

## Fuse protection selection guide

**Gawe**  
low voltage electrical material



## Cylindrical fuses

A complete range of cylindrical fuses according to IEC 60269 standards. Silver and zinc alloys with low power dissipation characteristics. All references supplied with 10u. packing.



In (A)	Size 00 - 8x31				Size 0 - 10x38												
	gG Curve		V	kA	gG Curve				aM Curve				gPV Curve				
	Standard	With indicator			Standard	With indicator	Vac	kA	Standard	With indicator	V	kA	Standard	Vdc	kA		
0,5					30F05GL			500	120								
1	29F1GL		400	20	30F1GL			500	120	30F1AM			500	120			
2	29F2GL	29F2GLIF	400	20	30F2GL	30F2GLIF	500	120	30F2AM	30F2AMIF	500	120	30F2PV	1000	40		
4	29F4GL	29F4GLIF	400	20	30F4GL	30F4GLIF	500	120	30F4AM	30F4AMIF	500	120	30F4PV	1000	40		
6	29F6GL	29F6GLIF	400	20	30F6GL	30F6GLIF	500	120	30F6AM	30F6AMIF	500	120	30F6PV	1000	40		
8	29F8GL		400	20	30F8GL	30F8GLIF	500	120	30F8AM	30F8AMIF	500	120	30F8PV	1000	33		
10	29F10GL	29F10GLIF	400	20	30F10GL	30F10GLIF	500	120	30F10AM	30F10AMIF	500	120	30F10PV	1000	33		
12	29F12GL		400	20	30F12GL	30F12GLIF	500	120	30F12AM	30F12AMIF	500	120	30F12PV	1000	33		
16	29F16GL	29F16GLIF	400	20	30F16GL	30F16GLIF	500	120	30F16AM	30F16AMIF	500	120	30F15PV	1000	33		
20	29F20GL	29F20GLIF	400	20	30F20GL	30F20GLIF	500	120	30F20AM	30F20AMIF	500	120	30F20PV	1000	10		
25	29F25GL	29F25GLIF	400	20	30F25GL	30F25GLIF	500	120	30F25AM	30F25AMIF	500	120					
32					30F32GL	30F32GLIF	400	120	30F32AM	30F32AMIF	400	120					

In (A)	Size 1 - 14x51*				Size 2 - 22x58*											
	gG Curve		V	kA	aM Curve				gG Curve				aM Curve			
	Standard	With indicator			Standard	With indicator	V	kA	Standard	With indicator	V	kA	Standard	With indicator	V	kA
2	31F2GL	31F2GLIF	690	80	31F2AM	31F2AMIF	690	80								
4	31F4GL	31F4GLIF	690	80	31F4AM	31F4AMIF	690	80								
6	31F6GL	31F6GLIF	690	80	31F6AM	31F6AMIF	690	80								
8	31F8GL	31F8GLIF	690	80	31F8AM	31F8AMIF	690	80								
10	31F10GL	31F10GLIF	690	80	31F10AM	31F10AMIF	690	80								
12	31F12GL	31F12GLIF	690	80	31F12AM	31F12AMIF	690	80								
16	31F16GL	31F16GLIF	690	80	31F16AM	31F16AMIF	690	80	32F16GL	32F16GLIF	690	80	32F16AM	32F16AMIF	690	80
20	31F20GL	31F20GLIF	690	80	31F20AM	31F20AMIF	690	80	32F20GL	32F20GLIF	690	80	32F20AM	32F20AMIF	690	80
25	31F25GL	31F25GLIF	690	80	31F25AM	31F25AMIF	690	80	32F25GL	32F25GLIF	690	80	32F25AM	32F25AMIF	690	80
32	31F32GL	31F32GLIF	500	120	31F32AM	31F32AMIF	500	120	32F32GL	32F32GLIF	690	80	32F32AM	32F32AMIF	690	80
40	31F40GL	31F40GLIF	500	120	31F40AM	31F40AMIF	500	120	32F40GL	32F40GLIF	690	80	32F40AM	32F40AMIF	690	80
50	31F50GL	31F50GLIF	400	120	31F50AM	31F50AMIF	400	120	32F50GL	32F50GLIF	690	80	32F50AM	32F50AMIF	690	80
63									32F63GL	32F63GLIF	690	80	32F63AM	32F63AMIF	690	80
80									32F80GL	32F80GLIF	500	120	32F80AM	32F80AMIF	500	120
100									32F100GL	32F100GLIF	500	120	32F100AM	32F100AMIF	500	120
125									32F125GL	32F125GLIF	400	120	32F125AM	32F125AMIF	400	120

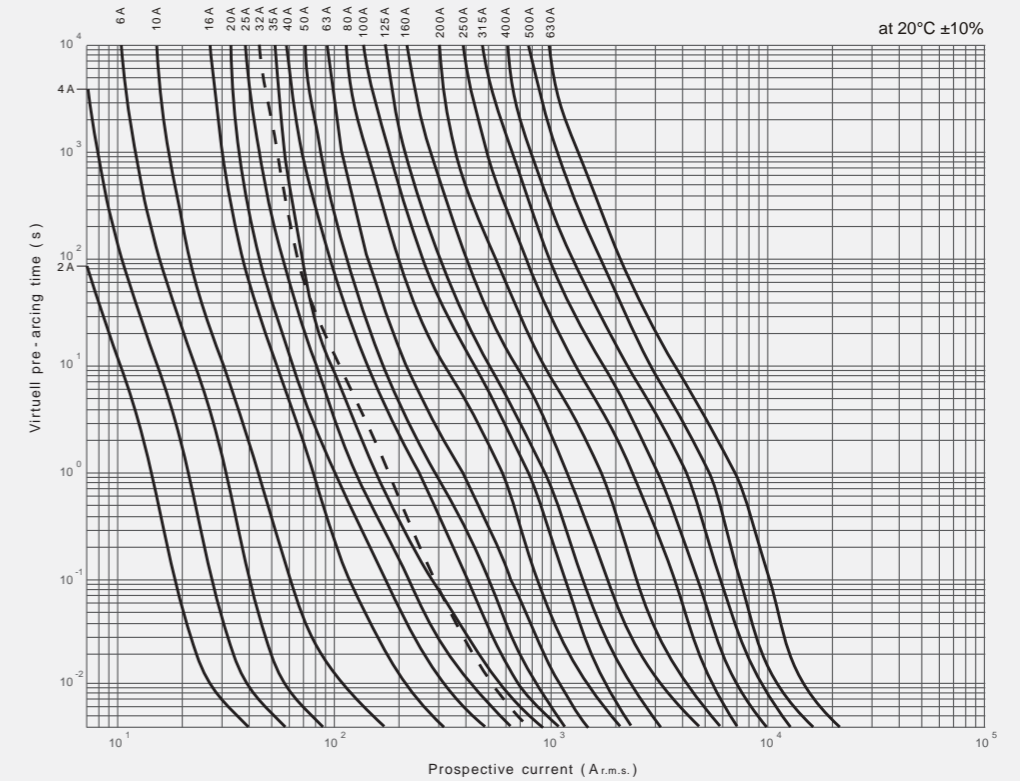
120kA breaking capacity on 690V fuses when operated at 500/400V.

## Cylindrical fuseholders

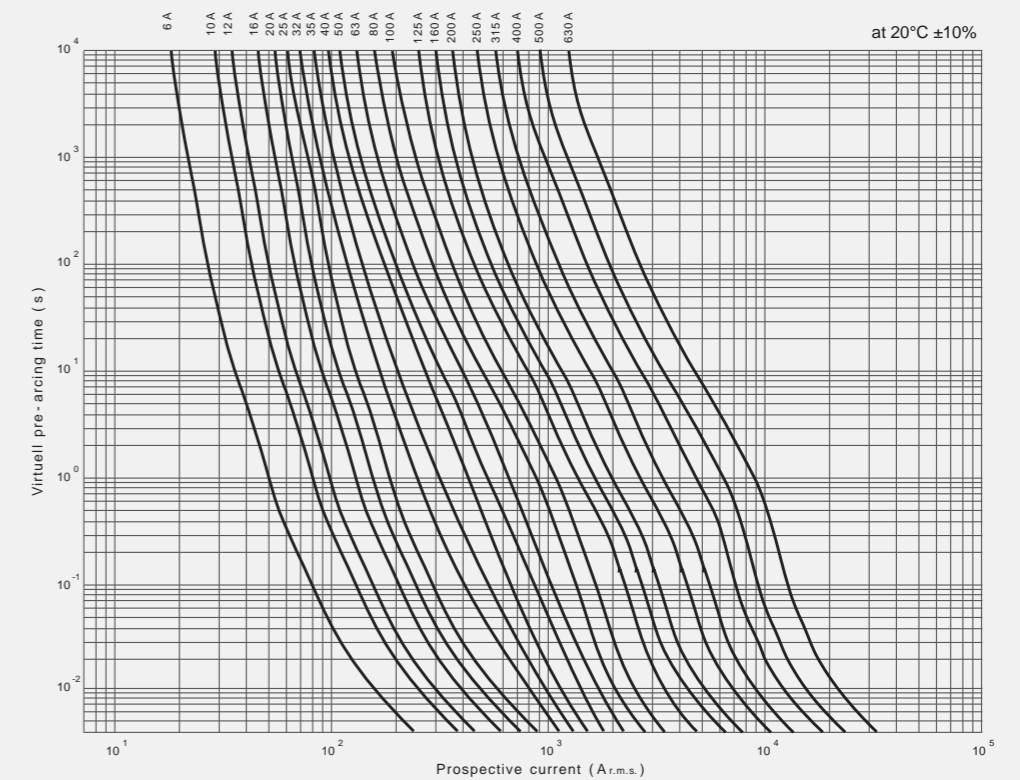
Poles	Size 00 - 8x31			Size 0 - 10x38						Size 1 - 14x51						Size 2 - 22x58		
	25A			20A PV			32A			32A PV			50A			125A		
	Reference	gr	Pack.	Reference	gr	Pack.	Reference	gr	Pack.	Reference	gr	Pack.	Reference	gr	Pack.	Reference	gr	Pack.
1P	201	63	12	211PV	63	12	211	63	12	221PV	140	6	221	140	6	231	180	3
1P+N							211N	135	6									
2P	202	130	6	212PV	130	6	212	130	6				222	285	3	232	365	2
3P	203	190	4				213	190	4				223	425	2	233	550	1
3P+N							213N	270	3				223N	570	1	233N	735	1

## Fuse time-current characteristics

### gG fuses



### aM fuses



### NH Knife fuses gG and aM curves

A range of blade fuses with high current limitation and short-circuit breaking capacity are the efficient cost effective solution to protect against overload and shortcircuit conditions. The steatite ceramic body offers optimum characteristics against temperature stresses and high resistance against internal pressures. Metal parts are treated to avoid corrosion effects.

Centre glass indicator is linked to a stainless steel pressure spring that ensures its right operation over time guaranteeing reliable fuse status indication. Fuses with gG curve are rated at 500V and have 120kA breaking capacity and the aM curve is rated 690V and 80kA (120kA if operated at 500V). All fuse references are supplied in 3 units packing.



In (A)	NH00				NH0				NH1				NH2				NH3																								
	gG Curve		aM Curve		gG Curve		aM Curve		gG Curve		aM Curve		gG Curve		aM Curve		gG Curve		aM Curve																						
	Type	V	gr	Reference	Type	V	gr	Reference	Type	V	gr	Reference	Type	V	gr	Reference	Type	V	gr	Reference	Type	V	gr	Reference																	
6	00C	500	120	66920006																																					
10	00C	500	120	66920010	00C	690	120	66930010																																	
16	00C	500	120	66920016	00C	690	120	66930016	0	500	270	67020016	0	690	270	67030016																									
20	00C	500	120	66920020	00C	690	120	66930020	0	500	270	67020020	0	690	270	67030020																									
25	00C	500	120	66920025	00C	690	120	66930025	0	500	270	67020025	0	690	270	67030025																									
32	00C	500	120	66920032	00C	690	120	66930032	0	500	270	67020032	0	690	270	67030032																									
40	00C	500	120	66920040	00C	690	120	66930040	0	500	270	67020040	0	690	270	67030040																									
50	00C	500	120	66920050	00C	690	120	66930050	0	500	270	67020050	0	690	270	67030050																									
63	00C	500	120	66920063	00C	690	120	66930063	0	500	270	67020063	0	690	270	67030063	1C	500	280	67120063	1C	690	280	67130063																	
80	00C	500	120	66920080	00C	690	120	66930080	0	500	270	67020080	0	690	270	67030080	1C	500	280	67120080	1C	690	280	67130080																	
100	00C	500	120	66920100	00	690	170	66930100	0	500	270	67020100	0	690	270	67030100	1C	500	280	67120100	1C	690	280	67130100																	
125	00	500	170	66920125	00	690	170	66930125	0	500	270	67020125	0	690	270	67030125	1C	500	280	67120125	1C	690	280	67130125																	
160	00	500	170	66920160					0	500	270	67020160	0	690	270	67030160	1C	500	280	67120160	1C	690	280	67130160	2C	500	420	67220160	2C	690	510	67230160									
200																	1	500	410	67120200	1	690	410	67130200	2C	500	420	67220200	2C	690	510	67230200									
250																	1	500	410	67120250	1	690	410	67130250	2C	500	420	67220250	2C	690	510	67230250									
315																										2	500	610	67220315	2	690	610	67230315	3C	500	620	67320315	3C	690	620	67330315
355																										2	500	610	67220355	2	690	610	67230355								
400																										2	500	610	67220400	2	690	610	67230400	3C	500	620	67320400	3C	690	620	67330400
500																																		3	500	920	67320500	3	690	920	67330500
630																																		3	500	920	67320630	3	690	920	67330630

### NH Knife fuses gR/aR curve

Ultraquick fuses are designed to protect semiconductor devices according to IEC 60269-4. Rated voltage is 690VAC (120kA) and 440VDC (50kA).

In (A)	NH00				
	160A 1P				
	Type	Curve	V	gr	Reference
16	00C	gR	690	120	67930016
20	00C	gR	690	120	67930020
25	00C	gR	690	120	67930025
32	00C	gR	690	120	67930032
35	00C	gR	690	120	67930035
40	00C	gR	690	120	67930040
50	00C	gR	690	120	67930050
63	00C	gR	690	120	67930063
80	00C	gR	690	120	67930080
100	00C	aR	690	120	67930100
125	00	aR	690	170	67930125
160	00	aR	690	170	67930160

### NH Fuse switch disconnectors

Poles	NH00C			NH00			NH1			NH2			NH3		
	In (A)	kg	Reference	In (A)	kg	Reference	In (A)	kg	Reference	In (A)	kg	Reference	In (A)	kg	Reference
1				160	0.32	711	250	1.00	731						
3	100	0.46	703	160	0.75	713	250	2.42	733	400	3.50	743	630	4.94	753
4				160	1.8	714	250	3.40	734				630	7.44	754

### NH Fuse bases

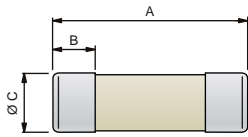
Poles	NH00			NH0			NH1			NH2			NH3			NH4		
	160A			160A			250A			400A			630A			1250A		
	Reference	kg	Pack.	Reference	kg	Pack.	Reference	kg	Pack.	Reference	kg	Pack.	Reference	kg	Pack.	Reference	kg	Pack.
1P	511	0.10	3	521	0.12	3	531	0.24	3	541	0.34	3	551	0.62	3	561	2.60	1
3P	513	0.34	1	523	0.44	1	533	0.84	1	543	1.20	1	553	2.30	1			

### NH Fuse bases with sectionable neutral

Type	NH00		NH0		NH1		NH2, NH3 & NH4	
	160A 1P		160A 1P		250A 1P		250A 1P	
	Reference	Pack.	Reference	Pack.	Reference	Pack.	Reference	Pack.
Screw / screw	511NTT	3	521NTT	3	531NTT	3	531NTT	3
Clamp / screw	511NBT	3						
Clamp / clamp	511NBB	3						

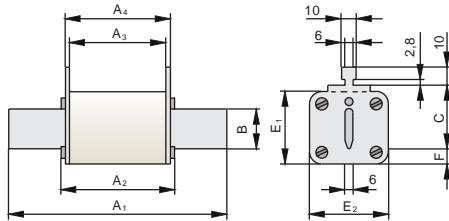
# Dimensions

## Cylindrical fuses



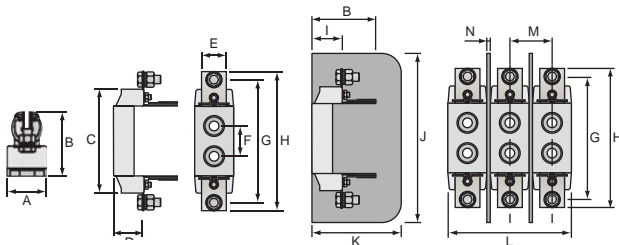
Size	A	B	Ø C
00	31.5	6.3	8.5
0	38	9.4	10.3
1	51	11.3	14.3
2	58	14.7	22.2

## NH Knife fuses



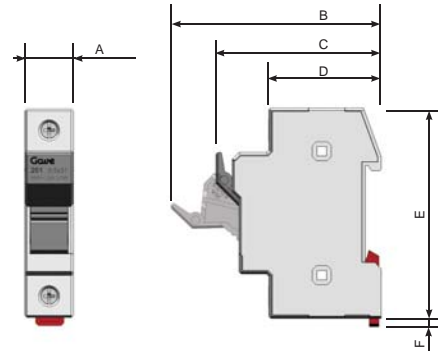
Size	A1	A2	A3	B1	C1	D	E1	E2	F
00C	78,5	53	45	49	15	35	40	21	7
00	78,5	53	45	49	15	35	44	28	14,5
0	125	68	62	66	15	35	44	35	14
1C	134	68	62	67	15	40	44	35	14
1	134	70	62	67	20	40	51,5	44	13,5
2C	150	70	62	67	20	48	51,5	44	13,5
2	150	70	62	67	20	60	60,5	54	14,5
3C	150	70	62	67	25	60	60,5	54	14,5
3	150	70	62	67	32	60	74	70	17

## NH Fuse bases



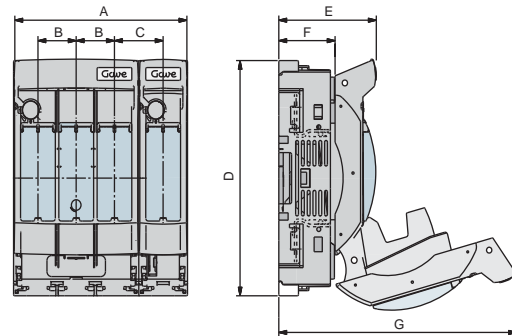
Size	1P								3P						
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	
00	32	53	86	22	20	25	100	118	22	130	75	102	35	3	
0	32	62	120	22	20	25	146	165	22	183	85	104	35	4	
1	55	74	150	34	27	25	174	198	-	250	100	175	60	-	
2	88	55	150	35	30	25	198	227	-	250	100	175	60	-	
3	63	100	150	35	45	25	210	223	-	-	-	-	-	-	
4	85	134	195	35	50	30	250	300	-	-	-	-	-	-	

## Cylindrical fuseholders



	Size 00, 0				Size 1			Size 2				
	1P	1P+N, 2P	3P	3P+N	1P	1P+N, 2P	3P	3P+N	1P	1P+N, 2P	3P	3P+N
A	18	36	54	72	27	54	81	108	33	66	99	132
B	80				99			106				
C	62				73			77				
D	42				52			54				
E	78,5				108			118				
F	3				4			4				

## NH Fuse switch disconnectors



	NH00C		NH00		NH1		NH2		NH3	
	3P	4P	1P	3P	1P	3P	4P	3P	3P	4P
A	89	41	84	150	71	185	256	205	256	331,5
B	22,5	-	42	33	-	57	57	65	80	80
C	-	-	-	42	-	-	71	-	-	-
D	141,5	-	184	-	-	238	-	251	-	288,5
E	74	-	84	-	-	110,5	-	130	148,9	153,9
F	44	-	48,5	-	-	65	-	80	93,5	98,5
G	175,5	-	205	-	-	287	-	306	352,5	357,5

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