



SITOR

Semiconductor Fuses



Reliable protection with safety.

Answers for industry.

SIEMENS

Siemens SITOR fuses type 3NE1—0 and 3NE8—1 with their superfast characteristics, effectively protect the semiconductors in the event of overcurrents in system.

3NE1—0 SITOR fuse links with utilization category gS, in addition of providing semiconductor protection, also offer overload and short circuit protection of cables, conductors and busbars.

These fuses also carry the symbol of reliability – CE marking

Advantages

The major advantages Siemens SITOR semiconductor fuses offer are

1. Extremely fast interruption of currents
2. Unique combination of semiconductor protection & cable protection minimizes cost, space requirement and installation cost
3. Fuses of aR, gR, gS characteristics with rated current upto 630A & rated voltage upto 690V for variety of applications
4. High cyclic load capacity ensures ageing free operation

Selection & ordering data

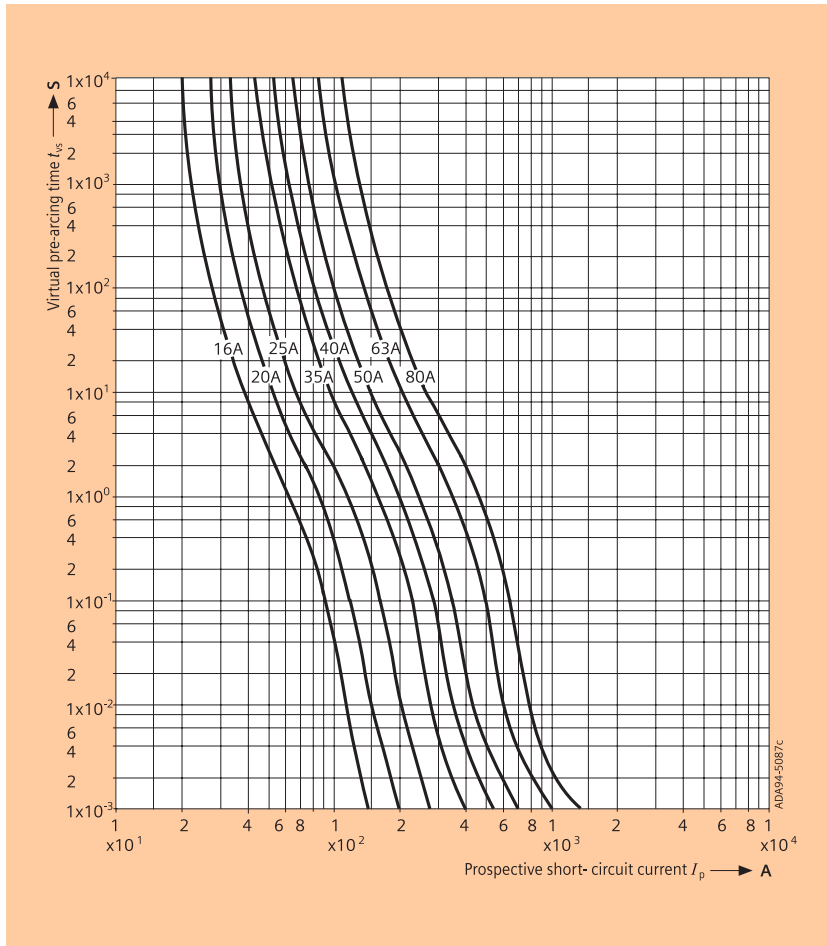


3NE1 8..-0 (IEC 60 269-2-1, Size 000)

Type ref no.		3NE1813-0	3NE1814-0	3NE1815-0	3NE1803-0	3NE1802-0	3NE1817-0	3NE1818-0	3NE1820-0
Utilization category (IEC 60 269)		gR/gS	gR/gS	gR/gS	gR/gS	gR/gS	gR/gS	gR/gS	gR/gS
Rated voltage V_n	V	690	690	690	690	690	690	690	690
Rated current I_n	A	16	20	25	35	40	50	63	80
Pre-arcing I^2t value I^2t_s ($t_{vs} = 1$ ms)	A ² s	18	41	74	166	295	461	903	1,843
Clearing I^2t value I^2t_A at V_n	A ² s	200	430	780	1,700	3,000	4,400	9,000	18,000
Temperature rise at I_n (center of the fuse body) ¹⁾	K	25	25	30	35	30	35	40	40
Power dissipation at I_n ¹⁾	W	3.0	3.5	4.0	5.0	5.0	6.0	7.0	8.0
Cyclic load factor WL		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Reqd. c/s of copper cable / busbar	mm ²	1.5	2.5	4.0	6.0	10	10	16	25
Weight, approx.	kg	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Accessories									
Fuse base, 1-pole		3NH3 030							
Fuse puller		3NX1 011, 3NX1 010							
Switch disconnecter fuse unit		3KL8111-3HA..		3KL8121-3HA..	3KL8151-3HA..			3KL8211-3HA/2HA..	

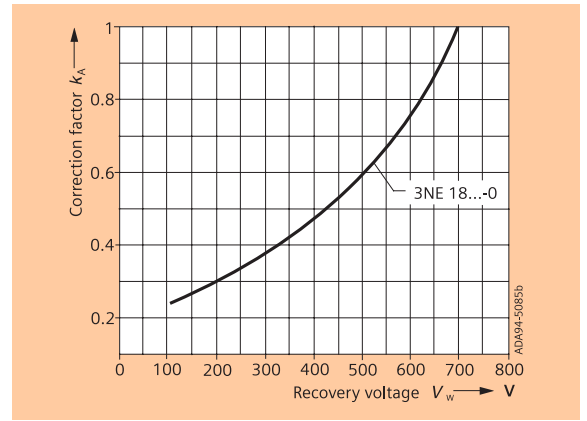
1) Temperature rise and power dissipation when used in fuse base

3NE1 8..-0



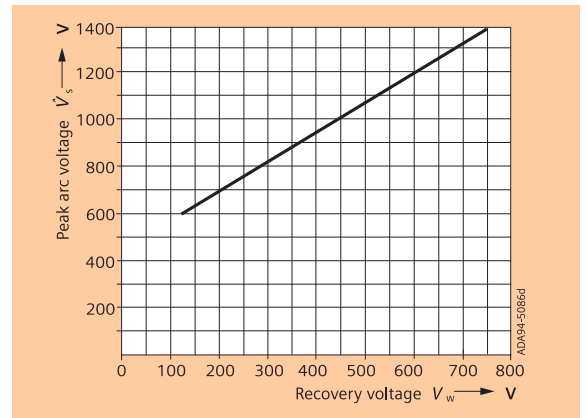
Time/current characteristics

3NE1 8..-0



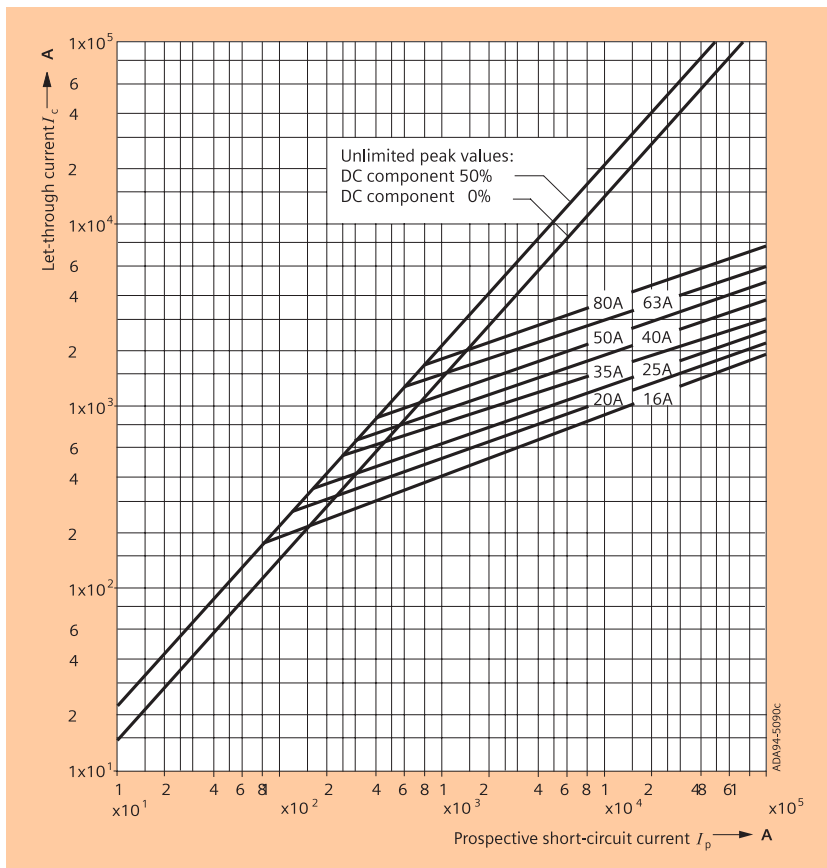
Correction factor k_A for clearing I^2t value

3NE1 8..-0



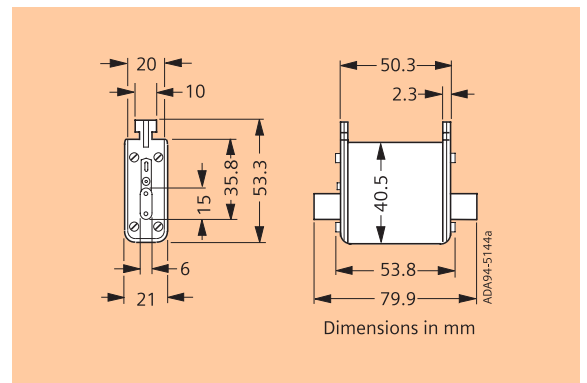
Arc voltage

3NE1 8..-0



Let-through characteristics (current limiting at 50 Hz)

3NE1 8..-0

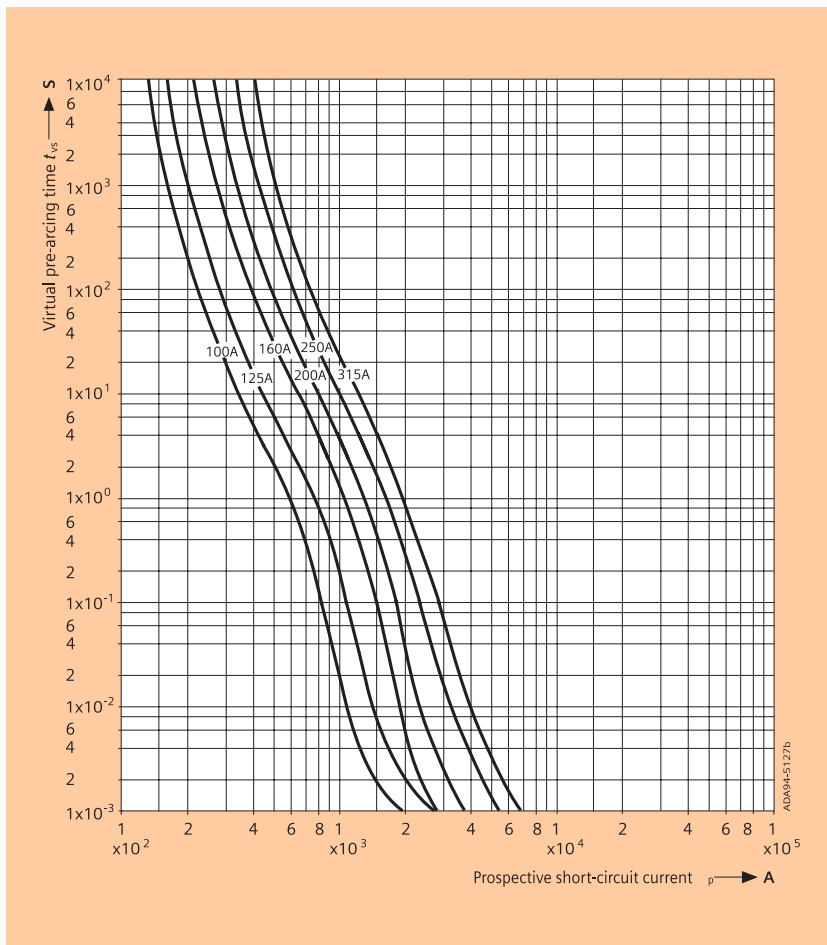




Type ref no.		3NE1 021-0	3NE1 022-0	3NE1 224-0	3NE1 225-0	3NE1 227-0	3NE1 230-0
Utilization category (IEC 60 269)		gR/gS	gR/gS	gR/gS	gR/gS	gR/gS	gR/gS
Rated voltage V_n	V	690	690	690	690	690	690
Rated current I_n	A	100	125	160	200	250	315
Pre-arcing I^2t value I^2t_s ($t_{vs} = 1$ ms)	A ² s	3,100	6,000	7,400	14,500	29,500	46,100
Clearing I^2t value I^2t_A at V_n	A ² s	33,000	63,000	60,000	100,000	200,000	310,000
Temperature rise at I_n (center of the fuse body) ¹⁾	K	36	40	60	65	75	80
Power dissipation at I_n ¹⁾	W	10	11	24	27	30	38
Cyclic load factor WL		1.0	1.0	1.0	1.0	1.0	1.0
Reqd. c/s of copper cable / busbar	mm ²	35	50	70	95	120	2x70
Weight, approx.	kg	0.20	0.20	0.55	0.55	0.55	0.55
Accessories							
Fuse base, 1-pole		3NH3 030		3NH3 230		3NH3 330	
Fuse puller		3NX1 011, 3NX1 010					
Switch disconnecter fuse unit		3KL8211-3HA/2HA..	3KL8221-3HA/2HA..	3KL8311-3UA/2UA..		3KL8321-3UA/2UA..	3KL8331-3UA/2UA..

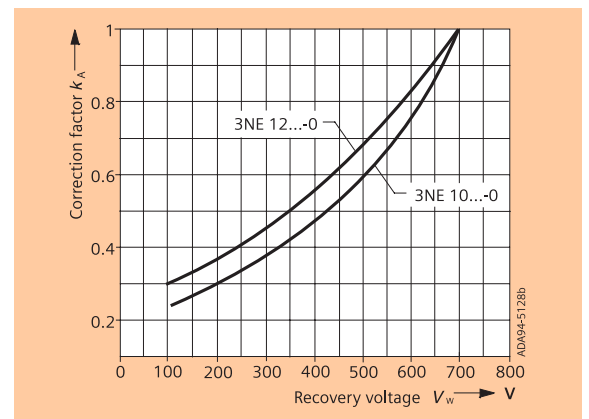
1) Temperature rise and power dissipation when used in fuse base

3NE1 0..-0, 3NE1 2..-0



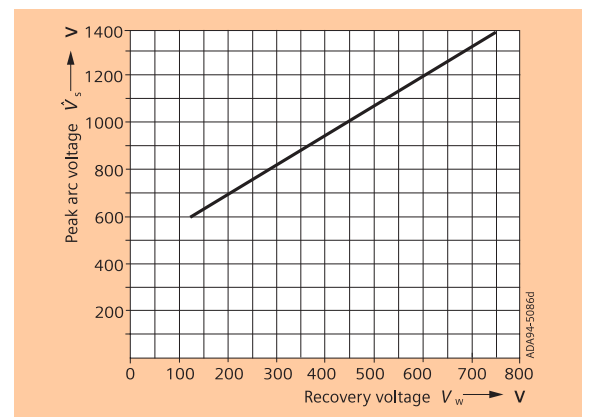
Time/current characteristics

3NE1 0..-0, 3NE1 2..-0



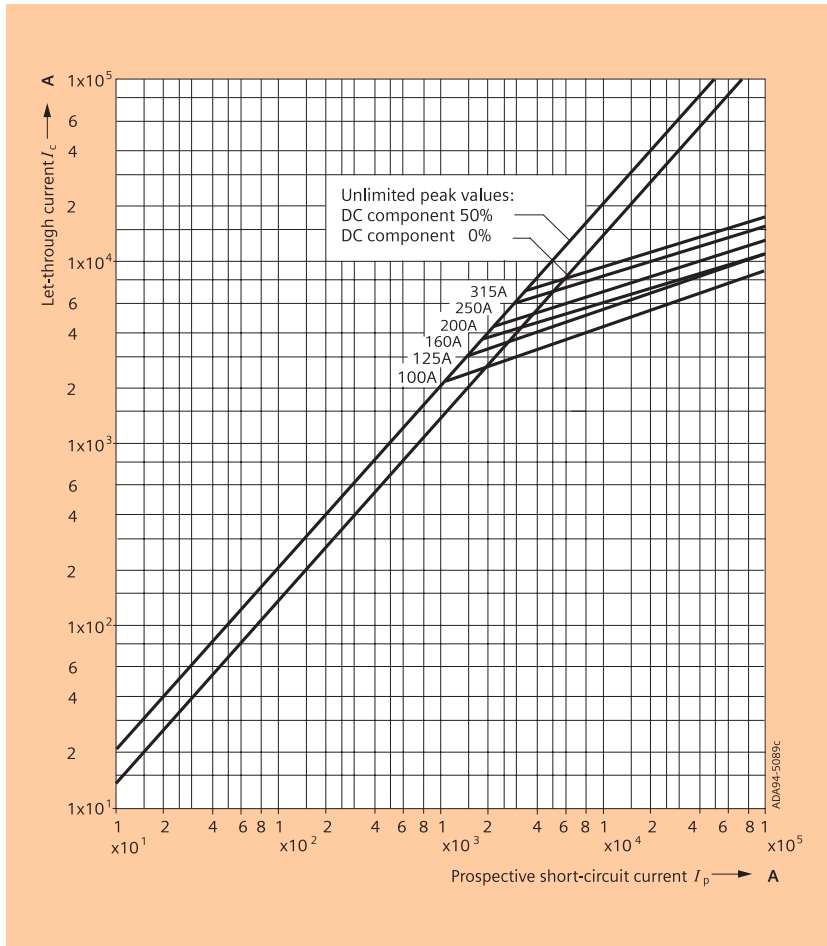
Correction factor k_A for clearing I^2t value

3NE1 0..-0, 3NE1 2..-0



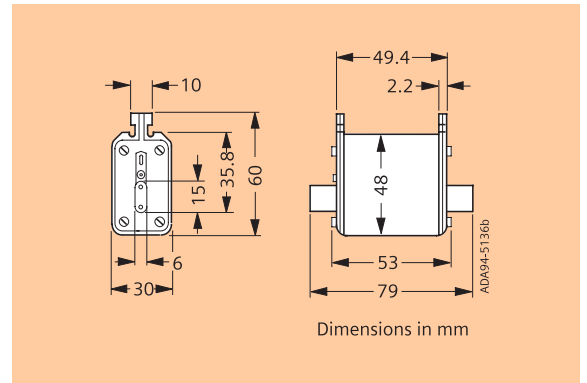
Arc voltage

3NE1 0..-0, 3NE1 2..-0

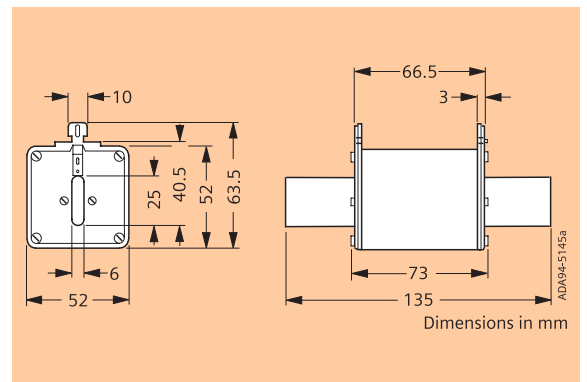


Let-through characteristics (current limiting at 50 Hz)

3NE1 0..-0



3NE1 2..-0



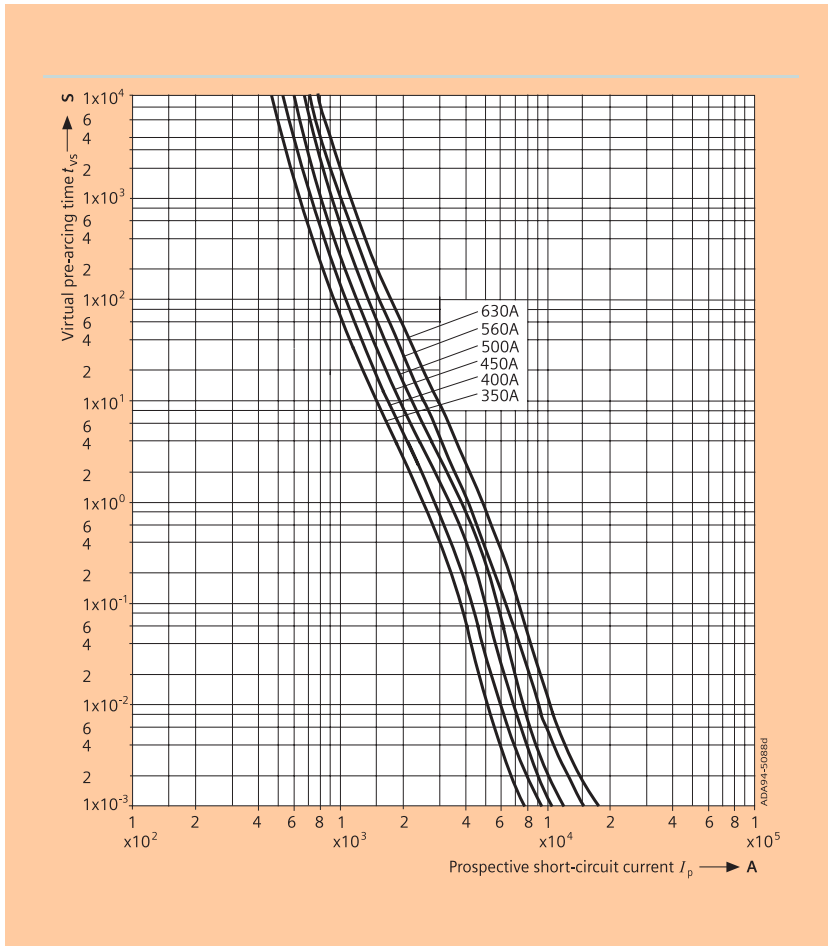
3NE1 3..-0 (IEC 60 269-2-1, Size 2), 3NE1 4..-0 (IEC 60 269-2-1, Size 3)



Type ref no.		3NE1 331-0	3NE1 332-0	3NE1 333-0	3NE1 334-0	3NE1 435-0	3NE1 436-0
Utilization category (IEC 60 269)		gR/gS	gR/gS	gR/gS	gR/gS	gR/gS	gR/gS
Rated voltage V_n	V	690	690	690	690	690	690
Rated current I_n	A	350	400	450	500	560	630
Pre-arcing I^2t value I^2t_s ($t_{vs} = 1$ ms)	A ² s	58,000	84,000	104,000	149,000	215,000	293,000
Clearing I^2t value I^2t_A at V_n	A ² s	430,000	590,000	750,000	950,000	1,700,000	2,350,000
Temperature rise at I_n (center of the fuse body) ¹⁾	K	75	85	85	90	65	70
Power dissipation at I_n ¹⁾	W	42	45	53	56	50	55
Cyclic load factor WL		1.0	1.0	1.0	1.0	1.0	1.0
Reqd. c/s of copper cable / busbar	mm ²	2x95	2x95	2x120	2x120	2x150	2x185
Weight. approx.	kg	0.7	0.7	0.7	0.7	0.95	0.95
Accessories							
Fuse base, 1-pole		3NH3 330		3NH3 430			
Fuse puller		3NX1 011, 3NX1 010					
Switch disconnecter fuse unit		3KL8341-3UA/2UA..		3KL8411-3UA/2UA..		3KL8421-3UA/2UA..	

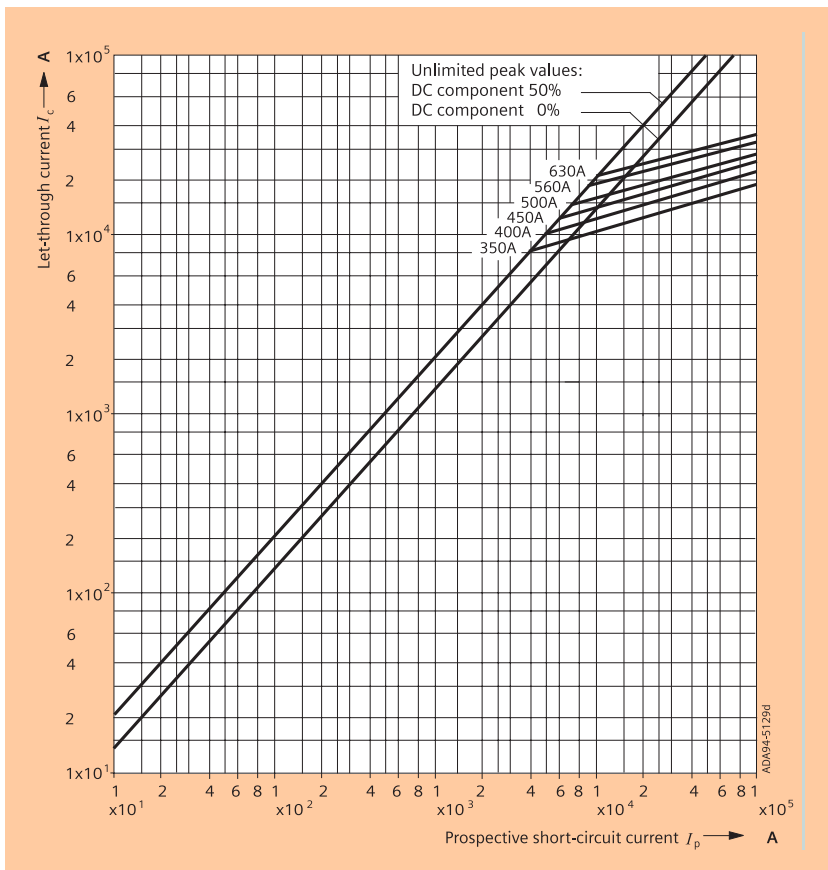
1) Temperature rise and power dissipation when used in fuse base

3NE1 3..-0, 3NE1 4..-0



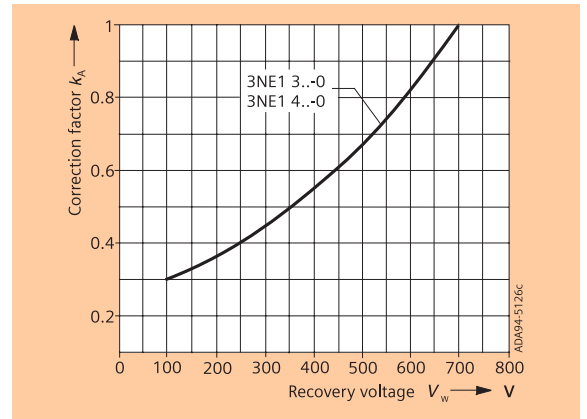
Time/current characteristics

3NE1 3..-0, 3NE1 4..-0



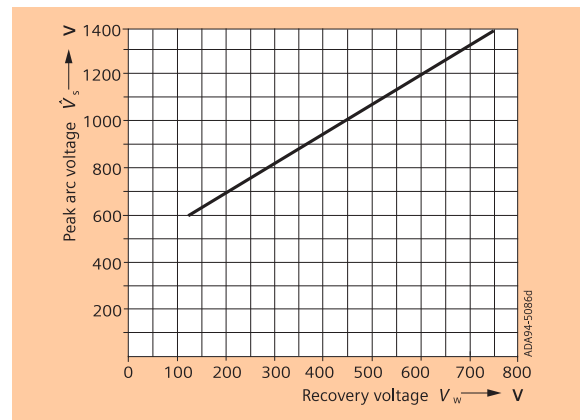
Let-through characteristics (current limiting at 50 Hz)

3NE1 3..-0, 3NE1 4..-0



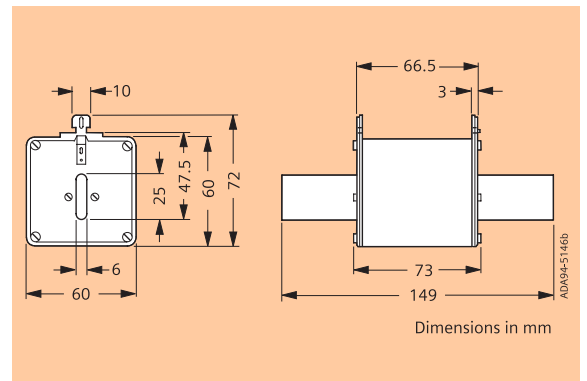
Correction factor k_A for clearing I^2t value

3NE1 3..-0, 3NE1 4..-0

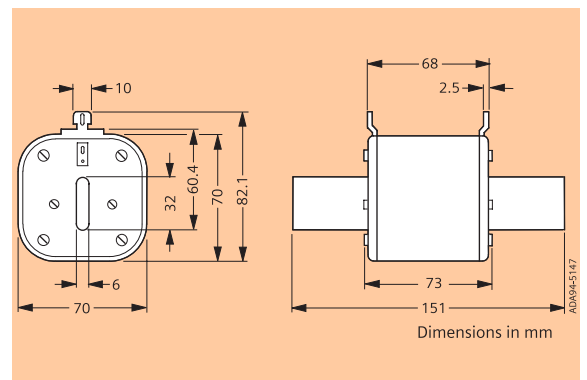


Arc voltage

3NE1 3..-0



3NE1 4..-0

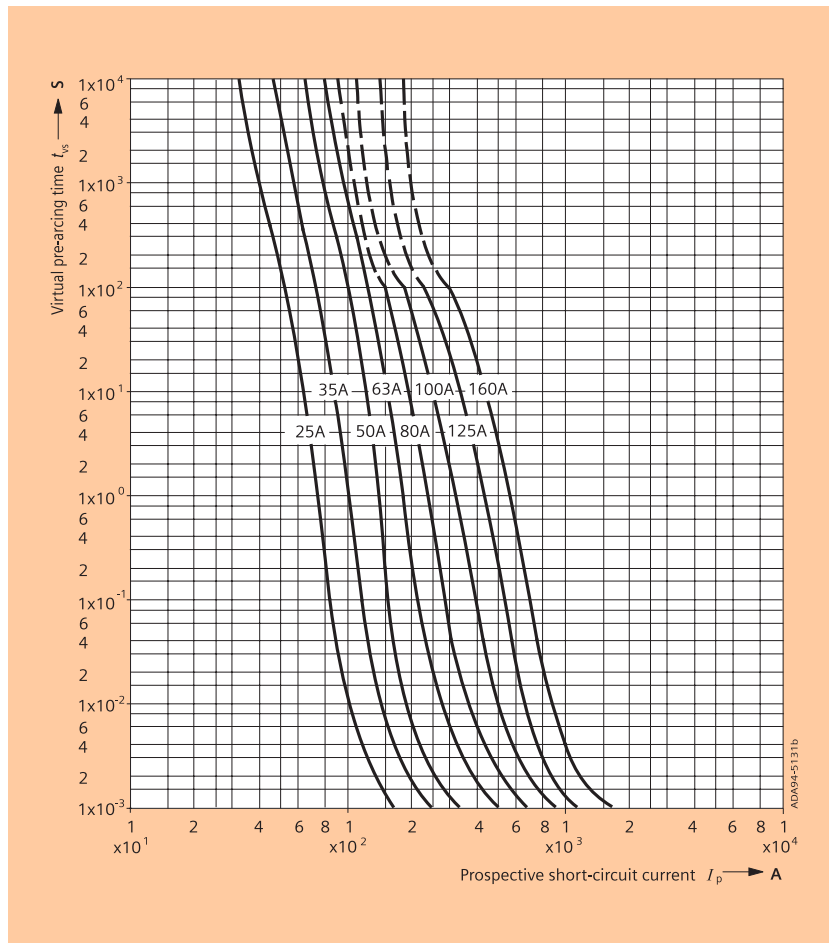


3NE8 0..-1 (IEC 60 269-2-1, Size 00)



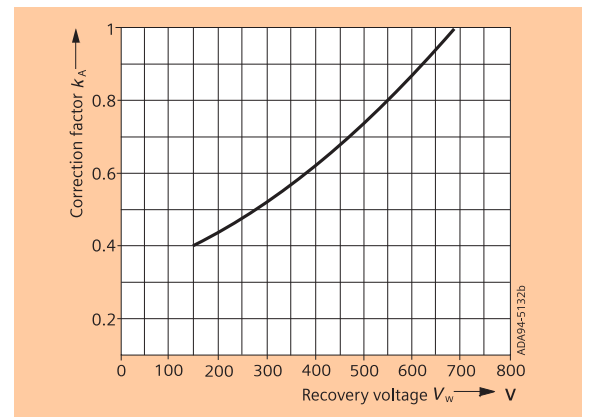
Type ref no.		3NE8015-1	3NE8003-1	3NE8017-1	3NE8018-1	3NE8020-1	3NE8021-1	3NE8022-1	3NE8024-1
Utilization category (IEC 60 269)		gR	gR	gR	gR	aR	aR	aR	aR
Rated voltage V_n	V	690	690	690	690	690	690	690	690
Rated current I_n	A	25	35	50	63	80	100	125	160
Pre-arcing I^2t value I^2t_s ($t_{vs} = 1$ ms)	A ² s	30	70	120	260	450	850	1,400	2,800
Clearing I^2t value I^2t_A at V_n	A ² s	180	400	700	1,400	2,400	4,200	6,500	13,000
Temperature rise at I_n (center of the fuse body)	K	35	45	65	70	80	90	110	130
Power dissipation at I_n	W	7	9	14	16	19	22	28	38
Cyclic load factor WL		0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Reqd. c/s of copper cable / busbar	mm ²	4	6	10	16	25	35	50	70
Weight, approx.	kg	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Accessories									
Fuse base, 1-pole		3NH3 030							
Fuse puller		3NX1 011, 3NX1 010							
Switch disconnecter fuse unit		3KL8121-3HA..	3KL8151-3HA..			3KL8211-3HA/2HA..	3KL8221-3HA/2HA..	3KL8231-3HA/2HA..	

3NE8 0..-1



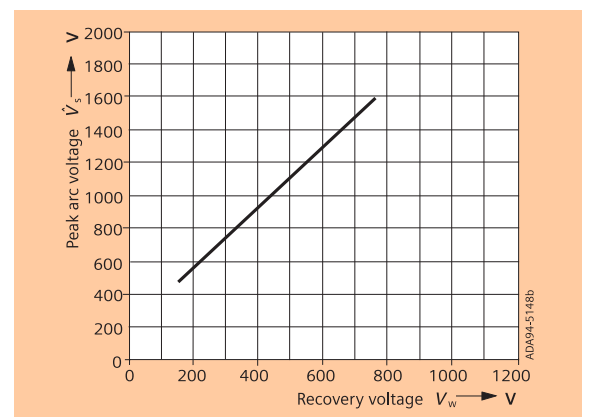
Time/current characteristics

3NE8 0..-1



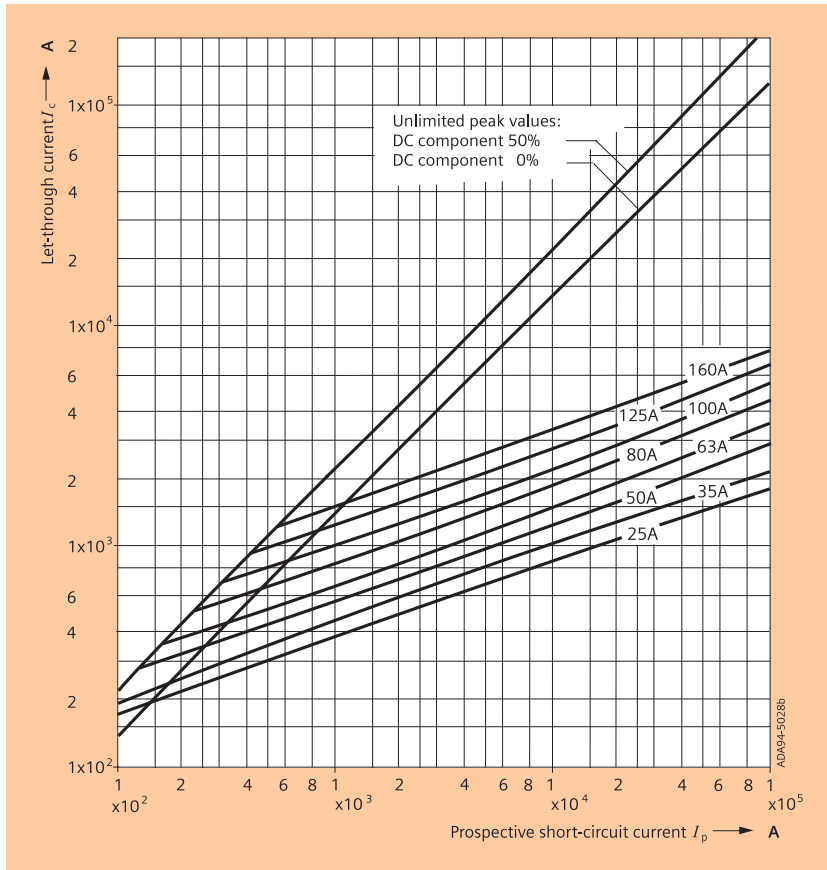
Correction factor k_A for clearing I^2t value

3NE8 0..-1



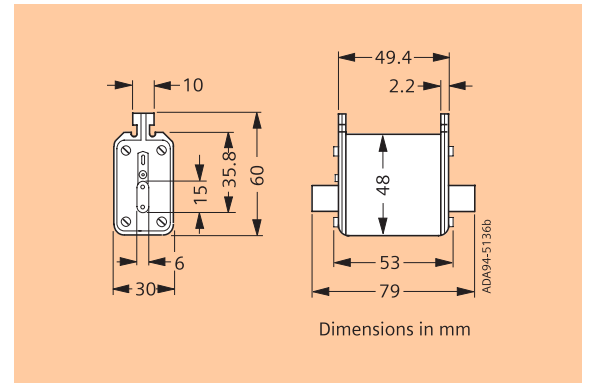
Arc voltage

3NE8 0..-1



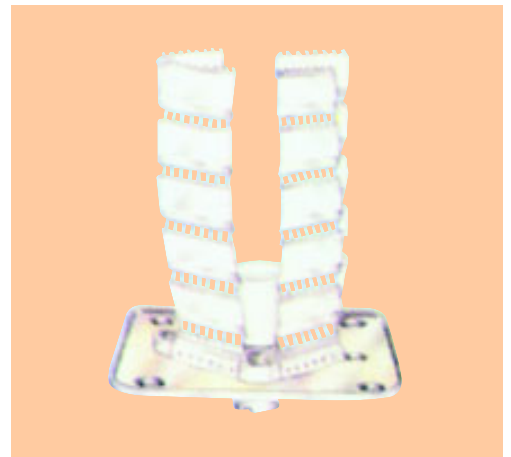
Let-through characteristics (current limiting at 50 Hz)

3NE8 0..-1



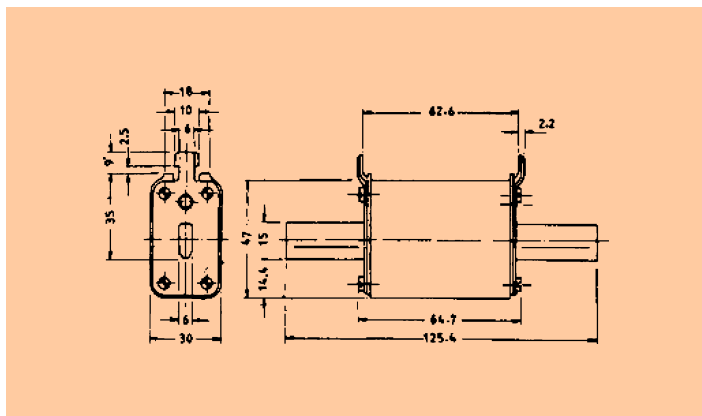
Special Features:

- Pure silver fuse element continuously conducts high current without change in characteristics
- Short pre-arcing time.
- High rupturing capacity.

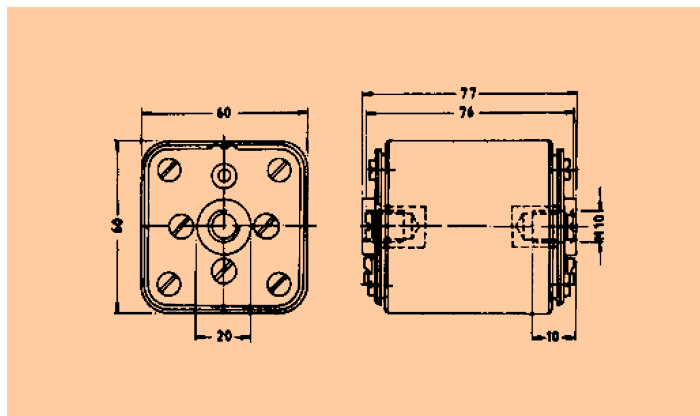


Dimensions

SITOR 3NE4 101 to 124 (32 to 160A)



SITOR 3NE4 327-6 to 337-6 (250 to 710A)



Selection Table:

Type Reference	Rated Voltage U_N (Volts)		Rated Current I_N A	Total I^2t (cold) A^2S		Watt-loss at I_N W	Mounting
	AC	D/AC		at $\frac{1}{2} U_N$	at U_N		
3NE4 101	1000	600	32	220	415	12	Fuse base 3NH3-230
3NE4 102			40	398	750	14	
3NE4 117			50	590	1130	18	
3NE4 120			80	1920	3700	26	
3NE4 121			100	3920	7560	29	
3NE4 122			125	7960	15400	34	
3NE4 124			160	15700	30200	42	
3NE4 327-6	800	500	250	18500	40000	68	Screwed to Busbar
3NE4 330-6		500	315	35000	76000	80	
3NE4 333-6		500	450	123000	246000	100	
3NE4 334-6		500	500	170000	345000	105	
3NE4 337-6		440	710	485000	1000000	140	

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