

RAPIDPLUS

HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

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HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS



03

gR
CYL
fuse links



04

aR
CYL
fuse links



05

gS
NH
fuse links



07

aR
NH
fuse links

RAPIDPLUS

HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

CYL gR CYLINDRICAL fuse links

RAPIDPLUS gR fuse links are capable to clearing all types of overcurrents, overloads as well as short-circuits, thus the fuse links protect semiconductors as well as cables and all switchgear of installation. Typical application comprise protection of semiconductors (diodes, thyristors, triacs, etc) used in power rectifiers, UPS, converters, motor drives (AC and DC), soft starters, solid state relays, photovoltaic inverters, welding inverters and any application where it is necessary to protect semiconductor devices. UL certification according to UL248 standard. UL file Nr. E477155.

10x38

U 690V AC

BREAKING CAPACITY 200kA 30kA @440V DC

STANDARDS

In (A)	REFERENCE WITHOUT STRIKER	REFERENCE WITH STRIKER	PACKING Uni /BOX
1	492000		10/100
2	492001		10/100
3	492002		10/100
4	492003		10/100
6	492004		10/100
8	492005		10/100
10	492006		10/100
12	492007		10/100
16	492008		10/100
20	492009		10/100
25	492010		10/100
32	492011		10/100



14x51

U 690V AC

BREAKING CAPACITY 200kA 30kA @440V DC

STANDARDS

In (A)	REFERENCE WITHOUT STRIKER	REFERENCE WITH STRIKER	PACKING Uni /BOX
4	492014		10/50
6	492015		10/50
8	492016	492116	10/50
10	492017	492117	10/50
12	492018	492118	10/50
16	492019	492119	10/50
20	492020	492120	10/50
25	492021	492121	10/50
32	492022	492122	10/50
40	492023	492123	10/50
50	492024	492124	10/50



22x58

U 690V AC

BREAKING CAPACITY 200kA 30kA @440V DC

STANDARDS

In (A)	REFERENCE WITHOUT STRIKER	REFERENCE WITH STRIKER	PACKING Uni /BOX
20	492033	492133	10/50
25	492034	492134	10/50
32	492035	492135	10/50
40	492036	492136	10/50
50	492037	492137	10/50
63	492038	492138	10/50
80	492039	492139	10/50
100	492040	492140	10/50



STANDARDS

IEC/EN 60269-1
IEC/EN 60269-6
UL 248-1
UL 248-13

DIMENSIONS

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PAGE 11 (14x51)
PAGE 13 (22x58)

t-I | CUT-OFF CHARACTERISTICS

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PAGE 14 (22x58)

USE IN PMX MODULAR FUSE HOLDERS

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RAPIDPLUS

HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

CYL aR CYLINDRICAL fuse links

RAPIDPLUS aR fuse links are intended to clearing short-circuits and have been designed and manufactured to have very low I^2t values as well as reduced arc voltages that guarantee an optimum protection of semiconductors. They have a very good cycling ability. Made of ceramic tubes with high withstand to internal pressure and thermal shock, and silver plated copper contacts. Typical application comprise protection of semiconductors (diodes, thyristors, triacs, etc) used in power rectifiers, UPS, converters, motor drives (AC and DC), soft starters, solid state relays, photovoltaic inverters, welding inverters and any application where it i necessary to protect semiconductor devices. UL certification according to UL248 standard. UL file Nr. E477155.

10x38

U	690V AC
BREAKING CAPACITY	200kA 30kA @700V DC
STANDARDS	

In (A)	REFERENCE WITHOUT STRIKER	REFERENCE WITH STRIKER	PACKING Uni /BOX
1	491105		10/100
2	491107		10/100
3	491100		10/100
4	491113		10/100
6	491115		10/100
8	491120		10/100
10	491125		10/100
12	491130		10/100
16	491135		10/100
20	491140		10/100
25	491145		10/100
32	491155		10/100



14x51

U	690V AC
BREAKING CAPACITY	200kA 30kA @700V DC
STANDARDS	

In (A)	REFERENCE WITHOUT STRIKER	REFERENCE WITH STRIKER	PACKING Uni /BOX
4	491215		10/50
6	491225		10/50
8	491230	491730	10/50
10	491235	491735	10/50
12	491237	491737	10/50
16	491241	491741	10/50
20	491245	491745	10/50
25	491250	491750	10/50
32	491260	491760	10/50
40	491265	491765	10/50
50	491270	491770	10/50



22x58

U	690V AC
BREAKING CAPACITY	200kA 30kA @700V DC
STANDARDS	

In (A)	REFERENCE WITHOUT STRIKER	REFERENCE WITH STRIKER	PACKING Uni /BOX
20	491300	491800	10/50
25	491305	491805	10/50
32	491310	491810	10/50
40	491315	491815	10/50
50	491320	491820	10/50
63	491325	491825	10/50
80	491330	491830	10/50
100	491335	491835	10/50



STANDARDS

IEC/EN 60269-1
IEC/EN 60269-6
UL 248-1
UL 248-13

DIMENSIONS

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t-I | CUT-OFF CHARACTERISTICS

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USE IN PMX MODULAR FUSE HOLDERS

PAGE 37

RAPIDPLUS

HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

NH gS NH fuse links

RAPIDPLUS NH gS fuse links are capable to clearing all types of overcurrents, overloads as well as short-circuits, thus the fuse links protect semiconductors as well as cables and all switchgear of installation. They are optimized to have reduced power dissipations that allow the utilization of a wide range of fuse-bases and fuse-switch disconnectors. RAPIDPLUS NH gS range comprise five sizes NH000, NH00, NH1, NH2 and NH3 with rated currents between 20A and 630A and a rated voltage of 690V AC. Typical application comprise protection of semiconductors (diodes, thyristors, triacs, etc) used in power rectifiers, UPS, converters, motor drives, soft starters, solid state relays, photovoltaic inverters, welding inverters and any application where it is necessary to protect semiconductor devices.

NH000

U **690V AC**

BREAKING CAPACITY **100kA** 30kA @440V DC

In (A)	REFERENCE	PACKING Uni /BOX
20	**371025**	3/90
25	**371030**	3/90
32	**371035**	3/90
40	**371045**	3/90
50	**371050**	3/90
63	**371055**	3/90
80	**371060**	3/90
100	**371065**	3/90



NH00

U **690V AC**

BREAKING CAPACITY **100kA** 30kA @440V DC

125	**371070**	3/60
160	**371075**	3/60



NH1

U **690V AC**

BREAKING CAPACITY **100kA** 30kA @550V DC

125	**371250**	3/30
160	**371255**	3/30
200	**371260**	3/30
250	**371270**	3/30
280	**371273**	3/30



STANDARDS

IEC/EN 60269-1
IEC/EN 60269-4

DIMENSIONS

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PAGE 23 NH1

t-I | CUT-OFF CHARACTERISTICS

PAGE 22 NH000 NH00
PAGE 24 NH1

RAPIDPLUS

HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

NH gS NH fuse links

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NH2

U	690V AC
BREAKING CAPACITY	100kA 30kA @550V DC

250	**371360**	3/18
315	**371370**	3/18
355	**371375**	3/18
400	**371380**	3/18
450	**371387**	3/18



NH3

U	690V AC
BREAKING CAPACITY	100kA 30kA @550V DC

355	**371450**	1/15
400	**371455**	1/15
450	**371463**	1/15
500	**371465**	1/15
630	**371470**	1/15



STANDARDS

IEC/EN 60269-1
IEC/EN 60269-4

DIMENSIONS

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PAGE 27 NH3

t-I | CUT-OFF CHARACTERISTICS

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PAGE 28 NH3

RAPIDPLUS

HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

NH aR NH fuse links

RAPIDPLUS NH aR fuse-links have a very low I^2t values thanks to the special melting elements design, manufactured with pure silver. The sand is solidified in order to have a good arcing control, high breaking capacity and excellent capability for cyclic loads. These fuse-links have a trip indicator that can be used as a visual indication or can be equipped with a microswitch mounted directly on the fuse-link. Typical application comprise protection of semiconductors (diodes, thyristors, triacs, etc) used in power rectifiers, UPS, converters, motor drives, soft starters, solid state relays, photovoltaic inverters, welding inverters and any application where it is necessary to protect power semiconductor devices.

NH000

U **690V AC**

BREAKING CAPACITY **120kA** **30kA @440V DC**

In (A)	REFERENCE	PACKING Uni /BOX
16	**365020**	3/90
20	**365025**	3/90
25	**365030**	3/90
32	**365035**	3/90
40	**365045**	3/90
50	**365050**	3/90
63	**365055**	3/90
80	**365060**	3/90
100	**365065**	3/90
125	**365070**	3/90
160	**365075**	3/90
200	**365080**	3/90
250	**365085**	3/90



NH1

U **690V AC**

BREAKING CAPACITY **120kA** **30kA @550V DC**

In (A)	REFERENCE	PACKING Uni /BOX
40	**365225**	3/30
50	**365230**	3/30
63	**365235**	3/30
80	**365240**	3/30
100	**365245**	3/30
125	**365250**	3/30
160	**365255**	3/30
200	**365260**	3/30
250	**365270**	3/30
315	**365280**	3/30
350	**365282**	3/30
400	**365290**	3/30



STANDARDS

IEC/EN 60269-1
IEC/EN 60269-4

DIMENSIONS

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PAGE 31 (NH1)

t-I | CUT-OFF CHARACTERISTICS

PAGE 30 (NH000)
PAGE 32 (NH1)

FUSE LOAD CONSTANT C_L

PAGE 38

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HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

NH aR NH fuse links

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NH2

U **690V AC**

BREAKING CAPACITY **120kA** 30kA @550V DC

200	**365350**	3/18
250	**365360**	3/18
315	**365370**	3/18
350	**365372**	3/18
400	**365380**	3/18
450	**365387**	3/18
500	**365390**	3/18
550	**365392**	3/18
630	**365395**	3/18
700	**365397**	3/18



NH3

U **690V AC**

BREAKING CAPACITY **120kA** 30kA @550V DC

500	**365465**	1/15
550	**365467**	1/15
630	**365470**	1/15
700	**365472**	1/15
800	**365475**	1/15
900	**365480**	1/15
1000	**365485**	1/15



STANDARDS

IEC/EN 60269-1
IEC/EN 60269-4

DIMENSIONS

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PAGE 35 NH3

t-I | CUT-OFF CHARACTERISTICS

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FUSE LOAD CONSTANT C_L

PAGE 38

RAPIDPLUS

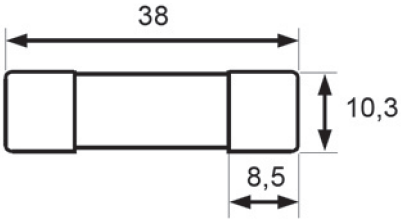
HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

CYL 10x38 | gR CYLINDRICAL fuse links

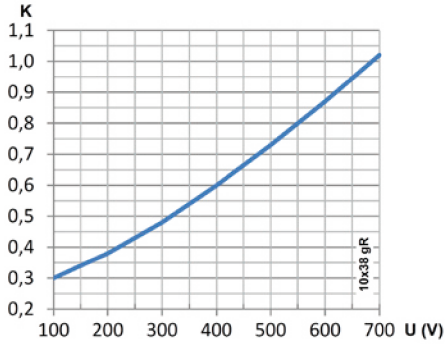
RATED VOLTAGE	RATED CURRENT	BREAKING CAPACITY
690V AC	1A...32A	200kA (690V AC)
		30kA (440V DC)



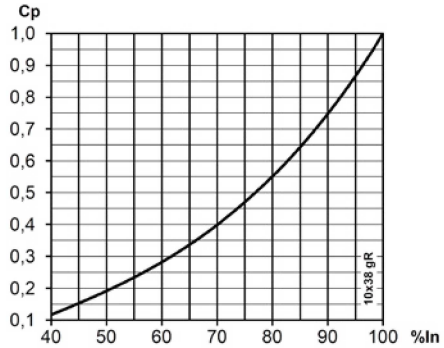
DIMENSIONS



I²t CORRECTION FACTOR (K)



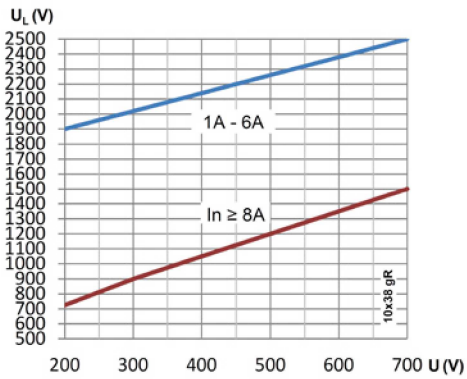
CORRECTION FACTOR FOR POWER LOSS (Cp)



POWER DISSIPATION

I_n	I^2t PREARCING	OPERATING I^2t @690V	POWER LOSS 0.8 · I_n	POWER LOSS I_n
(A)	(A^2S)	(A^2S)	(W)	(W)
1	0,20	1,2	0,45	0,75
2	0,80	2,6	0,75	1,40
3	2,5	8,0	0,95	1,70
4	5,6	17	1,13	2,05
6	16,0	48	1,56	3,00
8	4,3	38	0,97	1,68
10	6,6	59	1,20	2,09
12	9,6	84	1,69	2,99
16	17,0	150	2,31	4,27
20	23,5	200	2,86	5,35
25	60,2	512	2,94	5,52
32	94,0	800	3,82	7,43

PEAK ARC VOLTAGE (U_L)

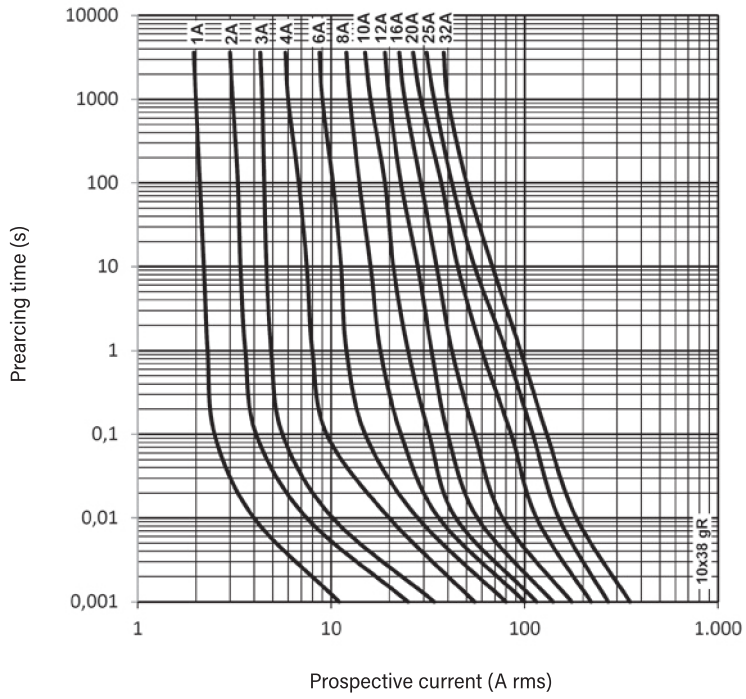


RAPIDPLUS

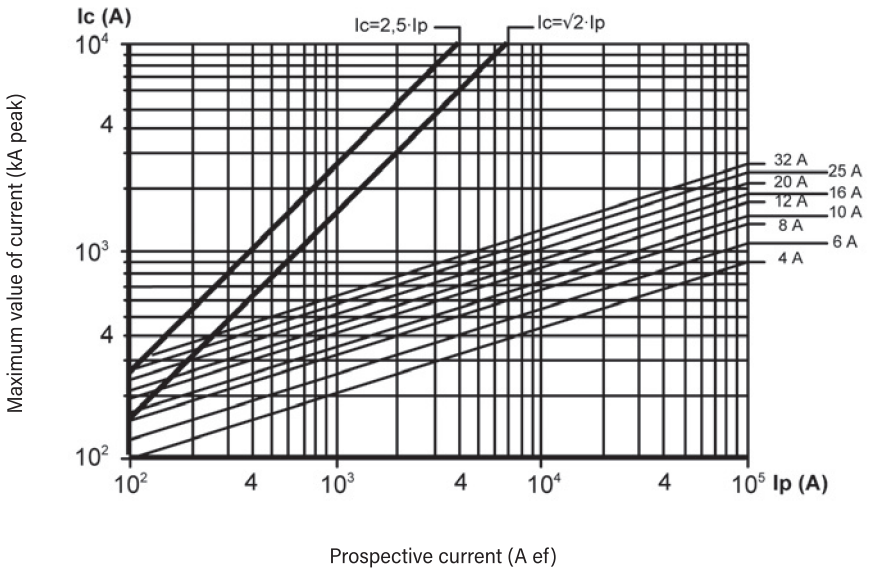
HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

CYL 10x38 **gR** CYLINDRICAL fuse links

t-I CHARACTERISTICS



CUT-OFF CHARACTERISTICS



RAPIDPLUS

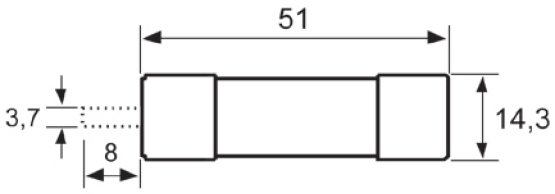
HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

CYL 14x51 | gR CYLINDRICAL fuse links

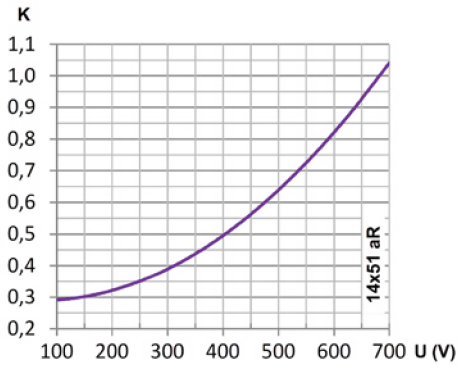


RATED VOLTAGE	RATED CURRENT	BREAKING CAPACITY
690V AC	4A...50A	200kA (690V AC)
		30kA (700V DC)

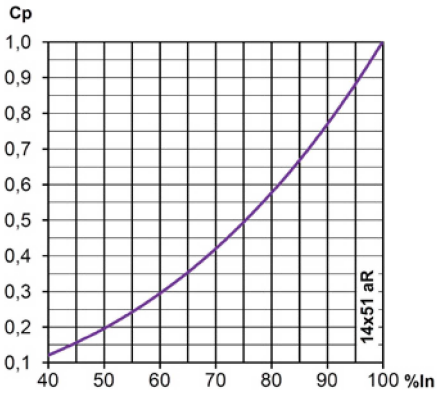
DIMENSIONS



I²t CORRECTION FACTOR (K)



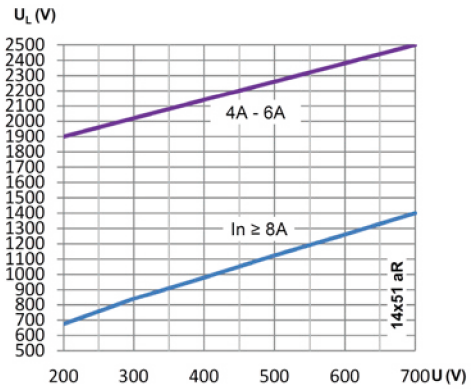
CORRECTION FACTOR FOR POWER LOSS (Cp)



POWER DISSIPATION

I_n	I^2t PREARCING	OPERATING I^2t @690V	POWER LOSS 0.8 · I_n	POWER LOSS I_n
(A)	(A^2S)	(A^2S)	(W)	(W)
4	5,6	17	1,56	2,94
6	16,0	48	2,25	4,20
8	3,8	30	1,18	2,00
10	5,9	47	1,41	2,52
12	8,4	68	1,95	3,54
16	15	120	2,67	4,83
20	27	170	2,91	5,40
25	53	333	3,38	6,00
32	108	679	3,72	6,93
40	211	1331	4,13	7,52
50	350	2200	5,36	9,80

PEAK ARC VOLTAGE (U_L)

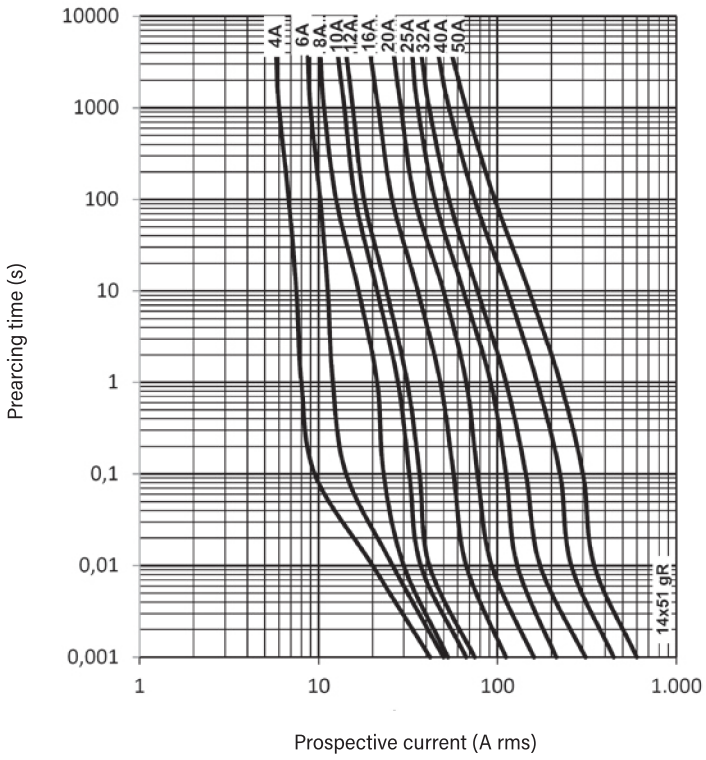


RAPIDPLUS

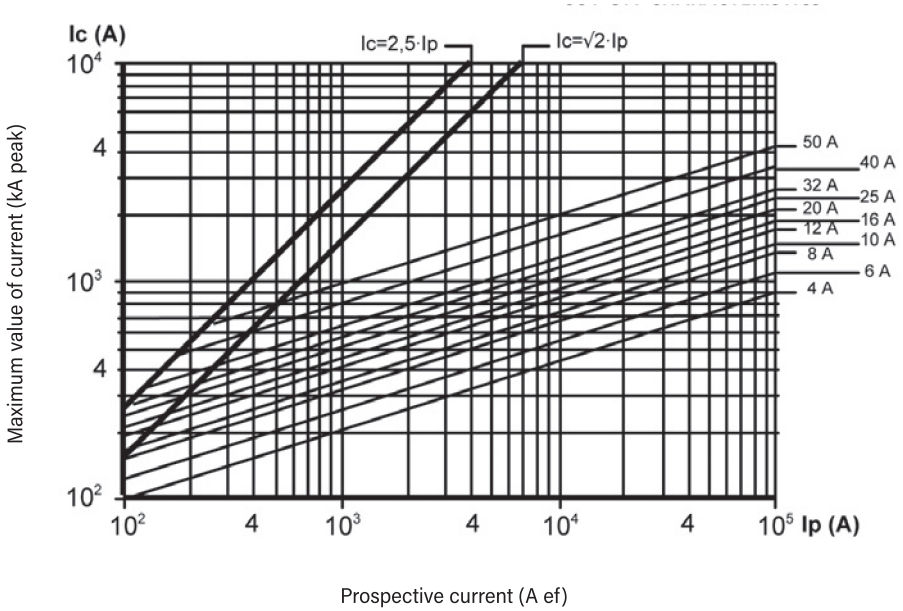
HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

CYL 14x51 **gR** CYLINDRICAL fuse links

t-I CHARACTERISTICS



CUT-OFF CHARACTERISTICS



RAPIDPLUS

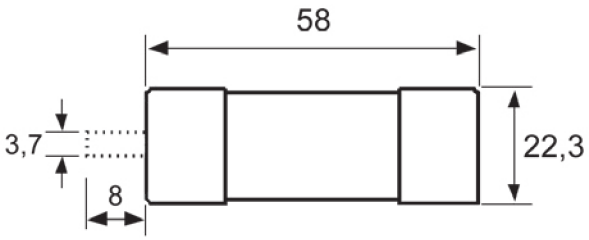
HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

CYL 22x58 **gR** CYLINDRICAL fuse links

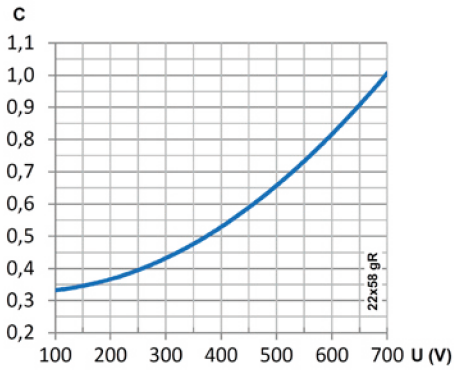


RATED VOLTAGE	RATED CURRENT	BREAKING CAPACITY
690V AC	20A...100A	200kA (690V AC)
		30kA (700V DC)

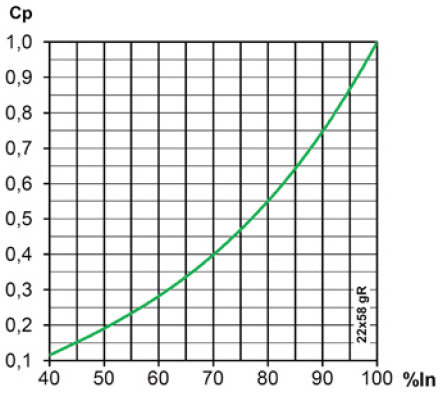
DIMENSIONS



I²t CORRECTION FACTOR (K)



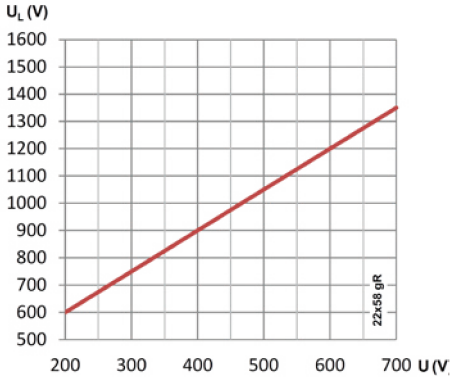
CORRECTION FACTOR FOR POWER LOSS (Cp)



POWER DISSIPATION

I_n	I^2t PREARCING	OPERATING I^2t @690V	POWER LOSS 0.8 · I_n	POWER LOSS I_n
(A)	(A^2S)	(A^2S)	(W)	(W)
20	19	103	3,00	5,25
25	34	182	3,40	5,85
32	60	324	4,50	8,20
40	94	506	6,10	10,80
50	158	856	7,50	13,70
63	375	2025	7,70	14,00
80	634	3422	9,65	17,60
100	1500	8100	10,30	18,00

PEAK ARC VOLTAGE (U_L)

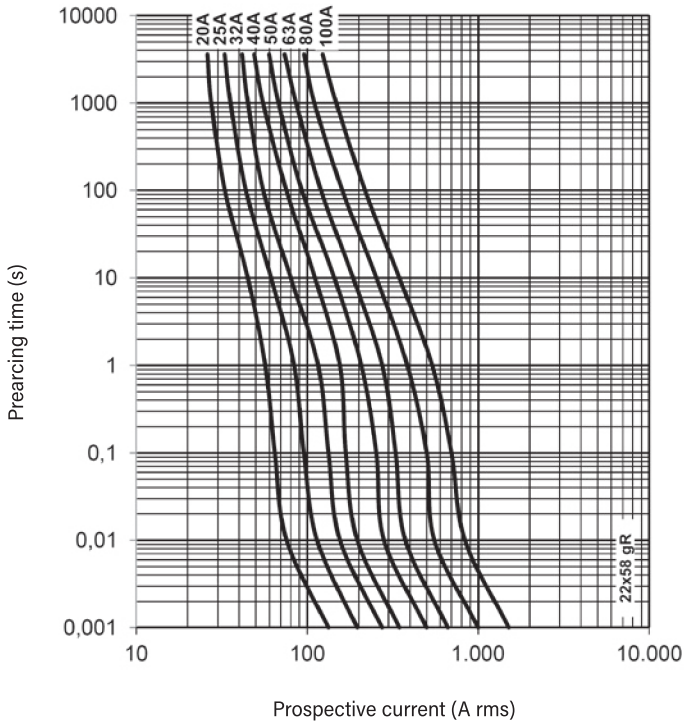


RAPIDPLUS

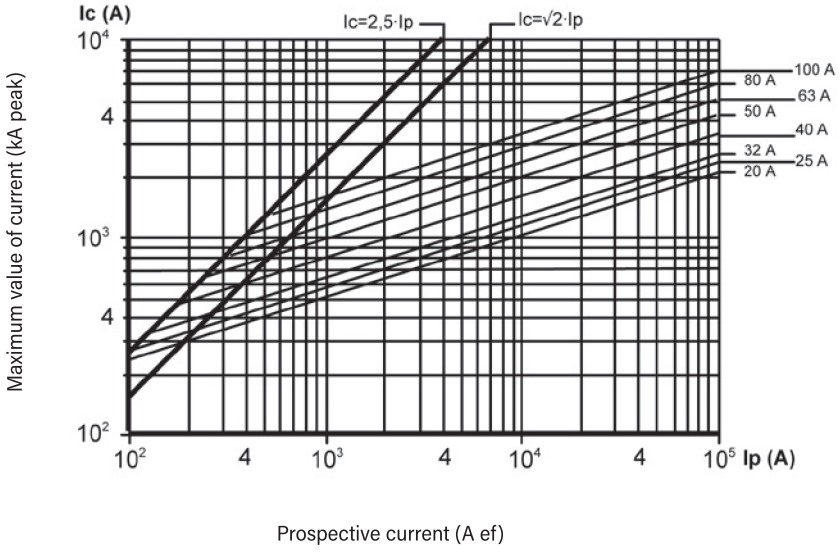
HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

CYL 22x58 gR CYLINDRICAL fuse links

t-I CHARACTERISTICS



CUT-OFF CHARACTERISTICS



RAPIDPLUS

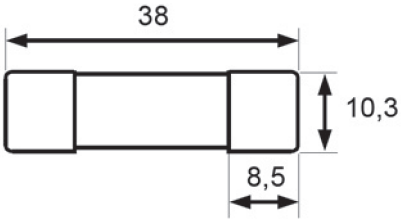
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CYL 10x38 **aR** CYLINDRICAL fuse links

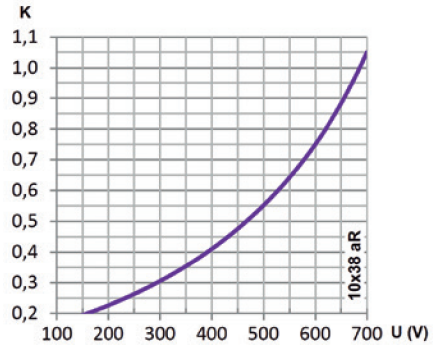


RATED VOLTAGE	RATED CURRENT	BREAKING CAPACITY
690V AC	1A...32A	200kA (690V AC)
		30kA (700V DC)

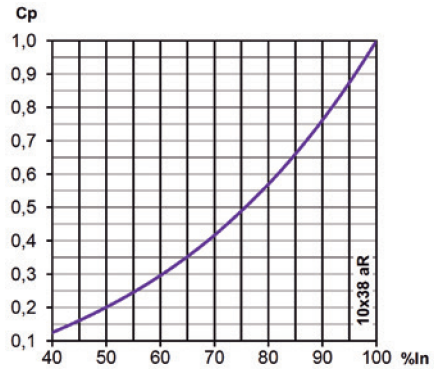
DIMENSIONS



I²t CORRECTION FACTOR (K)



CORRECTION FACTOR FOR POWER LOSS (Cp)

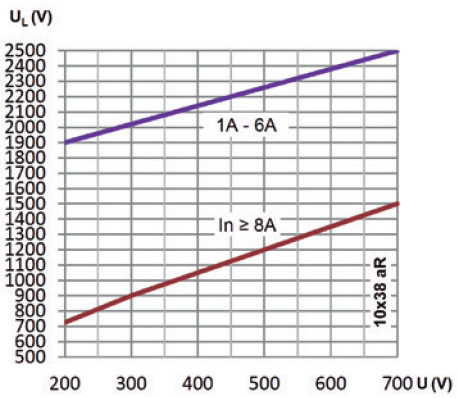


POWER DISSIPATION

I_n	I^2t PREARCING	OPERATING I^2t @690V	POWER LOSS 0.8 · I_n	POWER LOSS I_n
(A)	(A^2S)	(A^2S)	(W)	(W)
1*	0,20	1,2	0,45	0,75
2	0,80	2,6	0,75	1,40
3	2,5	8,0	0,95	1,70
4	4,9	10	0,97	1,69
6	14,0	28	1,4	2,46
8	3,0	24	0,91	1,52
10	4,7	38	1,23	2,07
12	6,8	54	1,53	2,62
16	12,0	96	2,11	3,72
20	18,8	150	2,57	4,50
25	48,0	384	2,60	4,55
32	75,0	600	3,65	6,65

* not UL certified

PEAK ARC VOLTAGE (U_L)

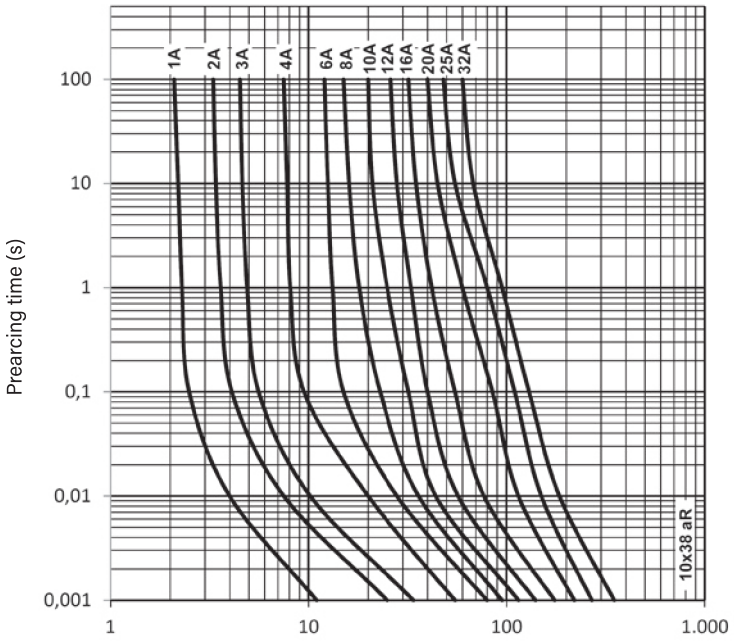


RAPIDPLUS

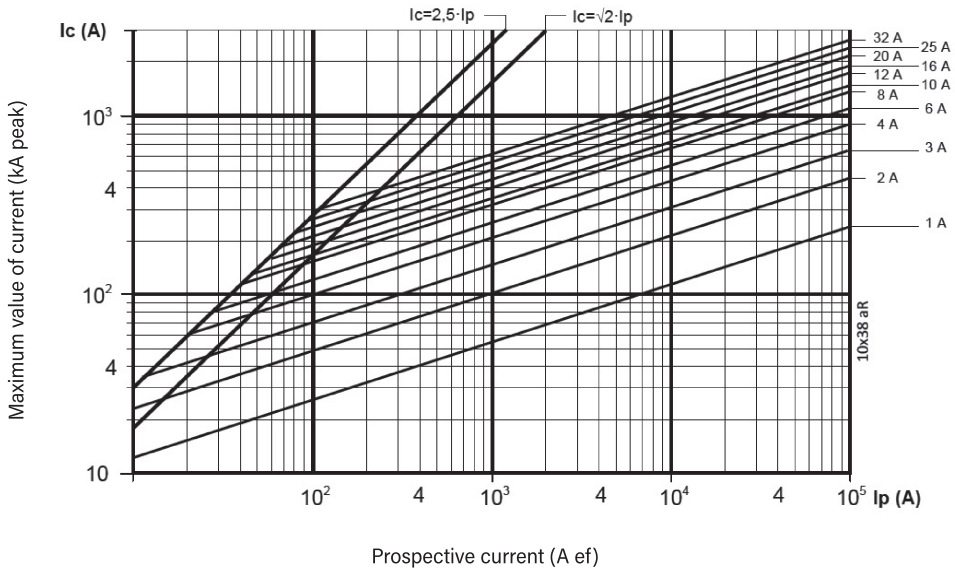
HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

CYL 10x38 aR CYLINDRICAL fuse links

t-I CHARACTERISTICS



CUT-OFF CHARACTERISTICS



RAPIDPLUS

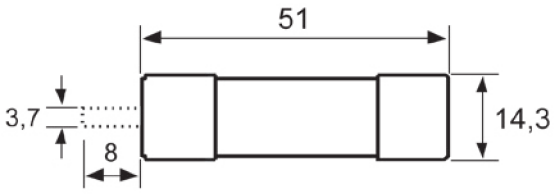
HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

CYL 14x51 | aR CYLINDRICAL fuse links

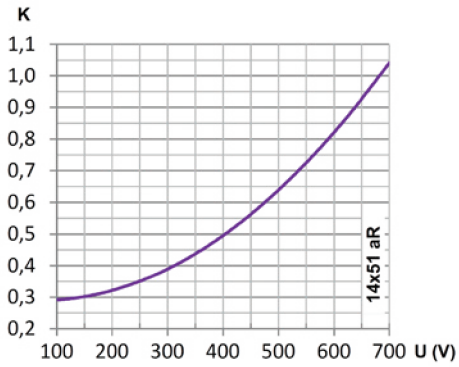


RATED VOLTAGE	RATED CURRENT	BREAKING CAPACITY
690V AC	4A...50A	200kA (690V AC)
		30kA (700V DC)

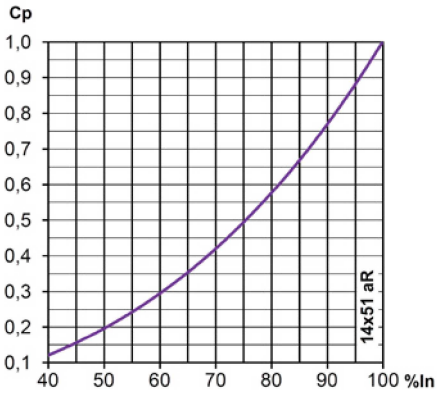
DIMENSIONS



I²t CORRECTION FACTOR (K)



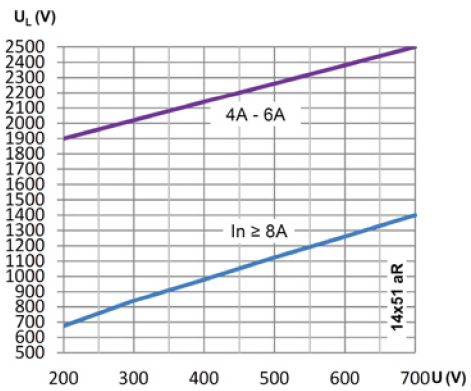
CORRECTION FACTOR FOR POWER LOSS (Cp)



POWER DISSIPATION

I_n (A)	I^2t PREARCING (A^2S)	OPERATING I^2t @690V (A^2S)	POWER LOSS 0.8 · I_n (W)	POWER LOSS I_n (W)
4	5,6	14	1,32	2,28
6	16,0	40	1,80	3,18
8	4,1	23	1,01	1,69
10	6,3	37	1,39	2,36
12	9,1	53	1,63	2,78
16	12,4	72	2,43	4,16
20	20,6	119	3,04	5,43
25	36,6	211	3,75	6,11
32	82,3	475	3,92	7,17
40	146,3	844	4,52	8,15
50	260,0	1500	5,60	10,6

PEAK ARC VOLTAGE (U_L)

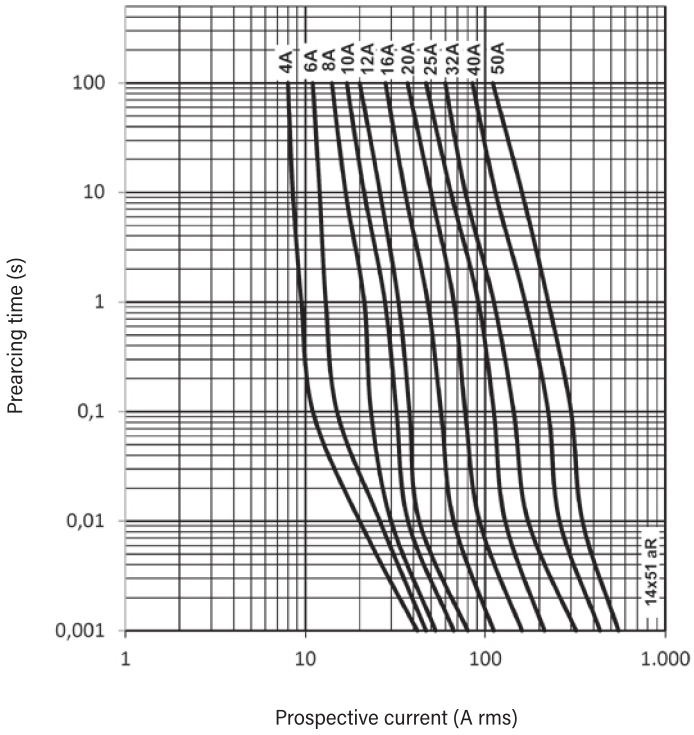


RAPIDPLUS

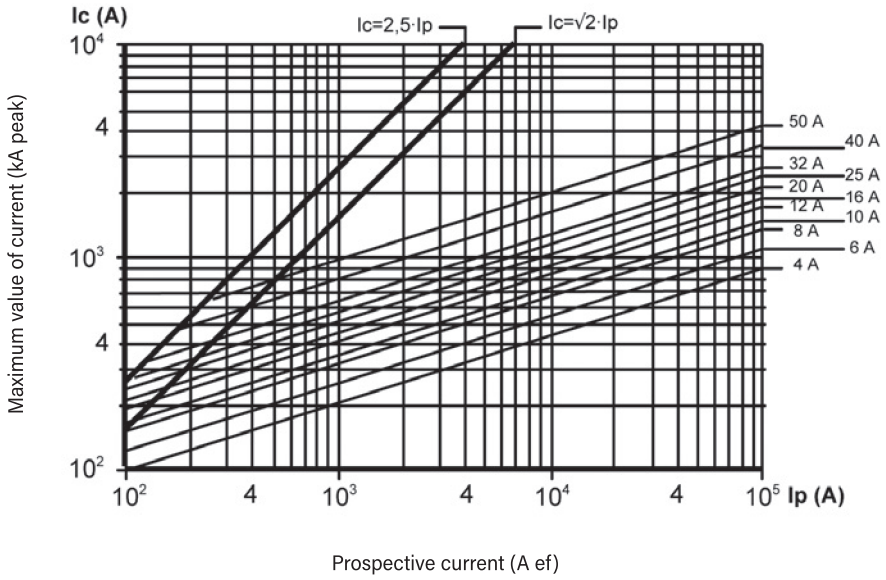
HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

CYL 14x51 aR CYLINDRICAL fuse links

t-I CHARACTERISTICS



CUT-OFF CHARACTERISTICS



RAPIDPLUS

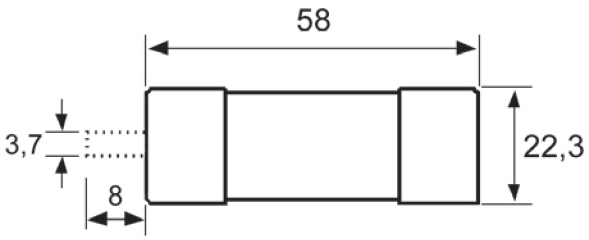
HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

CYL 22x58 **aR** CYLINDRICAL fuse links

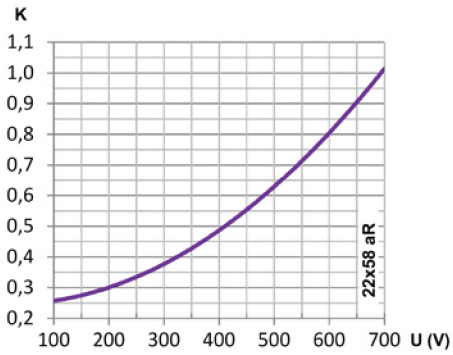


RATED VOLTAGE	RATED CURRENT	BREAKING CAPACITY
690V AC	20A...100A	200kA (690V AC)
		30kA (700V DC)

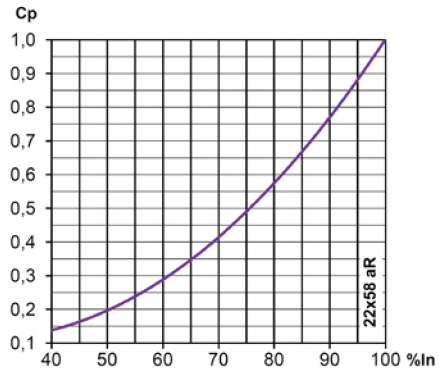
DIMENSIONS



I²t CORRECTION FACTOR (K)



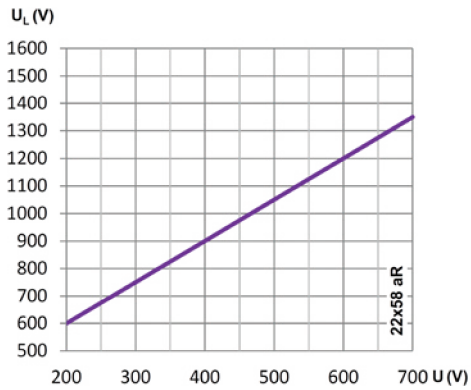
CORRECTION FACTOR FOR POWER LOSS (Cp)



POWER DISSIPATION

I_n	I^2t PREARCING	OPERATING I^2t @690V	POWER LOSS 0.8 · I_n	POWER LOSS I_n
(A)	(A^2S)	(A^2S)	(W)	(W)
20	19	103	3,00	5,25
25	34	182	3,40	5,85
32	60	324	4,50	8,20
40	94	506	6,10	10,80
50	158	856	7,50	13,70
63	375	2025	7,70	14,00
80	634	3422	9,65	17,60
100	1500	8100	10,30	18,00

PEAK ARC VOLTAGE (U_L)

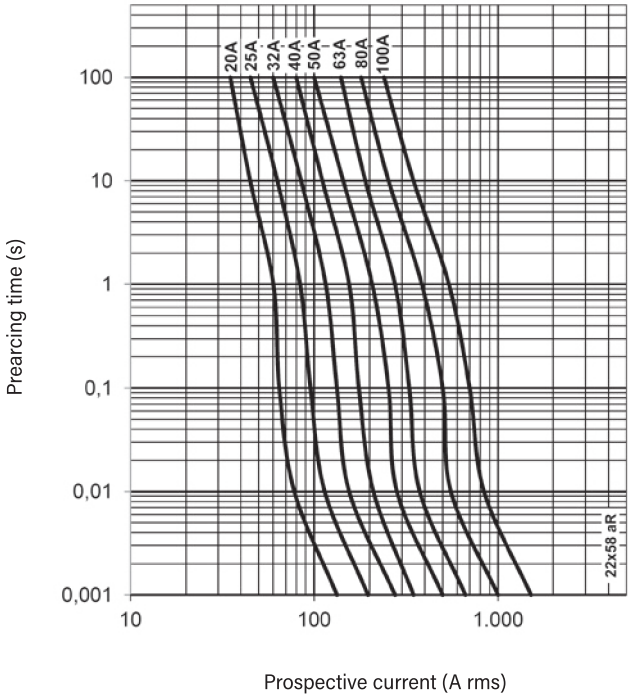


RAPIDPLUS

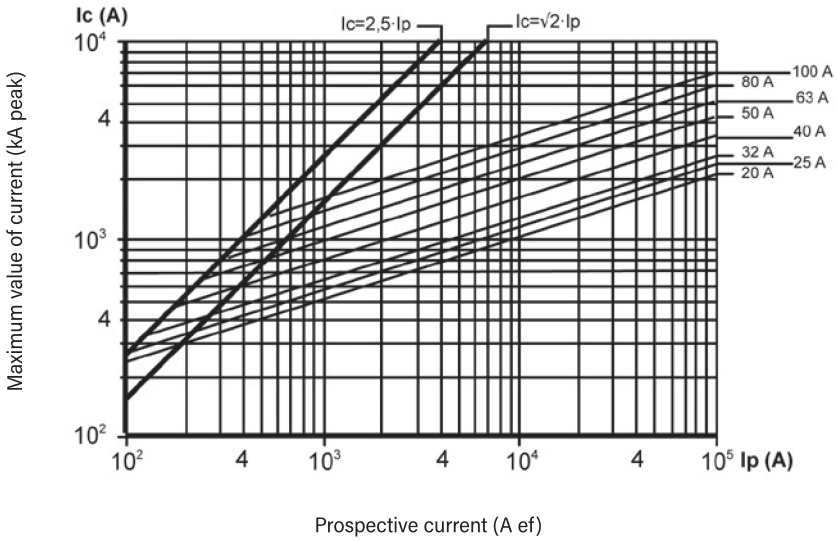
HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

CYL 22x58 aR CYLINDRICAL fuse links

t-I CHARACTERISTICS



CUT-OFF CHARACTERISTICS



RAPIDPLUS

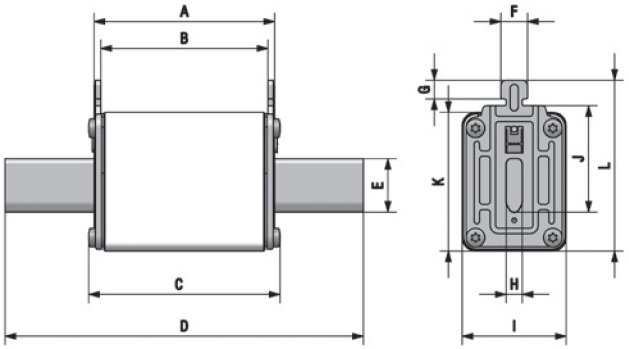
HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

NH NH000 NH00 | gS NH fuse links



RATED VOLTAGE	RATED CURRENT	BREAKING CAPACITY
690V AC	20A...160A	100kA (690V AC)
		30kA (440V DC)

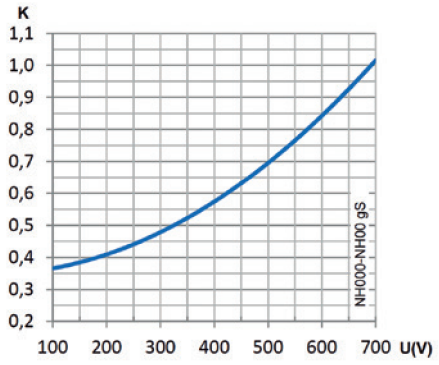
DIMENSIONS



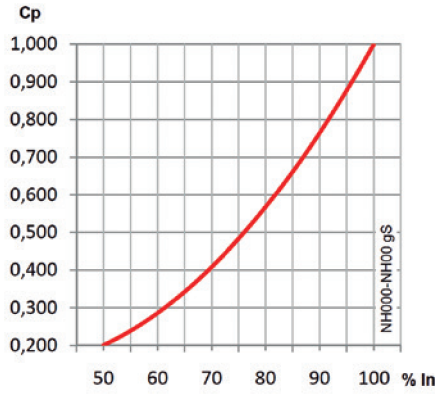
	A	B	C	D	E	F	G	H	I	J	K	L
NH000	49	45	52	78,5	15	10	9,5	6	21	35	40	53
NH00*	49	44	52	78,5	15	10	9,5	6	29	35	47	59

* only available in gS semiconductor fuse links

I²t CORRECTION FACTOR (K)



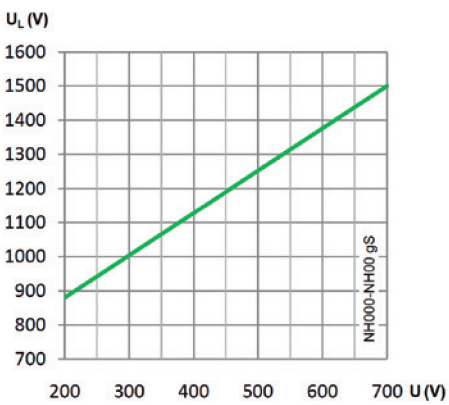
CORRECTION FACTOR FOR POWER LOSS (Cp)



POWER DISSIPATION

	I_n (A)	I^2t PREARCING (A^2S)	OPERATING I^2t @690V (A^2S)	POWER LOSS 0.8 · I_n (W)	POWER LOSS I_n (W)
NH000	**20**	31	116	2,9	5,1
	25	49	181	3,2	5,6
	32	96	355	3,9	6,6
	40	196	724	4,2	7,2
	50	331	1.224	5,1	8,5
	63	782	2.897	5,3	9,1
	80	1.420	5.270	6,3	11,0
	100	2.130	7.880	7,6	13,3
NH00	**125**	3.380	11.550	8,3	14,7
	160	6.400	21.840	10,5	18,2

PEAK ARC VOLTAGE (U_L)

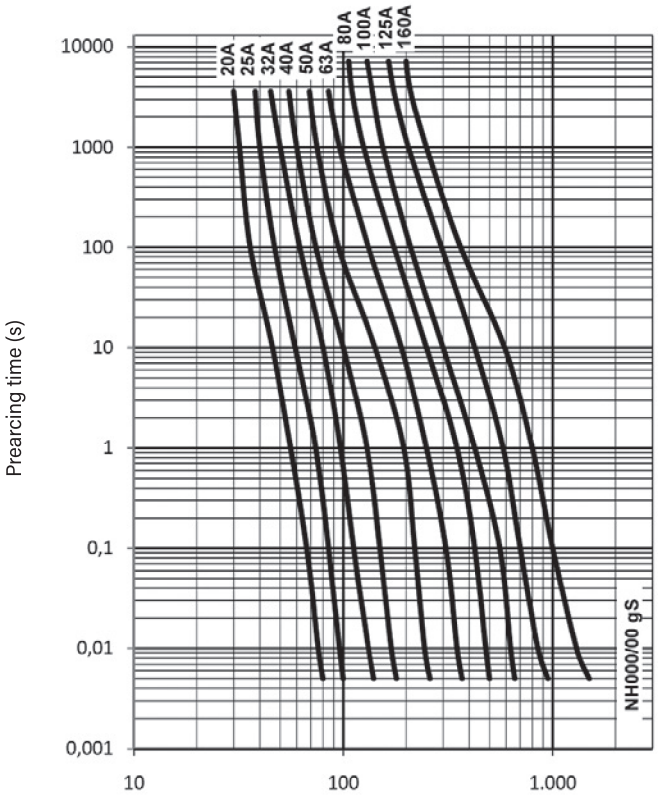


RAPIDPLUS

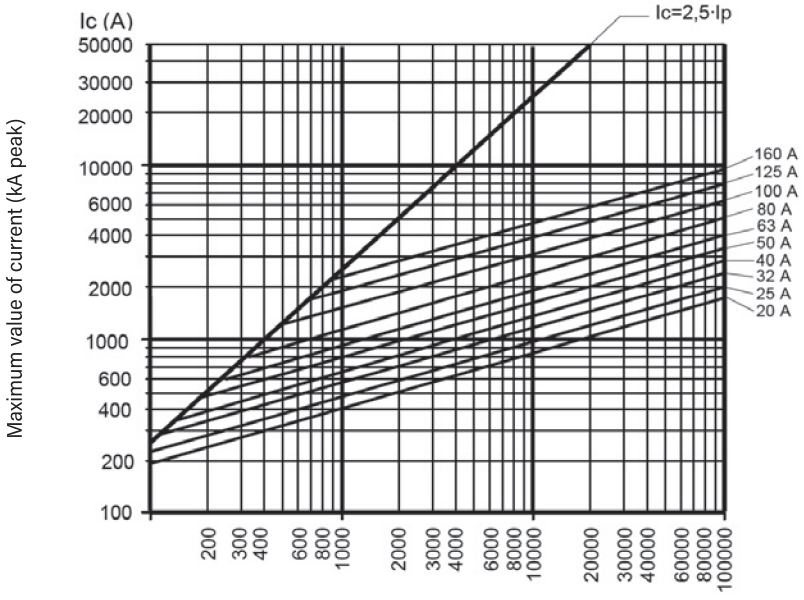
HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

NH NH000 NH00 | gS NH fuse links

t-I CHARACTERISTICS



CUT-OFF CHARACTERISTICS



RAPIDPLUS

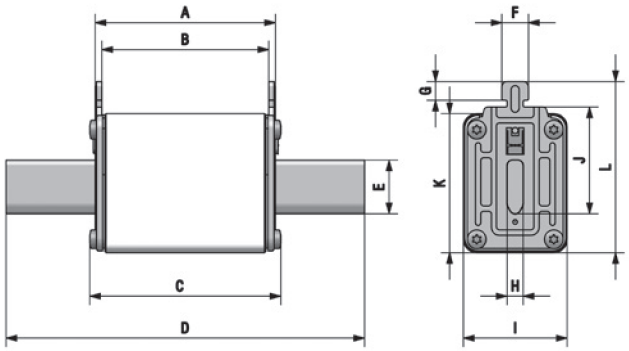
HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

NH NH1 gS NH fuse links

RATED VOLTAGE	RATED CURRENT	BREAKING CAPACITY
690V AC	125A...280A	100kA (690V AC)
		30kA (550V DC)

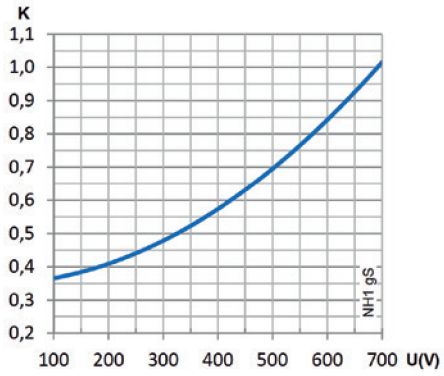


DIMENSIONS

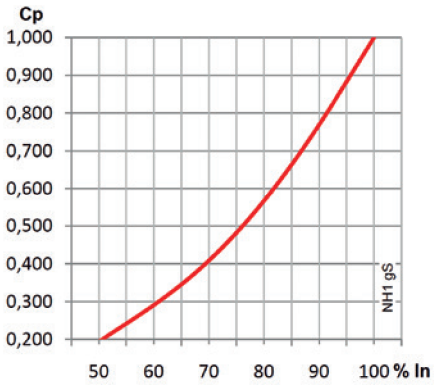


A	B	C	D	E	F	G	H	I	J	K	L
68	62	71,5	135	20	10	9,5	6	39	40	52	64

I²t CORRECTION FACTOR (K)



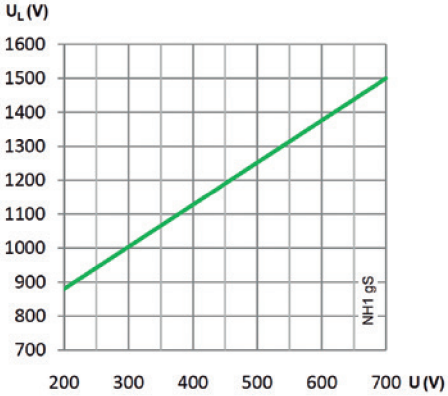
CORRECTION FACTOR FOR POWER LOSS (Cp)



POWER DISSIPATION

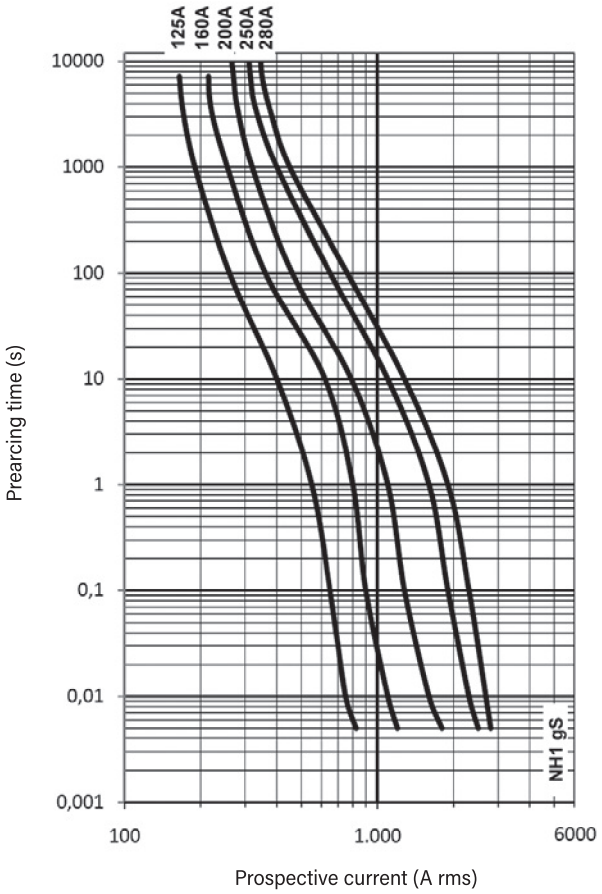
I_n	I^2t PREARCING	OPERATING I^2t @690V	POWER LOSS $0.8 \cdot I_n$	POWER LOSS I_n
(A)	(A^2S)	(A^2S)	(W)	(W)
125	3.800	11.680	10,7	19,7
160	6.290	19.300	14,5	25,3
200	13.120	40.280	16,1	28,6
250	25.160	77.230	19,5	33,2
280	37.590	115.370	20,1	35,7

PEAK ARC VOLTAGE (U_L)

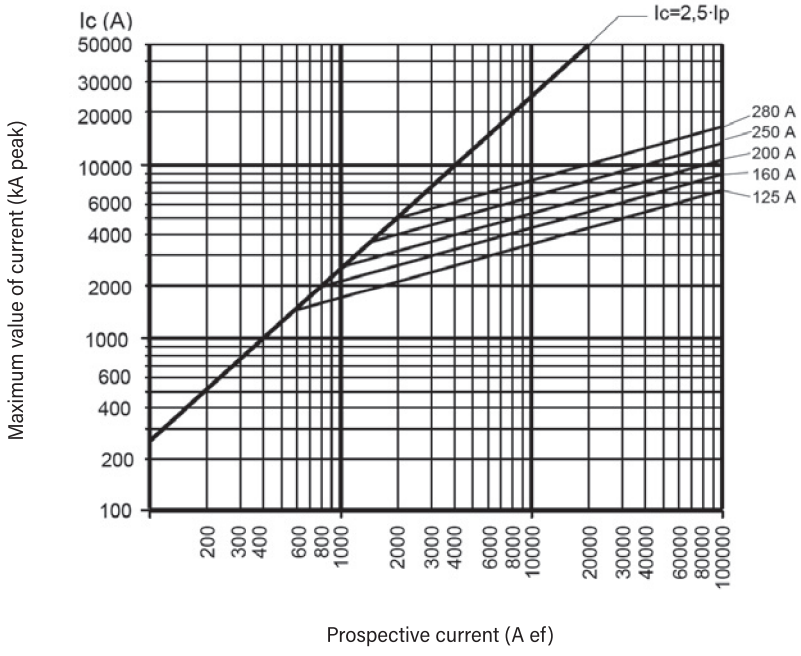


NH NH1 gS NH fuse links

t-I CHARACTERISTICS



CUT-OFF CHARACTERISTICS



RAPIDPLUS

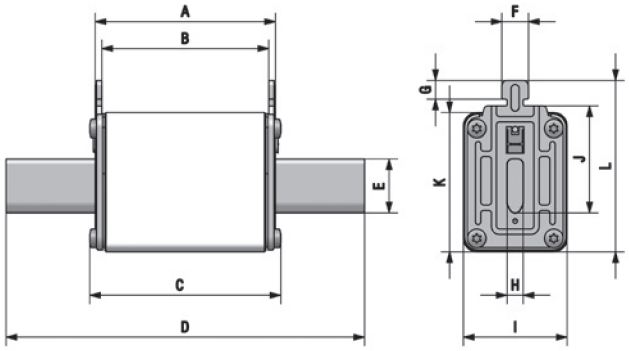
HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

NH NH2 gS NH fuse links

RATED VOLTAGE	RATED CURRENT	BREAKING CAPACITY
690V AC	250A...450A	100kA (690V AC)
		30kA (550V DC)

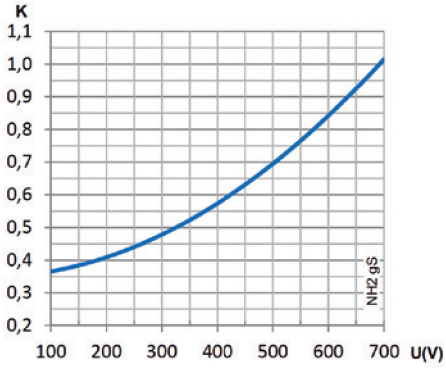


DIMENSIONS

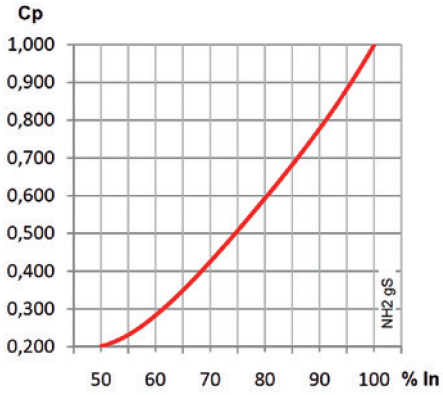


A	B	C	D	E	F	G	H	I	J	K	L
68	62	71,5	150	25	10	9,5	6	53	48	60	72

I²t CORRECTION FACTOR (K)



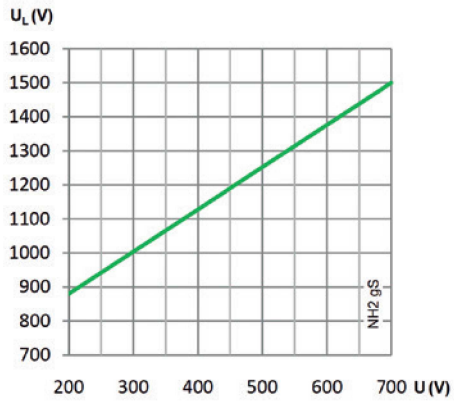
CORRECTION FACTOR FOR POWER LOSS (Cp)



POWER DISSIPATION

I_n	I^2t PREARCING	OPERATING I^2t @690V	POWER LOSS 0.8 · I_n	POWER LOSS I_n
(A)	(A^2S)	(A^2S)	(W)	(W)
250	24.280	74.460	18,6	32,2
315	50.660	155.360	20,8	35,8
355	67.450	206.850	23,4	40,1
400	100.770	309.000	24,4	42,6
450	140.740	431.580	33,9	47,2

PEAK ARC VOLTAGE (U_L)

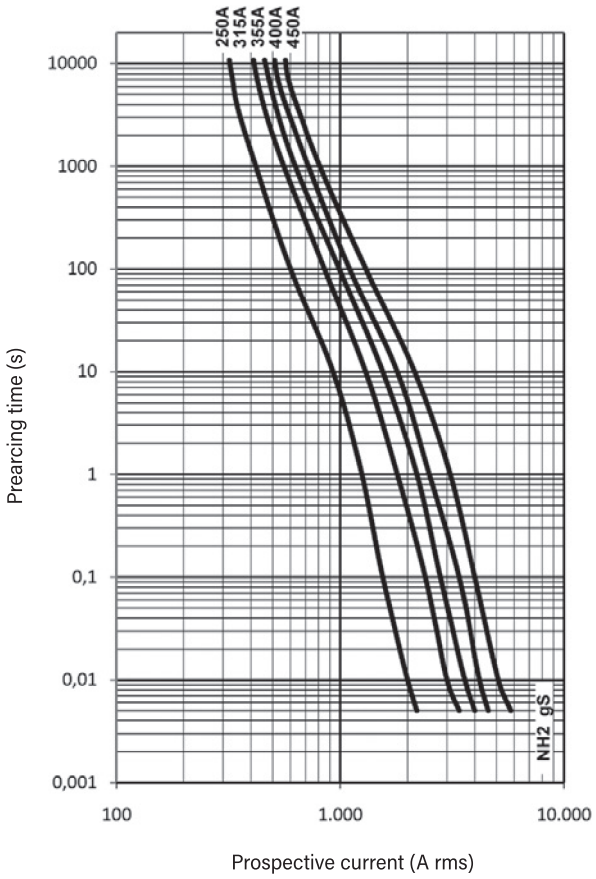


RAPIDPLUS

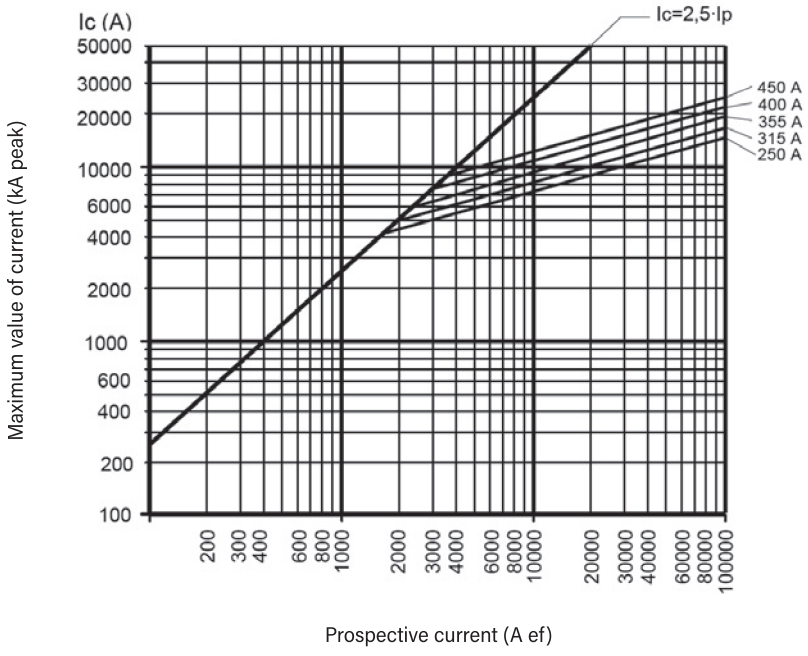
HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

NH NH2 gS NH fuse links

t-I CHARACTERISTICS



CUT-OFF CHARACTERISTICS



RAPIDPLUS

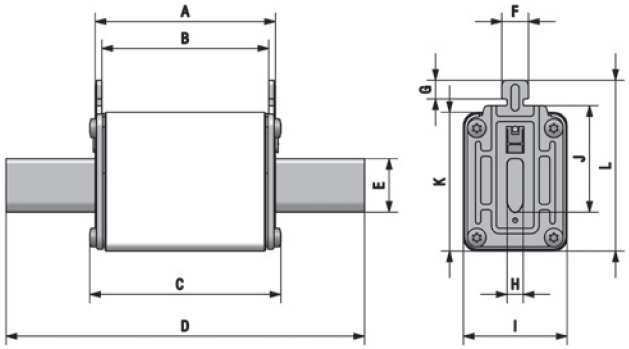
HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

NH NH3 gS NH fuse links

RATED VOLTAGE	RATED CURRENT	BREAKING CAPACITY
690V AC	355A...630A	100kA (690V AC)
		30kA (550V DC)

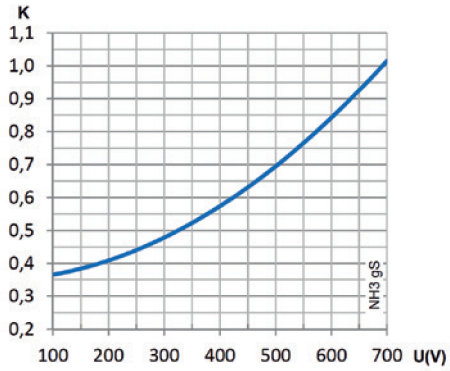


DIMENSIONS

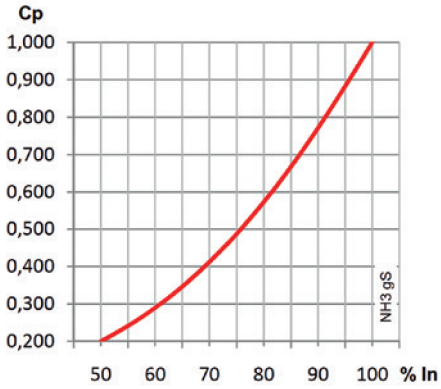


A	B	C	D	E	F	G	H	I	J	K	L
68	62	73	150	32	10	9,5	6	70	60	75	87

I²t CORRECTION FACTOR (K)



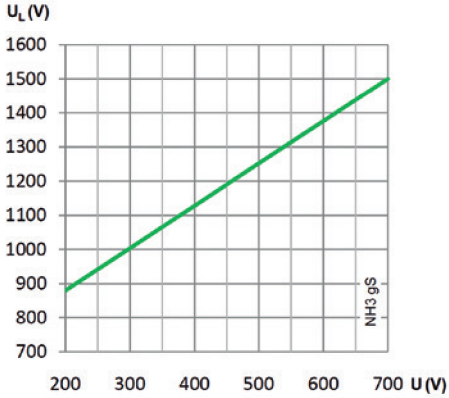
CORRECTION FACTOR FOR POWER LOSS (Cp)



POWER DISSIPATION

I_n	I^2t PREARCING	OPERATING I^2t @690V	POWER LOSS 0.8 · I_n	POWER LOSS I_n
(A)	(A^2S)	(A^2S)	(W)	(W)
355	54.240	151.700	22,7	39,6
400	75.760	211.900	24,3	42,7
450	114.770	320.970	26,3	46,0
500	165.270	462.200	27,6	47,1
630	303.060	847.570	34,3	60,4

PEAK ARC VOLTAGE (U_L)

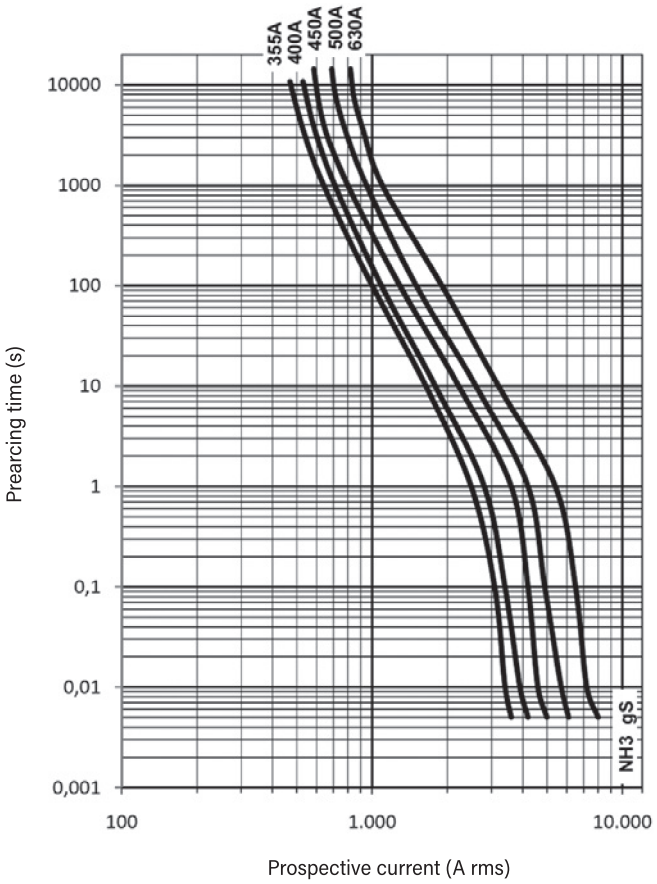


RAPIDPLUS

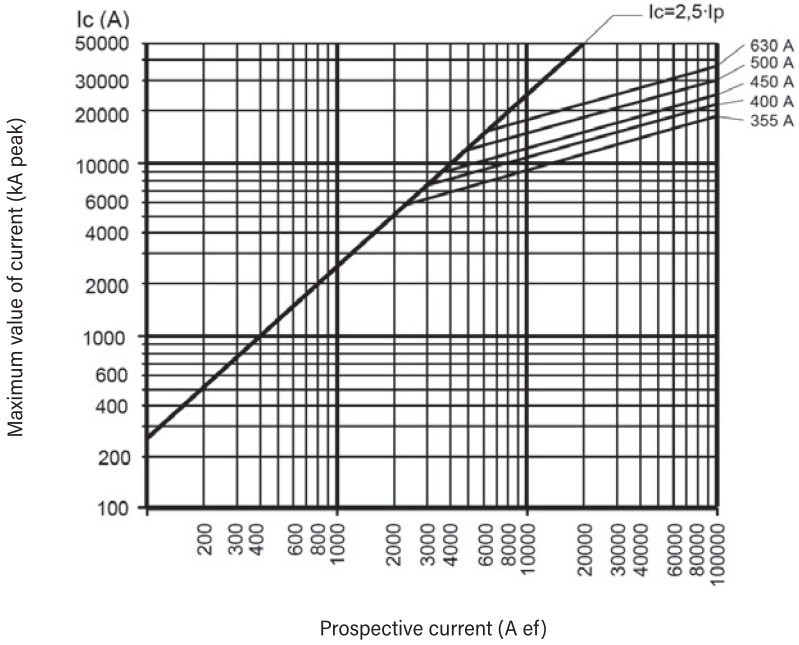
HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

NH NH3 gS NH fuse links

t-I CHARACTERISTICS



CUT-OFF CHARACTERISTICS



RAPIDPLUS

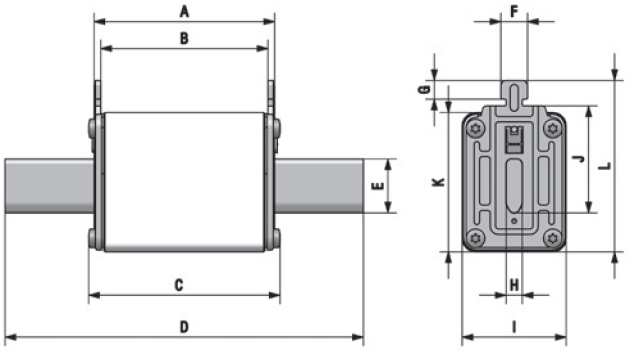
HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

NH NH000 aR NH fuse links



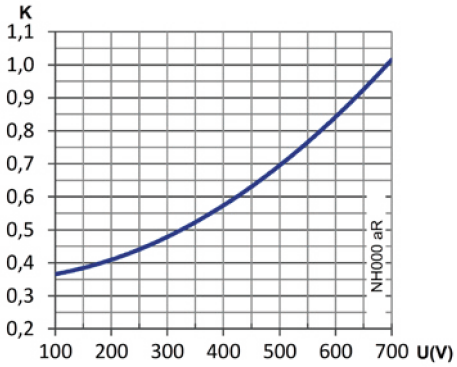
RATED VOLTAGE	RATED CURRENT	BREAKING CAPACITY
690V AC	16A...250A	120kA (690V AC)
		30kA (440V DC)

DIMENSIONS

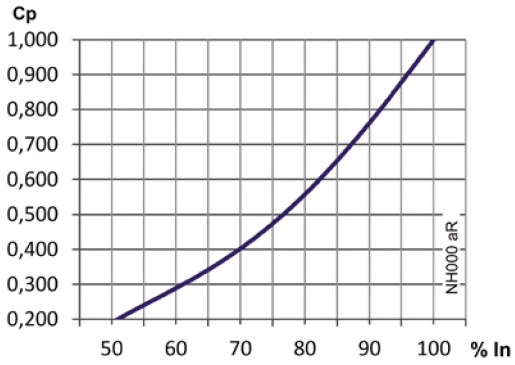


A	B	C	D	E	F	G	H	I	J	K	L
49	45	52	78,5	15	10	9,5	6	21	35	40	53

I²t CORRECTION FACTOR (K)



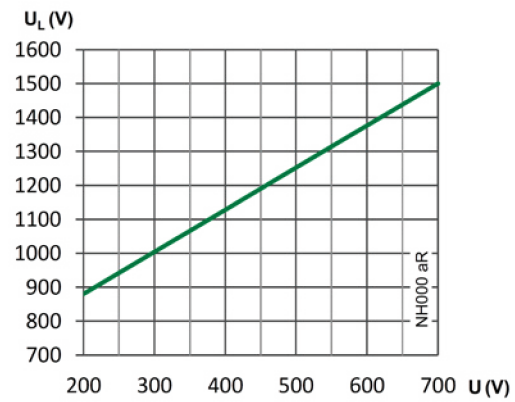
CORRECTION FACTOR FOR POWER LOSS (Cp)



POWER DISSIPATION

I_n	I^2t PREARCING	OPERATING I^2t @690V	POWER LOSS 0.8 · I_n	POWER LOSS I_n
(A)	(A^2S)	(A^2S)	(W)	(W)
16	7	62	2,5	4,5
20	15	121	2,9	5,2
25	24	200	3,8	6,8
32	33	213	4,5	8,0
40	59	379	5,1	9,1
50	157	1.000	5,3	9,5
63	290	2.270	6,9	12
80	550	4.300	8,4	15
100	720	5.880	9,5	17
125	1.410	11.540	11	20
160	2.340	19.080	15	26
200	3.490	28.500	20	36
250	6.500	53.000	26	46

PEAK ARC VOLTAGE (U_L)

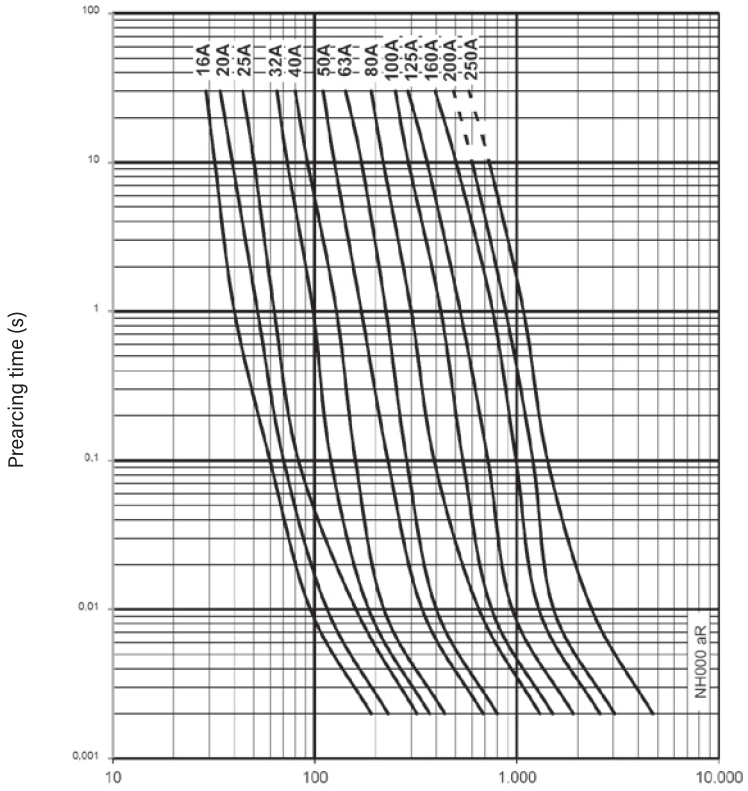


RAPIDPLUS

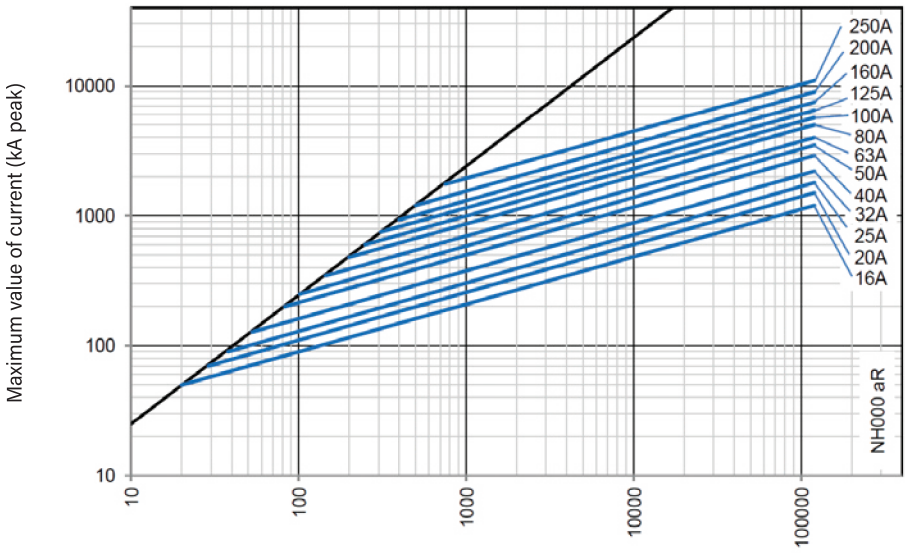
HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

NH NH000 aR NH fuse links

t-I CHARACTERISTICS



CUT-OFF CHARACTERISTICS



RAPIDPLUS

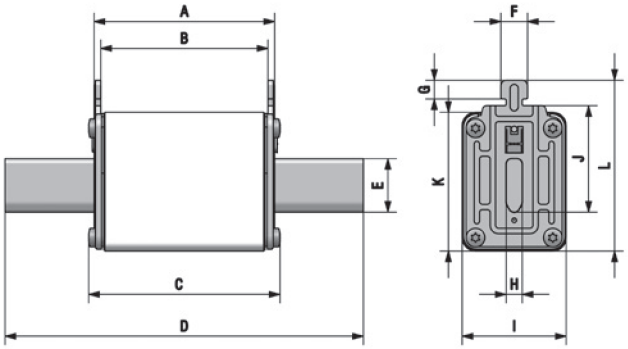
HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

NH NH1 aR NH fuse links

RATED VOLTAGE	RATED CURRENT	BREAKING CAPACITY
690V AC	40A...400A	120kA (690V AC)
		30kA (550V DC)

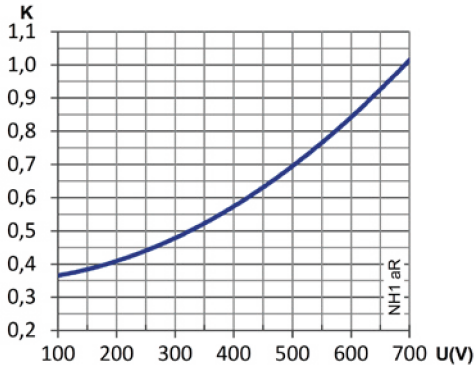


DIMENSIONS

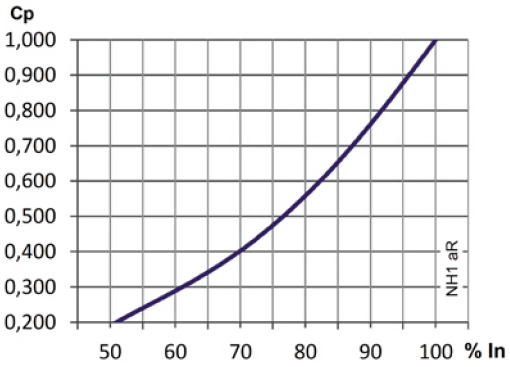


A	B	C	D	E	F	G	H	I	J	K	L
68	62	71,5	135	20	10	9,5	6	39	40	52	64

I^2t CORRECTION FACTOR (K)



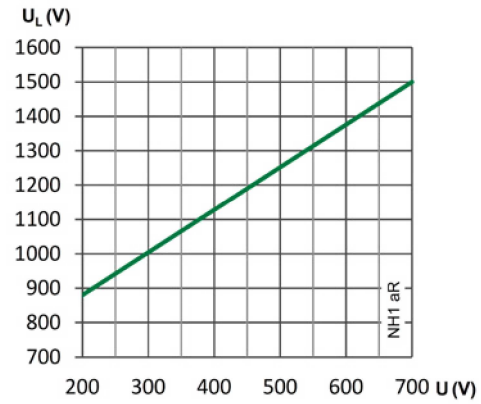
CORRECTION FACTOR FOR POWER LOSS (Cp)



POWER DISSIPATION

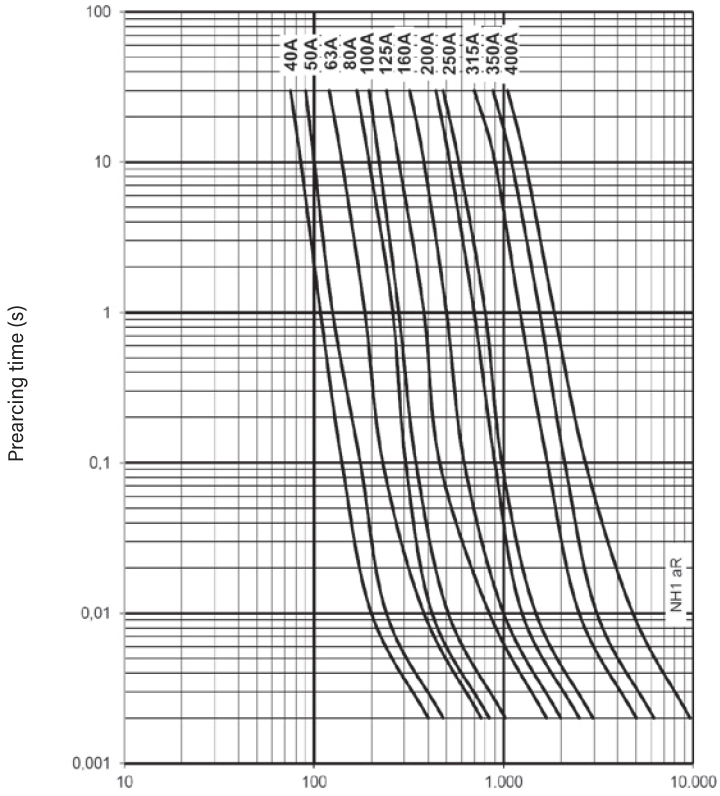
I_n	I^2t PREARCING	OPERATING I^2t @690V	POWER LOSS 0.8 · I_n	POWER LOSS I_n
(A)	(A^2S)	(A^2S)	(W)	(W)
40	55	320	8,1	14
50	97	570	9,6	17
63	220	1.300	11	19
80	370	2.300	13	23
100	570	3.590	18	32
125	980	6.080	24	44
160	1.710	10.560	25	45
200	3.040	18.770	33	59
250	5.400	33.380	41	73
315	10.220	63.110	43	77
350	12.160	75.100	45	80
400	23.000	142.000	52	93

PEAK ARC VOLTAGE (U_L)

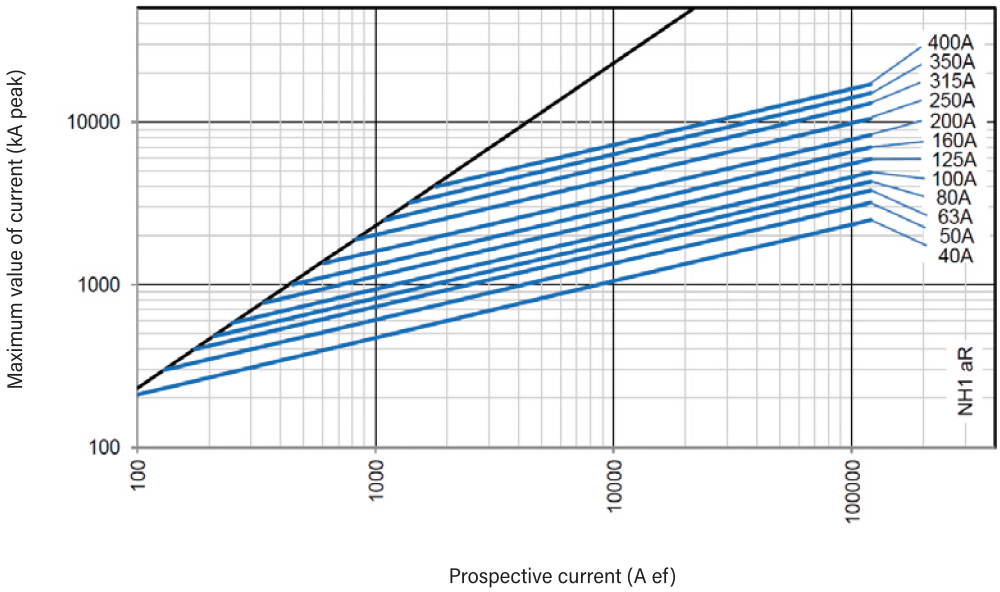


NH NH1 aR NH fuse links

t-I CHARACTERISTICS



CUT-OFF CHARACTERISTICS



RAPIDPLUS

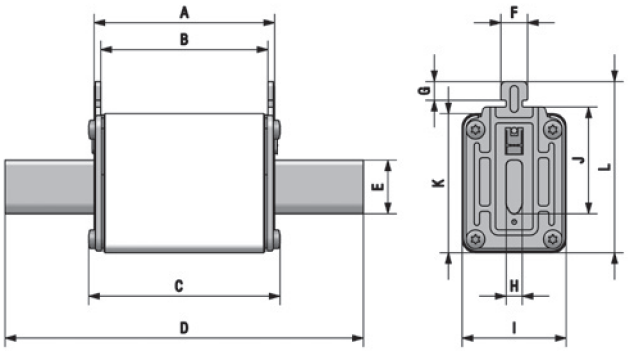
HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

NH NH2 aR NH fuse links



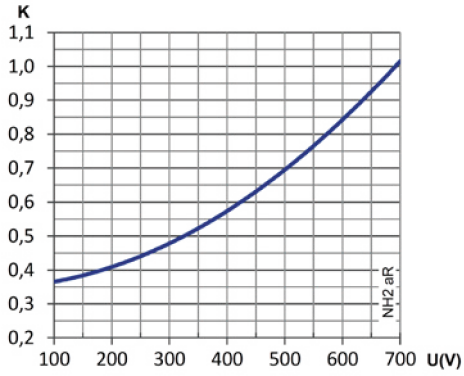
RATED VOLTAGE	RATED CURRENT	BREAKING CAPACITY
690V AC	200A...700A	120kA (690V AC)
		30kA (550V DC)

DIMENSIONS

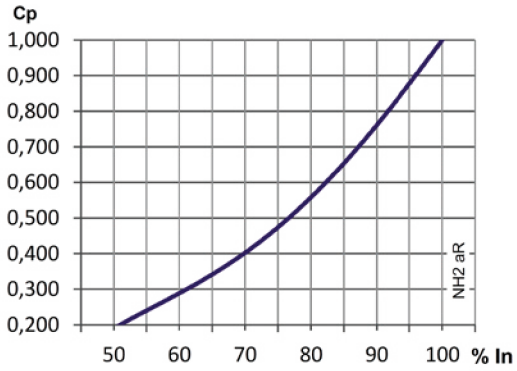


A	B	C	D	E	F	G	H	I	J	K	L
68	62	71,5	150	25	10	9,5	6	53	48	60	72

I²t CORRECTION FACTOR (K)



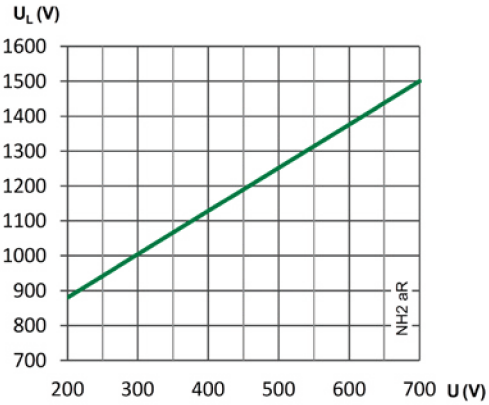
CORRECTION FACTOR FOR POWER LOSS (Cp)



POWER DISSIPATION

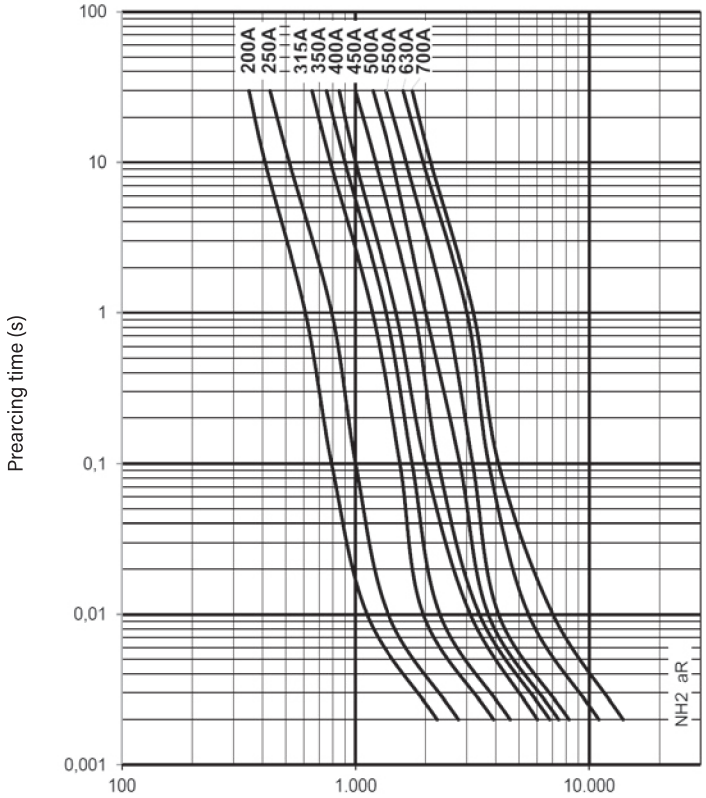
I_n	I^2t PREARCING	OPERATING I^2t @690V	POWER LOSS 0.8 · I_n	POWER LOSS I_n
(A)	(A^2S)	(A^2S)	(W)	(W)
200	1.550	9.430	53	95
250	3.250	19.670	56	100
315	6.230	37.720	57	102
350	9.300	56.340	58	104
400	13.000	78.700	72	129
450	17.000	102.000	77	137
500	24.500	147.000	83	148
550	36.000	216.000	85	152
630	47.220	283.330	95	170
700	68.000	408.000	99	178

PEAK ARC VOLTAGE (U_L)

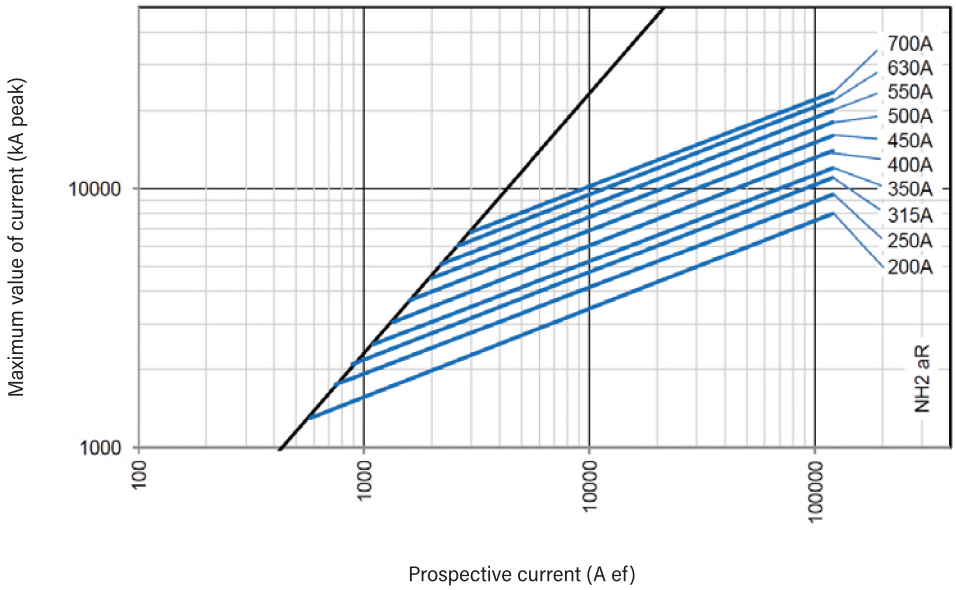


NH NH2 aR NH fuse links

t-I CHARACTERISTICS



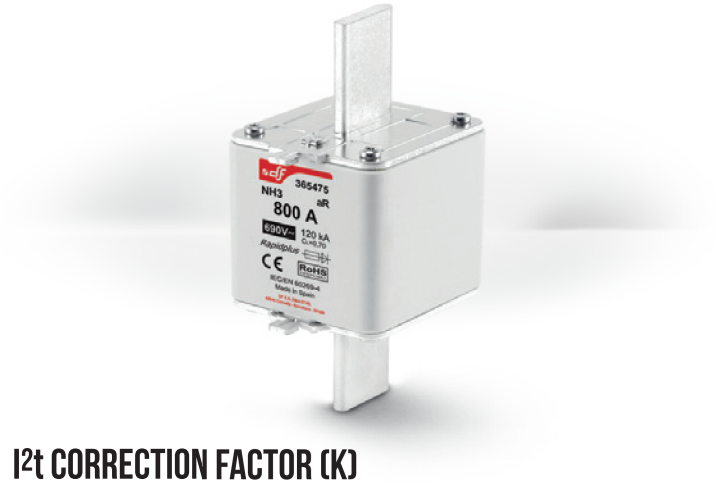
CUT-OFF CHARACTERISTICS



RAPIDPLUS

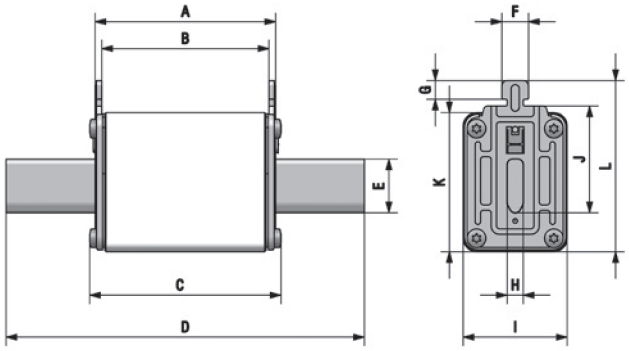
HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

NH NH3 aR NH fuse links



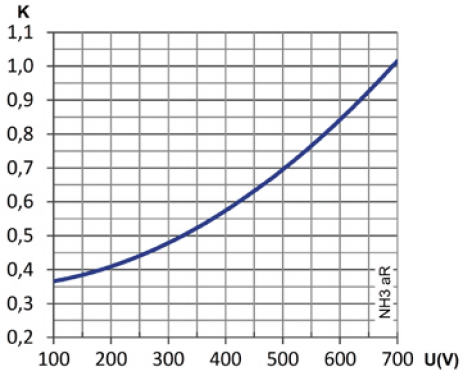
RATED VOLTAGE	RATED CURRENT	BREAKING CAPACITY
690V AC	500A...1000A	120kA (690V AC)
		30kA (550V DC)

DIMENSIONS

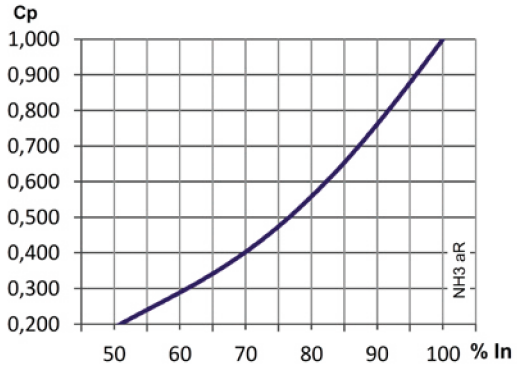


A	B	C	D	E	F	G	H	I	J	K	L
68	62	73	150	32	10	9,5	6	70	60	75	87

I²t CORRECTION FACTOR (K)



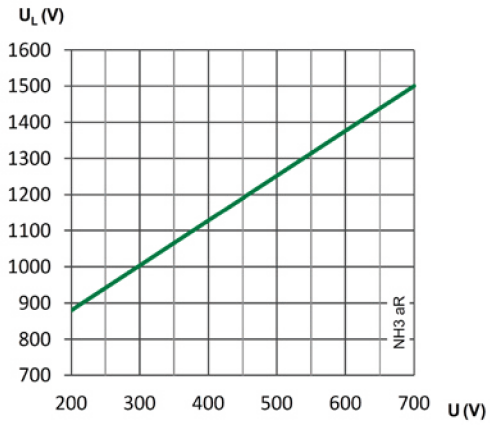
CORRECTION FACTOR FOR POWER LOSS (Cp)



POWER DISSIPATION

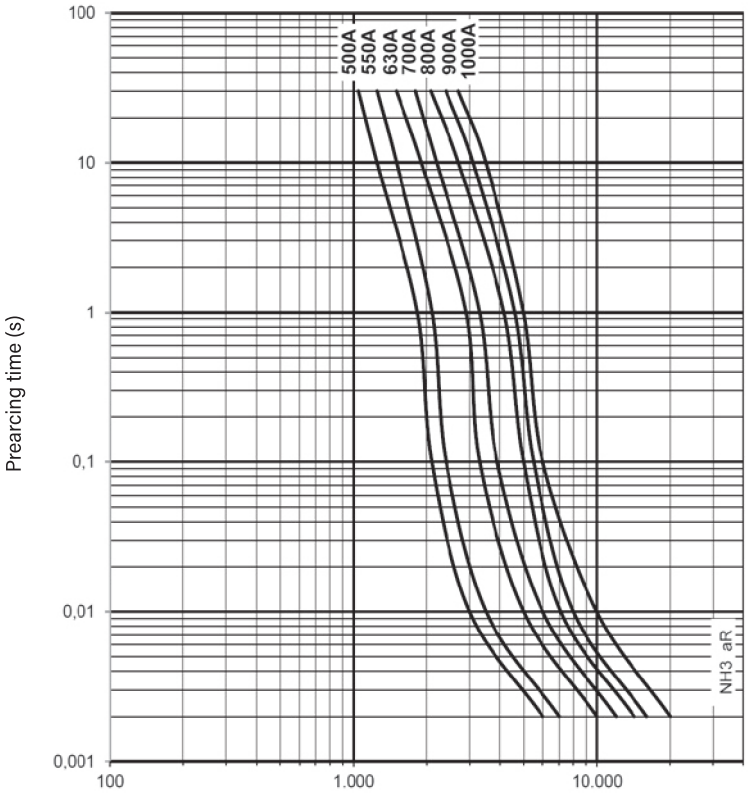
I_n	I^2t PREARCING	OPERATING I^2t @690V	POWER LOSS 0.8 · I_n	POWER LOSS I_n
(A)	(A^2S)	(A^2S)	(W)	(W)
500	22.160	109.000	76	136
550	32.100	158.060	81	145
630	45.500	220.000	89	159
700	65.520	322.200	103	184
800	97.870	481.310	107	191
900	126.380	621.520	121	216
1000	182.000	895.000	150	268

PEAK ARC VOLTAGE (U_L)

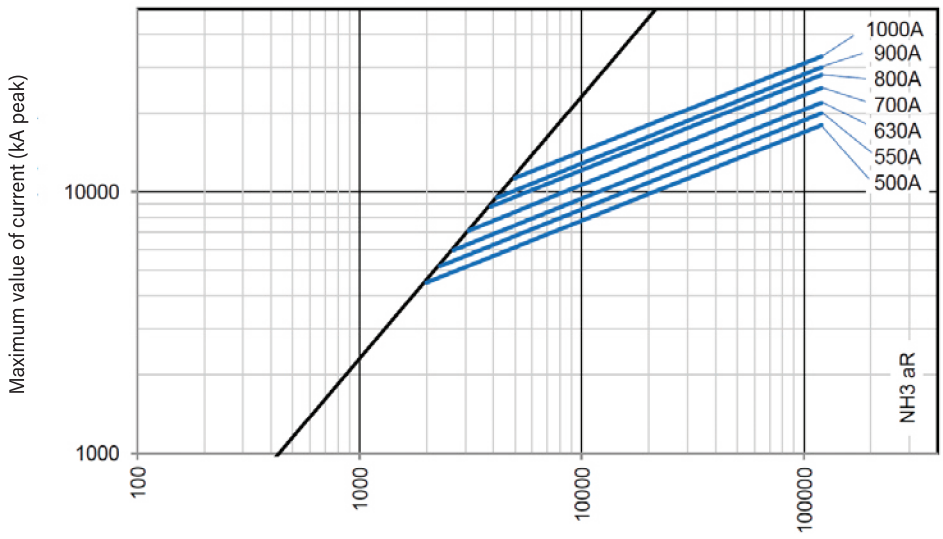


NH NH3 aR NH fuse links

t-I CHARACTERISTICS



CUT-OFF CHARACTERISTICS



RAPIDPLUS

HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

CYL | aR | gR CYLINDRICAL fuse links



USE OF SEMICONDUCTOR FUSE LINKS RAPIDPLUS® IN PMX MODULAR FUSE HOLDERS

The modular fuse holders for cylindrical fuses have a rated power acceptance according to the maximum power dissipations allowed for the general use fuse links (gG) and back up fuse links.

These maximum values allowed for the fuse links (gG/aM) are regulated by standards (IEC/EN60269-2). In the same way, this standards specify the minimum power acceptance for the fuse holders. This power acceptance is the power dissipated by the fuse links (converted in heat) that the fuse holder can accept with an acceptable increase of the temperature (values also regulated by standards).

The fuse links for protection of semiconductors RAPIDPLUS have a rated power dissipation (or power loss) higher than the gG or aM types, and for this reason there are some limitations for the application of these fuses in closed modular fuse holders.

It is necessary to check that the fuse links have a power diissipation not higher than the maximum value admissible of the fuse holder indicated by the manufacturer.

When it is no possible to use modular fuse holders the solution is the use of an open fuse base where the heat can be appropriately dissipated.

In the following table are indicated the maximum values of power acceptance for DF ELECTRIC fuse holders. These limits should never be exceeded:

PMX | PMX CYLINDRICAL fuse holders

	10x38	14x51	22x58
RATED POWER ACCEPTANCE IEC/EN60269-2	3W	5W	9,5W
MAX. POWER ACCEPTANCE DF ELECTRIC FUSE HOLDERS	4W	6W	12W



RAPIDPLUS

HIGH SPEED FUSE LINKS FOR SEMICONDUCTORS

NH aR NH fuse links



FUSE LOAD CONSTANT C_L

Due to the high power dissipation of NH aR fuse-links, it is necessary to apply a derating factor that determines the maximum allowable continous current when these fuses are installed in an NH base or in a fuse-switch-disconnector.

$$I_{MAX.} = I_N \times C_L$$

	I_n (A)	OPEN TYPE FUSE BASES	FUSE SWITCH DISCONNECTORS
NH000	**16**	1	1
	20	1	1
	25	1	1
	32	1	1
	40	1	1
	50	1	1
	63	1	1
	80	1	0.95
	100	1	0,90
	125	0,95	0,85
	160	0,90	0,75
	200	0,80	0,70
	250	0,80	0,60
NH1	**40**	1	0.95
	50	0,90	0,85
	63	0,90	0,85
	80	0,90	0,85
	100	0,90	0,85
	125	0,75	0,70
	160	0,75	0,70
	200	0,75	0,70
	250	0,75	0,70
	315	0,75	0,65
	350	0,70	0,65
	400	0,70	0,60

	I_n (A)	OPEN TYPE FUSE BASES	FUSE SWITCH DISCONNECTORS
NH2	**200**	0,70	0,65
	250	0,70	0,65
	315	0,70	0,65
	350	0,70	0,65
	400	0,70	0,65
	450	0,65	0,60
	500	0,65	0,60
	550	0,65	0,60
	630	0,65	0,55
	700	0,65	0,55
NH3	**500**	0,70	0,65
	550	0,70	0,65
	630	0,70	0,65
	700	0,70	0,60
	800	0,70	0,60
	900	0,65	0,55
	1000	0,60	0,50