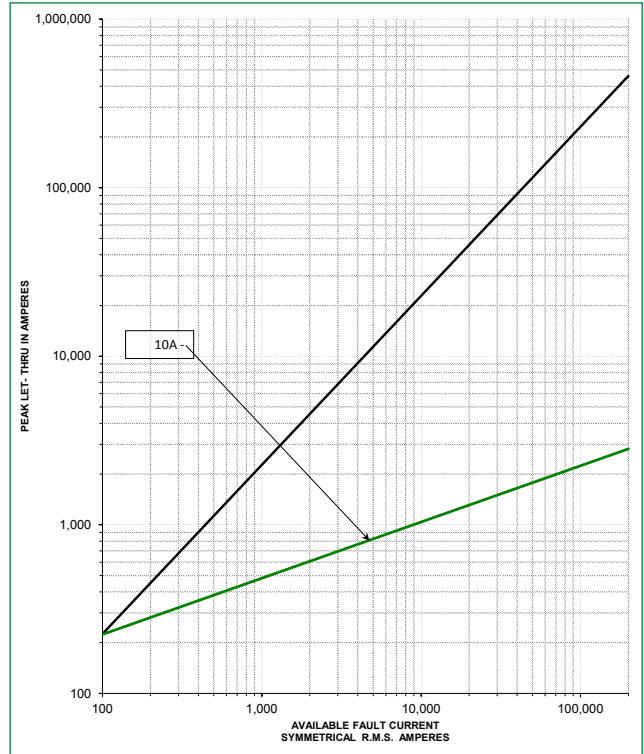
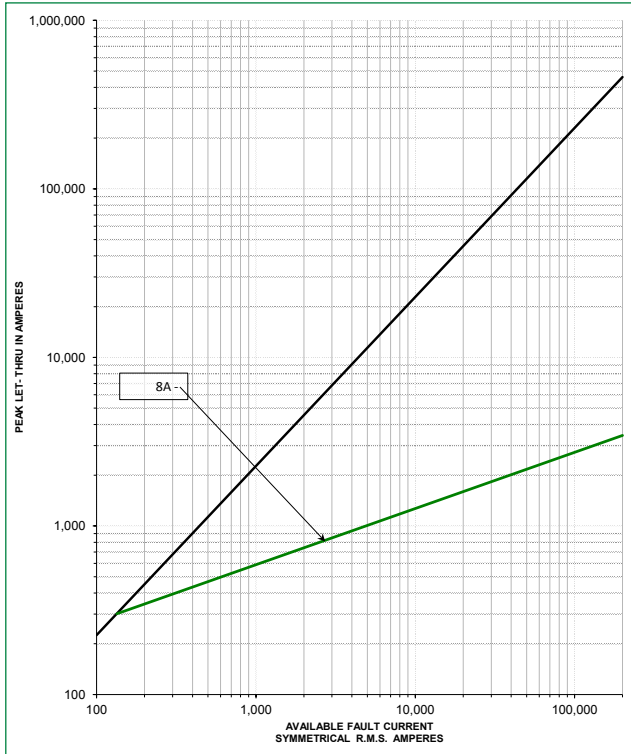
### Peak Let-Thru Curves



# Class CC/CD Fuses

## CCMR Series

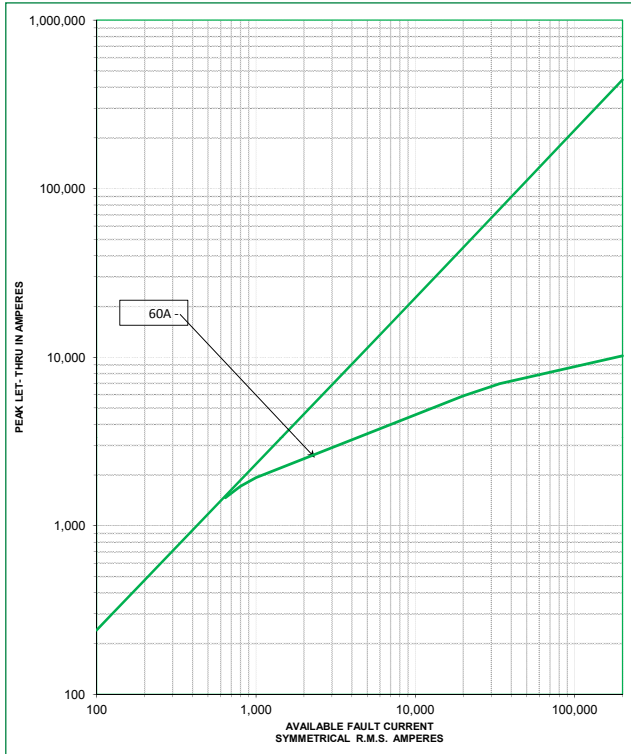
### Peak Let-Thru Curves



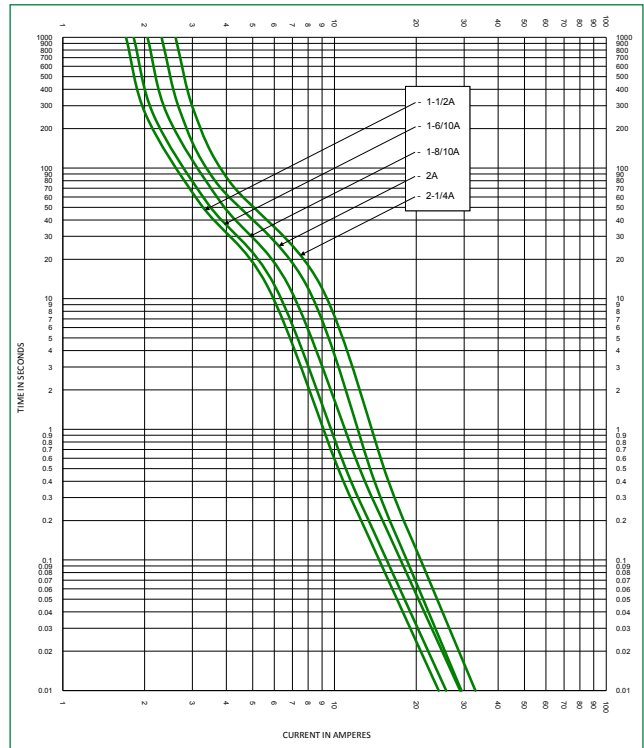
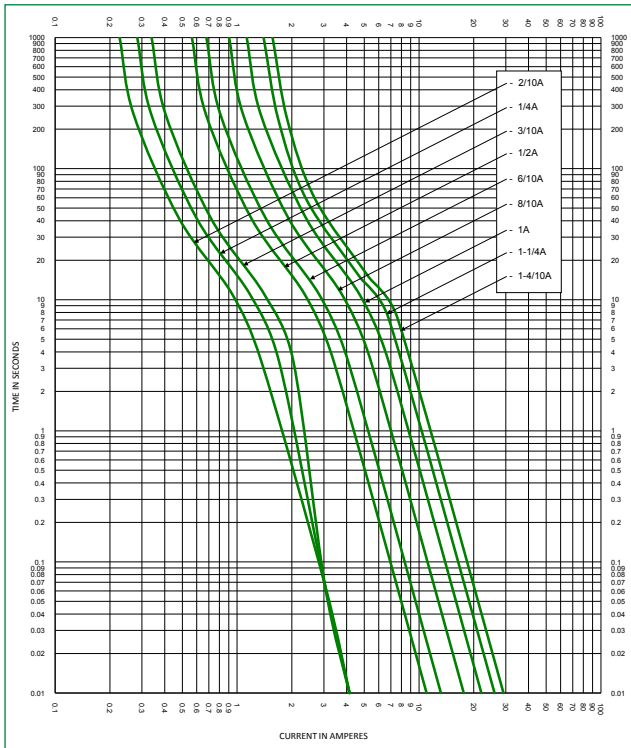
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### Peak Let-Thru Curves



### Time Current Curves

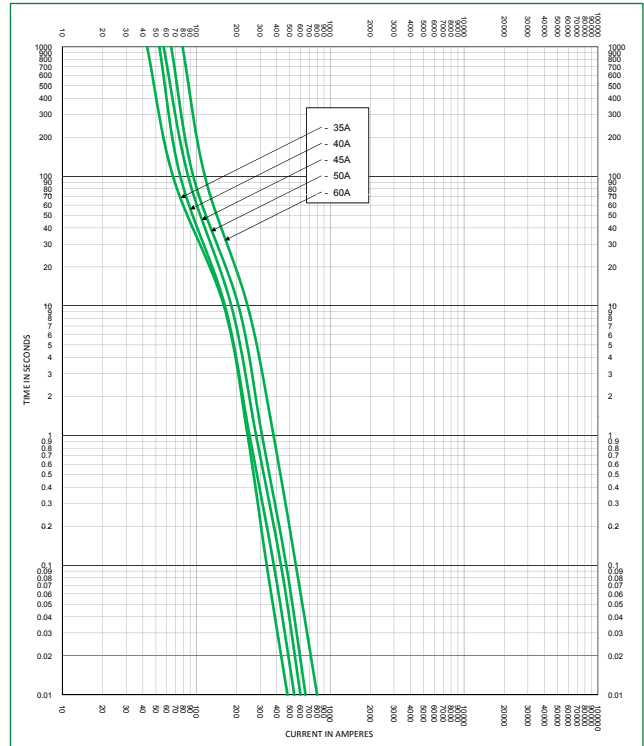
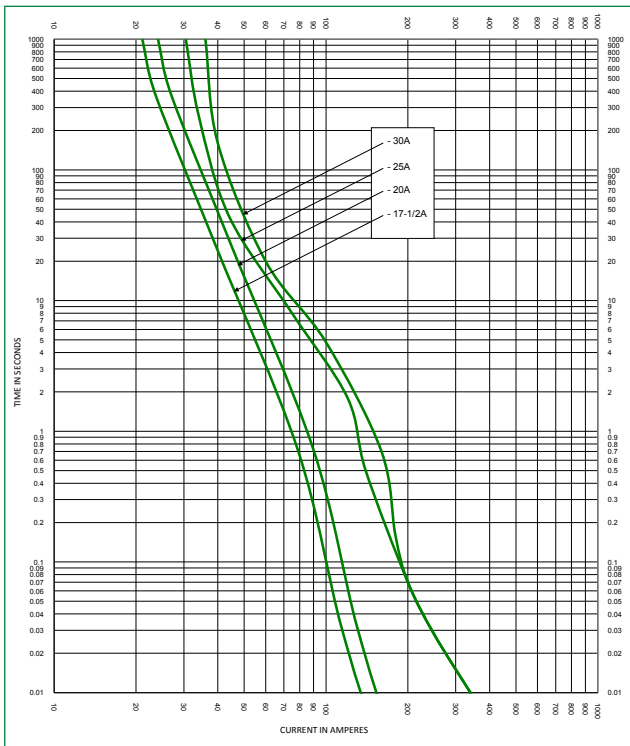
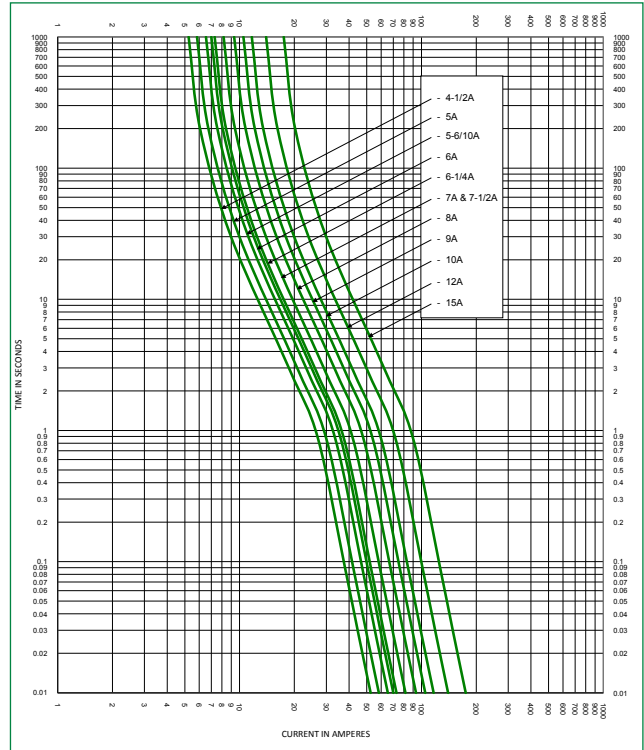
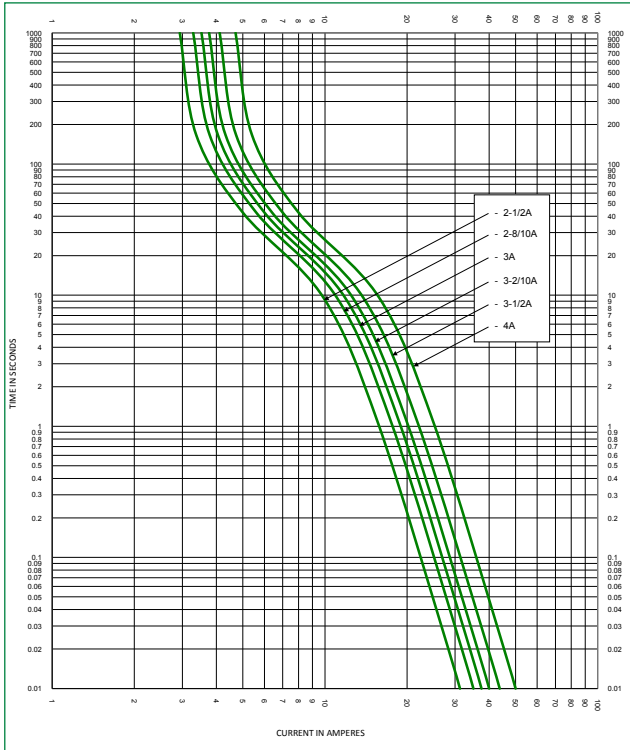




# Class CC/CD Fuses

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### Time Current Curves



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