



**Catalog Number ECNR (1 - 600A) 250Vac or Less
Catalog Number ECSR (1 - 600A) 600Vac or Less**

Amp Ratings					
ECNR					
1	8	25	70	150	400
2	9	30	75	175	450
3	10	35	80	200	500
4	12	40	90	225	600
5	15	45	100	250	—
6	17.5	50	110	300	—
7	20	60	125	350	—
ECSR					
1	8	25	70	150	400
2	9	30	75	175	450
3	10	35	80	200	500
4	12	40	90	225	600
5	15	45	100	250	—
6	17.5	50	110	300	—
7	20	60	125	350	—

ECNR/ECSR Specifications

Dual-Element Time-Delay

Voltage Rating: ECNR - 250Vac
 ECNR - (1-60A, 110-200A) 125Vdc;
 (225-600A) 250Vdc
 ECSR - 600Vac
 ECSR - (1-30A, 70-600A) 300Vdc
 (35-60A) 250Vdc

Amp Rating: 1 - 600A

Interrupting Rating: 200kA RMS Symmetrical Amps

Current Limiting: RK5 Fuse

Agency Information:

UL Listed for US and Canada, Class RK5, Guide JDDZ, File E162363

Interrupting Rating: ECNR/ECSR 20kA DC

Benefits:

- True dual-element construction allows sizing of 125% FLA for motor backup protection.
- Superior overload and cycling capabilities.
- Current limiting provides component short-circuit protection.

Applications:

- Recommended for AC power distribution system mains, feeders, and branch circuits.
- Protection of motors and motor branch circuits.
- Protection of transformers and other inductive loads.
- All general-purpose applications including lighting, heating and other non-inductive loads.

Recommended Fuse Blocks:

Refer to pages 146 in this catalog.

Recommended Upgrade:

Class RK1 (LENRK/LESRK) for greater degree of short-circuit protection.

CROSS REFERENCE			
VOLTS	EDISON	MERSEN	LITTELFUSE
250	ECNR	TR	FLNR
600	ECSR	TRS	FLSR

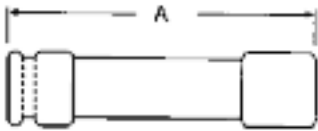
ECNR/ECSR Dual Element Fuses

These fuses are recommended for AC power distribution system mains, feeders and branch circuits having inductive loads (motors, transformers) or non-inductive loads (lighting, heating) where the available short-circuit current does not exceed 200,000 RMS symmetrical amps. These “dual-element, time-delay” fuses have minimum industry standard time-delay of 10 seconds at 5 times the fuse rating (8 sec. minimum for 250V, 30A and less). The time-delay

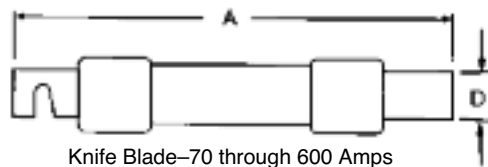
characteristics of these fuses typically allows them to be sized closer to the running ampacity of inductive loads to reduce cost and provide improved overcurrent protection. These fuses will override normal equipment current surges to reduce unnecessary fuse openings. They are the most popular fuses used in the industry and the most economical for most applications, especially motors and transformers. They have moderate current limitation.

Class R fuses will fit Class H, K and R fuse clips. Class R fuse clips will only accept Class R fuses. Fuses rated 600Vac or less may be applied at any lower voltage.

Dimensions



Ferrule Design—0 through 60 Amps



Knife Blade—70 through 600 Amps



Catalog Number	Amps	Overall Length - in	Max Diameter - in
		A	B
ECNR	0-30	2	0.56
	35-60	3	0.81
	70-100	5.88	1.06
	110-200	7.13	1.56
	225-400	8.63	2.38
	450-600	10.38	2.88
ECSR	0-30	5	0.81
	35-60	5.5	1.06
	65-100	7.88	1.11
	110-200	9.63	1.61
	225-400	11.63	2.34
	450-600	13.38	2.88

Average Melt Time-Current Curves Cat No. ECNR (Amp)



UL/GSA Fuses
Current Limiting

UL/GSA Fuses
General Purpose

Special
Purpose Fuses

Canadian
Fuses & Holders

Medium
Voltage Fuses

Fuse Blocks,
Holders & Misc.

Surge Protective
Devices

Application
Section

Average Melt Time-Current Curves
Cat No. ECSR (Amp)



Peak Let-Through Current Curves

ECNR



ECSR



Current Limitation Tables

ECNR*

Available Fault Current RMS Amperes	Apparent Effective Let-Through Amperes					
	Fuse Amp Ratings					
	30A	60A	100A	200A	400A	600A
5,000	1,050	2,070	2,820	4,300	5,000	5,000
10,000	1,310	2,570	3,630	5,400	8,700	10,000
15,000	1,490	2,920	4,140	6,200	9,900	15,000
20,000	1,630	3,200	4,500	6,800	10,700	16,100
25,000	1,720	3,420	4,800	7,200	11,400	17,200
30,000	1,840	3,630	5,100	7,700	12,100	18,300
35,000	1,920	3,810	5,400	8,100	12,600	19,200
40,000	2,000	3,980	5,600	8,500	13,100	19,900
50,000	2,140	4,200	6,000	9,100	14,000	21,400
60,000	2,260	4,500	6,400	9,600	14,900	22,600
80,000	2,450	4,900	7,000	10,600	16,000	24,600
100,000	2,620	5,200	7,500	11,400	17,100	26,200
150,000	2,920	5,800	8,300	13,000	19,200	29,200
200,000	3,140	6,200	8,900	14,300	20,800	31,700

ECSR*

Available Fault Current RMS Amperes	Apparent Effective Let-Through Amperes					
	Fuse Amp Ratings					
	30A	60A	100A	200A	400A	600A
5,000	1,290	2,070	2,980	5,000	5,000	5,000
10,000	1,640	2,590	3,810	6,500	8,800	10,000
15,000	1,890	2,940	4,400	7,500	10,200	15,000
20,000	2,110	3,250	4,800	8,300	11,400	18,200
25,000	2,260	3,470	5,200	8,900	12,400	19,600
30,000	2,420	3,660	5,500	9,600	13,200	21,100
35,000	2,570	3,850	5,800	10,100	14,100	22,400
40,000	2,670	4,030	6,000	10,500	14,700	23,400
50,000	2,890	4,300	6,500	11,400	16,000	25,300
60,000	3,060	4,500	6,900	12,100	17,200	27,000
80,000	3,360	4,900	7,600	13,400	19,100	29,500
100,000	3,630	5,200	8,200	14,400	20,700	31,700
150,000	4,100	5,800	9,300	16,500	23,900	36,300
200,000	4,400	6,100	10,400	18,300	26,700	39,500

*"Apparent Let-Through Amperes" values are read from "Peak Let-Through Current Curves" and the peak current value divided by 2.3 Asymmetry Factor.



Catalog Number ECNR (1 - 600A) 250Vac or Less
Catalog Number ECSR (1 - 600A) 600Vac or Less

Amp Ratings					
ECNR					
1	8	25	70	150	400
2	9	30	75	175	450
3	10	35	80	200	500
4	12	40	90	225	600
5	15	45	100	250	—
6	17.5	50	110	300	—
7	20	60	125	350	—
ECSR					
1	8	25	70	150	400
2	9	30	75	175	450
3	10	35	80	200	500
4	12	40	90	225	600
5	15	45	100	250	—
6	17.5	50	110	300	—
7	20	60	125	350	—

ECNR/ECSR Specifications

Dual-Element Time-Delay

Voltage Rating: ECNR - 250Vac
 ECNR - (1-60A, 110-200A) 125Vdc;
 (225-600A) 250Vdc
 ECSR - 600Vac
 ECSR - (1-30A, 70-600A) 300Vdc
 (35-60A) 250Vdc

Amp Rating: 1 - 600A

Interrupting Rating: 200kA RMS Symmetrical Amps

Current Limiting: RK5 Fuse

Agency Information:

UL Listed for US and Canada, Class RK5, Guide JDDZ, File E162363

Interrupting Rating: ECNR/ECSR 20kA DC

Benefits:

- True dual-element construction allows sizing of 125% FLA for motor backup protection.
- Superior overload and cycling capabilities.
- Current limiting provides component short-circuit protection.

Applications:

- Recommended for AC power distribution system mains, feeders, and branch circuits.
- Protection of motors and motor branch circuits.
- Protection of transformers and other inductive loads.
- All general-purpose applications including lighting, heating and other non-inductive loads.

Recommended Fuse Blocks:

Refer to pages 146 in this catalog.

Recommended Upgrade:

Class RK1 (LENRK/LESRK) for greater degree of short-circuit protection.

CROSS REFERENCE			
VOLTS	EDISON	MERSEN	LITTELFUSE
250	ECNR	TR	FLNR
600	ECSR	TRS	FLSR

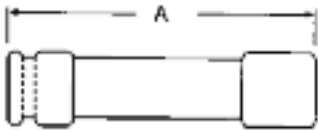
ECNR/ECSR Dual Element Fuses

These fuses are recommended for AC power distribution system mains, feeders and branch circuits having inductive loads (motors, transformers) or non-inductive loads (lighting, heating) where the available short-circuit current does not exceed 200,000 RMS symmetrical amps. These “dual-element, time-delay” fuses have minimum industry standard time-delay of 10 seconds at 5 times the fuse rating (8 sec. minimum for 250V, 30A and less). The time-delay

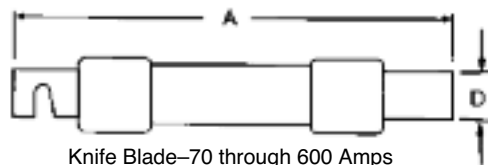
characteristics of these fuses typically allows them to be sized closer to the running ampacity of inductive loads to reduce cost and provide improved overcurrent protection. These fuses will override normal equipment current surges to reduce unnecessary fuse openings. They are the most popular fuses used in the industry and the most economical for most applications, especially motors and transformers. They have moderate current limitation.

Class R fuses will fit Class H, K and R fuse clips. Class R fuse clips will only accept Class R fuses. Fuses rated 600Vac or less may be applied at any lower voltage.

Dimensions



Ferrule Design—0 through 60 Amps



Knife Blade—70 through 600 Amps



Catalog Number	Amps	Overall Length - in	Max Diameter - in
		A	B
ECNR	0-30	2	0.56
	35-60	3	0.81
	70-100	5.88	1.06
	110-200	7.13	1.56
	225-400	8.63	2.38
	450-600	10.38	2.88
ECSR	0-30	5	0.81
	35-60	5.5	1.06
	65-100	7.88	1.11
	110-200	9.63	1.61
	225-400	11.63	2.34
	450-600	13.38	2.88

Average Melt Time-Current Curves Cat No. ECNR (Amp)



UL/GSA Fuses
Current Limiting

UL/GSA Fuses
General Purpose

Special
Purpose Fuses

Canadian
Fuses & Holders

Medium
Voltage Fuses

Fuse Blocks,
Holders & Misc.

Surge Protective
Devices

Application
Section

Average Melt Time-Current Curves
Cat No. ECSR (Amp)



Peak Let-Through Current Curves

ECNR



ECSR



Current Limitation Tables

ECNR*

Available Fault Current RMS Amperes	Apparent Effective Let-Through Amperes					
	Fuse Amp Ratings					
	30A	60A	100A	200A	400A	600A
5,000	1,050	2,070	2,820	4,300	5,000	5,000
10,000	1,310	2,570	3,630	5,400	8,700	10,000
15,000	1,490	2,920	4,140	6,200	9,900	15,000
20,000	1,630	3,200	4,500	6,800	10,700	16,100
25,000	1,720	3,420	4,800	7,200	11,400	17,200
30,000	1,840	3,630	5,100	7,700	12,100	18,300
35,000	1,920	3,810	5,400	8,100	12,600	19,200
40,000	2,000	3,980	5,600	8,500	13,100	19,900
50,000	2,140	4,200	6,000	9,100	14,000	21,400
60,000	2,260	4,500	6,400	9,600	14,900	22,600
80,000	2,450	4,900	7,000	10,600	16,000	24,600
100,000	2,620	5,200	7,500	11,400	17,100	26,200
150,000	2,920	5,800	8,300	13,000	19,200	29,200
200,000	3,140	6,200	8,900	14,300	20,800	31,700

ECSR*

Available Fault Current RMS Amperes	Apparent Effective Let-Through Amperes					
	Fuse Amp Ratings					
	30A	60A	100A	200A	400A	600A
5,000	1,290	2,070	2,980	5,000	5,000	5,000
10,000	1,640	2,590	3,810	6,500	8,800	10,000
15,000	1,890	2,940	4,400	7,500	10,200	15,000
20,000	2,110	3,250	4,800	8,300	11,400	18,200
25,000	2,260	3,470	5,200	8,900	12,400	19,600
30,000	2,420	3,660	5,500	9,600	13,200	21,100
35,000	2,570	3,850	5,800	10,100	14,100	22,400
40,000	2,670	4,030	6,000	10,500	14,700	23,400
50,000	2,890	4,300	6,500	11,400	16,000	25,300
60,000	3,060	4,500	6,900	12,100	17,200	27,000
80,000	3,360	4,900	7,600	13,400	19,100	29,500
100,000	3,630	5,200	8,200	14,400	20,700	31,700
150,000	4,100	5,800	9,300	16,500	23,900	36,300
200,000	4,400	6,100	10,400	18,300	26,700	39,500

*"Apparent Let-Through Amperes" values are read from "Peak Let-Through Current Curves" and the peak current value divided by 2.3 Asymmetry Factor.