NV/NH

Low Voltage NH Knife-Blade Fuses

Low Voltage Knife-Blade Fuse-Links **818**

Fuse Bases **864**

Accessories **883**

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Strip Type Fuse-Switch-Disconnectors **896**

NV/NH Disconnectors With Fuses **908**

HR

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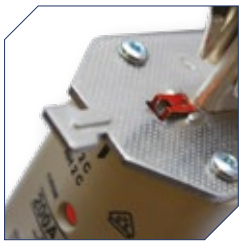
SWITCH TO
A SAFE FUTURE

NV/NH Low Voltage NH Knife-Blade Fuse-Links



Two trip indicators: a red front window (KOMBI series) and a spring-loaded mechanism for use with a microswitch.

Microswitch: A mechanism equipped with a changeover contact, designed for remote signaling of the fuse status.

ETIsON software enables analysis of protective devices' time-current curves, considering selectivity.

The fuse body is made of steatite, a thermally resistant material. Blade contacts are crafted from brass or copper with silver plating. End cover plates are aluminum, ensuring long-term corrosion resistance. The body is filled with specially graded quartz sand, providing high breaking capacity and stable protection parameters.

Fuse blades are silver-plated and cone-shaped, allowing for easier installation in the fuse base with reduced force.

NH4 fuses feature specially designed contact blades for secure fixation with a bolted connection.

Fuses with insulated covers provide additional protection against contact with live parts.

Fuses with striker pin are used in KVL and HVL disconnectors equipped with a microswitch for remote fuse status monitoring.

The removable handle is designed for installing or replacing fuses.

NV/NH KOMBI advantages

ETI is offering compleate range of low-voltage fuse-links from size NV00C up to NV3 with new, dual indication of fuse-link operation, called KOMBI. The indicator is easily visible on the top and centre of the fuse-link, whether it is situated in a standard fuse base or vertical fuse rail or in fuse-switch disconnector.

The most important advantages of NV/NH KOMBI fuse-links:

- High breaking capacity up to 120 kA
- Rated voltages: 400 V a.c., 500 V a.c., 690 V a.c.
- Two versions of covers: aluminium, when the gripping lug is under voltage and plastic, when insulated metal gripping lug is incorporated into the plastic cover
- VDE certificates and CCA/CB test reports
- Visual trip indicator: red window on the front of the housing (KOMBI series) with red window indicating OK and white window indicating a fault.
- NH000 and NH C fuses have reduced dimensions while maintaining all technical and electrical characteristics.
- Low power loss.
- High current-limiting capability.
- Stable time-current and selectivity characteristics.
- Support selective protection schemes with circuit breakers.

General about NV/NH fuse-links

Their dimensions correspond with IEC 60269 and DIN 43620, other technical characteristics correspond with the requirements of the following standards:

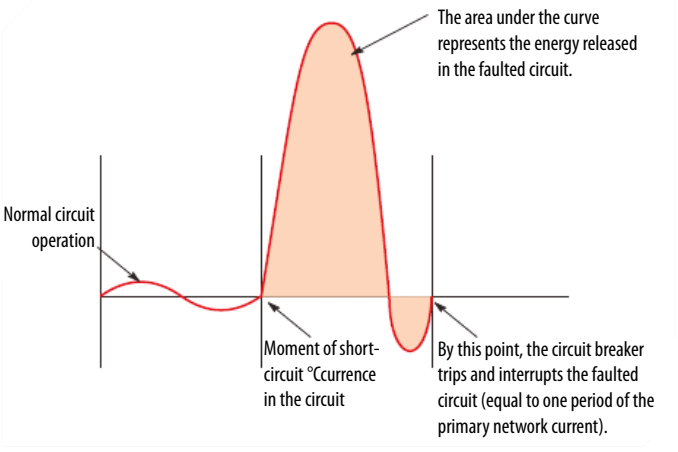
- Rated voltage 400V/500V/ 690V/gG: IEC 60269-1, IEC 60269-2
- Rated voltage 690V/aM: IEC 60269-2
- Rated voltage 400V/gF: PN-IEC 60269-2
- Rated voltage 400V/gTr: VDE 0636-21

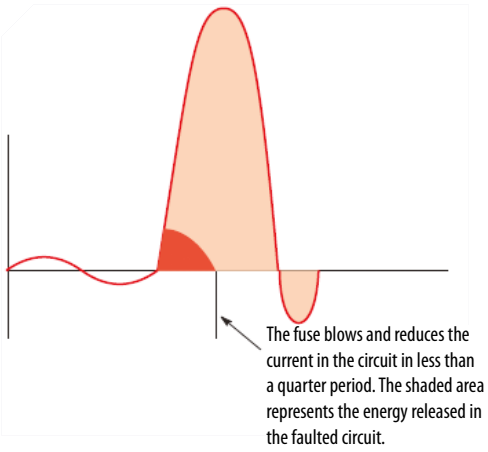
Short description of constituent parts for NV/NH fuse-links

The body of the fuse-link is made of quality steatite which is highly resistant against temperature overloads and pressure at high short circuit currents.

In the inner part of the steatite body there is a copper melting element which is welded on a specially shaped fastener of the contact knife by spot welding. By careful shaping of fastener we achieved that during assembly the melting element is placed exactly into the middle of the inner place. The remaining inside place of the ceramic body is filled up with precisely determined granulation and chemical structure quartz sand. All contact knives are additionally protected with a layer of silver or on special order of nickel. On the base of cyclic tests we have proved that the fusing characteristics are very stable and the tolerance on the current axis can be up to ± 10%.

Time-current diagram of a short-circuit in a circuit protected by a circuit breaker and a fuse.





Fuse-link NV/NH gG

Rated current	Breaking capacity	Rated voltage
2-1600 A	**120 kA / 100 kA**	**400, 500, 690 V**

WATCH THE VIDEO

NH fuse-link installation guide with the use of a replacement handle.

Electrical characteristics

Rated voltage Un	400 V AC, 500 V AC, 690 V AC
Rated current In	2 - 1600 A
Breaking capacity Un	120 kA, 100 kA, 50 kA
Melting characteristic	gG, aM, gF, gTr
Certified	DIN VDE0636-201 (1998-06)
In accordance with	IEC 60269-1, IEC60269-2
Dimensions according to	IEC 60269, DIN43620
Two versions of covers	aluminium and plastic

NV/NH 00C KOMBI gG

Rated current [A]	Code No. ~ 400V 120 kA	~ 500V 120 kA	~ 690V 100 kA	Korrosionsfest ~ 400V 100 kA	g	
2	004181101	004181201	004181301	004181118	120	3/120
4	004181102	004181202	004181302	004181119	120	3/120
6	004181103	004181203	004181303	004181120	120	3/120
10	004181104	004181204	004181304	004181121	120	3/120
16	004181105	004181205	004181305	004181122	120	3/120
20	004181106	004181206	004181306	004181123	120	3/120
25	004181107	004181207	004181307	004181138	120	3/120
32	004181108	004181208	004181308	004181139	120	3/120
35	004181109	004181209	004181309	004181140	120	3/120
40	004181110	004181210	004181310	004181141	120	3/120
50	004181111	004181211	004181311	004181142	120	3/120
63	004181112	004181212	004181312	004181143	120	3/120
80	004181113	004181213		004181130	120	3/120
100	004181114	004181214		004181131	120	3/120
125	004181217	004181215			120	3/120
160	004181216				120	3/120

NV/NH 00 CI KOMBI gG*

Rated current [A]	Code No. ~ 400V 120 kA	~ 500V 120 kA	~ 690V 100 kA	g	
2	004191101	004191201	004191301	120	3/120
4	004191102	004191202	004191302	120	3/120
6	004191103	004191203	004191303	120	3/120
10	004191104	004191204	004191304	120	3/120
16	004191105	004191205	004191305	120	3/120
20	004191106	004191206	004191306	120	3/120
25	004191107	004191207	004191307	120	3/120
32	004191108	004191208	004191308	120	3/120
35	004191109	004191209	004191309	120	3/120
40	004191110	004191210	004191310	120	3/120
50	004191111	004191211	004191311	120	3/120
63	004191112	004191212	004191312	120	3/120
80	004191113	004191213		120	3/120
100	004191114	004191214		120	3/120
125				120	3/120
160				120	3/120

* INSULATED

NV/NH 00 C gG with striker pin

Rated current [A]	Code No. ~ 690 V 100 kA	g	
2	004111172	130	3
4	004111173	130	3
6	004111174	130	3
10	004111175	130	3
16	004111176	130	3
20	004111177	130	3
25	004111178	130	3
32	004111179	130	3
35	004111180	130	3
40	004111181	130	3

NV/NH 00 KOMBI gG

Rated current [A]	Code No. ~ 400V 120 kA	~ 500V 120 kA	~ 690V 100 kA	Korrosionsfest ~ 400V 120 kA	g	
6		004182203			170	3/90
10		004182204			170	3/90
16		004182205			170	3/90
20		004182206			170	3/90
25		004182207			170	3/90
32		004182208			170	3/90
35		004182209			170	3/90
40		004182210			170	3/90
50		004182211	004182311		170	3/90
63		004182212	004182312		170	3/90
80	004182113	004182213	004182313		170	3/90
100	004182114	004182214	004182314		170	3/90
125	004182115	004182215	004182315	004182118	170	3/90
160	004182116	004182216		004182119	170	3/90

NV/NH 00 I KOMBI gG*

Rated current [A]	Code No. ~ 400V 120 kA	~ 500V 120 kA	~ 690V 100 kA	g	
6		004192203		170	3/90
10		004192204		170	3/90
16		004192205		170	3/90
20		004192206		170	3/90
25		004192207		170	3/90
32		004192208		170	3/90
35		004192209		170	3/90
40		004192210		170	3/90
50		004192211	004192311	170	3/90
63		004192212	004192312	170	3/90
80		004192213	004192313	170	3/90
100		004192214	004192314	170	3/90
125	004192115	004192215	004192315	170	3/90
160	004192116	004192216		170	3/90

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NV/NH 00 gG with striker pin

Rated current [A]	Code No. ~ 500 V 120 kA~	Code No. ~ 690 V 100 kA~	g	
50		004111182	200	3
63		004111183	200	3
80		004111184	200	3
100		004111185	200	3
125		004111186	200	3
160	004111187		200	3

NV/NH 0 KOMBI gG

Rated current [A]	Code No. ~ 500 V 120 kA	Code No. ~690 V 100 kA	g	
6	004183203	004183303	235	3/45
10	004183204	004183304	235	3/45
16	004183205	004183305	235	3/45
20	004183206	004183306	235	3/45
25	004183207	004183307	235	3/45
32	004183208	004183308	235	3/45
35	004183209	004183309	235	3/45
40	004183210	004183310	235	3/45
50	004183211	004183311	235	3/45
63	004183212	004183312	235	3/45
80	004183213	004183313	235	3/45
100	004183214	004183314	235	3/45
125	004183215	004183315	235	3/45
160	004183216		235	3/45

NV/NH 1C KOMBI gG

Rated current [A]	Code No. ~ 400V 120 kA	Code No. ~ 500V 120 kA	Code No. ~ 690V 100 kA	Korrosionsfest ~ 400V 120 kA	g	
6	004184103	004184203	004184303		245	3/45
10	004184104	004184204	004184304		245	3/45
16	004184105	004184205	004184305		245	3/45
20	004184106	004184206	004184306		245	3/45
25	004184107	004184207	004184307	004184131	245	3/45
32	004184108	004184208	004184308	004184130	245	3/45
35	004184109	004184209	004184309	004184129	245	3/45
40	004184110	004184210	004184310	004184128	245	3/45
50	004184111	004184211	004184311	004184127	245	3/45
63	004184112	004184212	004184312	004184138	245	3/45
80	004184113	004184213	004184313	004184139	245	3/45
100	004184114	004184214	004184314	004184132	245	3/45
125	004184115	004184215	004184315	004184133	245	3/45
160	004184116	004184216		004184134	245	3/45

NV/NH 1C I KOMBI gG*

Rated current [A]	Code No. ~ 400V 120 kA	~ 500V 120 kA	~ 690V 100 kA	g	
6	004194103	004194203	004194303	245	3/45
10	004194104	004194204	004194304	245	3/45
16	004194105	004194205	004194305	245	3/45
20	004194106	004194206	004194306	245	3/45
25	004194107	004194207	004194307	245	3/45
32	004194108	004194208	004194308	245	3/45
35	004194109	004194209	004194309	245	3/45
40	004194110	004194210	004194310	245	3/45
50	004194111	004194211	004194311	245	3/45
63	004194112	004194212	004194312	245	3/45
80	004194113	004194213	004194313	245	3/45
100	004194114	004194214	004194314	245	3/45
125	004194115	004194215	004194315	245	3/45
160	004194116	004194216		245	3/45

* INSULATED

NV/NH 1 KOMBI gG

Rated current [A]	Code No. ~ 400V 120 kA	~ 500V 120 kA	~ 690V 100 kA	Korrosionsfest ~ 400V 120 kA	g	
6		004184233			420	3/24
10		004184225			420	3/24
16		004184226			420	3/24
20		004184227			420	3/24
25		004184228			420	3/24
32		004184232			420	3/24
35		004184229			420	3/24
40		004184230			420	3/24
50		004184231	004184331		420	3/24
63	004184120	004184220	004184320		420	3/24
80	004184121	004184221	004184321		420	3/24
100	004184122	004184222	004184322		420	3/24
125	004184123	004184223	004184323		420	3/24
160	004184124	004184224	004184324		420	3/24
200	004184117	004184217	004184317	004184135	420	3/24
224	004184118	004184218	004184318	004184136	420	3/24
250	004184119	004184219	004184319	004184137	420	3/24

NV/NH 1 I KOMBI gG*

Rated current [A]	Code No. ~ 400 V 120 KA	~ 500 V 120 kA	~ 690 V 120 kA	g	
6		004194233		420	3/24
10		004194225		420	3/24
16		004194226		420	3/24
20		004194227		420	3/24
25		004194228		420	3/24
32		004194232		420	3/24
35		004194229		420	3/24
40		004194230		420	3/24
50		004194231	004194331	420	3/24
63	004194120	004194220	004194320	420	3/24
80	004194121	004194221	004194321	420	3/24
100	004194122	004194222	004194322	420	3/24
125	004194123	004194223	004194323	420	3/24
160	004194124	004194224	004194324	420	3/24
200	004194117	004194217	004194317	420	3/24
224	004194118	004194218	004194318	420	3/24
250	004194119	004194219	004194319	420	3/24

* INSULATED

NV/NH 1 gG with striker pin

Rated current [A]	Code No. ~ 690 V 100 kA	g	
63	004113340	450	3
80	004113341	450	3
100	004113342	450	3
125	004113343	450	3
160	004113344	450	3
200	004113345	450	3
224	004113346	450	3
250	004113347	450	3

NV/NH 2 C KOMBI gG

Rated current [A]	Code No. ~ 400V 120 kA	~ 500V 120 kA	~ 690V 100 kA	Korrosionsfest ~ 400V 120 kA	g	
20	004185127				435	3/15
25	004185128	004185228			435	3/15
32	004185132	004185242			435	3/15
35	004185129	004185229			435	3/15
40	004185130	004185230			435	3/15
50	004185131	004185231	004185331		435	3/15
63	004185112	004185212	004185312	004185144	435	3/15
80	004185113	004185213	004185313	004185145	435	3/15
100	004185114	004185214	004185314	004185146	435	3/15
125	004185115	004185215	004185315	004185147	435	3/15
160	004185116	004185216	004185316	004185133	435	3/15
200	004185117	004185217	004185317	004185134	435	3/15
224	004185118	004185218	004185318	004185135	435	3/15
250	004185119	004185219	004185319	004185136	435	3/15

NV/NH 2 CI KOMBI gG*

Rated current [A]	Code No. ~ 400V 120 kA	~ 500V 120 kA	~ 690V 120 kA	g	
25		004195228		435	3/15
32		004195242		435	3/15
35	004195109	004195229		435	3/15
40	004195110	004195230		435	3/15
50	004195111	004195231	004195331	435	3/15
63	004195112	004195212	004195312	435	3/15
80	004195113	004195213	004195313	435	3/15
100	004195114	004195214	004195314	435	3/15
125	004195115	004195215	004195315	435	3/15
160	004195116	004195216	004195316	435	3/15
200	004195117	004195217	004195317	435	3/15
224	004195118	004195218	004195318	435	3/15
250	004195119	004195219	004195319	435	3/15

* INSULATED

NV/NH 2 KOMBI gG

Rated current [A]	Code No. ~ 400V 120 kA	~ 500V 120 kA	~ 690V 120 kA	Korrosionsfest ~ 400V 120 kA	g	
32		004185234			580	3/15
35		004185235			580	3/15
40		004185236			580	3/15
50		004185237			580	3/15
63		004185238			580	3/15
80		004185239			580	3/15
100		004185240			580	3/15
125		004185241			580	3/15
160		004185225	004185325		580	3/15
200		004185226	004185326		580	3/15
224		004185227	004185327		580	3/15
250		004185232	004185328		580	3/15
280	004185120	004185220	004185320	004185137	580	3/15
300	004185121	004185221	004185321	004185138	580	3/15
315	004185122	004185222	004185322	004185139	580	3/15
355	004185123	004185223		004185140	580	3/15
400	004185124	004185224		004185141	580	3/15

NV/NH 2 I KOMBI gG*

Rated current [A]	Code No. ~ 400V 120 kA	Code No. ~ 500V 120 kA	Code No. ~ 690V 120 kA	g	
32		004195234		580	3/15
35		004195235		580	3/15
40		004195236		580	3/15
50		004195237		580	3/15
63		004195238		580	3/15
80		004195239		580	3/15
100		004195240		580	3/15
125		004195241		580	3/15
160		004195225		580	3/15
200		004195226		580	3/15
224		004195227		580	3/15
250		004195232		580	3/15
280	004195120	004195220	004195320	580	3/15
300	004195121	004195221	004195321	580	3/15
315	004195122	004195222	004195322	580	3/15
355	004195123	004195223		580	3/15
400	004195124	004195224		580	3/15

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NV/NH 2 gG with striker pin

Rated current [A]	Code No. ~ 690 V 100 kA	g	
160	004114345	620	3
200	004114346	620	3
224	004114347	620	3
250	004114348	620	3
300	004114349	620	3
315	004114350	620	3

NV/NH 3 C KOMBI gG

Rated current [A]	Code No. ~ 400V 120 kA	Code No. ~ 500V 120 kA	Code No. ~ 690V 100 kA	Korrosionsfest ~ 400V 120 kA	g	
63	004186112	004186212			585	3/12
80	004186113	004186213			585	3/12
100	004186114	004186214			585	3/12
125	004186115	004186215			585	3/12
160	004186116	004186216			585	3/12
200	004186117	004186217			585	3/12
224	004186118	004186218			585	3/12
250	004186119	004186219	004186319	004186150	585	3/12
280	004186120	004186220	004186320		585	3/12
300	004186121	004186221	004186321	004186140	585	3/12
315	004186122	004186222	004186322	004186141	585	3/12
355	004186123	004186223		004186142	585	3/12
400	004186124	004186224		004186143	585	3/12

NV/NH 3 KOMBI gG

Rated current [A]	Code No. ~ 400V 120 kA	~ 500V 120 kA	~ 690V 100 kA	Korrosionsfest ~ 400V 120 kA	g	
355			004186328		800	3/12
400			004186329		800	3/12
425	004186130	004186230	004186330	004186144	800	3/12
450	004186129	004186229			800	3/12
500	004186131	004186231	004186331	004186145	800	3/12
560	004186132	004186232			800	3/12
630	004186133	004186233		004186147	800	3/12

NV/NH 3 I KOMBI gG*

Rated current [A]	Code No. ~ 400V 120 kA	~ 500V 120 kA	~ 690V 100 kA	g	
200	004196123	004196223	004196323	800	3/12
224	004196124	004196224	004196324	800	3/12
250	004196125	004196225	004196325	800	3/12
300	004196126	004196226	004196326	800	3/12
315	004196127	004196227	004196327	800	3/12
355	004196128	004196228	004196328	800	3/12
400	004196129	004196229	004196329	800	3/12
425	004196130	004196230	004196330	800	3/12
500	004196131	004196231	004196331	800	3/12
560	004196132	004196232		800	3/12
630	004196133	004196233		800	3/12

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NV/NH 3 gG with striker pin

Rated current [A]	Code No. ~ 690 V 100 kA	g	
250	004115120	980	3
300	004115121	980	3
315	004115122	980	3
400	004115123	980	3
425	004115124	980	3
500	004115125	980	3

NV/NH 4 gG

Rated current [A]	Code No. ~ 500 V 120 kA	g	
630	004116101	2150	1/4
710	004116102	2150	1/4
800	004116103	2150	1/4
900	004116105	2150	1/4
1000	004116104	2150	1/4
1250	004116106	2150	1/4

NV/NH 4a gG

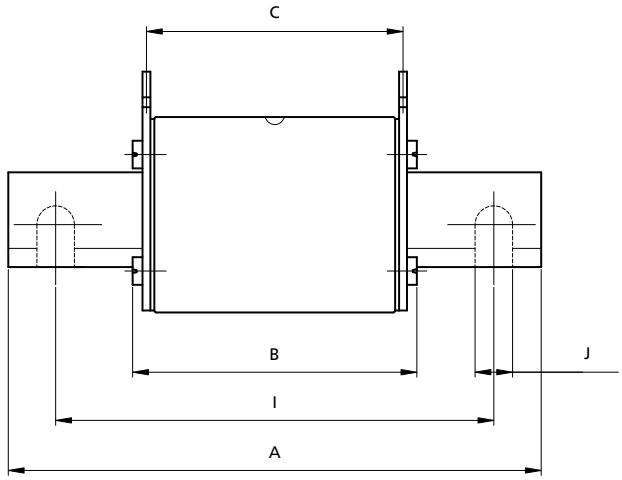
Rated current [A]	Code No. ~ 500 V, 120 kA			~ 690 V 100 kA	g	
		MI	AL			
250			004187200		2810	1/12
315			004187201		2810	1/12
355			004187202		2810	1/12
400			004187203		2810	1/12
500			004187204		2810	1/12
630	004116108	004176026	004187205	004176105	2810	1/12
710	004116109	004176027	004187206	004176106	2810	1/12
800	004116110	004176028	004187207	004176107	2810	1/12
900	004116111	004176029	004187208	004176108	2810	1/12
1000	004116112	004176030	004187209	004176109	2810	1/12
1250	004116113	004176031	004187210	004176110	2810	1/12
1500	004116119	004176032			2810	1/12
1600	004116120	004176033			2810	1/12

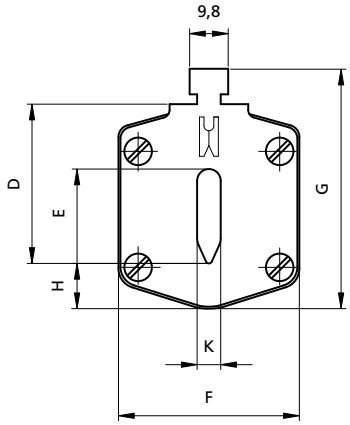
NV/NH 4a gG with striker pin

Rated current [A]	Code No. ~ 690 V 100 kA	g	
500	004116186	2810	1
630	004116187	2810	1
800	004116188	2810	1
1000	004116189	2810	1
1250	004116190	2810	1

Fuse Links NV/NH gG Dimensions

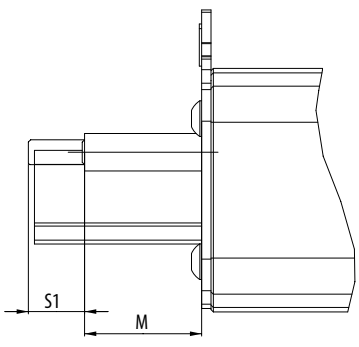
Type	Dimensions											
	A	B	C	D	E	F	G	H	I	J	K	
NV00C	79	53	47	35	15	21	52	7,5			6	KOMBI
NV00C I	79	53	47	35	15	21	52	7,5			6	KOMBI
NV00	79	53	47	35	15	28	56	12			6	KOMBI
NV00 I	79	53	47	35	15	28	56	12			6	KOMBI
NV0	125	68	65	35	15	28	56	12			6	KOMBI
NV1C	135	68	65	40	15	28	61	12			6	KOMBI
NV1C I	135	68	65	40	15	28	61	12			6	KOMBI
NV1	135	72	65	40	20	46	65	14			6	KOMBI
NV1 I	135	72	65	40	20	46	65	14			6	KOMBI
NV2C	150	72	65	48	20	46	73	14			6	KOMBI
NV2C I	150	72	65	48	20	46	73	14			6	KOMBI
NV2	150	72	65	48	26	54	73	14			6	KOMBI
NV2 I	150	72	65	48	26	54	73	14			6	KOMBI
NV3C	150	72	65	60	26	54	84	14			6	KOMBI
NV3	150	72	65	60	33	65	84	14			6	KOMBI
NV4	200	75	66	87	50	100	121	24	150	16	8	
NV4a	200	99	87	85	50	95	121	27			6	
NV4a MI*	200	99	87	85	50	95	121	27			6	

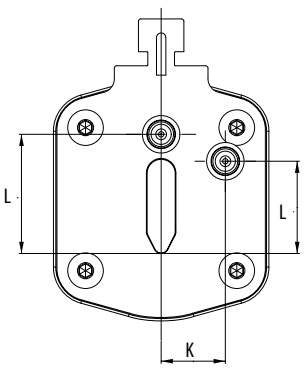




Fuse Links NV/NH gG with Striker Pin Dimensions

Type	Dimensions			
	K	L	M	S1
00C	0	20.7	16.7	7.5
00	0	20.7	16.7	7.5
1	13.7	19.7	25	12
2	16.2	27.4	25	12
3	17	35.6	25	12
4a	24	49	25	12

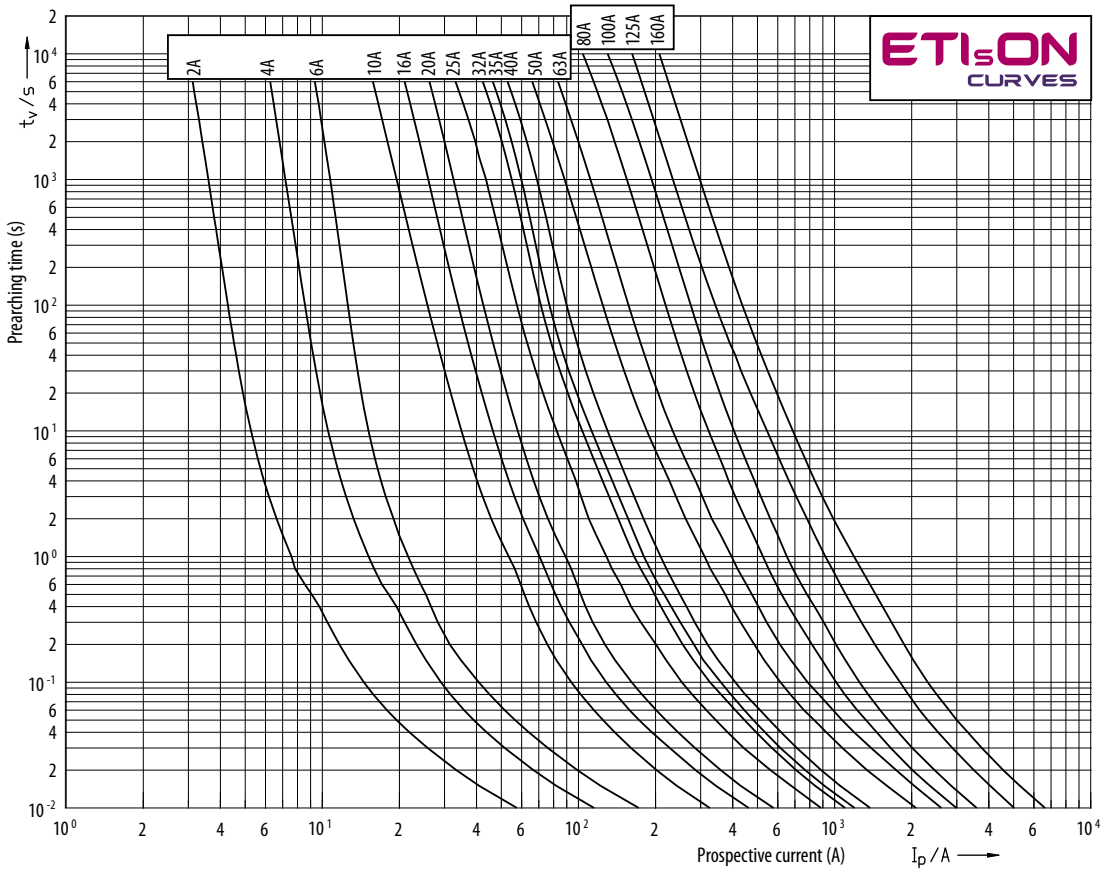




Characteristics gG

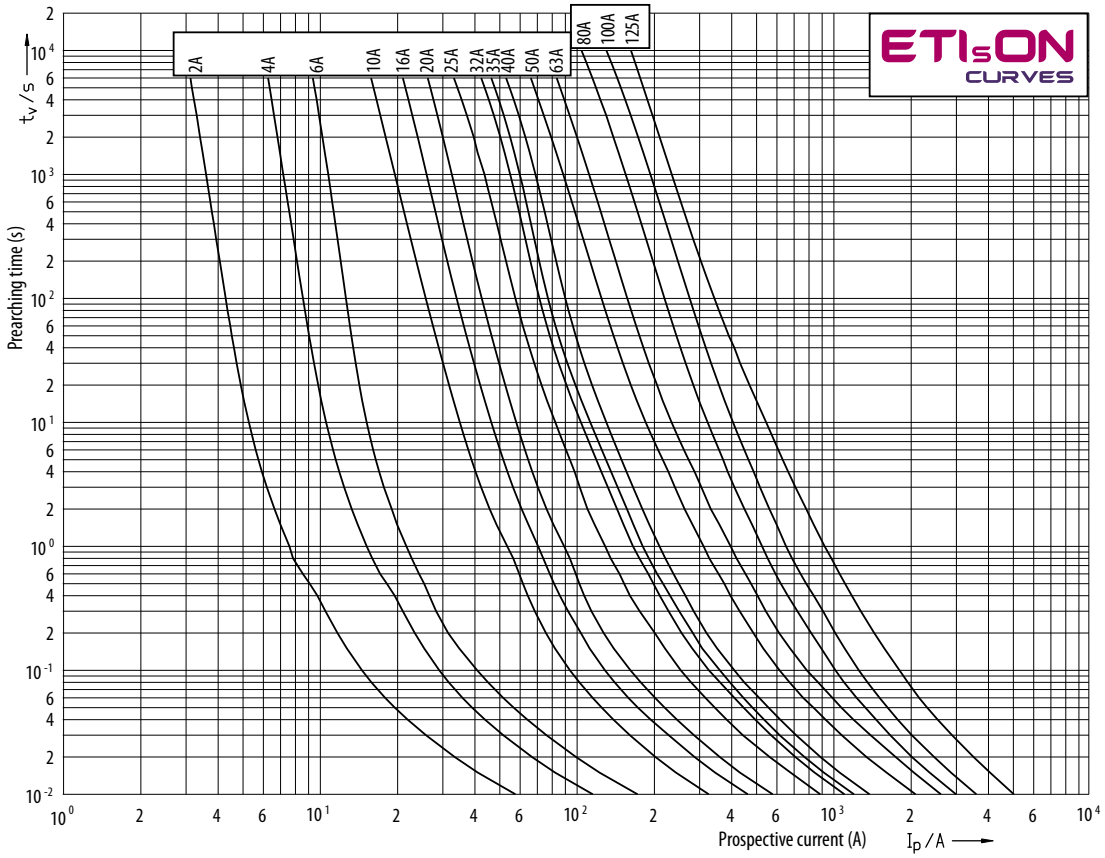
NH000 400V

Time current characteristics I/t, gG



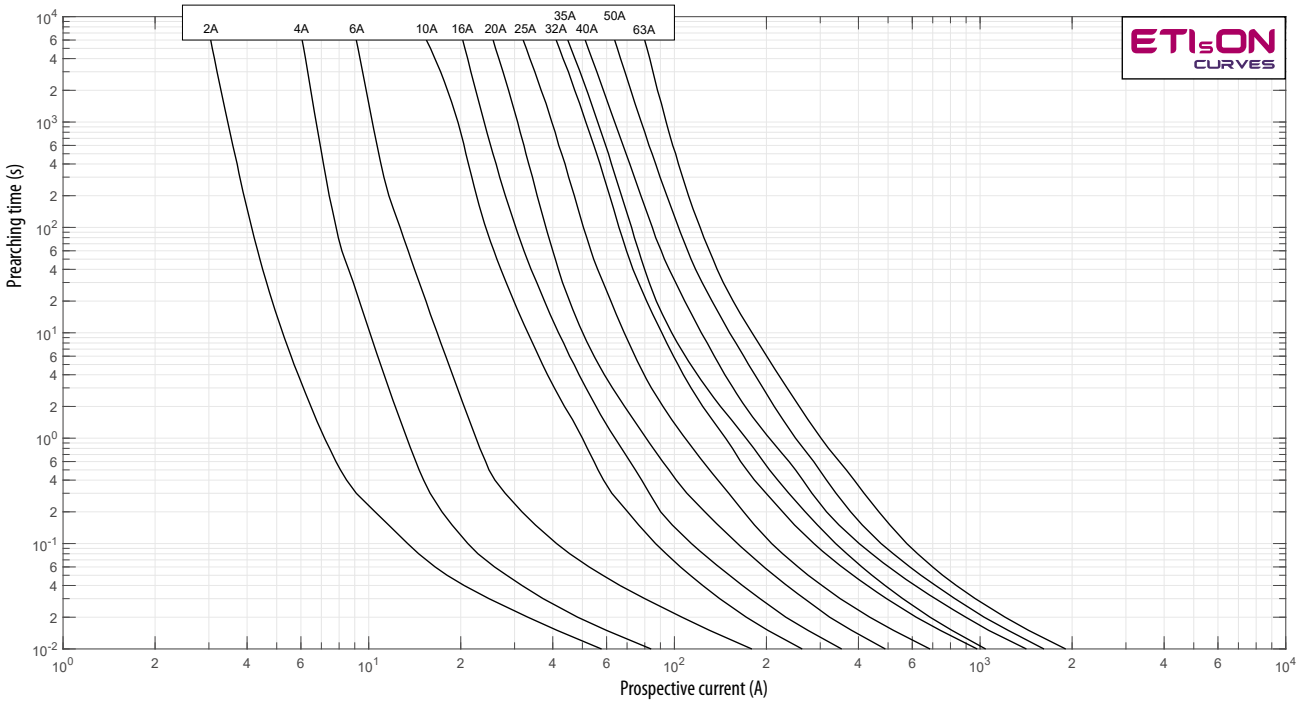
NH000 500V

Time current characteristics I/t, gG



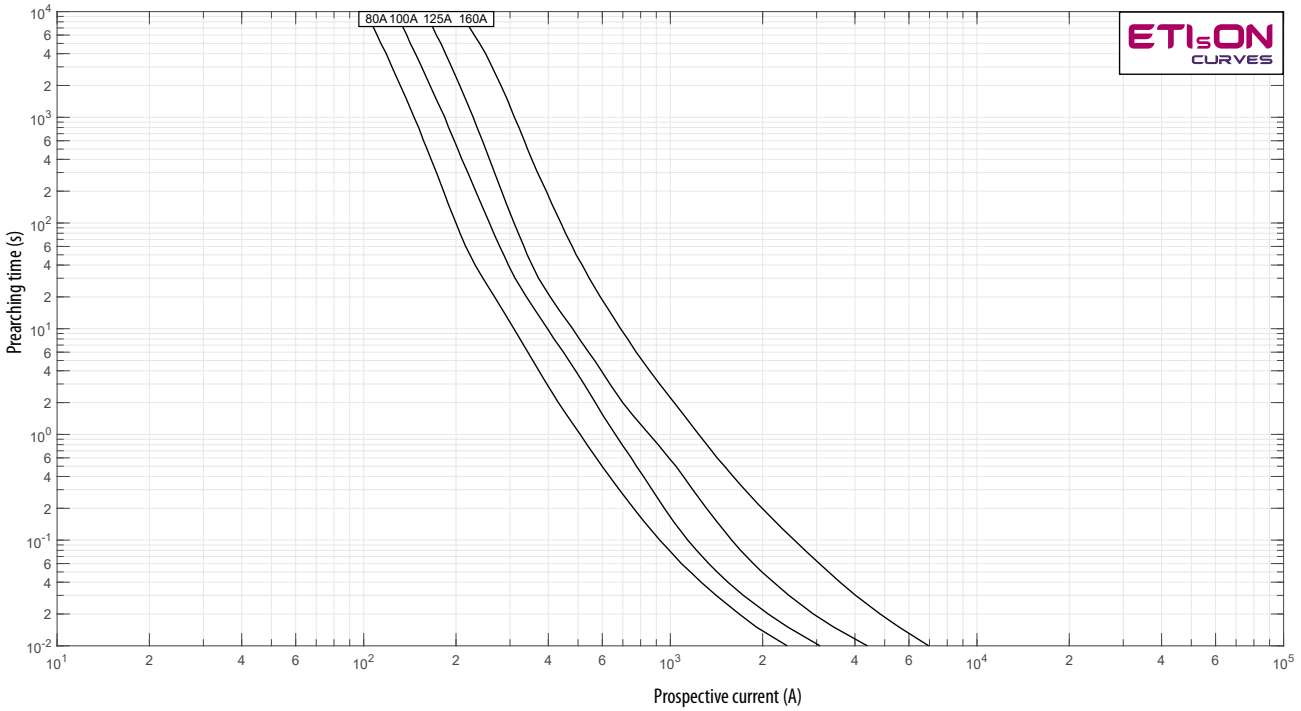
NH000 690V

Time current characteristics
I/t, gG



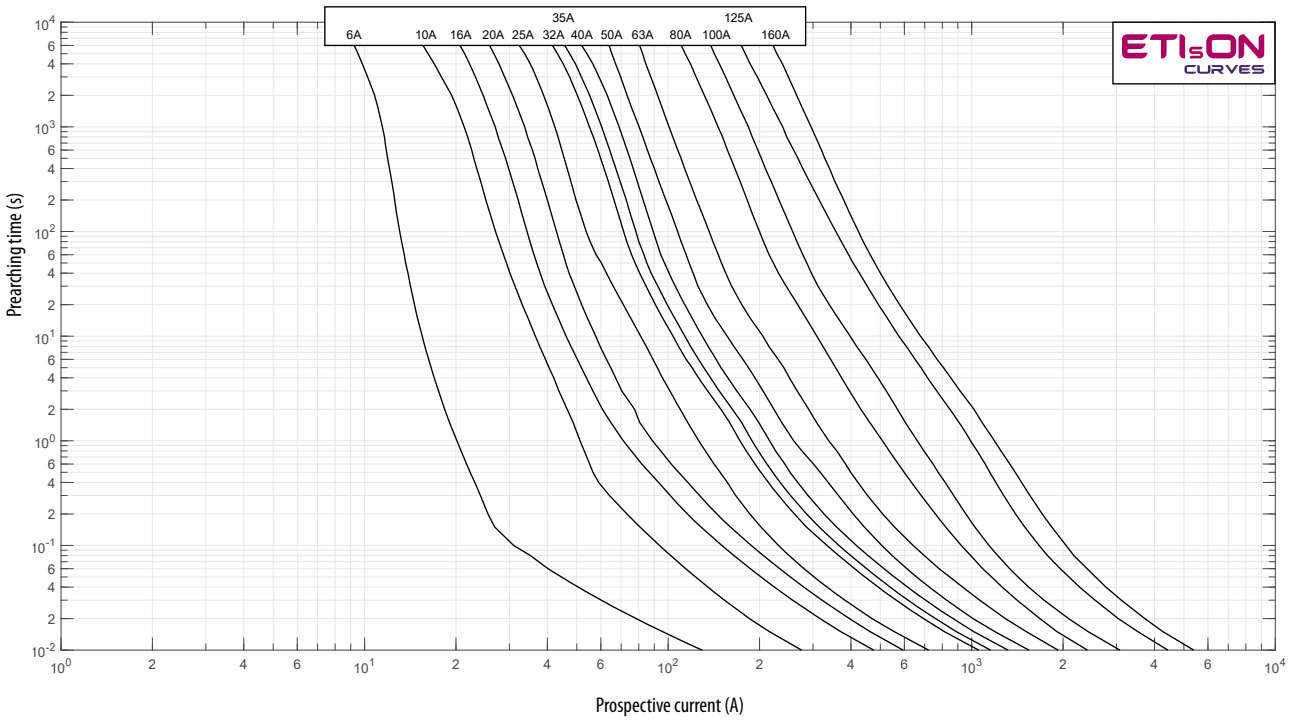
NH00 400V

Time current characteristics
I/t, gG



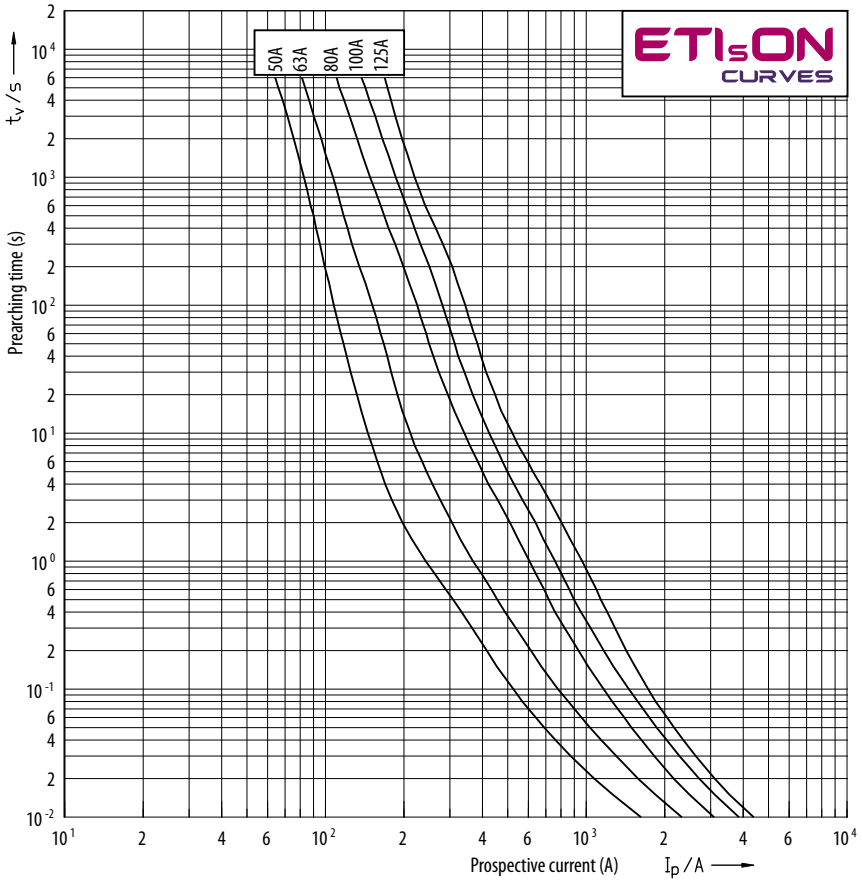
NH00 500V

Time current characteristics
I/t, gG



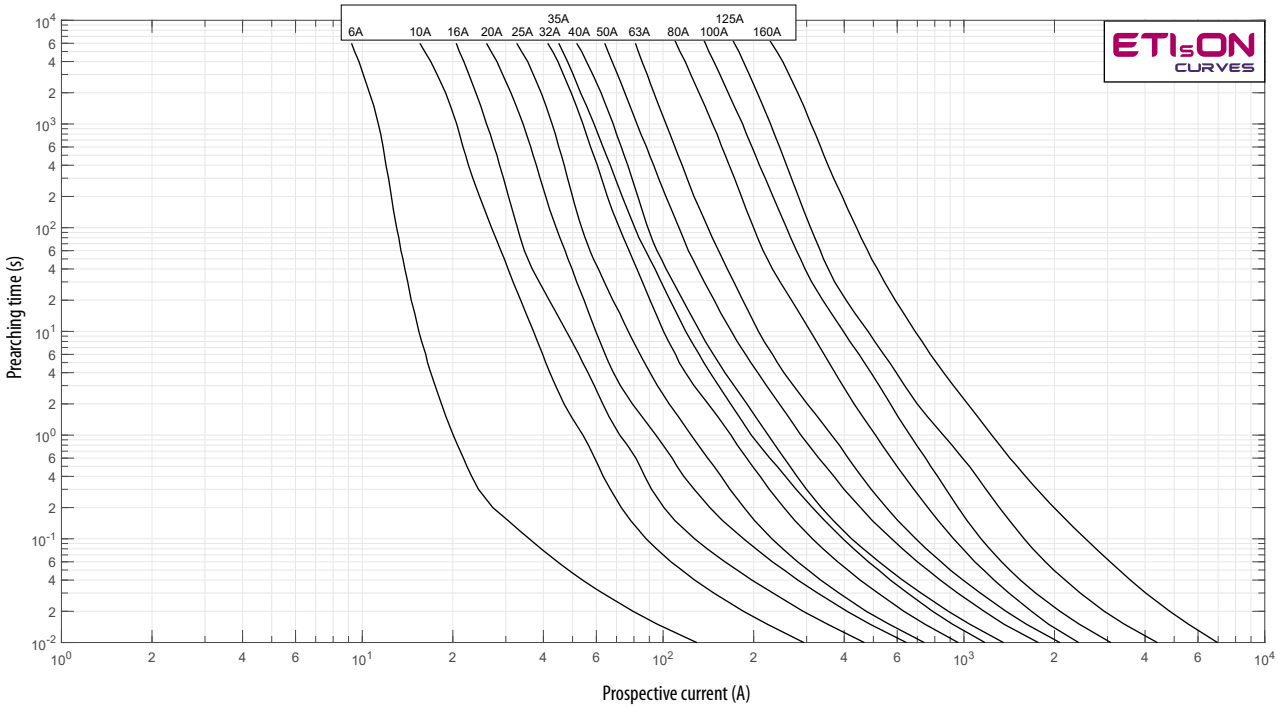
NH00 690V

Time current characteristics
I/t, gG



NH0, NH1C
400V

Time current characteristics
I/t, gG

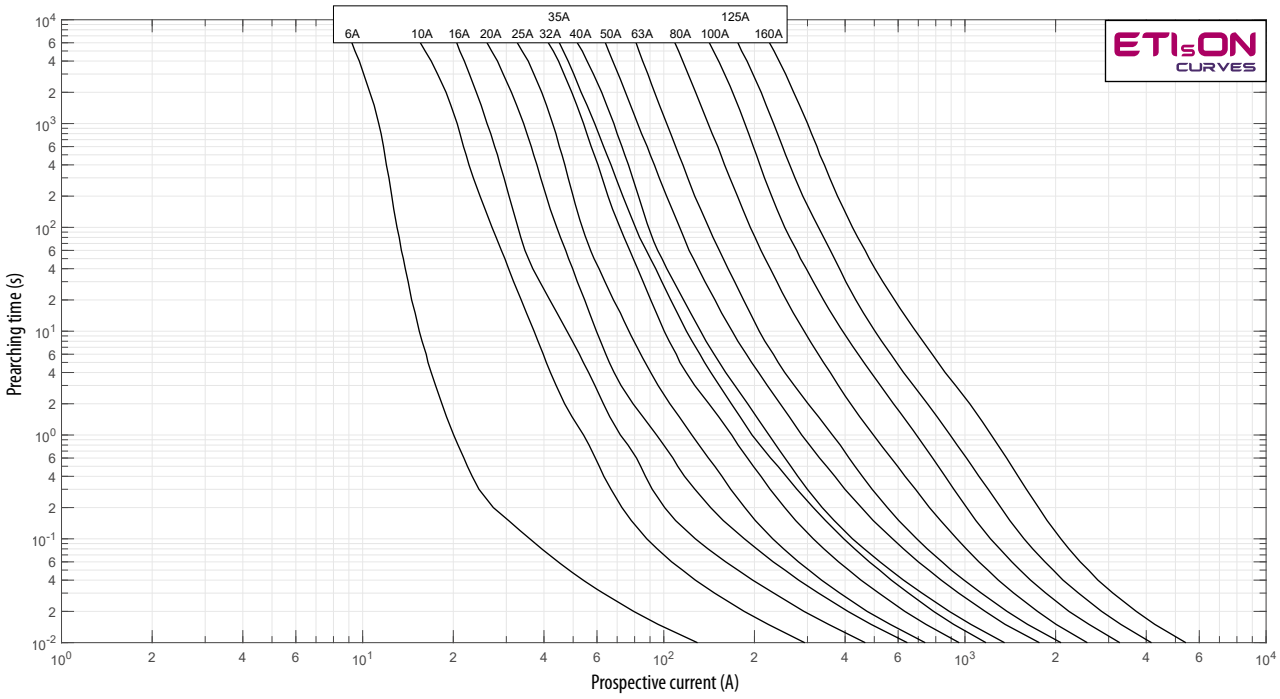


WATCH THE VIDEO

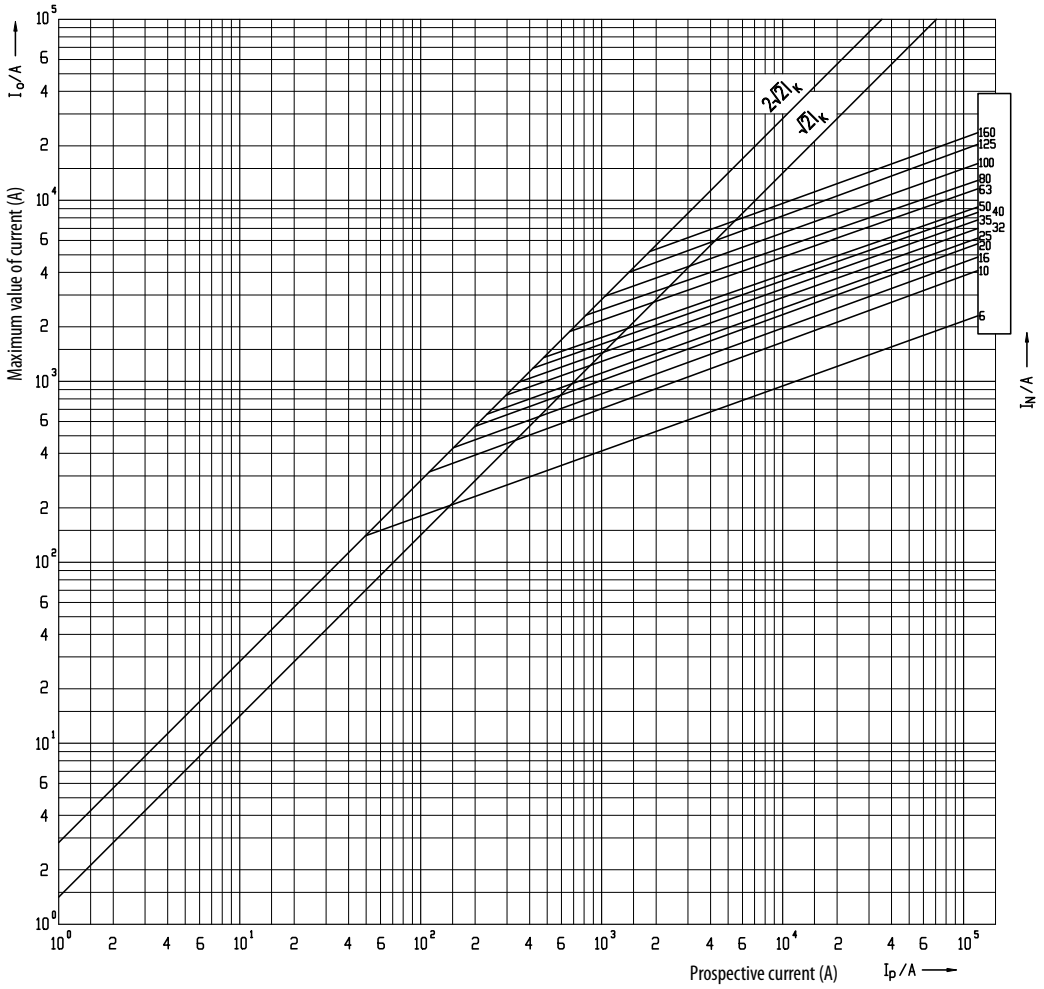
ETIFUSE: Streamline Your Fuse Selection - Interactive Online Tool

NH0, NH1C
500V

Time current characteristics
I/t, gG

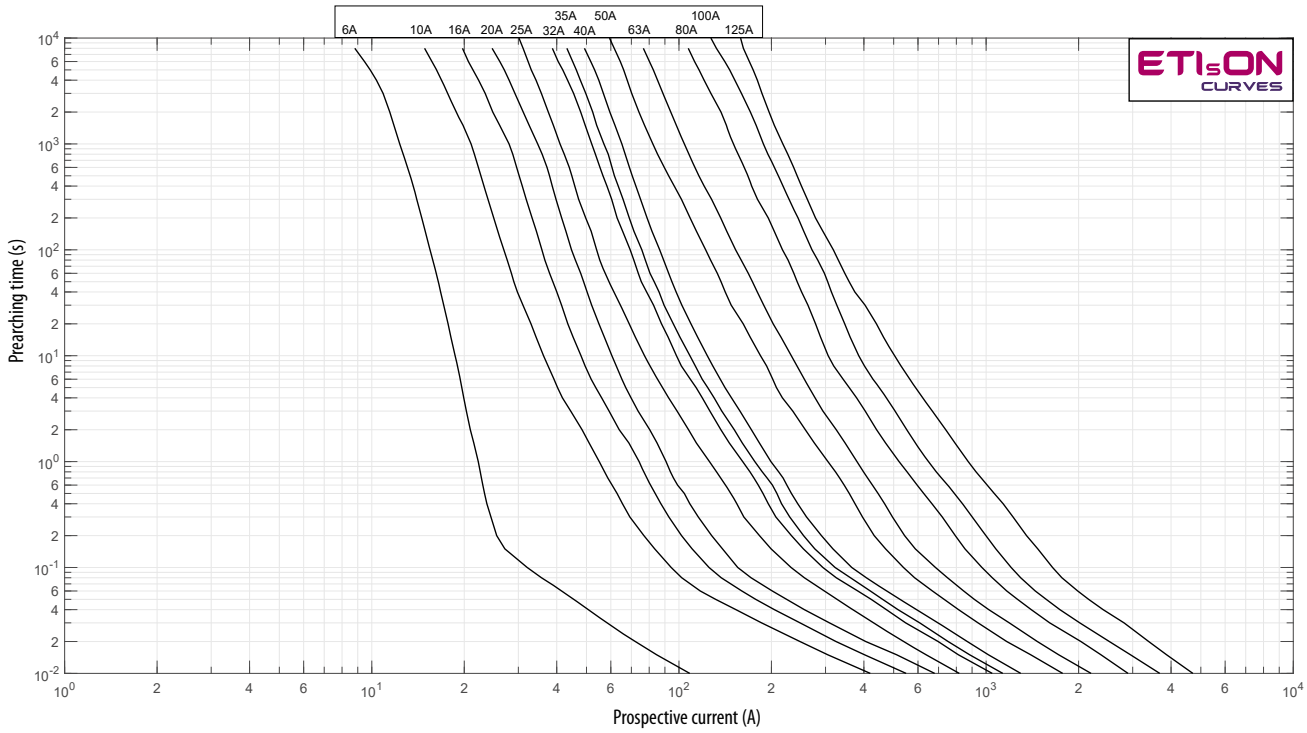


Cut-off current characteristics



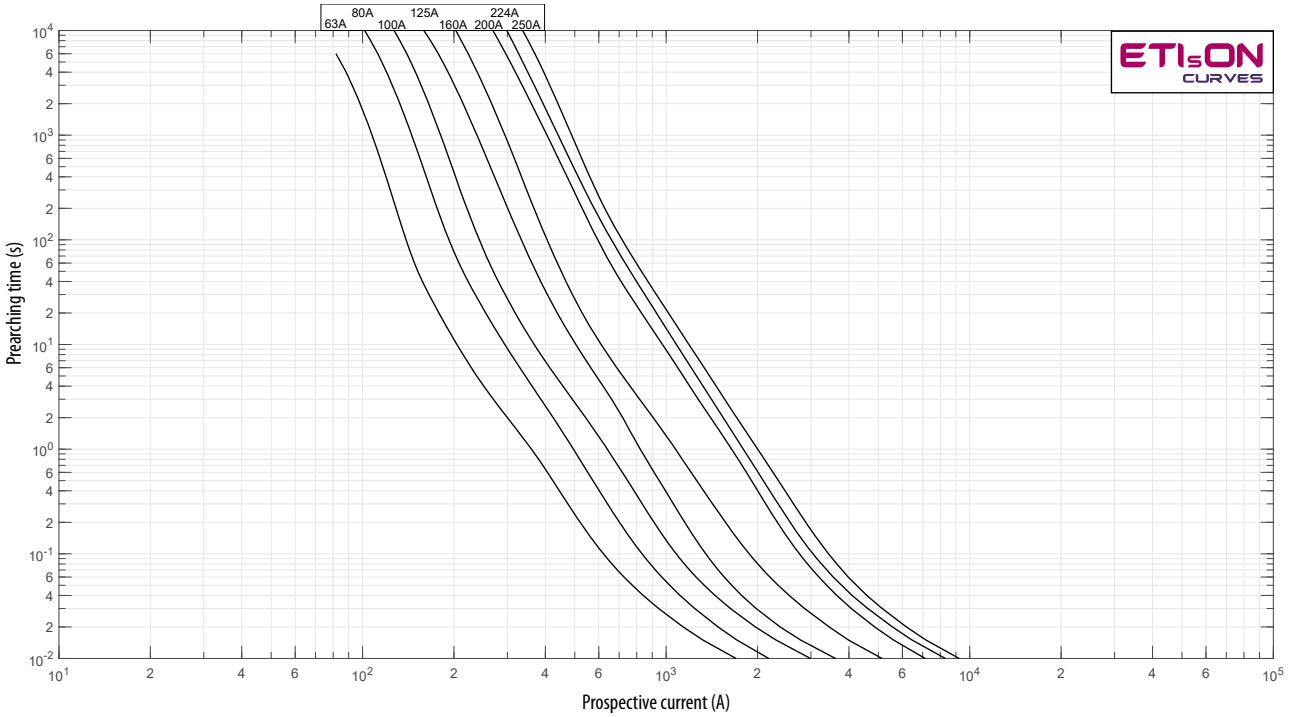
NH0, NH1C
690V

Time current characteristics
I/t, gG

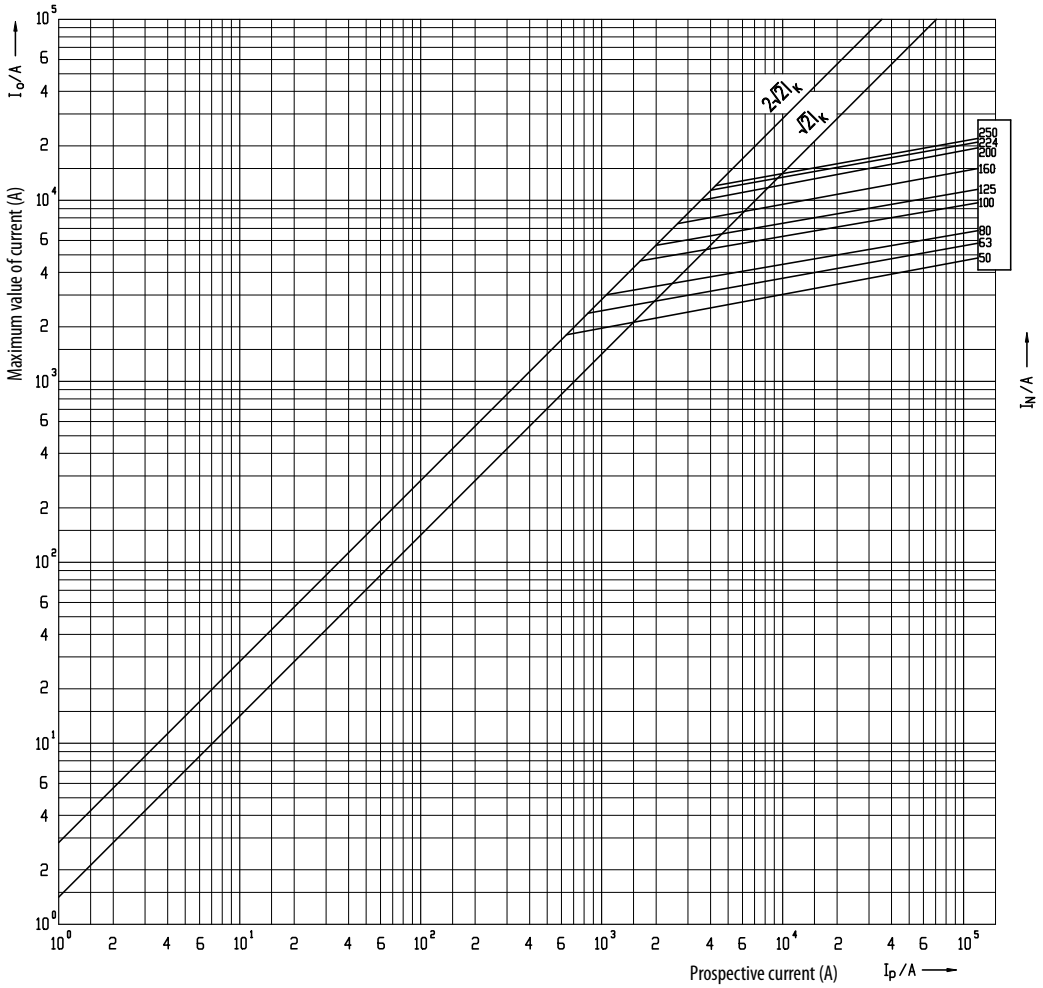


NH1 400V

Time current characteristics
I/t, gG

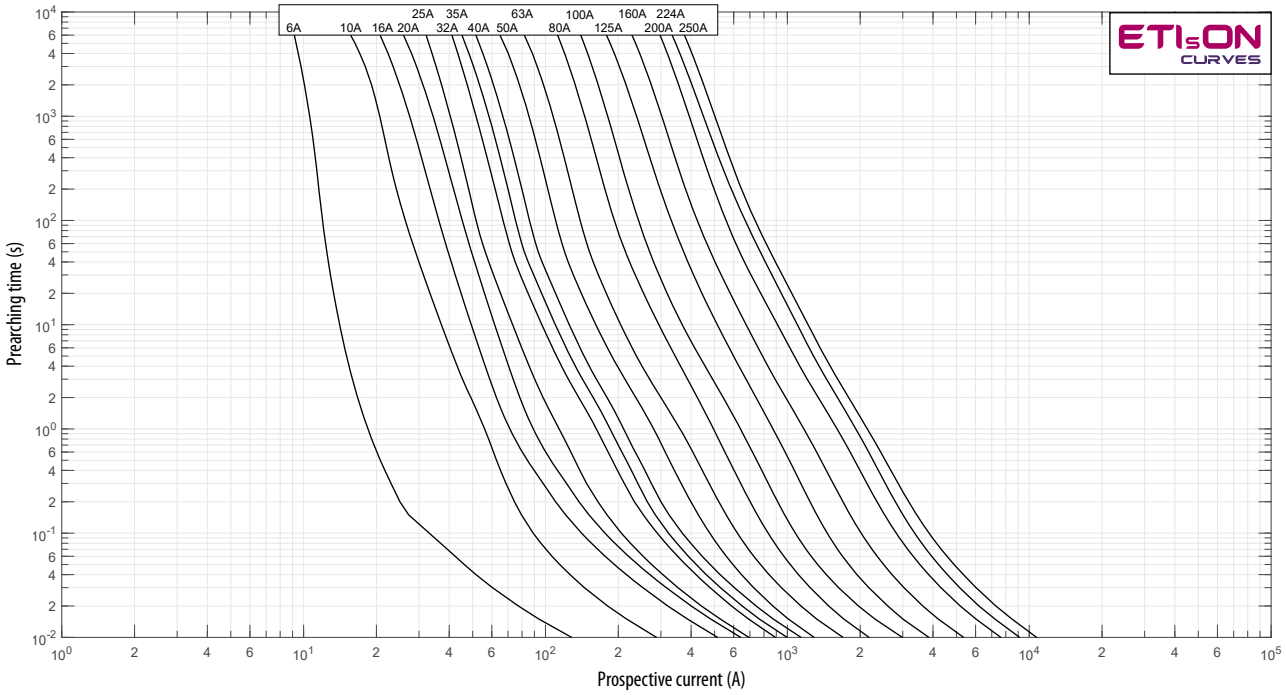


Cut-off current characteristics

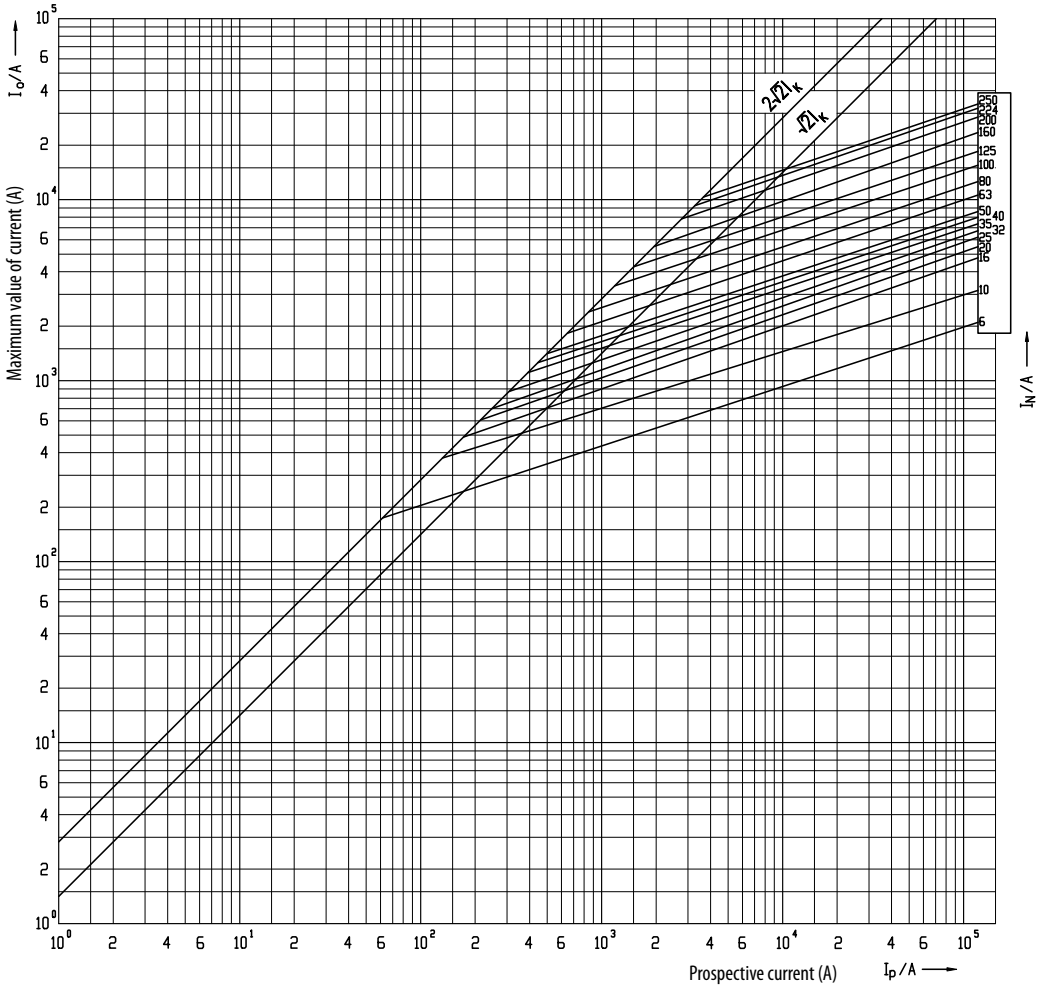


NH1 500V

Time current characteristics I/t, gG

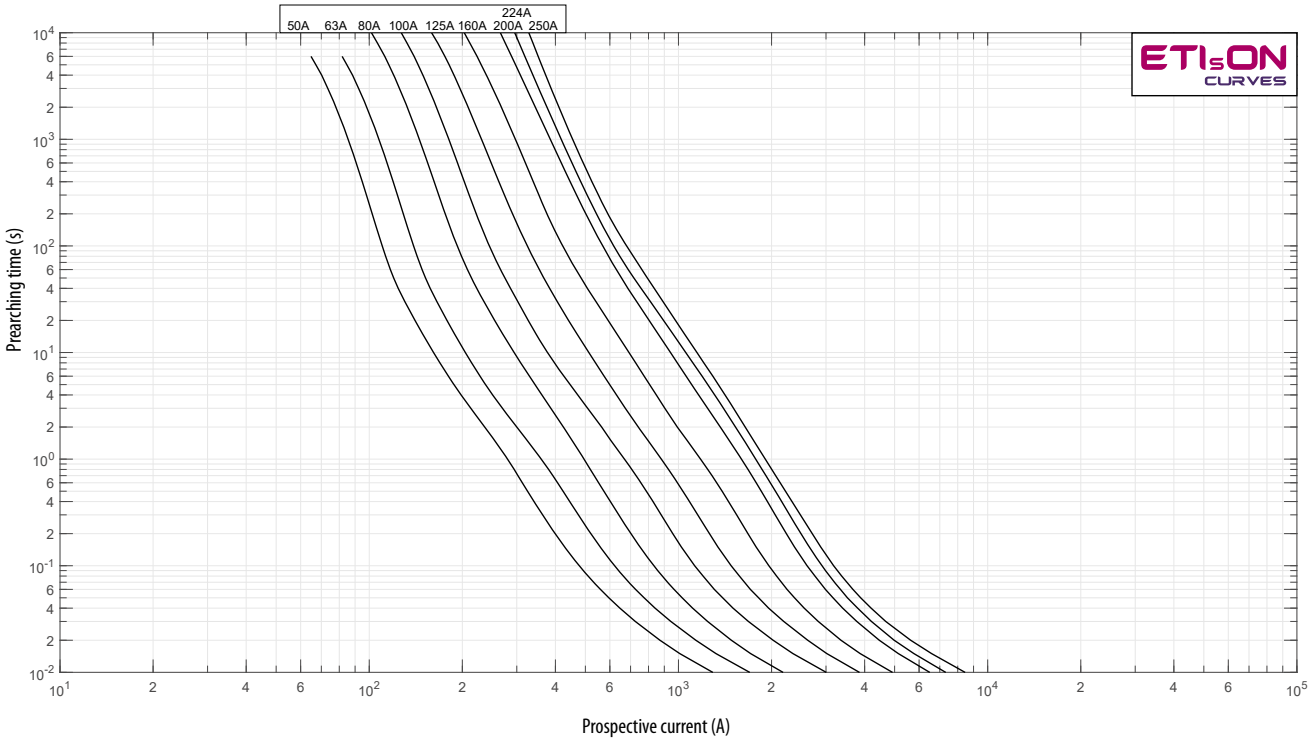


Cut-off current characteristics

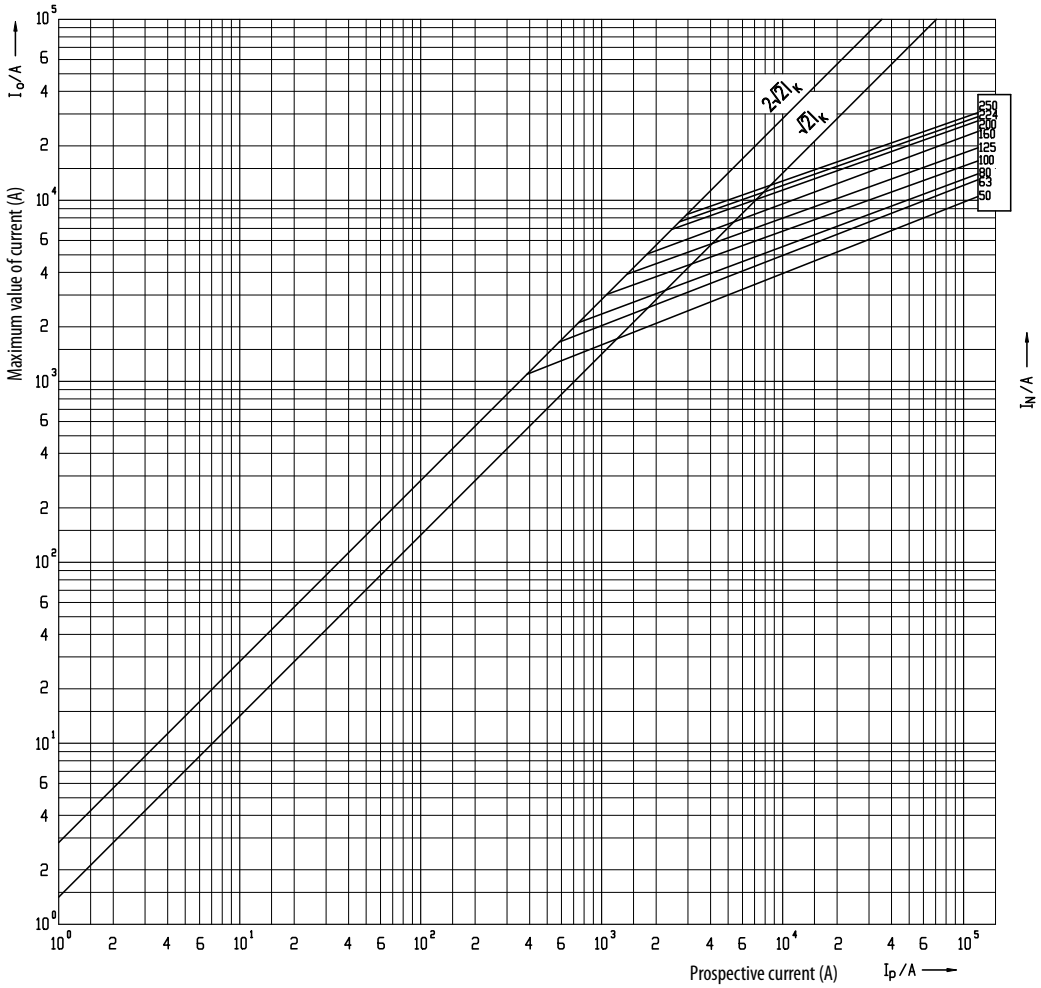


NH1 690V

Time current characteristics
I/t, gG

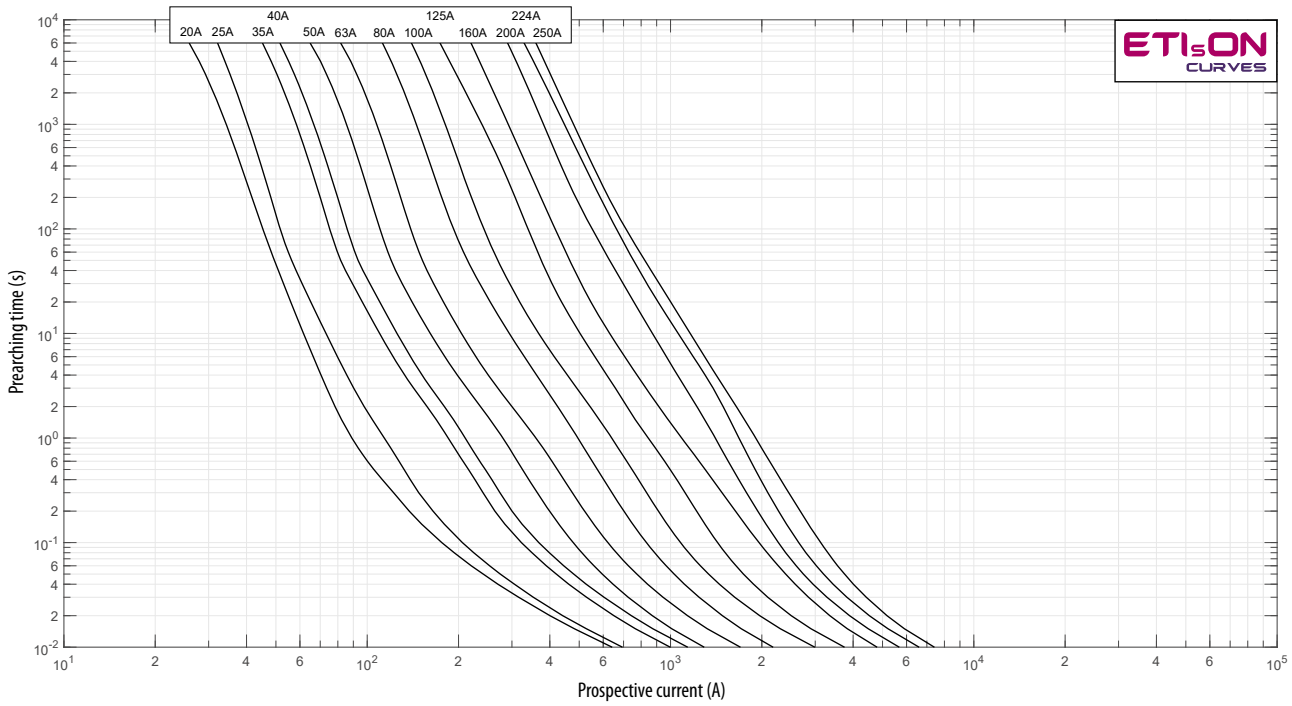


Cut-off current characteristics

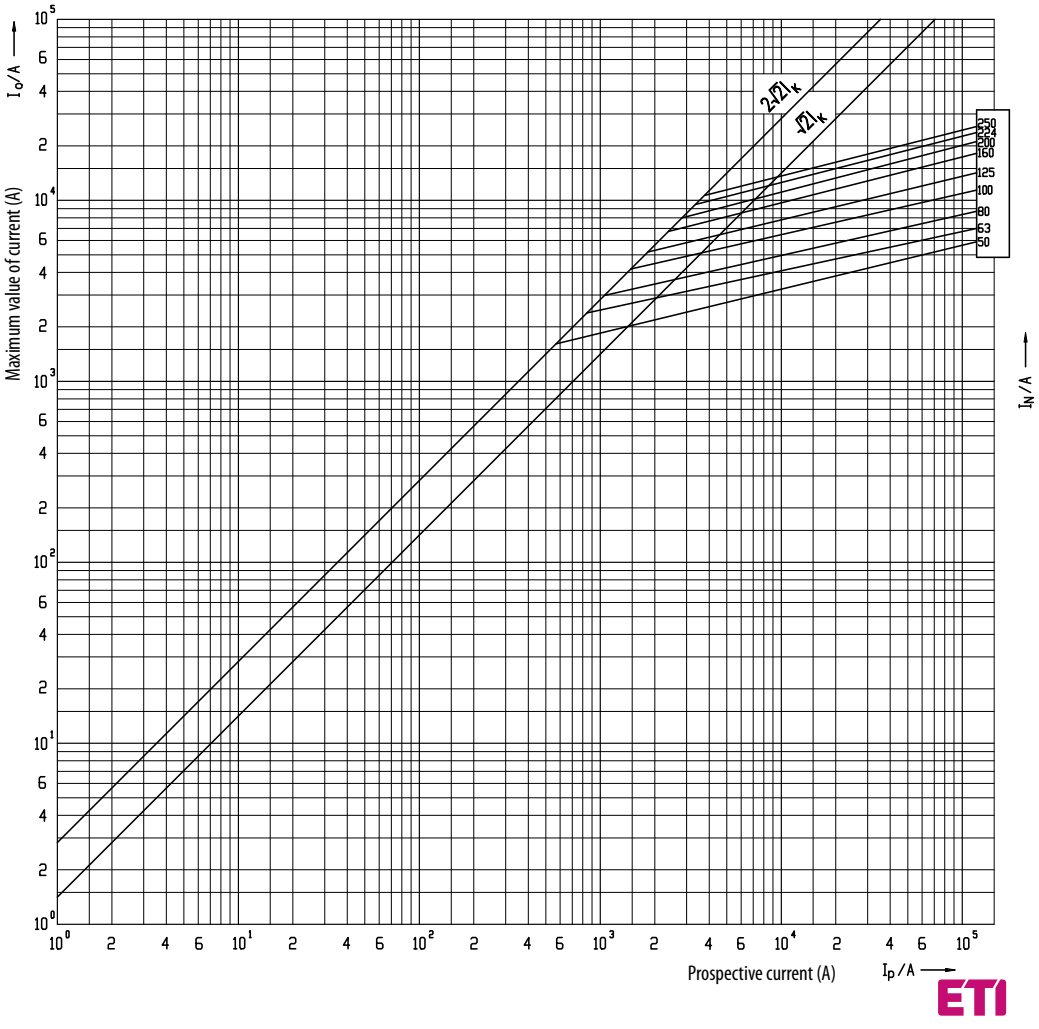


NH2C 400V

Time current characteristics I/t, gG

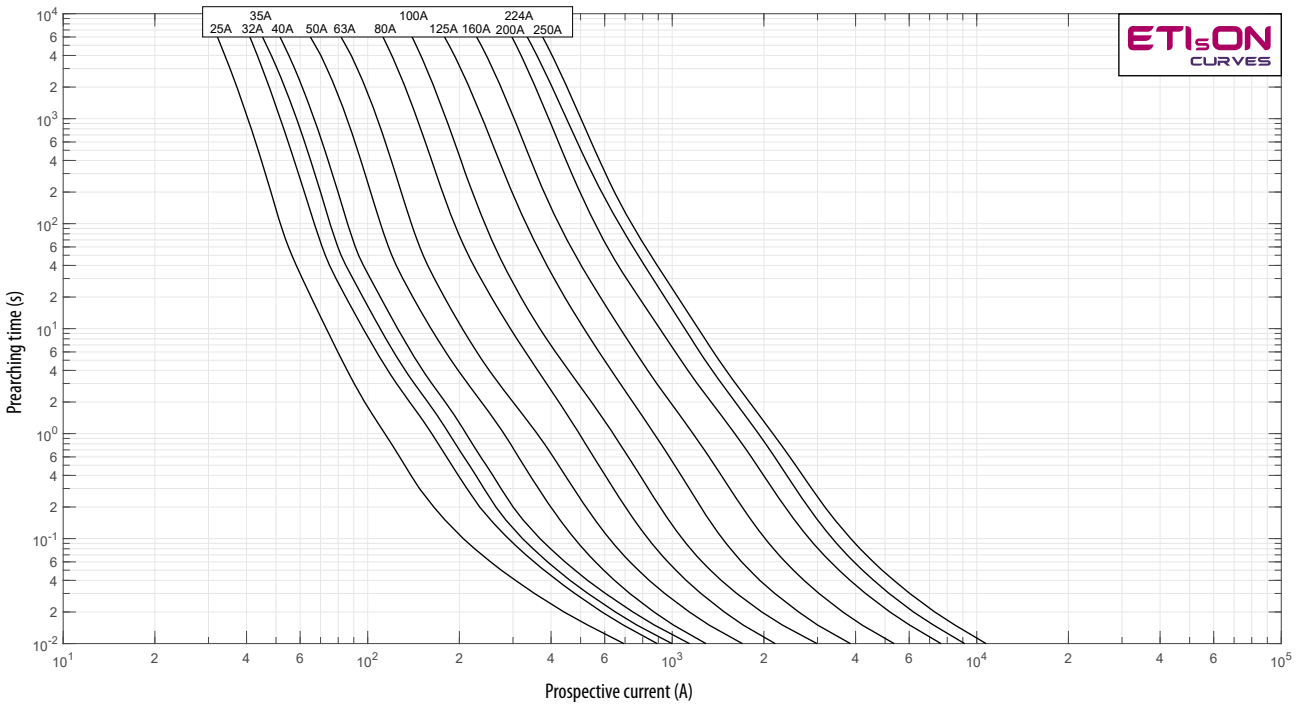


Cut-off current characteristics

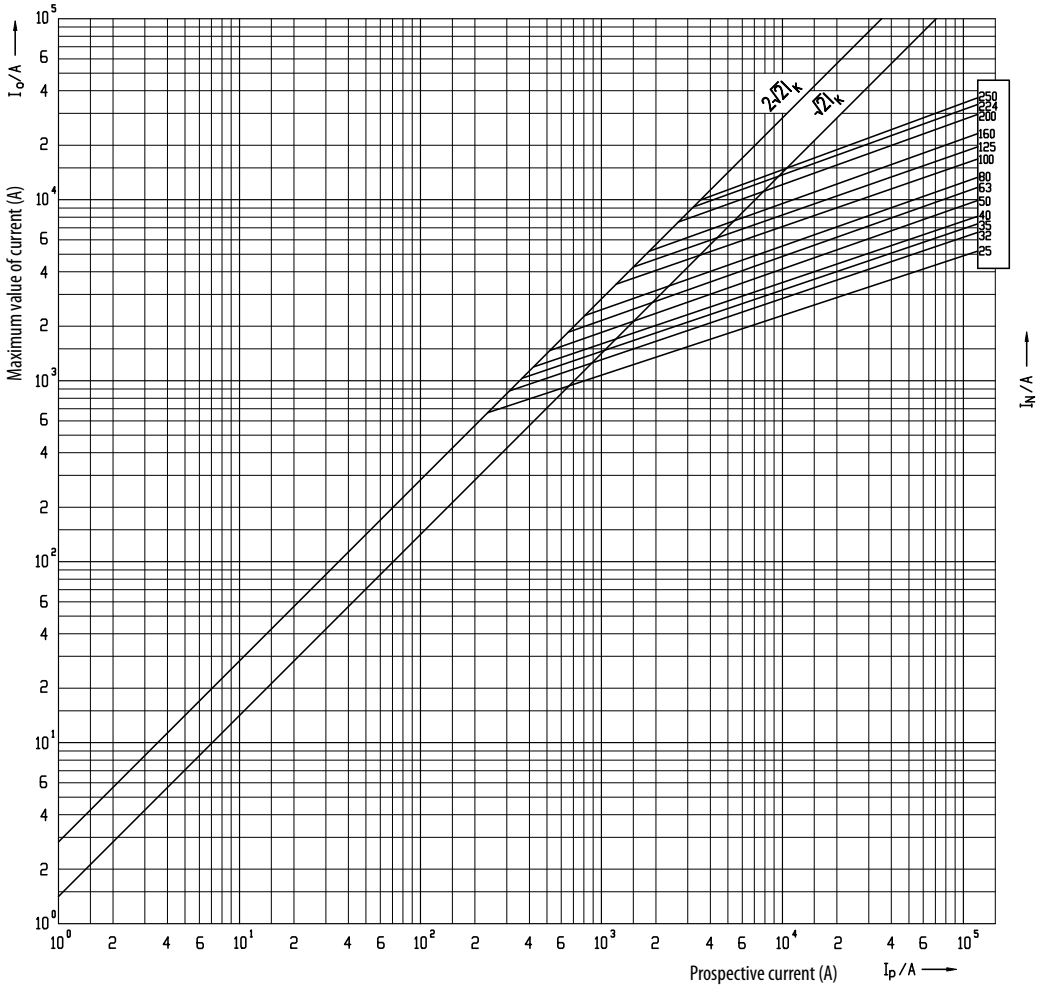


NH2C 500V

Time current characteristics I/t, gG

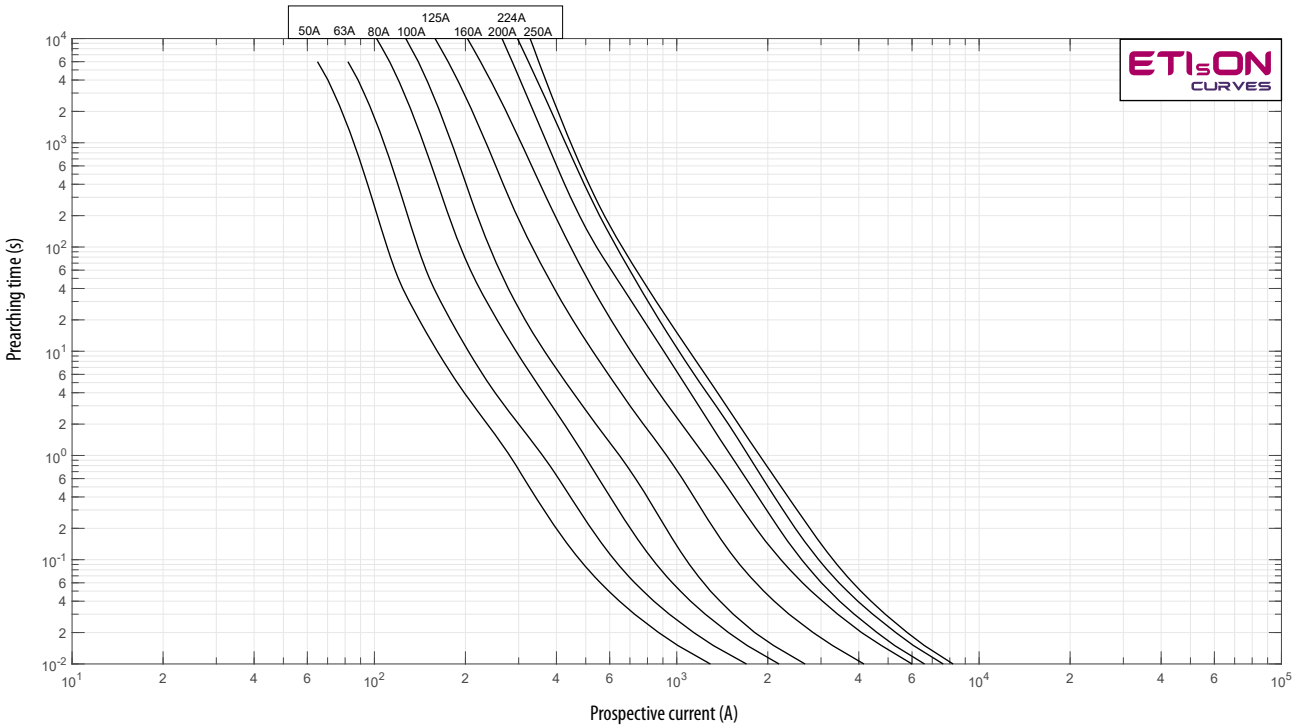


Cut-off current characteristics

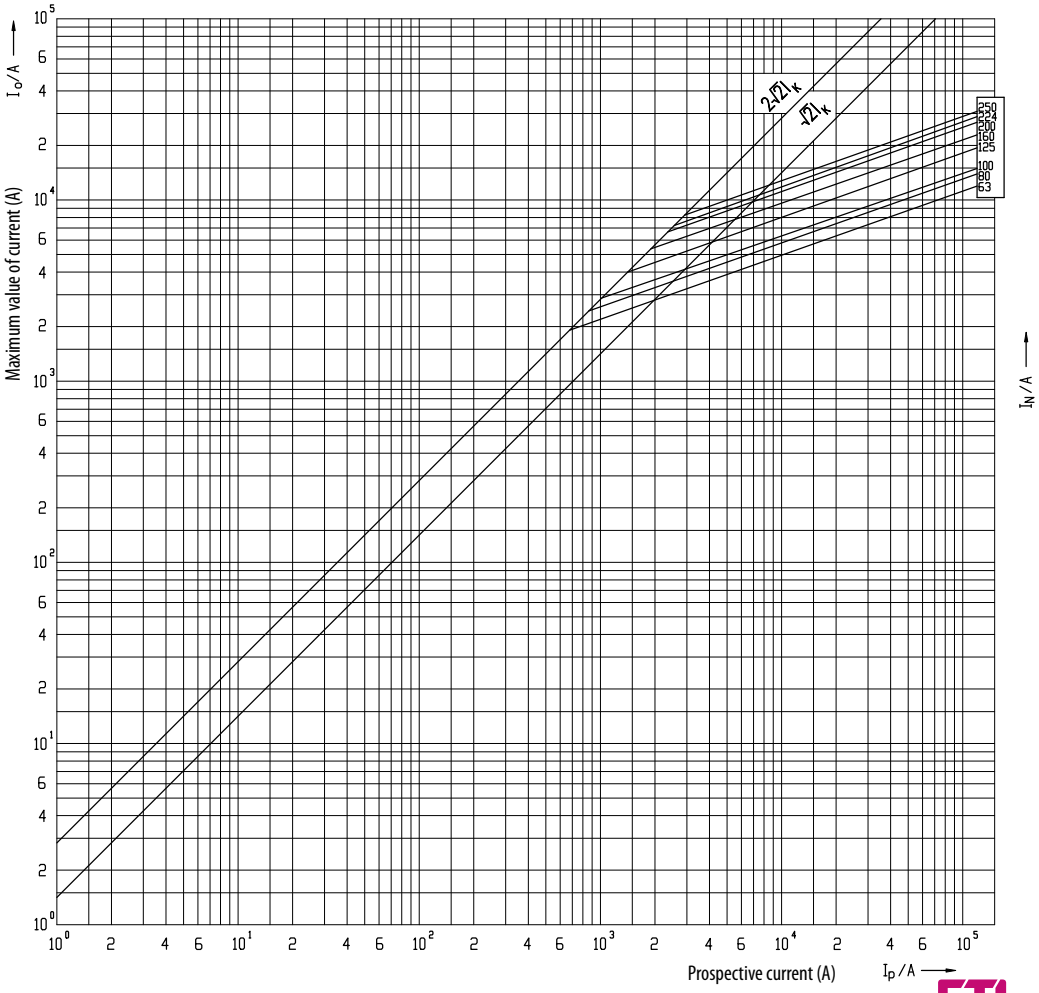


NH2C 690V

Time current characteristics
I/t, gG

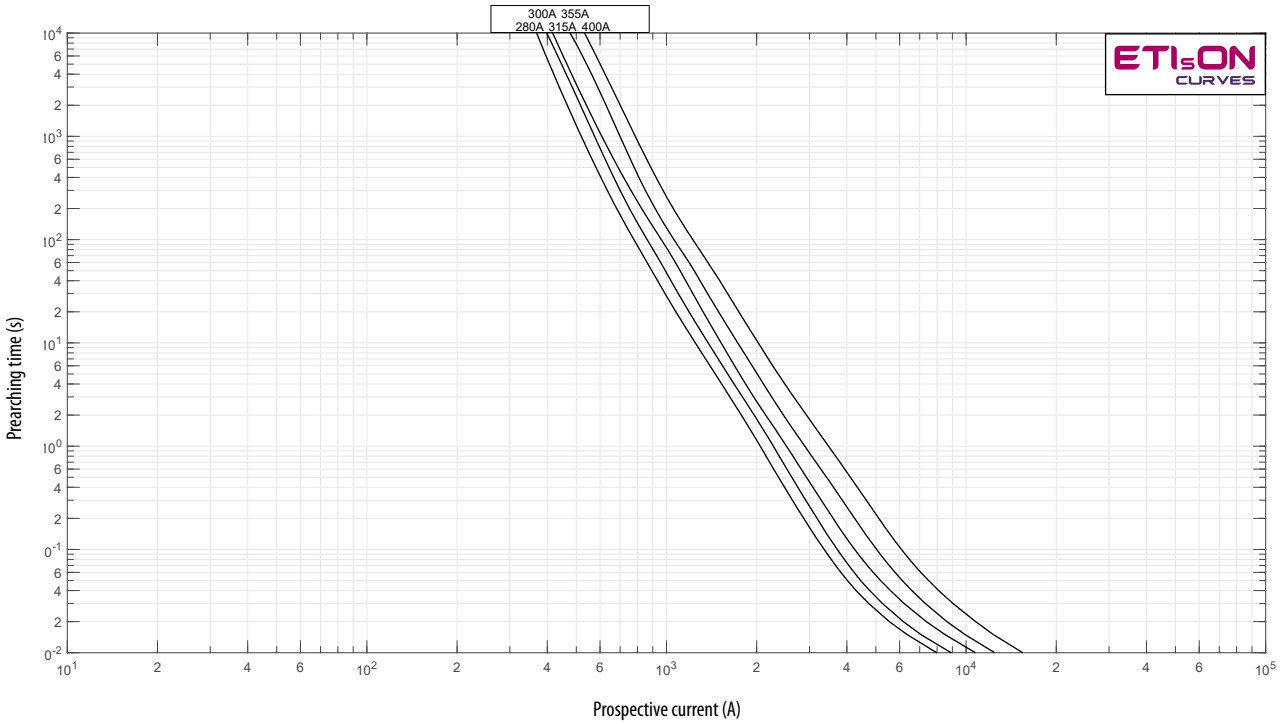


Cut-off current characteristics

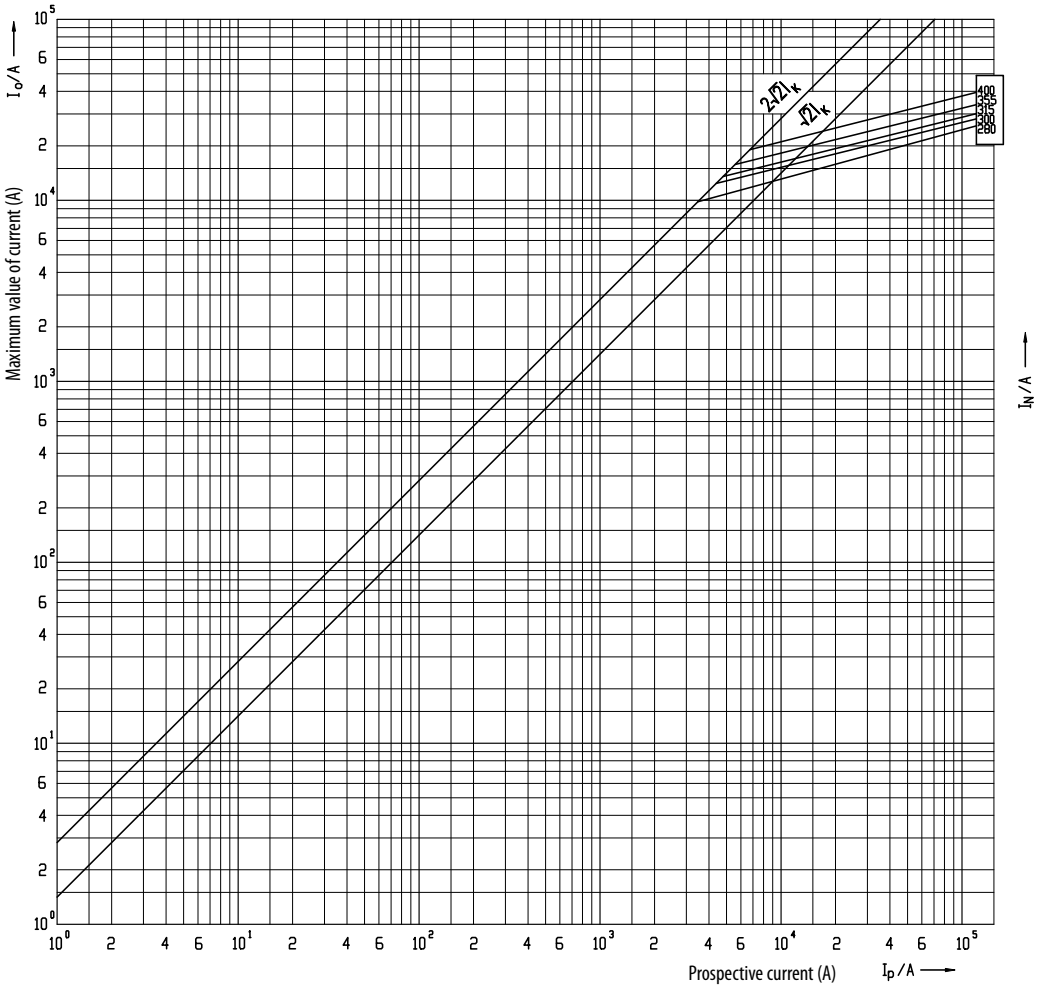


NH2 400V

Time current characteristics I/t, gG

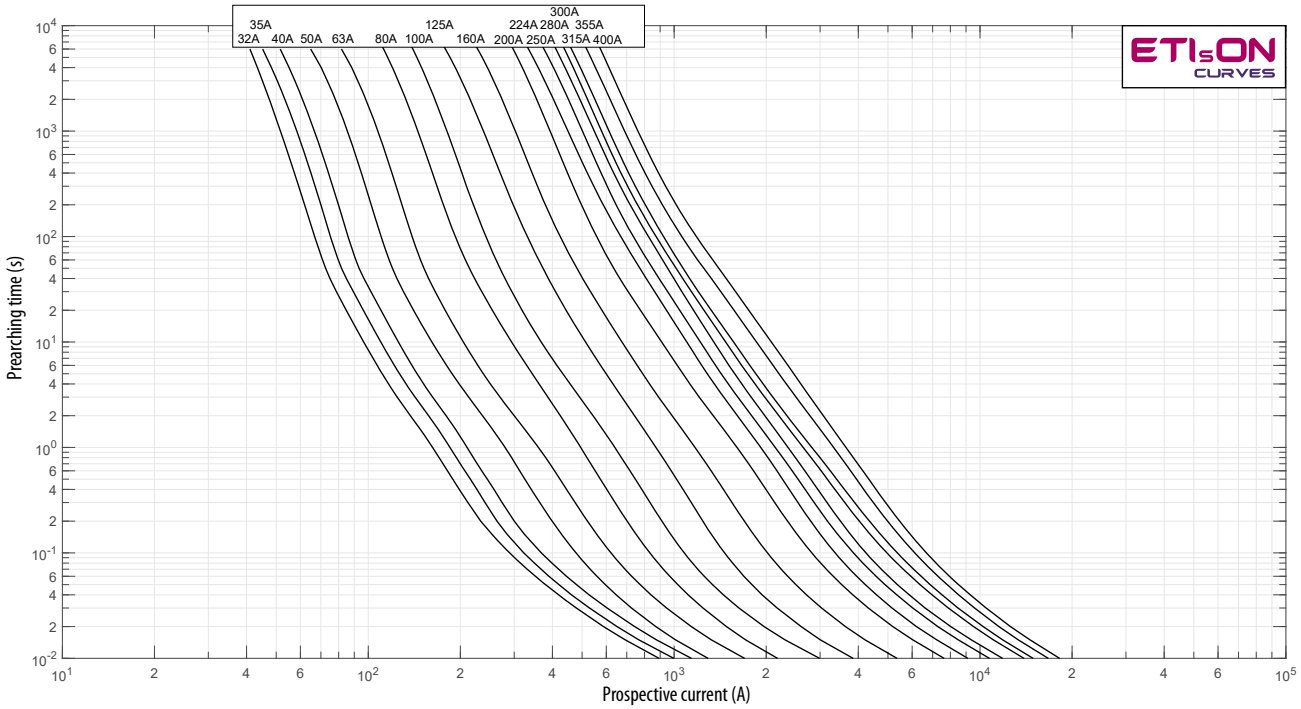


Cut-off current characteristics

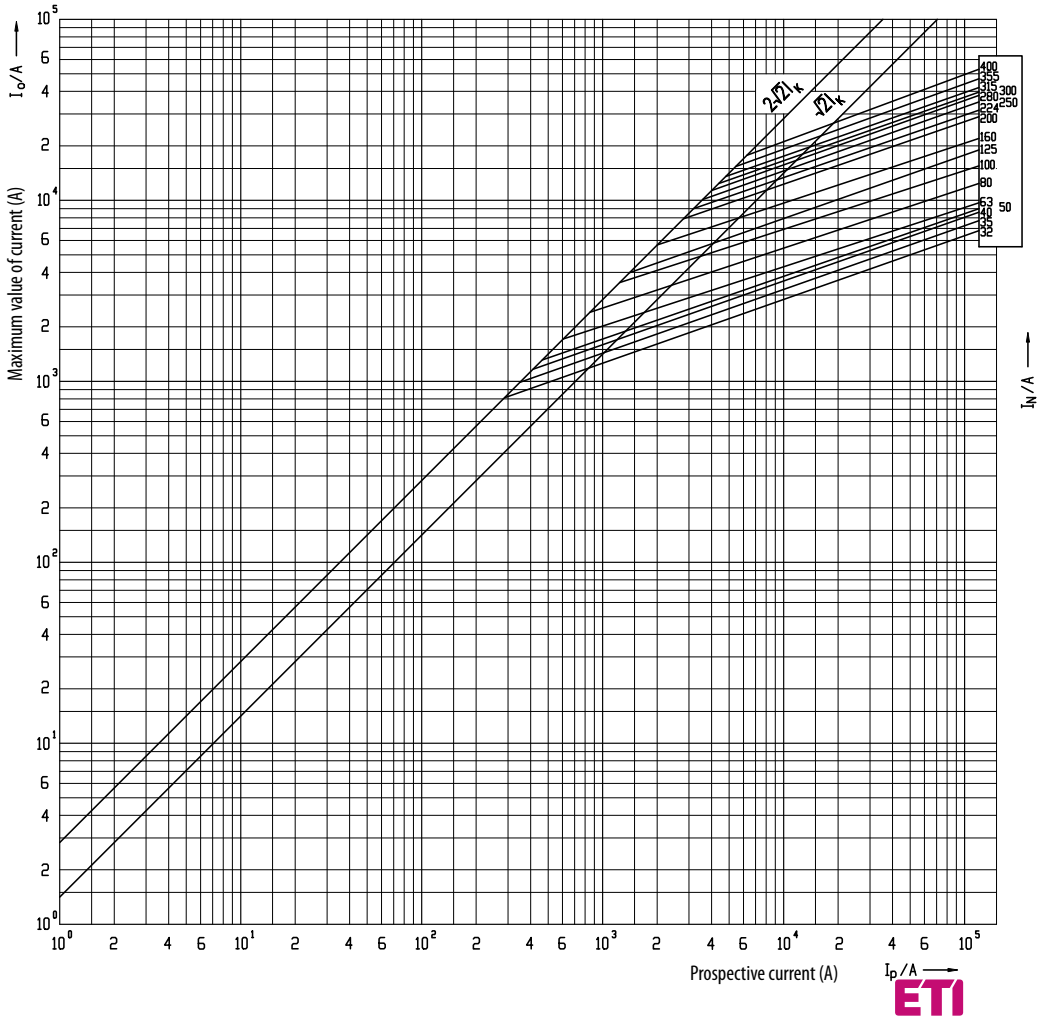


NH2 500V

Time current characteristics I/t, gG

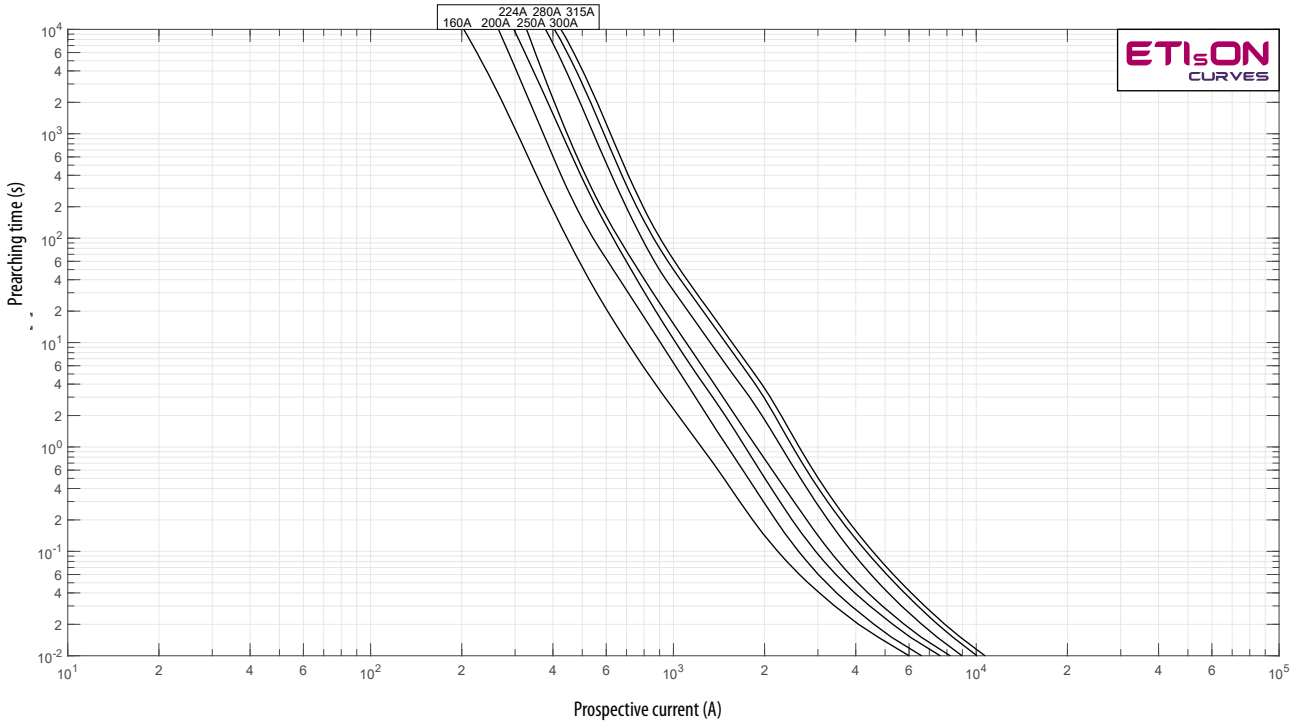


Cut-off current characteristics

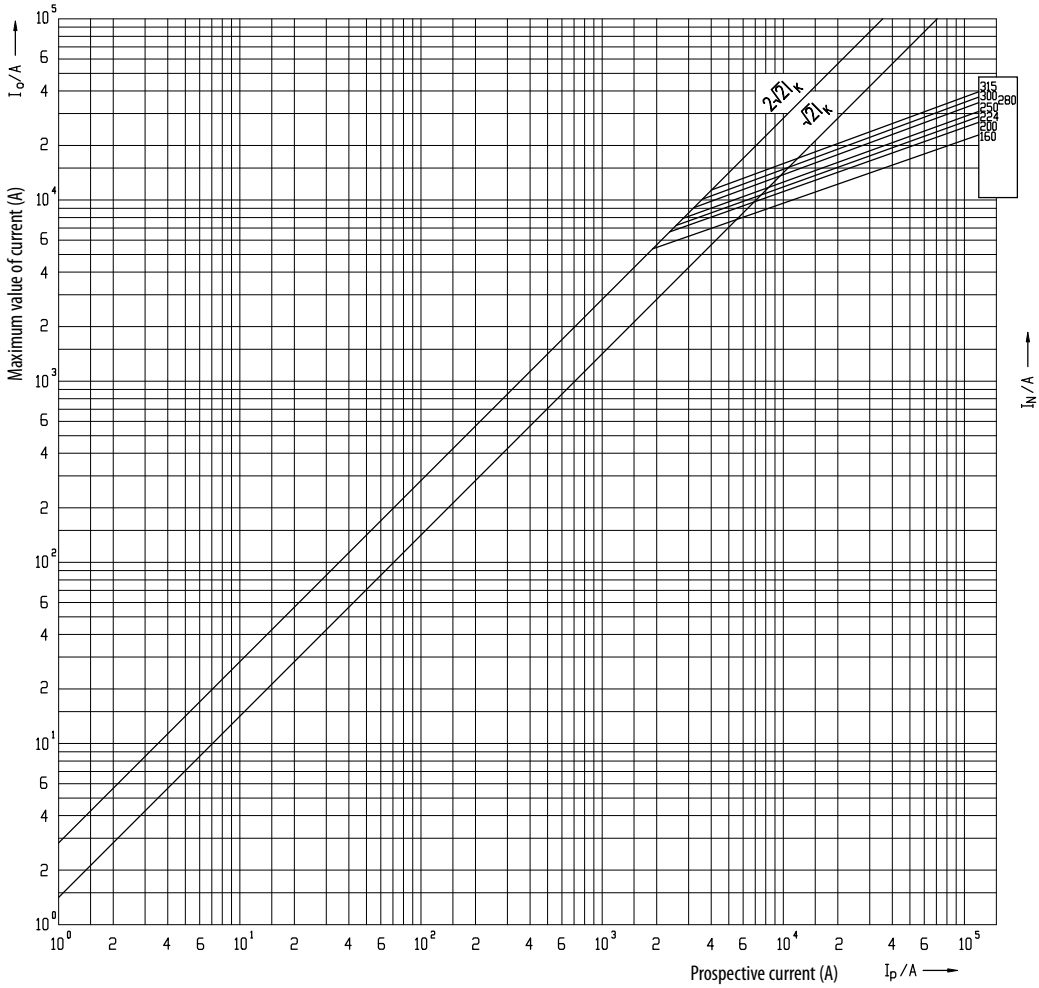


NH2 690V

Time current characteristics
I/t, gG

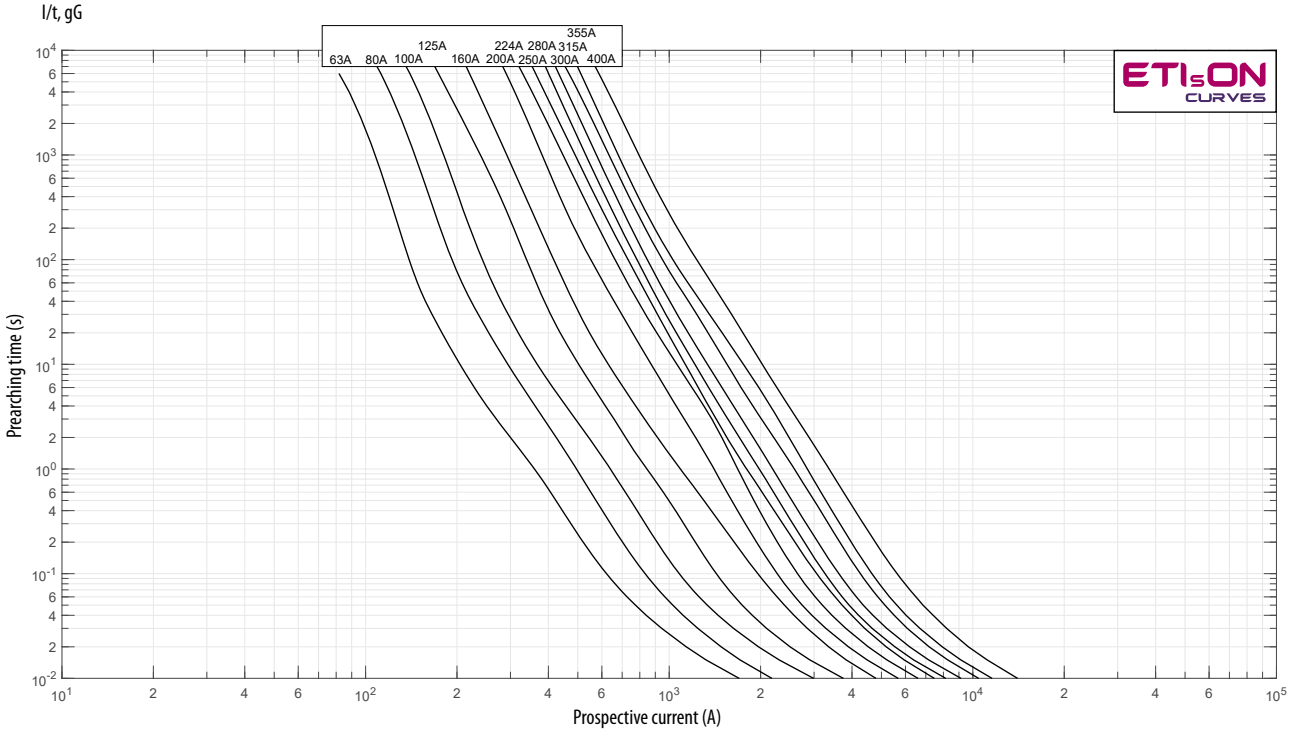


Cut-off current characteristics

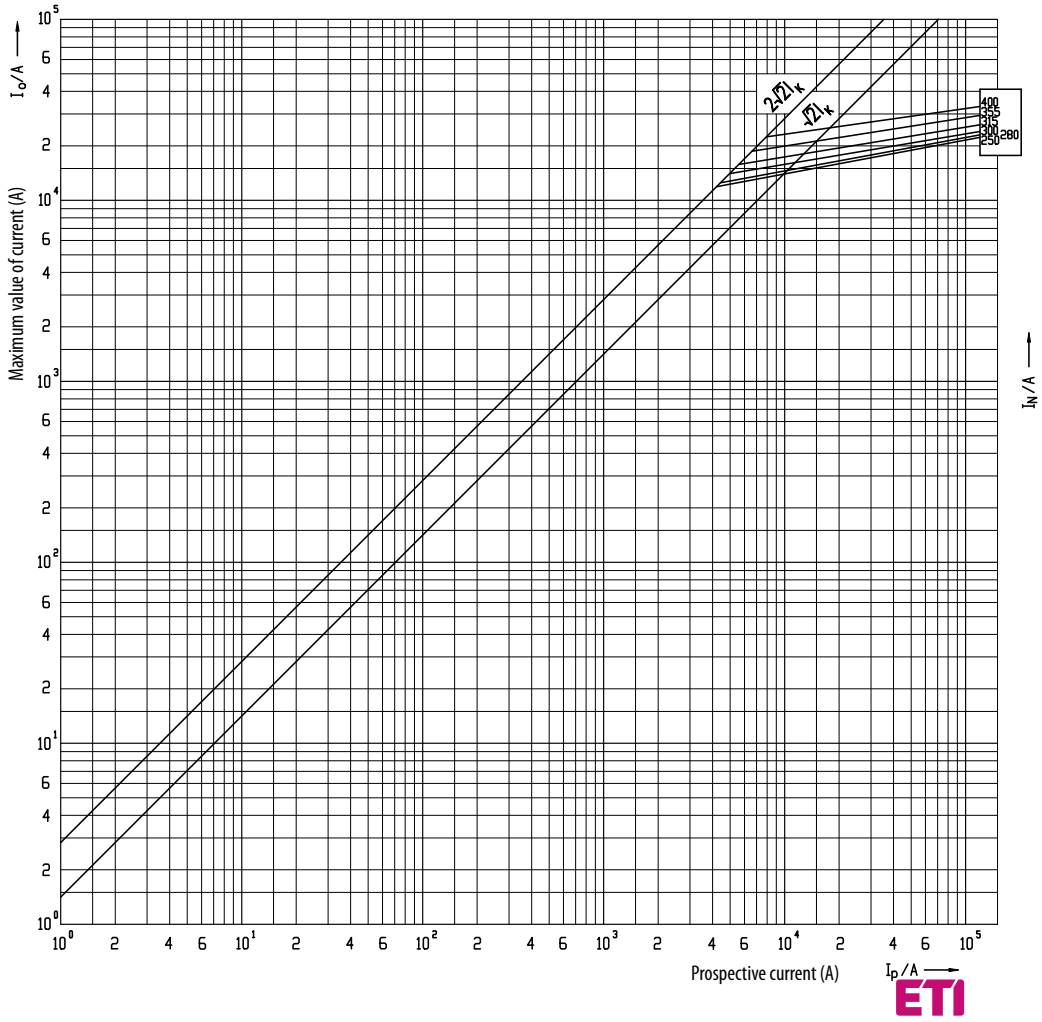


NH3C 400V

Time current characteristics
I/t, gG

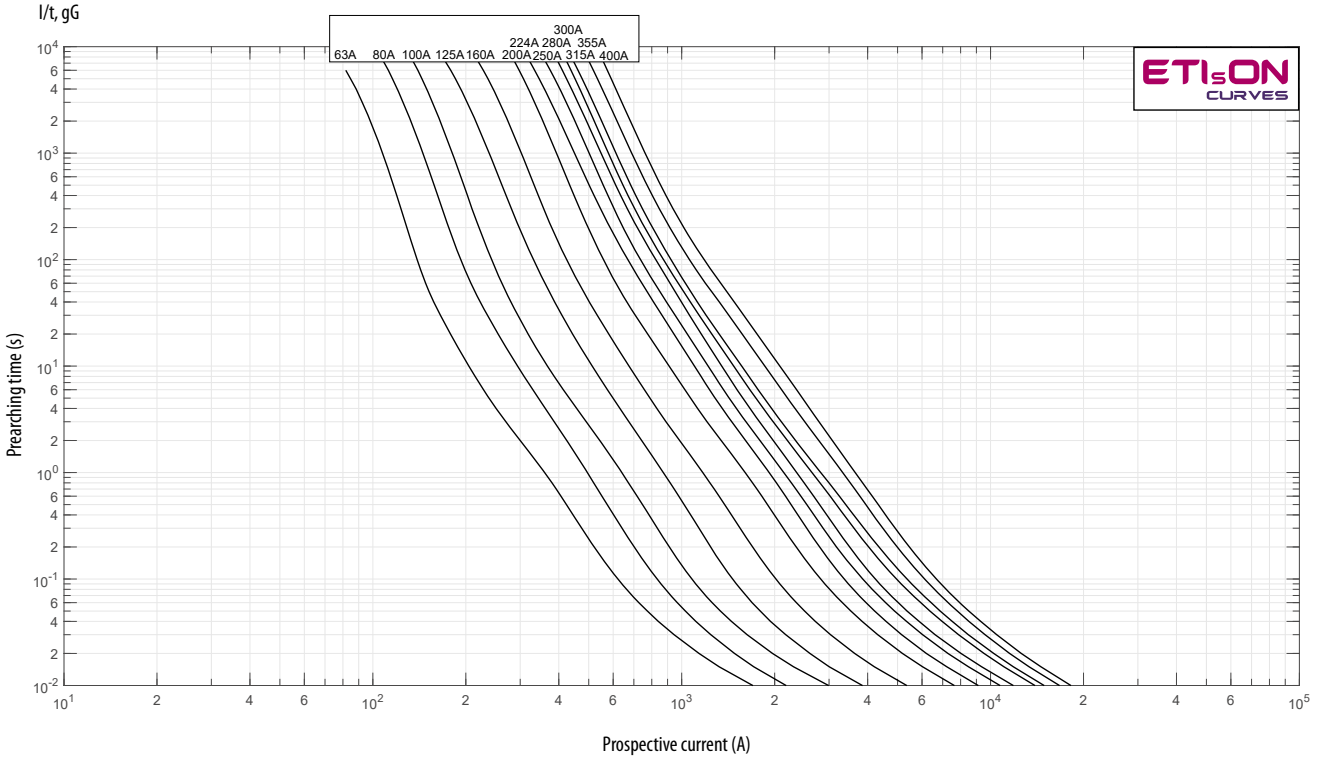


Cut-off current characteristics

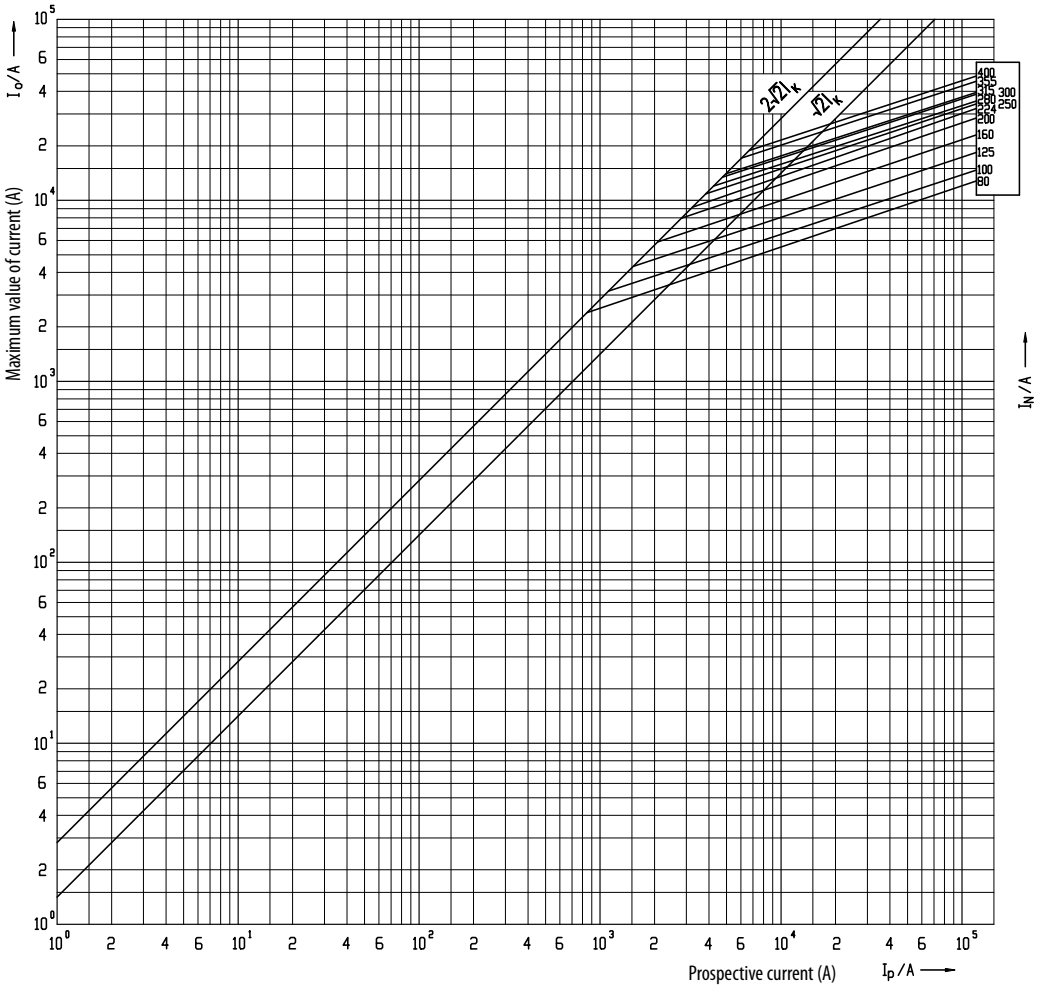


NH3C 500V

Time current characteristics
I/t, gG

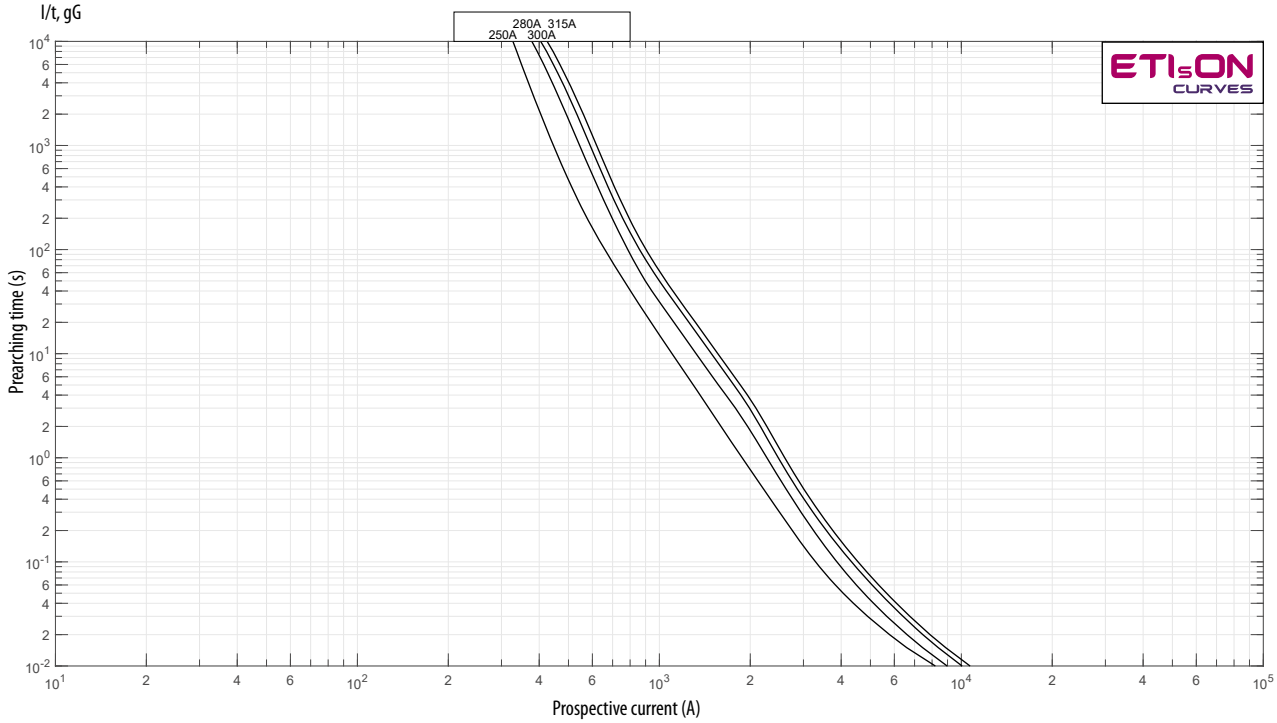


Cut-off current characteristics

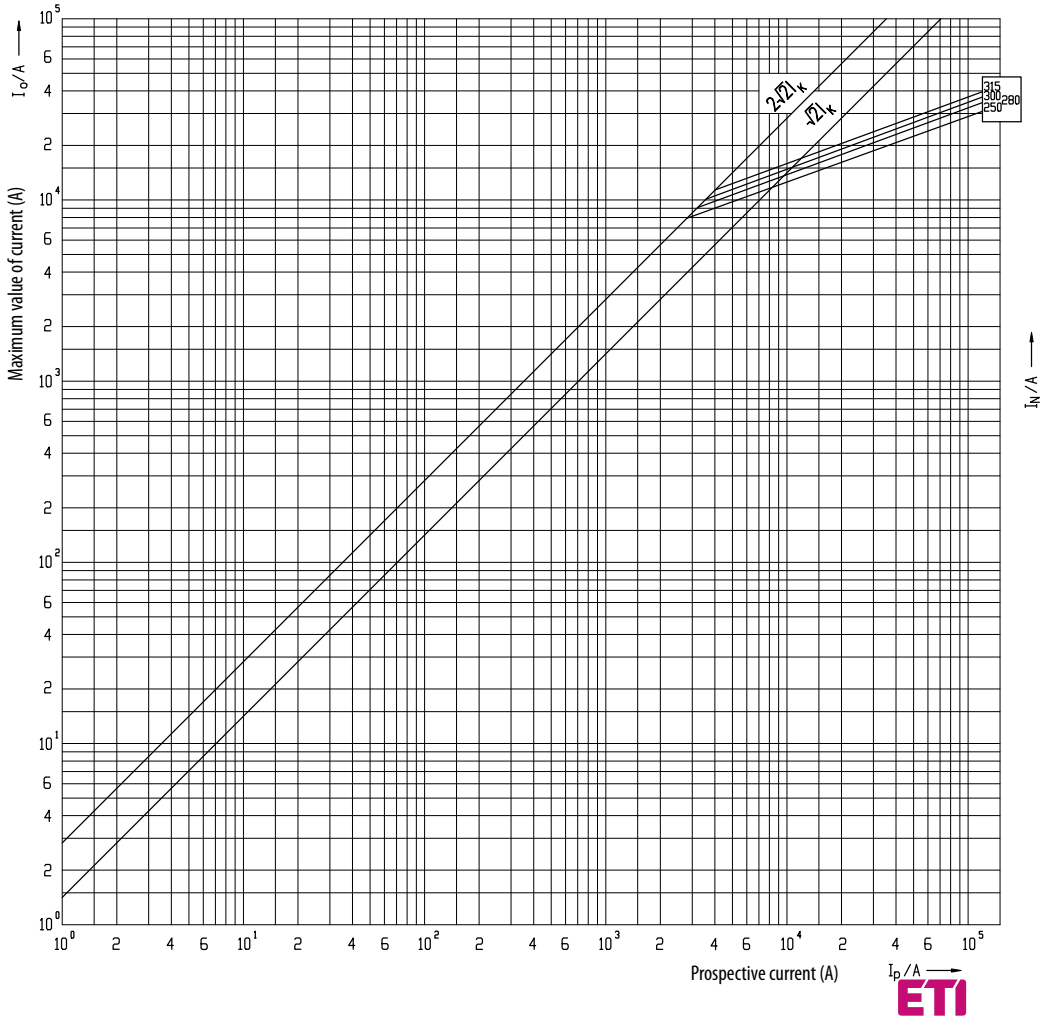


NH3C 690V

Time current characteristics
I/t, gG

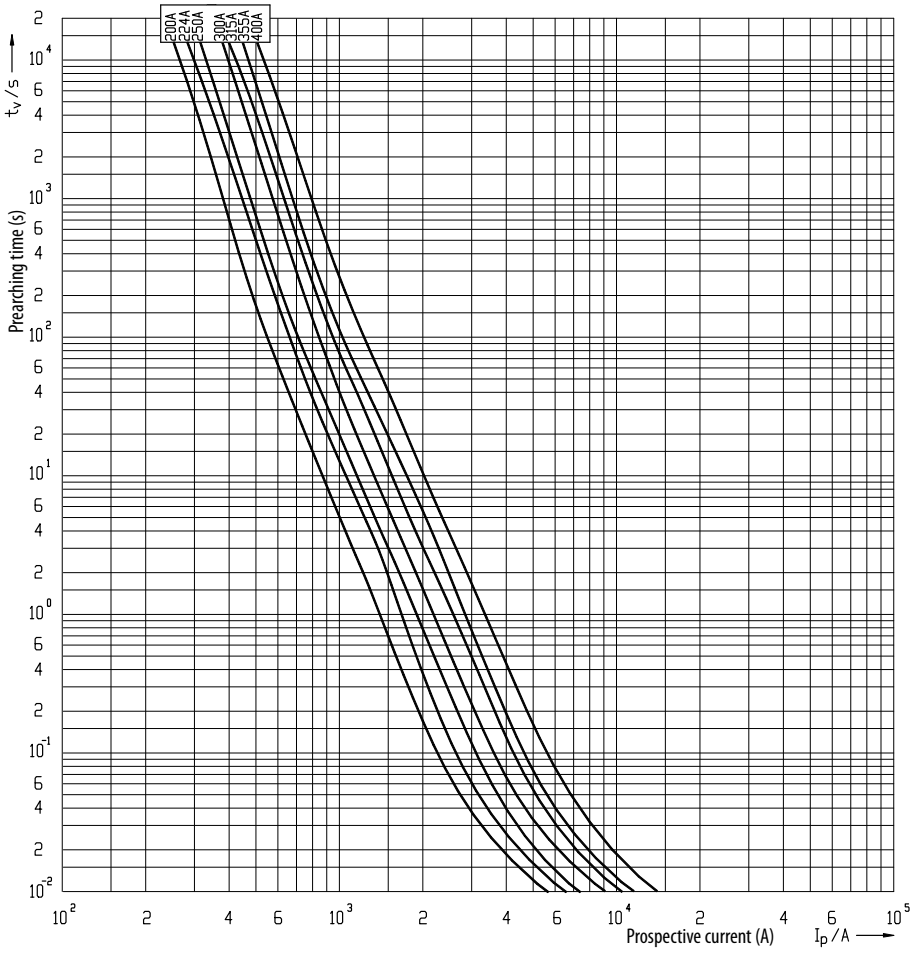


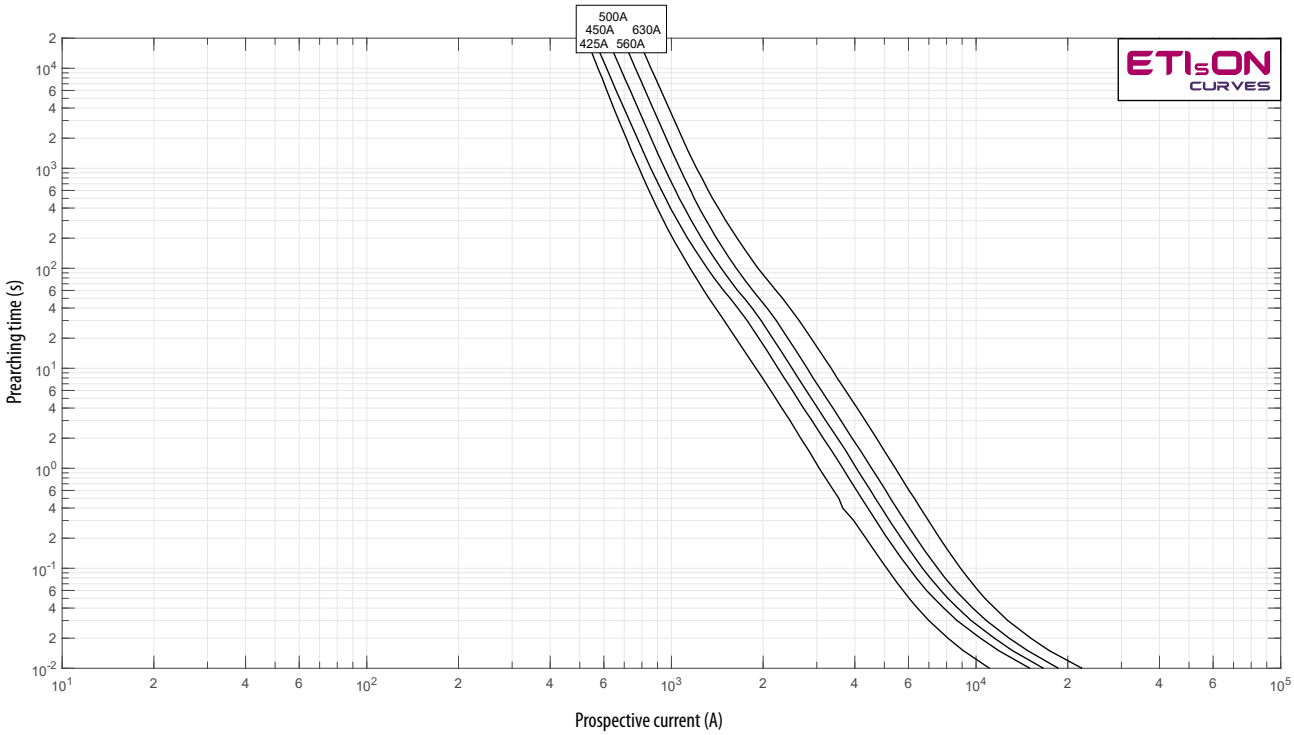
Cut-off current characteristics



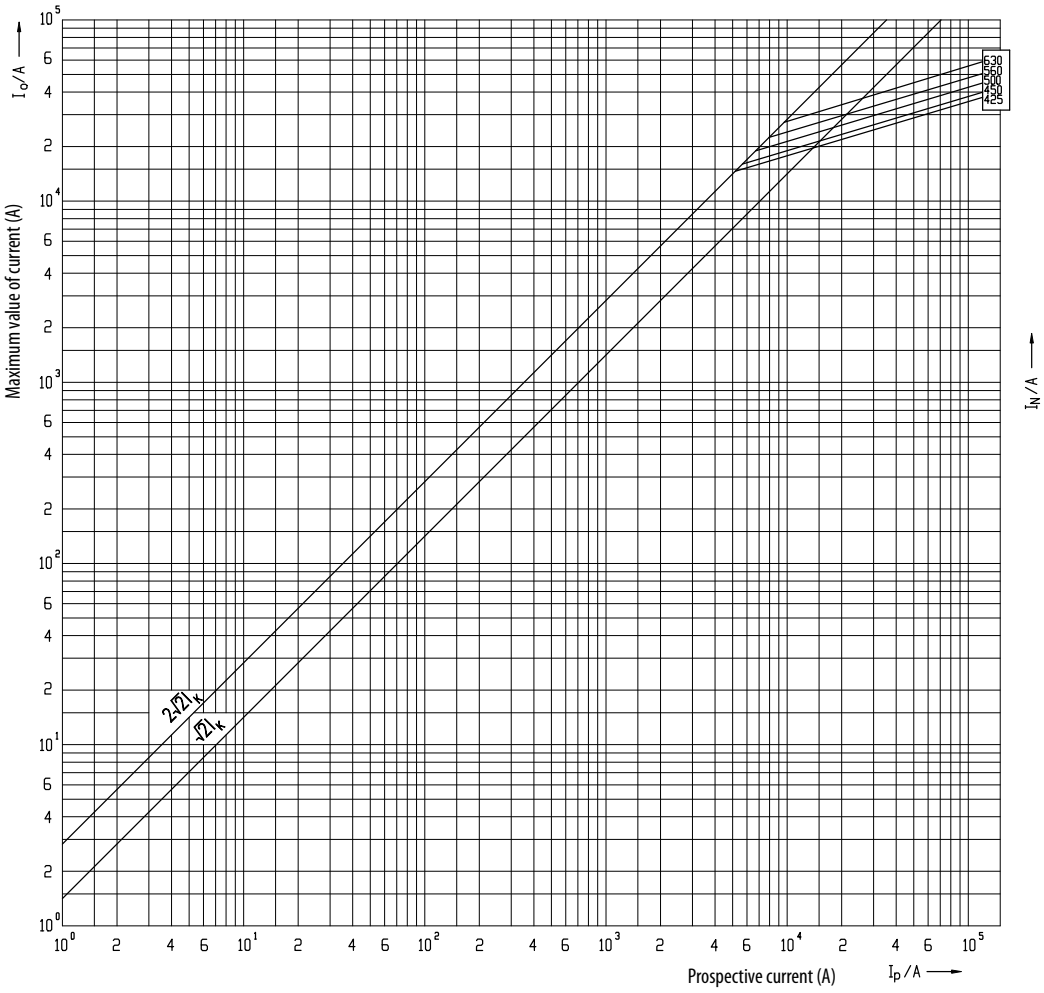
NH3 400V

Time current characteristics I/t, gG



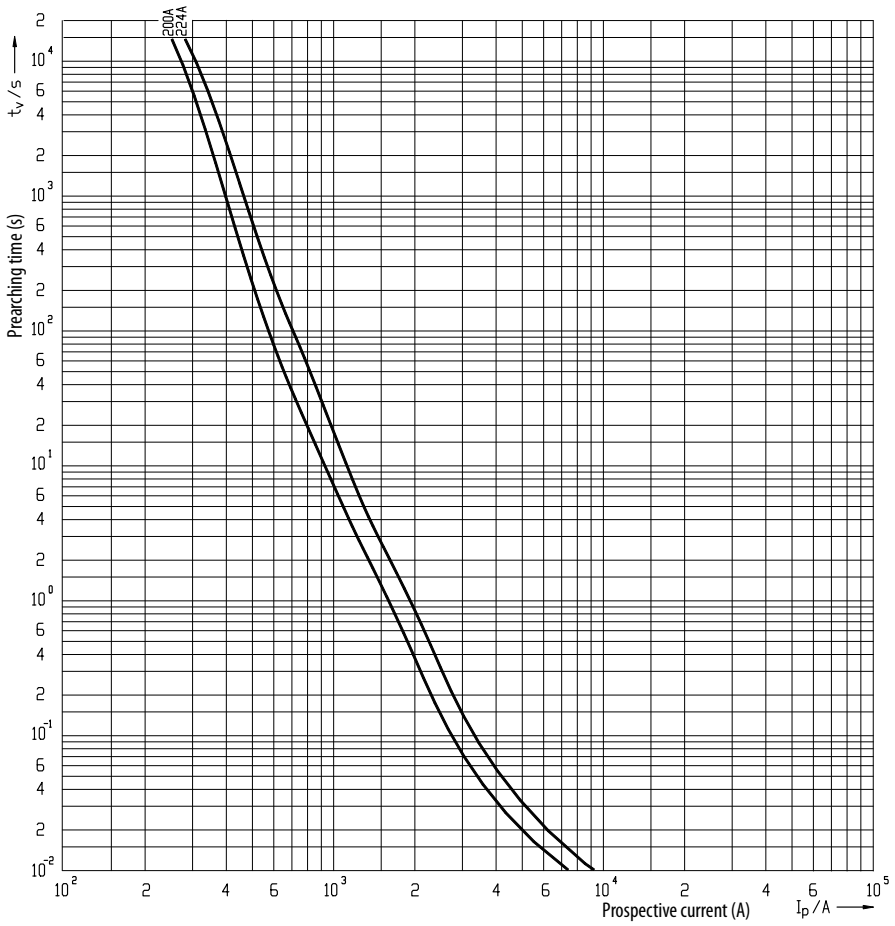


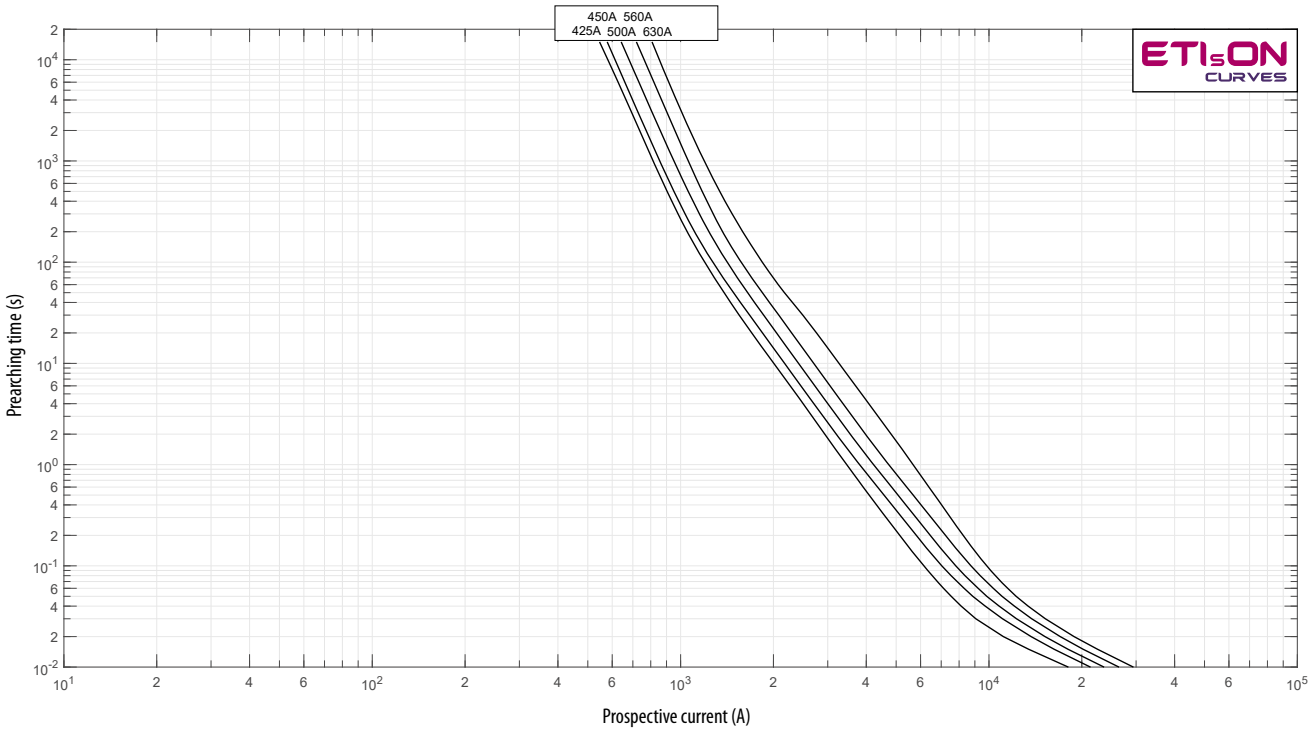
Cut-off current characteristics



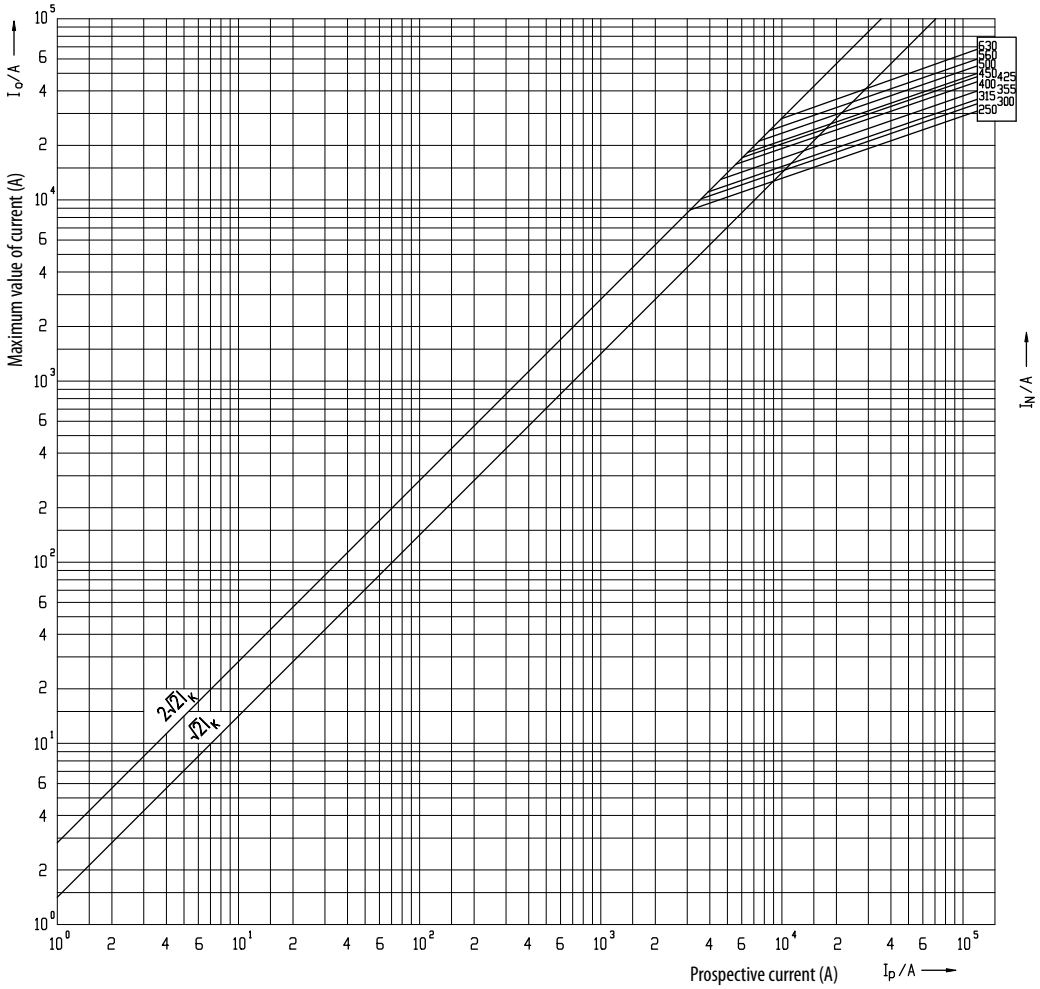
NH3 500V

Time current characteristics I/t, gG



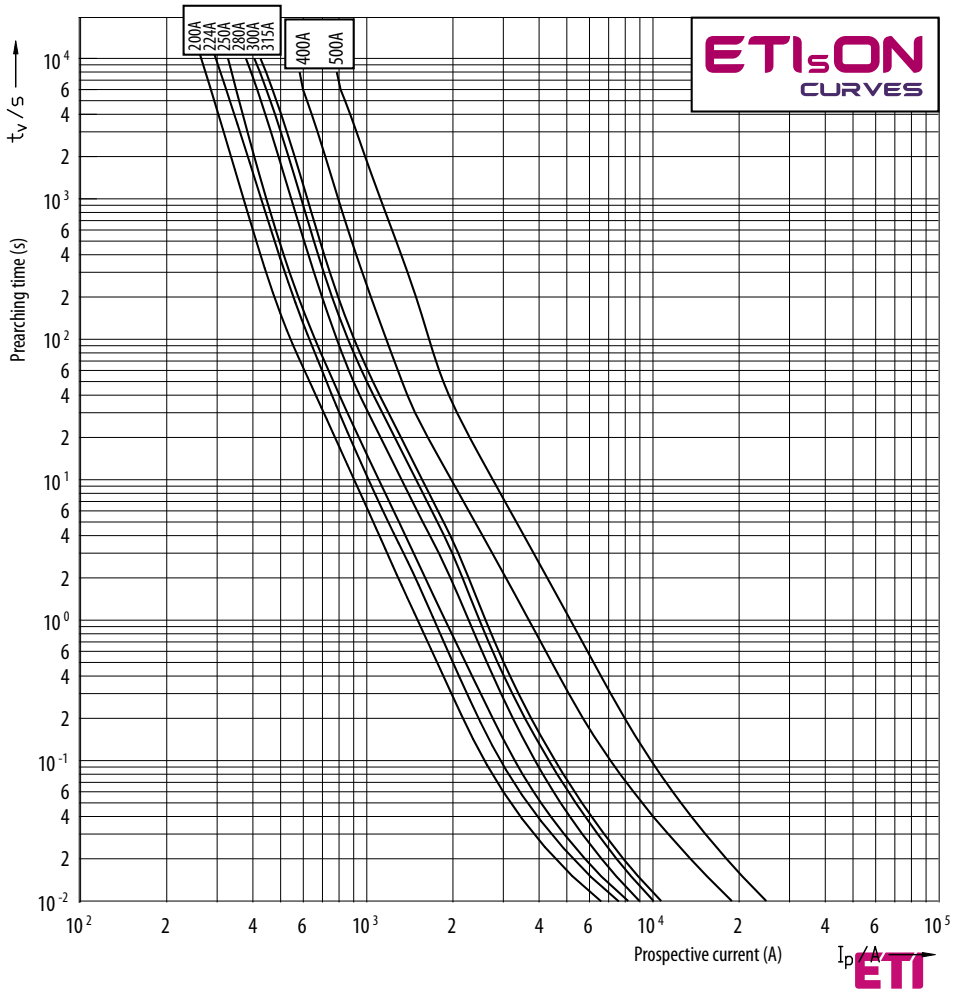


Cut-off current characteristics



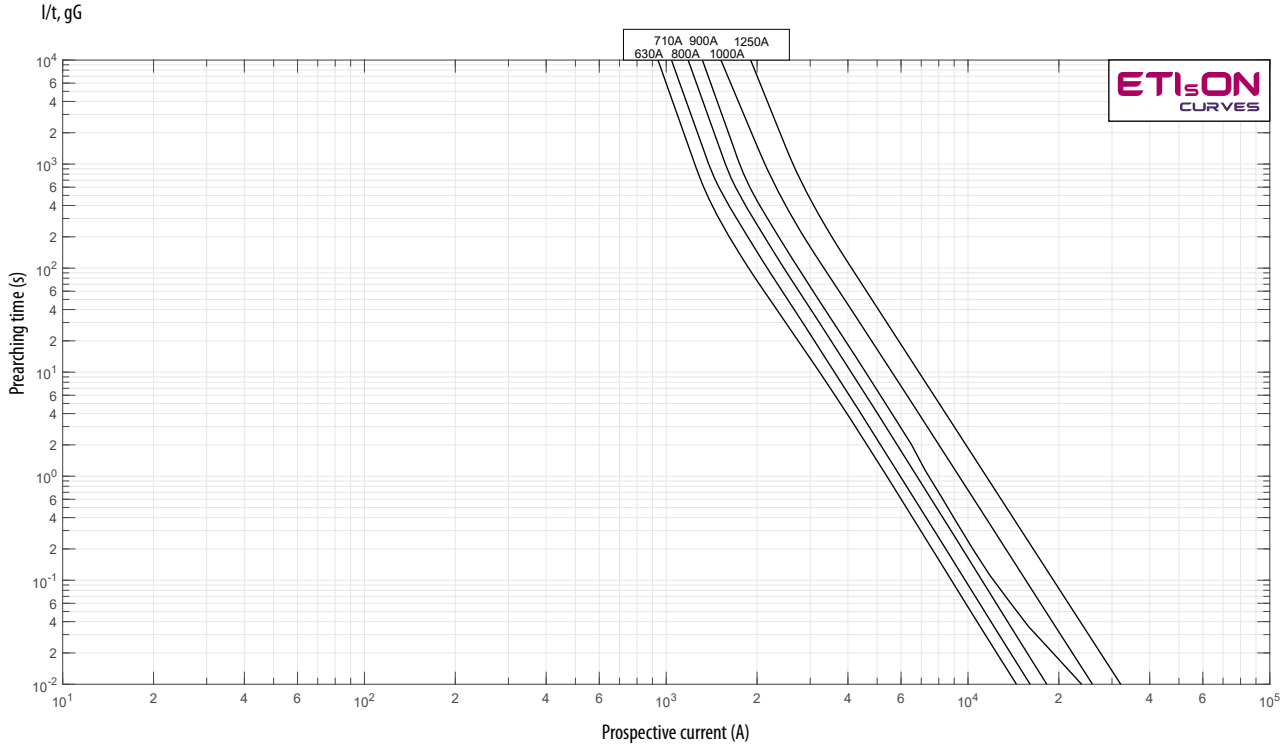
NH3 690V

Time current characteristics I/t, gG



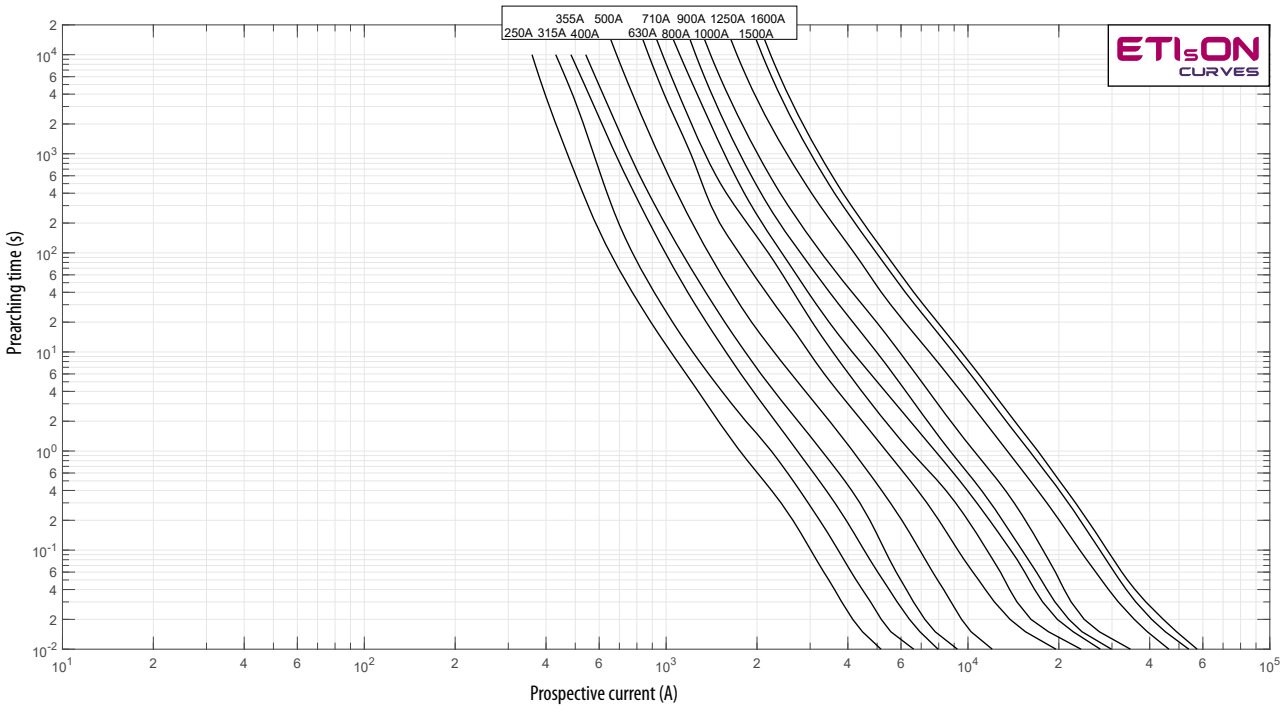
NH4

Time current characteristics I/t, gG



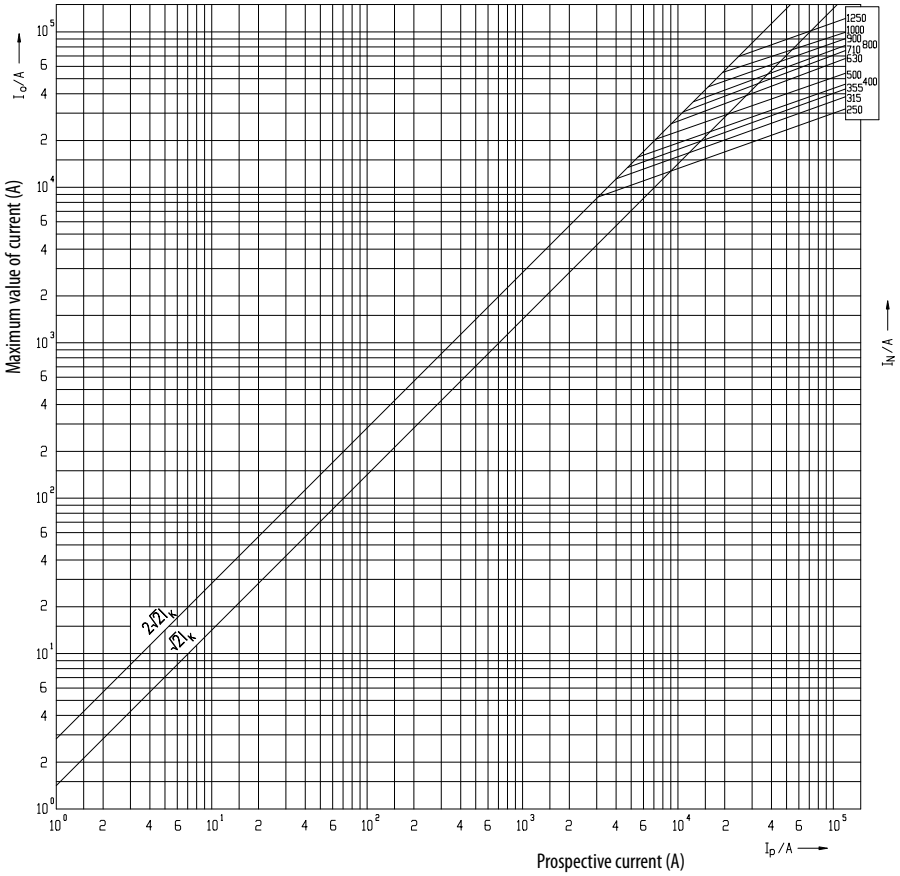
NH4a

Time current characteristics I/t, gG (nonstandard rated currents)



NH4
NH4a

Cut-off current characteristics



Joule integral I²t values and power losses ΔPV of NH knife blade fuses with gG characteristic

NH000 gG 400V, 500V

I_n	PV	I^2t 1ms	I^2tc ~254V	I^2tc ~440V	I^2tc ~550V
A	W	A^2s	A^2s	A^2s	A^2s
2	0,7	7,3	12	17	21
4	0,9	38	61	87	107
6	1,3	121	161	199	266
10	1,3	90	208	383	550
16	2,4	220	440	721	970
20	2,7	400	760	1210	1600
25	2,6	1200	2900	5470	8000
32	3	1760	3850	6838	9600
35	3,3	2500	5580	10033	14200
40	3,4	3300	6840	11670	16000
50	4,9	8200	15400	24370	32000
63	5,8	11100	22250	37000	50000
80	5,1	14500	31900	56850	80000
100	6,6	25000	55580	99700	141000
125	8,8	30000	66100	117900	166000
160	9,8	65800	-	-	170600

NH00 gG 400V, 500V

I_n	PV	I^2t 1ms	I^2tc ~254V	I^2tc ~440V	I^2tc ~550V
A	W	A^2s	A^2s	A^2s	A^2s
6	1,9	70	116	169	210
10	1,3	100	192	310	410
16	2,4	250	425	630	790
20	2,6	580	900	1240	1500
25	2,7	1000	1660	2400	3200
32	3,4	1340	2530	4030	5300
35	3,1	2300	3770	5410	6700
40	3,8	3200	4700	6200	7350
50	5	5000	8200	11800	14600
63	6	6600	13200	21900	32500
80	5,6	11200	21700	35160	46800
100	6,8	26400	44630	65560	82300
125	9	46100	76160	110000	136700
160	11,2	73600	135290	211300	275000

NH1C gG 400V, 500V

I_n	PV	I^2t 1ms	I^2tc ~254V	I^2tc ~440V	I^2tc ~550V
A	W	A^2s	A^2s	A^2s	A^2s
6	2,2	67	93	118	136
10	1,6	200	400	660	890
16	2,9	550	930	1360	1700
20	3,1	980	1600	2270	2800
25	3,3	1210	1980	2830	3500
32	3,8	1600	2930	4900	6500
35	3,6	2300	4350	6900	9100
40	4,1	2900	6100	10500	14500
50	5,3	4100	7930	13400	18000
63	6,5	4600	10600	21700	32000
80	6,3	14350	22030	40000	51700
100	7,3	23900	39200	63500	81000
125	9,7	39600	74500	130000	175000
160	12,9	72900	136410	223050	295000

NH1 gG 400V, 500V

I_n	PV	I^2t 1ms	I^2tc ~254V	I^2tc ~440V	I^2tc ~550V
A	W	A^2s	A^2s	A^2s	A^2s
6	2,5	20	53	107	162
10	1,5	140	282	420	640
16	2,8	500	920	1430	1850
20	2,4	760	1620	2810	3900
25	3,1	760	1960	3900	5900
32	3,6	800	2140	4380	6700
35	3,2	1300	3260	6400	9500
40	3,9	2020	6212	14140	23000
50	4,5	3000	7990	16360	25000
63	5,4	4500	14060	32400	53000
80	6,5	8000	24000	53000	85000
100	7,6	20000	51600	103300	155700
125	9,5	34000	75700	132700	186500
160	12,2	51000	120900	227400	330400
200	13,5	116000	224000	362520	482000
224	14,5	164000	318000	516470	688000
250	17	191000	372650	607930	812000

NH2C gG 400V, 500V

I_n	PV	I^2t 1ms	I^2tc ~254V	I^2tc ~440V	I^2tc ~550V
A	W	A^2s	A^2s	A^2s	A^2s
25	3,1	760	1960	3900	5900
32	3,6	800	2140	4380	6700
35	3,2	1300	3260	6400	9500
40	3,9	2020	6212	14140	23000
50	4,5	3000	7990	16360	25000
63	5,4	4500	14060	32400	53000
80	6,5	8000	24000	53000	85000
100	7,6	20000	51600	103300	155700
125	9,5	34000	75700	132700	186500
160	12,2	51000	120900	227400	330400
200	13,5	116000	224000	362520	482000
224	14,5	164000	318000	516470	688000
250	17	191000	372650	607930	812000

NH2 gG 400V, 500V

I_n	PV	I^2t 1ms	I^2tc ~254V	I^2tc ~440V	I^2tc ~550V
A	W	A^2s	A^2s	A^2s	A^2s
32	3,6	800	2140	4380	6700
35	3,2	1300	3260	6400	9500
40	3,9	2020	6212	14140	23000
50	4,5	3000	7990	16360	25000
63	5,4	4500	14060	32400	53000
80	6,5	8000	24000	53000	85000
100	7,6	20000	51600	103300	155700
125	9,5	34000	75700	132700	186500
160	12,2	51000	120900	227400	330400
200	13,5	116000	224000	362520	482000
224	14,5	164000	318000	516470	688000
250	17,0	191000	372650	607930	812000
280	19,4	217150	432500	716100	965000
300	20	260000	523250	873150	1182000
315	22,5	299900	595600	985000	1325000
355	23,5	558000	971300	1457600	1853000
400	29	740500	1400150	2232400	2941500

NH3C gG 400V, 500V

I_n	PV	I^2t 1ms	I^2tc ~254V	I^2tc ~440V	I^2tc ~550V
A	W	A^2s	A^2s	A^2s	A^2s
80	6,5	8000	24000	53000	85000
100	7,5	20000	51600	103300	155700
125	9,2	34000	75700	132700	186500
160	11,9	51000	120900	227400	330400
200	13,1	116000	224000	362520	482000
250	16,8	191000	372650	607930	812000
280	19,4	217150	432500	716100	965000
300	20	260000	523250	873150	1182000
315	22,5	299900	595600	985000	1325000
355	23,5	558000	971300	1457600	1853000
400	29	740500	1400150	2232400	2941500

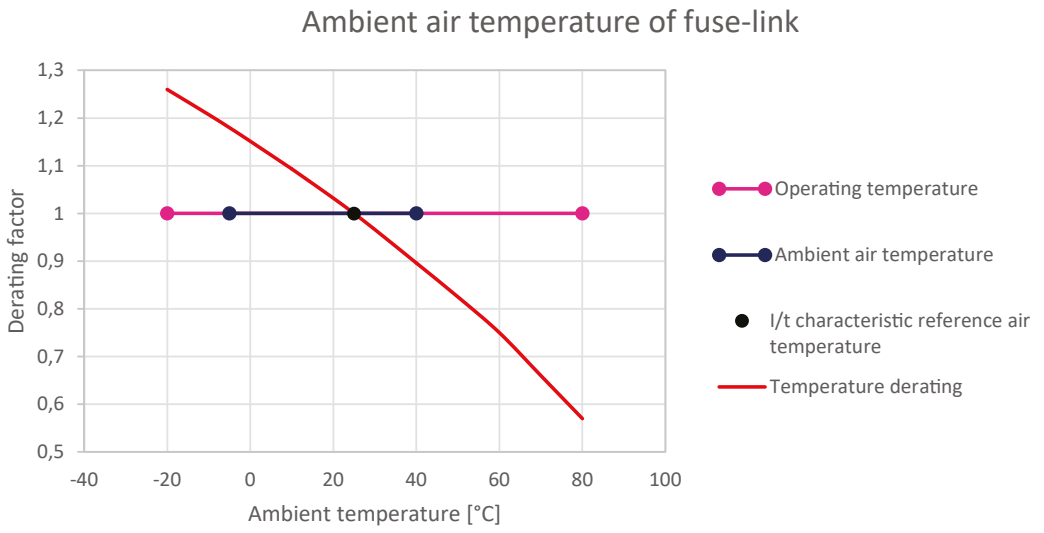
NH3 gG 500V

I_n	PV	I^2t 1ms	I^2tc ~254V	I^2tc ~440V	I^2tc ~550V
A	W	A^2s	A^2s	A^2s	A^2s
425	28,7	600800	1119900	1677850	2131000
500	33,5	776500	1404100	2166500	2800000
560	37,6	1155000	2044640	3106350	3978000
630	40,2	1619000	2902100	4449520	5729000

NH4a gG 500V

I_n	PV	I^2t 1ms	I^2tc ~220V	I^2tc ~400V	I^2tc ~550V
A	W	A^2s	A^2s	A^2s	A^2s
630	43,5	2150000	-	-	10000000
800	59,5	3900000	-	-	13000000
1000	84	6250000	-	-	20000000
1250	104	8000000	-	-	35000000
1500	145	-	-	-	-
1600	153	12000000	-	-	45000000

Effect of ambient temperature on the rated current of fuses



Fuse-link NV/NH aM

Rated current	Breaking capacity	Rated voltage
2-1250 A	**100 kA**	**500V, 690 V**

Fuse-links with aM characteristics are intended for protection of switchgears and controlgears as well as motors in motor drives where gG characteristics do not comply with all requirements of succesful protection of these devices. They are made in all standard NV sizes from 00 to 4a for all standard rated currents and for voltages to 690 V. Their main duty is to enable a full usage of switchgears and controlgears in the region of starting currents and to prevent sparking or destruction of protective contacts in case of short-circuit currents. It should be noted that these fuse-links are intended only for protection in the limited region (in the region of short-circuit currents).

Technical data:

Rated voltage Un	500V, 690V AC
Rated current In	2-1250 A
Dimensions	DIN 43620, IEC 60269, EN 60269
Fusing characteristics	IEC 60269
Breaking capacity	100 kA

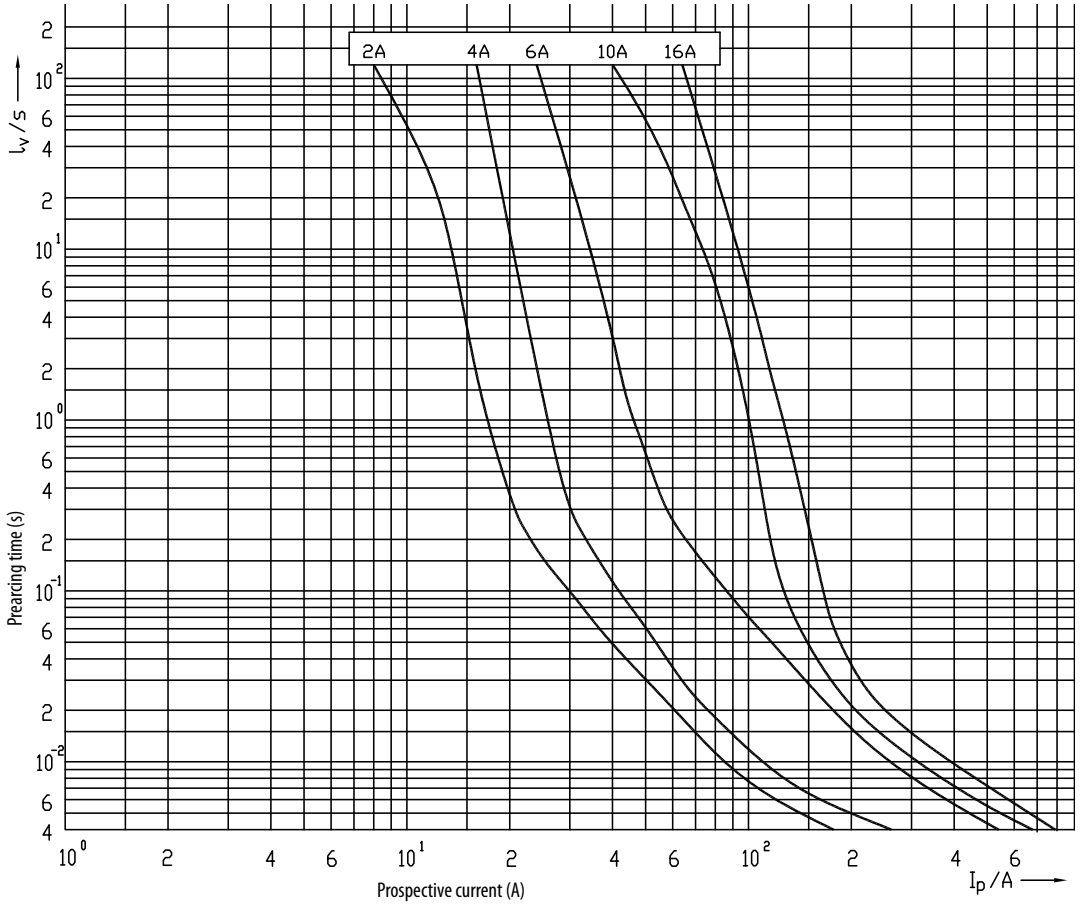
NV/NH fuse-link aM

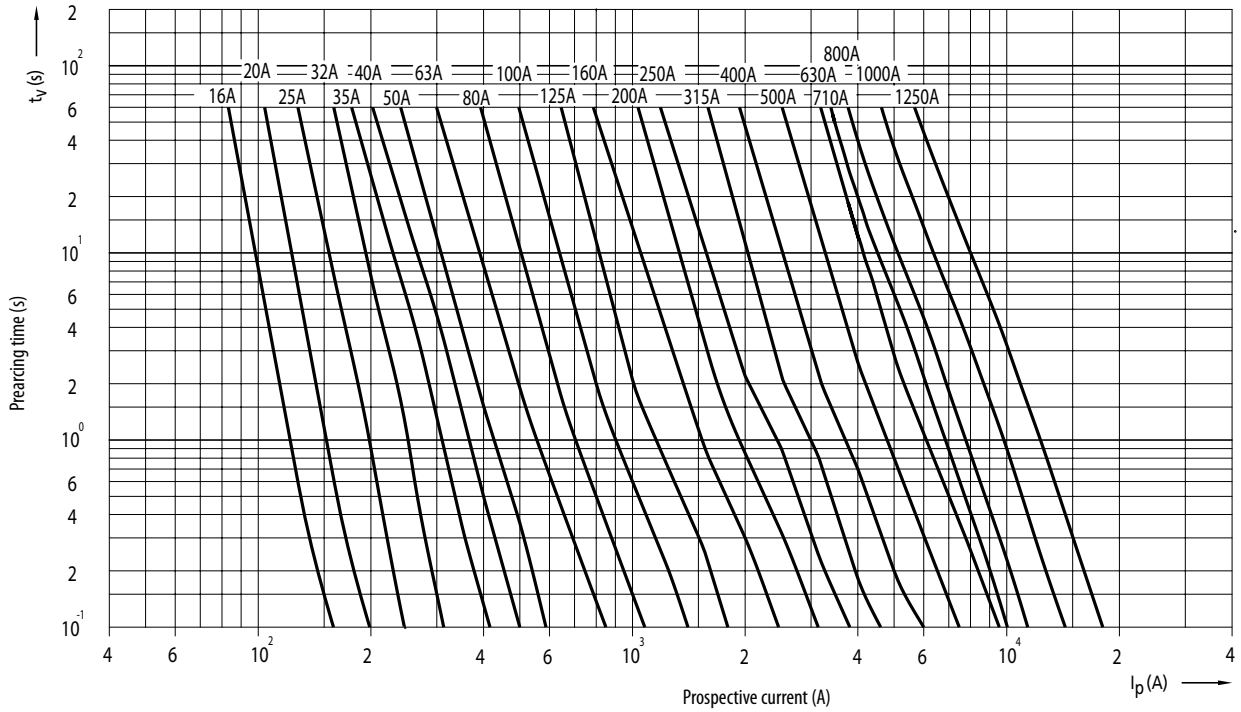
Rated current [A]	Code No. ~ 690 V, 100 kA							
	NV 00 C KOMBI	NV 00 KOMBI	NV 0	NV 1 kombi	NV 2 C kombi	NV 2 kombi	NV3 kombi	NV4a
2	004181401							
4	004181402							
6	004181403							
10	004181404			004184425				
16	004181405		004112125**	004184426				
20	004181406		004112126**	004184427				
25	004181407		004112127**	004184428				
32	004181408		004112128**					
35	004181409		004112129**	004184429	004185429			
40	004181410		004112130**	004184430	004185430			
50	004181411	004182411	004112131**	004184431	004185431			
63	004181412	004182412	004112132**	004184420	004185412			
80	004181413*	004182413	004112133**	004184421	004185413			
100	004181414*	004182414	004112134**	004184422	004185414			
125		004111735**	004112135**	004184423	004185415			
160		004111736**	004112136**	004184424	004185416	004185425		
200				004184417	004185417	004185426		
224				004184418	004185418	004185427		
250				004184419	004185419	004185428		
280						004185420		
300						004185421		
315						004185422		
355						004185423	004186428	
400						004185424	004186429	
425							004186430	
500							004186431	
630							004186432**	004187432**
710								004187433**
800								004187434**
900								004187435**
1000								004187436**
1250								004187437**

Weight and Packaging the same as for gG fuse-links.
*500V, 120 kA
** NOT in KOMBI version

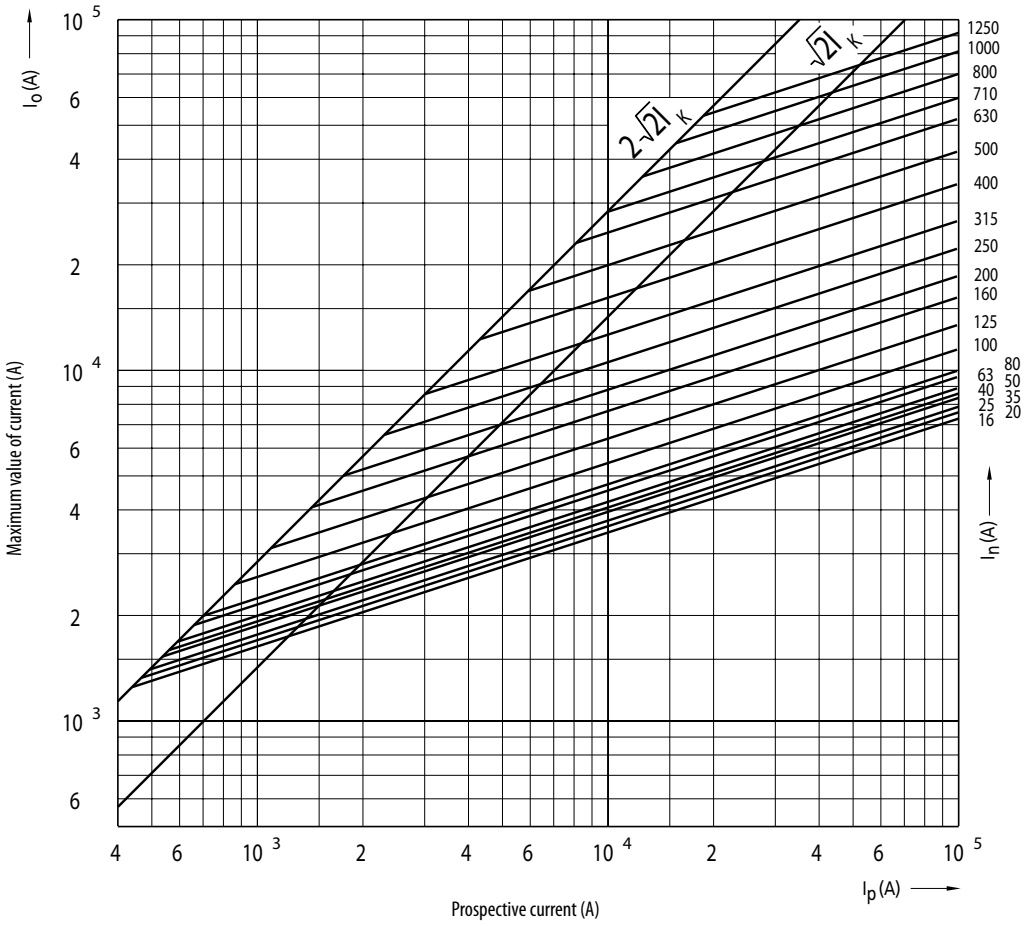
Characteristics aM

Time current characteristics I/t, aM





Cut-off current characteristics



Power dissipation of fuse-links NV aM 690 V a.c.

size	the highest rated current at according to VDE 0636-2011	the maximal power dissipation	real power dissipation of fuse-links
	690 V AC (A)	690 V AC (W)	690 V AC (W)
NV 00	160	12	9
NV 1	250	32	28
NV 2	400	45	41
NV 3	630	60	58
NV 4a	1250	110	105

Fuse-link NV/NH gF

Rated current	Breaking capacity	Rated voltage
20-250 A	**100 kA**	**400/500 V**

Fuse-links with gF current characteristics are intended for protection of low voltage installations and energy lines, where expected short circuit currents are low. We offer all standard rated currents in sizes NH00C, NH00, NH1C, NH2C and NV2 for voltages of up to 500V.

Technical data

Rated voltage Un	400/500 V AC
Rated current In	20 - 400 A
Dimensions	DIN 43620, IEC 60269, EN 60269
Fusing characteristics	gF -> PN 91/E-06160/10 PN 91/E-06160/21
Breaking capacity In	100kA

NV/NH fuse-link gF

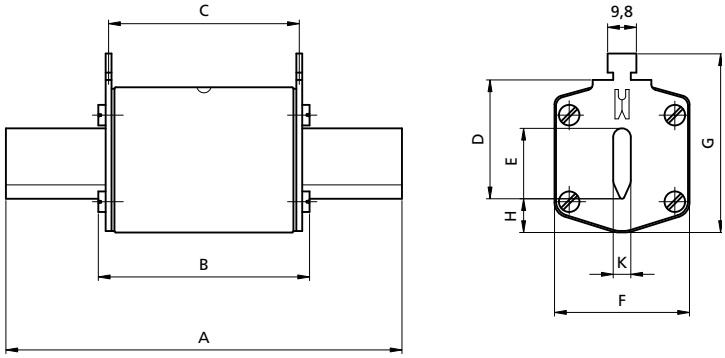
Rated current [A]	Code No. NH000 /00C	Code No. NH00		Code No. NH1C	Code No. NH1		Code No. NH2C	Code No. NH2
	400V	400V	500V	400V	400V	500V	500V	500V
20	004119200		004114341	004139200		004139110	004139388	
25	004119201		004114333	004139201		004139111	004139389	
32	004119202		004114334	004139202		004139112	004139390	
40	004119203		004114335	004139203		004139113	004139391	
50	004119204		004114336	004139204		004139114	004139392	
63		004119100	004114337	004139205		004139115	004139393	
80		004119101	004114338	004139206		004139116	004139394	
100		004119102	004114339	004139207		004139117	004139395	
125		004119103	004114340	004139208		004139118	004139396	
160		004119104		004139209		004139119	004139397	
200					004139100	004139120	004139398	
250					004139101	004139121	004139399	
315								004139412
355								004139413
400								004139414

Weight and Packaging the same as for gG fuse-links.

Power dissipation of fuse-links gF 400 V a.c.

size	the highest rated current at according to PN-IEC 60269-2	the maximal power dissipation	real power dissipation of fuse-links
	690 V AC (A)	690 V AC (W)	690 V AC (W)
NV 00C	100	12	7,2
NV 00	160	16	15,1
NV 1C	160	23	21,9
NV 1	250	32	31,3

Fuse Links NV/NH gF Dimensions

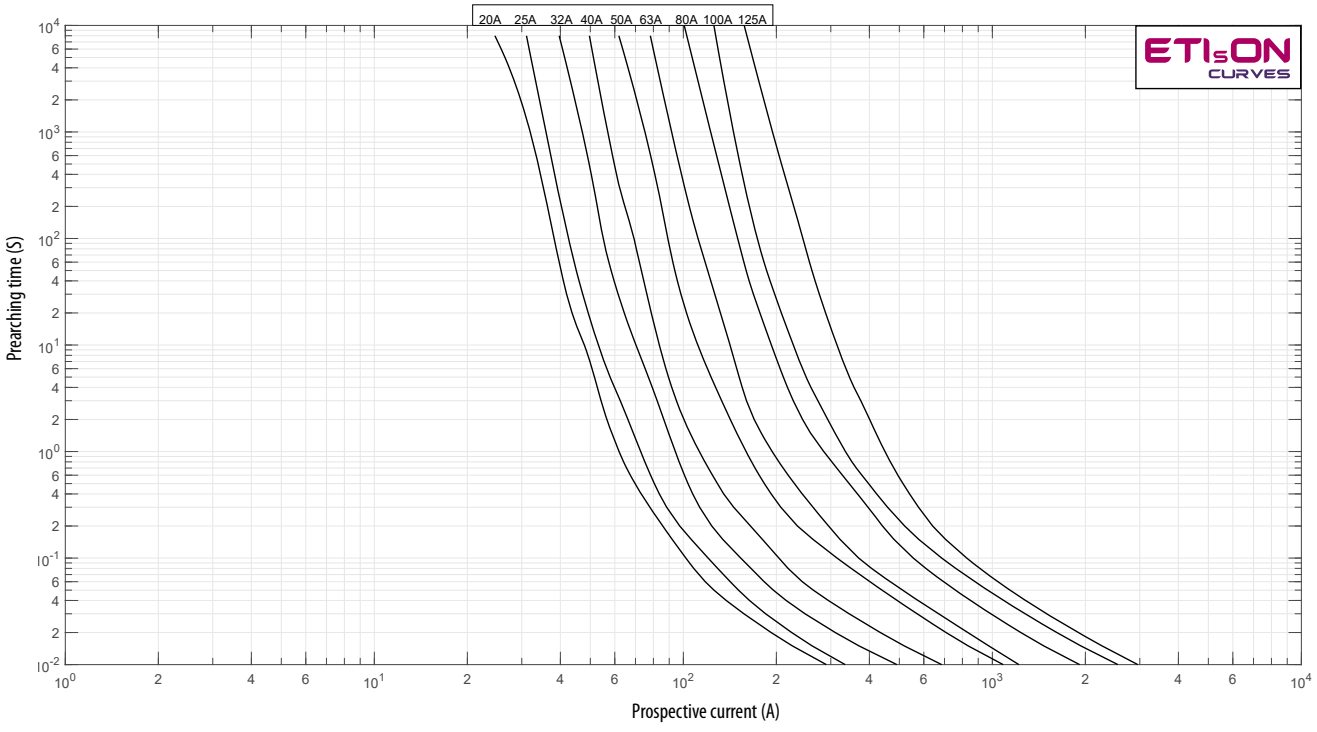


type	dimensions										
	A	B	C	D	E	F	G	H	I	J	K
NV00C	79	53	47	35	15	21	52	7,5			6
NV00	79	53	47	35	15	28	56	12			6
NV1C	135	68	65	40	15	28	61	12			6
NV1	135	72	65	40	20	46	65	14			6

Characteristics gF

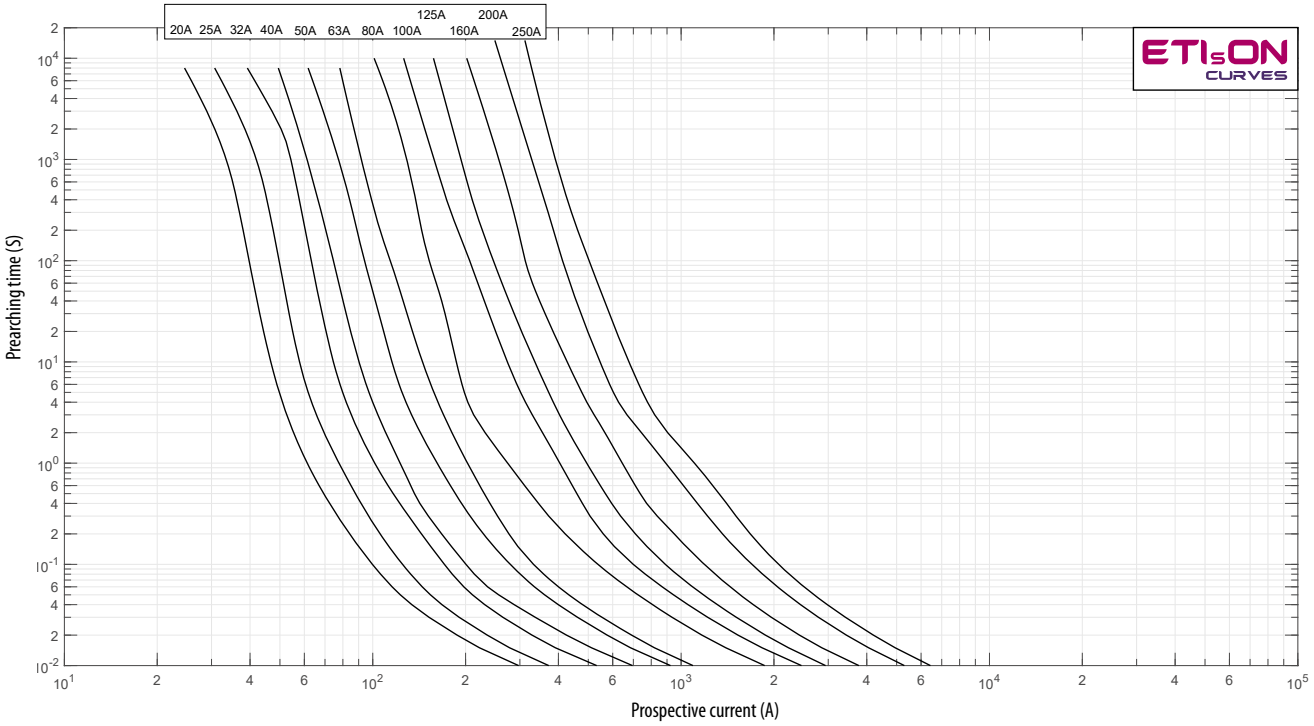
NH00 500V

Time current characteristics I/t, gF



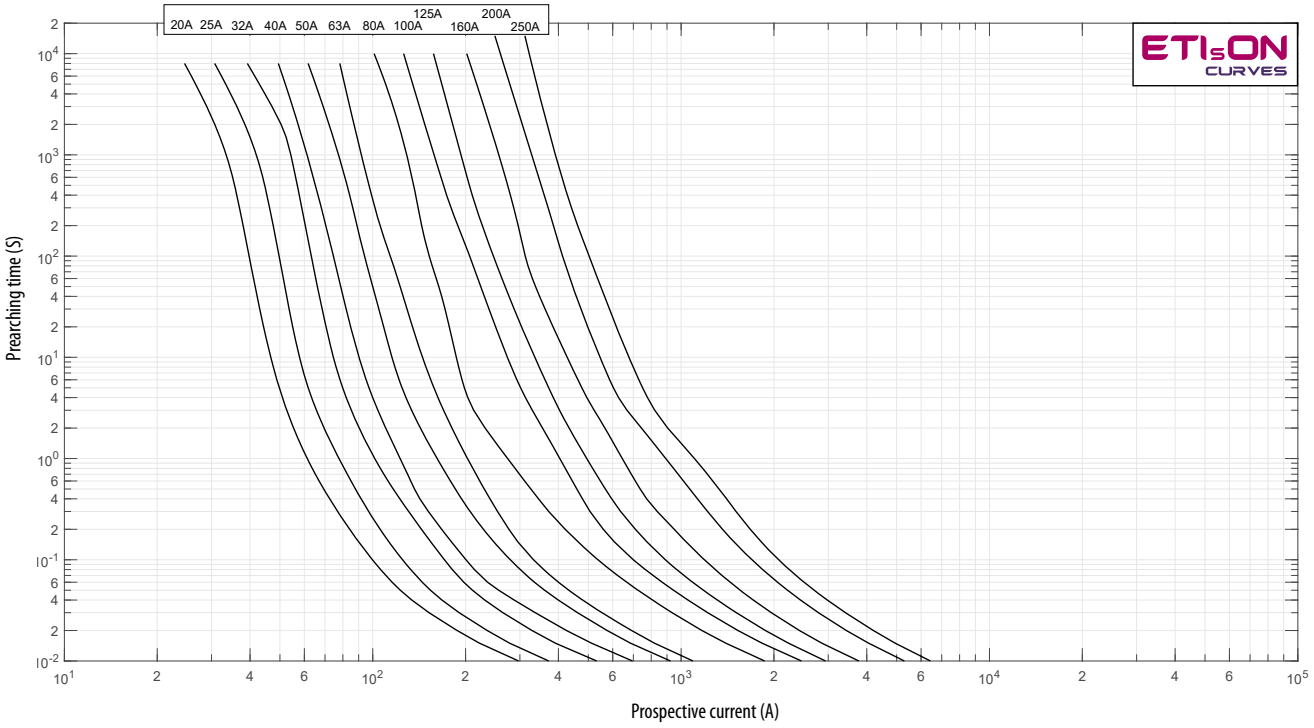
NH1 500V

Time current characteristics I/t, gF



NH2C 500V

Time current characteristics I/t, gF



Fuse-link NV/NH gTr

Rated transformer power	Breaking capacity	Rated voltage
50-1000 kVA	**100 kA**	**400 V**

Technical data

Rated voltage	400 V AC
Rated transformer power	50-1000 kVA
Breaking capacity	100 kA

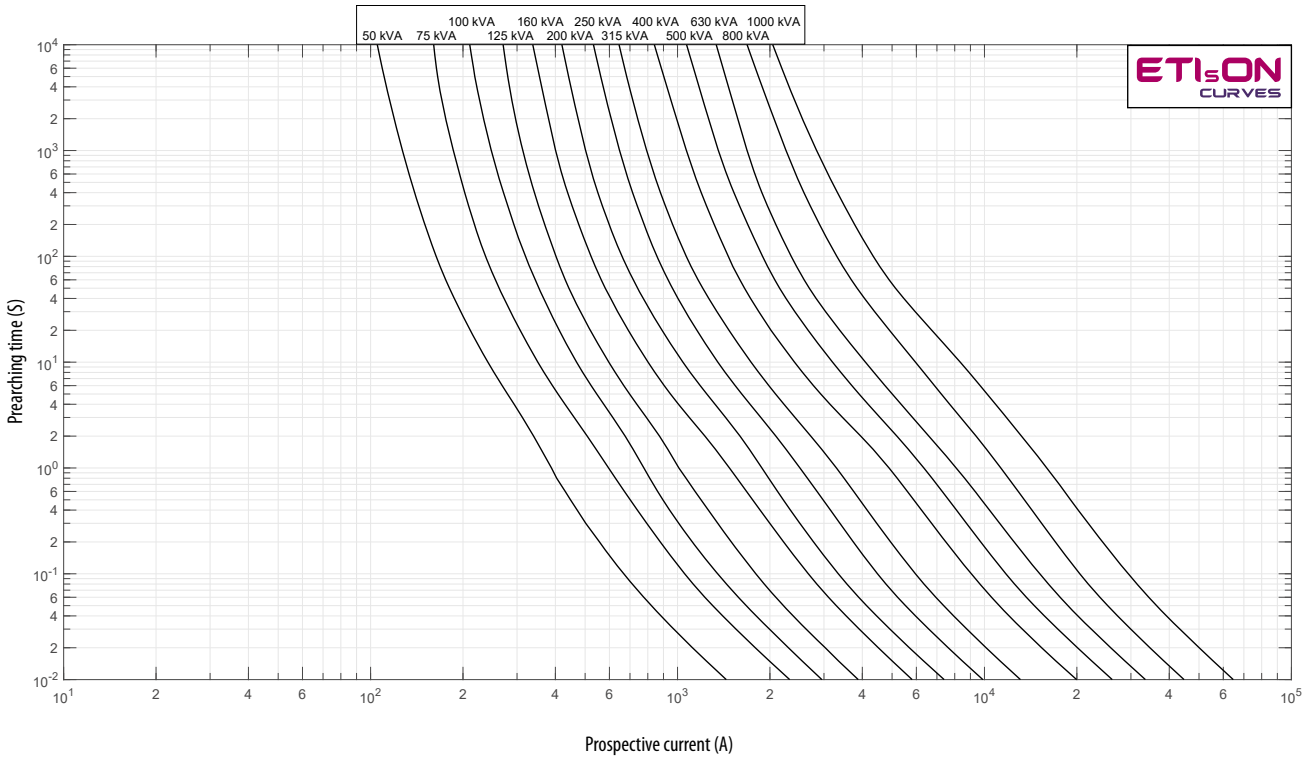
NV/NH fuse-link gTr

Rated transformer power [kVA]	Code No. NV/NH 2	NV/NH 2 INSULATED	NV/NH 3C	NV/NH 3	NV/NH 3 MI	NV/NH 3 INSULATED	NV/NH 4a	g	
50	004114400*	004114407*	004115400*			004115430*	004116400		
63	004114399*		004115399*						
75	004114401*	004114413*	004115401*			004115431*	004116401		
100	004114402*	004114412*	004115402*			004115432*	004116402		
125	004114403*	004114408*	004115403*			004115433*	004116403		
160	004114404*	004114409*	004115404*			004115434*	004116404	the same as for gG fuse-links	the same as for gG fuse-links
200	004114405*	004114410*	004115405*			004115435*	004116405		
250	004114406*	004114411*	004115406*			004115436*	004116406		
315				004115407*		004115437*	004116407		
400				004115408*		004115438*	004116408		
500				004115409	004115422		004116409		
630				004115410	004115423		004116410		
800							004116411		
1000							004116412		

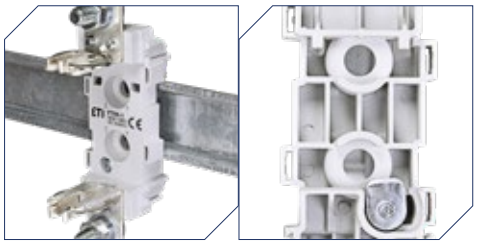
* KOMBI version

Characteristics gTr

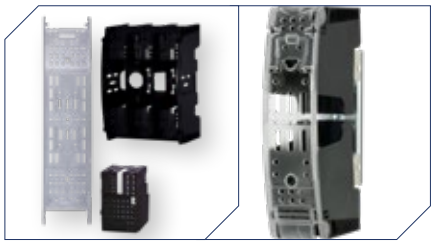
Time current characteristics I/t, gTr



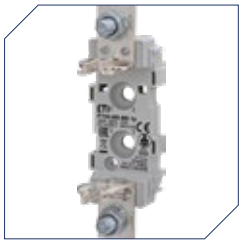
NV/NH Fuse Bases



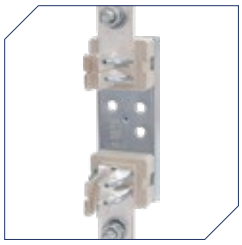
PT fuse bases can be mounted on a TH-35 rail



Protection against accidental contact ensured by insulating contact covers and protective covers, IP20

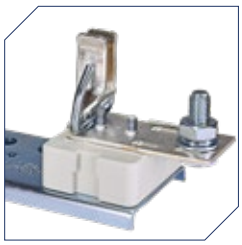


Characteristics of PT fuse bases:
In =160A - 630A;
Un =690V a.c.;
Icu =120kA



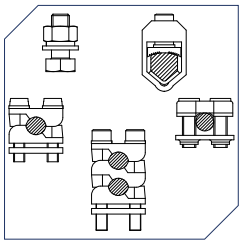
Characteristics of PK fuse bases:
In =160A - 1250A;
Un =690V a.c.;
Icu=200kA

Dual contact system for NH3 fuse bases

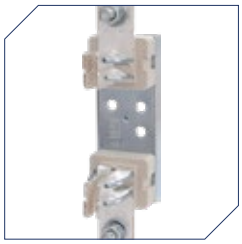


Galvanically silver plated contacts ensure reliable electrical connections

Possibility to build multipole systems by linking PT fuse bases together, using dividing partitions



We offer one- and two-cable terminals with a broad range of available connections:
- flat terminals - prism clamps
- clip terminals -V clamps



PK fuse bases with ceramic insulators are resistant to temperature fluctuations and dynamic impacts.

PK Fuse Bases with Ceramic Insulation sizes 00 to 3

Rated voltage
690 V

PK fuse bases with ceramic insulation for NH fuses are suitable for surface mounting on mounting plates and can be used in combination with NH fuse-links according to DIN VDE 0636-2/IEC 60269-2 as well as solid links.

They offer a compact and simple solution for application of fuses as protective elements in low voltage distribution boards and are characterized by silver plated contacts, in-house developed technical ceramic materials with high thermal resistance and a broad range of connections.

PK fuse bases are available in sizes 00 to 3, in 1-pole and 3-pole version. The range comes with accessories including protection barriers, IP20 finger safe protection kits and neutral links, which, along with the possibility of attaching additional poles, provides an optimal solution for every application.

Technical data

Size			00	1	2	3
Electrical characteristics						
Rated voltage	Un	V a.c.	690			
Rated current	In	A	160	250	400	630
Conv. free air thermal current with fuse links	Ith	A	160	250	400	630
Conv. free air thermal current with solid links	Ith	A	200	320	500	800
Rated frequency		Hz	40-60			
Max. permis. power dissipation per fuse link	Pa	W	12	32	45	60
Max. breaking capacity per fuse link	Icu	kA	200			
Derating temperature factors for max. current	≤ 35	0C	1			
	40	0C	0,95			
	50	0C	0,85			
Mechanical characteristics						
Ambient temperature range	Tamb	0C	-25...+55			
Rated operating mode			uninterrupted			
Mounting position			vertical, horizontal			
Pollution degree			3			
Overvoltage category			III			
Degree of protection			IP00 without covers; IP20 with covers fitted			
Standards			IEC 60269-2, DIN VDE 0636, DIN 43620			

1-pole fuse base size 00

Type	I_n [A]	Code No.	g	
PK 00 M8-M8 1p S	160	004123000	173	3
PK 00 2M6-2M6 1p S	160	004123001	173	3
PK 00 M8-2M6 1p S	160	004123002	173	3
PK 00 M8-P00 1p S	160	004123003	190	3
PK 00 M8-2P00 1p S	160	004123004	205	3
PK 00 P00-P00 1p S	160	004123005	205	3
PK 00 P00-2P00 1p S	160	004123006	219	3
PK 00 2P00-2P00 1p S	160	004123007	233	3
PKI 00 M8-M8 1p S	160	004123011	213	3
PKI 00 2M6-2M6 1p S	160	004123012	213	3
PKI 00 M8-2M6 1p S	160	004123013	213	3
PKI 00 M8-P00 1p S	160	004123014	230	3
PKI 00 M8-2P00 1p S	160	004123015	245	3
PKI 00 P00-P00 1p S	160	004123016	245	3
PKI 00 P00-2P00 1p S	160	004123017	259	3
PKI 00 2P00-2P00 1p S	160	004123018	273	3
PKIP 00 M8-M8 1p S	160	004123021	223	3
PKIP 00 2M6-2M6 1p S	160	004123022	223	3
PKIP 00 M8-2M6 1p S	160	004123023	223	3
PKIP 00 M8-P00 1p S	160	004123024	240	3
PKIP 00 M8-2P00 1p S	160	004123025	255	3
PKIP 00 P00-P00 1p S	160	004123026	255	3
PKIP 00 P00-2P00 1p S	160	004123027	269	3
PKIP 00 2P00-2P00 1p S	160	004123028	283	3

PK basic version
PKI fuse base with terminal covers
PKIP fuse base with terminal covers and fuse cover

3-pole fuse base size 00

Type	I_n [A]	Code No.	g	
PK 00 M8-M8 3p S	160	004132100	558	1
PK 00 2M6-2M6 3p S	160	004132101	563	1
PK 00 M8-2M6 3p S	160	004132102	560	1
PK 00 M8-P00 3p S	160	004132103	608	1
PK 00 M8-2P00 3p S	160	004132104	651	1
PK 00 P00-P00 3p S	160	004132105	658	1
PK 00 P00-2P00 3p S	160	004132106	700	1
PK 00 2P00-2P00 3p S	160	004132107	743	1
PKI 00 M8-M8 3p S	160	004132111	675	1
PKI 00 2M6-2M6 3p S	160	004132112	680	1
PKI 00 M8-2M6 3p S	160	004132113	677	1
PKI 00 M8-P00 3p S	160	004132114	725	1
PKI 00 M8-2P00 3p S	160	004132115	768	1
PKI 00 P00-P00 3p S	160	004132116	775	1
PKI 00 P00-2P00 3p S	160	004132117	817	1
PKI 00 2P00-2P00 3p S	160	004132118	860	1
PKIP 00 M8-M8 3p S	160	004132121	704	1
PKIP 00 2M6-2M6 3p S	160	004132122	709	1
PKIP 00 M8-2M6 3p S	160	004132123	706	1
PKIP 00 M8-P00 3p S	160	004132124	754	1
PKIP 00 M8-2P00 3p S	160	004132125	797	1
PKIP 00 P00-P00 3p S	160	004132126	804	1
PKIP 00 P00-2P00 3p S	160	004132127	846	1
PKIP 00 2P00-2P00 3p S	160	004132128	889	1

PK basic version with protective barriers
PKI fuse base with terminal covers
PKIP fuse base with terminal covers and fuse covers

1-pole fuse base PK 1, 2, 3

Type	I_n [A]	Code No.	g	
PK 1 M10-M10 1p S	250	004123100	603	3
PK 1 M10-S12 1p S	250	004123101	595	3
PK 1 S12-S12 1p S	250	004123102	587	3
PK 1 M10-P1 1p S	250	004123103	665	3
PK 1 M10-2P1 1p S	250	004123104	715	3
PK 1 P1-P1 1p S	250	004123105	727	3
PK 1 P1-2P1 1p S	250	004123106	777	3
PK 1 2P1-2P1 1p S	250	004123107	827	3
PK 2 M10-M10 1p S	400	004123200	840	3
PK 2 M10-S12 1p S	400	004123201	833	3
PK 2 S12-S12 1p S	400	004123202	825	3
PK 2 M10-P2 1p S	400	004123203	963	3
PK 2 M10-2P2 1p S	400	004123204	1029	3
PK 2 P2-P2 1p S	400	004123205	1085	3
PK 2 P2-2P2 1p S	400	004123206	1151	3
PK 2 2P2-2P2 1p S	400	004123207	1217	3
PK 3 M12-M12 1p S	630	004123300	1106	3
PK 3 M12-P3 1p S	630	004123301	1265	3
PK 3 M12-2P3 1p S	630	004123302	1360	3
PK 3 P3-P3 1p S	630	004123303	1424	3
PK 3 P3-2P3 1p S	630	004123304	1519	3
PK 3 2P3-2P3 1p S	630	004123305	1614	3

*Terminal covers and fuse covers sold separately

3-pole fuse base PK 1, 2, 3

Type	I_n [A]	Code No.	g	
PK 1 M10-M10 3p S	250	004132200	1922	1
PK 1 M10-S12 3p S	250	004132201	1785	1
PK 1 S12-S12 3p S	250	004132202	1761	1
PK 1 M10-P1 3p S	250	004132203	1995	1
PK 1 M10-2P1 3p S	250	004132204	2145	1
PK 1 P1-P1 3p S	250	004132205	2181	1
PK 1 P1-2P1 3p S	250	004132206	2331	1
PK 1 2P1-2P1 3p S	250	004132207	2481	1
PK 2 M10-M10 3p S	400	004132300	2520	1
PK 2 M10-S12 3p S	400	004132301	2499	1
PK 2 S12-S12 3p S	400	004132302	2475	1
PK 2 M10-P2 3p S	400	004132303	2889	1
PK 2 M10-2P2 3p S	400	004132304	3087	1
PK 2 P2-P2 3p S	400	004132305	3255	1
PK 2 P2-2P2 3p S	400	004132306	3453	1
PK 2 2P2-2P2 3p S	400	004132307	3651	1
PK 3 M12-M12 3p S	630	004132400	3318	1
PK 3 M12-P3 3p S	630	004132401	3795	1
PK 3 M12-2P3 3p S	630	004132402	4080	1
PK 3 P3-P3 3p S	630	004132403	4272	1
PK 3 P3-2P3 3p S	630	004132404	4557	1
PK 3 2P3-2P3 3p S	630	004132405	4824	1

PK basic version with protective barriers

*Terminal covers and fuse covers sold separately

Accessories

Type	Code No.	g	
Terminal covers			
ZP PT 00-1	004129010	20	6
ZP PT 1-1	004129012	47,5	6
ZP PT 2-1	004129013	62	6
ZP PT 3-1	004129014	73,5	6
Fuse covers			
PZP PT 00-1	004129020	9,5	6
PZP PT 1-1	004129022	25	6
PZP PT 2-1	004129023	36,5	6
PZP PT 3-1	004129024	45	6
Protective barriers			
PR PK00 S	004941320	17	20
PR PK1 S	004941321	47	20
PR PK2 S	004941322	56	20
PR PK3 S	004941323	62	20

Technical data for Neutral Terminal Base / Earth Clamp

Size			00	1	2	3
Electrical characteristics						
Rated voltage	Un	V a.c.	690			
Rated current	In	A	160	250	400	630
Cable terminal						
Connection			M8-2M5	M10-M10		M12-M12
Tightening torque		Nm	10-2,6	32		

Neutral terminal base / Earth clamp

Type	I_n [A]	Code No.	g	
PK 00/0 M8-2M5 S	160	004941410	187	3
PK 1/0 M10-M10 S	250	004941411	590	3
PK 2/0 M10-M10 S	400	004941412	940	3
PK 3/0 M12-M12 S	630	004941413	1066	3

1-pole fuse base PK 0, 4

Type	I_n [A]	Code No.	g	
PK 0 M8 - 2 x M6	160	004122009	258	3/90
PK 0 M8 - M8	160	004122002	258	3/90
PK 02 x M6 - 2 x M6	160	004122008	258	3/90
PK 4	1250	004122006	3030	1/7

3-pole fuse base PK 0

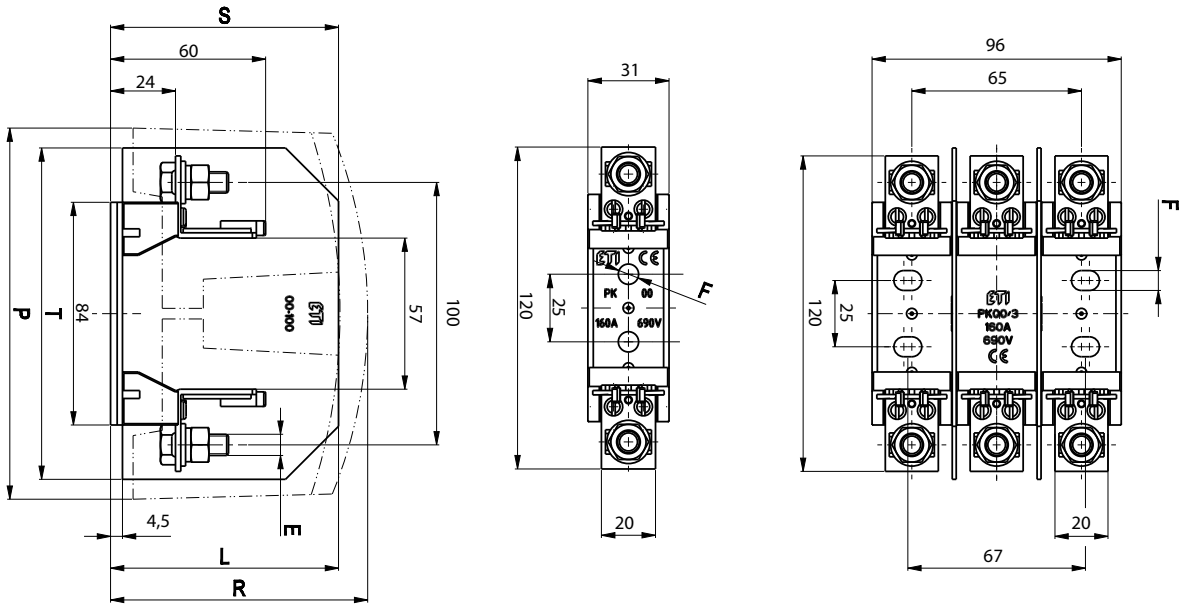
Type	I_n [A]	Code No.	g	
PK 0/3 M8 - 2 x M6	160	004132007	650	1/18
PK 0/3 M8 - M8	160	004132002	650	1/18
PK 0/3 2xM6 - 2xM6	160	004132016	650	1/18

PK Fuse Bases Dimensions

Dimensions for size 00

1p	3p	E	F	L	P	R	S*	T*
PK 00 M8-M8 1p S	PK 00 M8-M8 3p S	M8-M8	Ø 7,5	\	\	\	88	126
PK 00 2M6-2M6 1p S	PK 00 2M6-2M6 3p S	2M6-2M6	Ø 7,5	\	\	\	88	126
PK 00 M8-2M6 1p S	PK 00 M8-2M6 3p S	M8-2M6	Ø 7,5	\	\	\	88	126
PK 00 M8-P00 1p S	PK 00 M8-P00 3p S	M8-P00	Ø 7,5	\	\	\	88	126
PK 00 M8-2P00 1p S	PK 00 M8-2P00 3p S	M8-2P00	Ø 7,5	\	\	\	88	126
PK 00 P00-P00 1p S	PK 00 P00-P00 3p S	P00-P00	Ø 7,5	\	\	\	88	126
PK 00 P00-2P00 1p S	PK 00 P00-2P00 3p S	P00-2P00	Ø 7,5	\	\	\	88	126
PK 00 2P00-2P00 1p S	PK 00 2P00-2P00 3p S	2P00-2P00	Ø 7,5	\	\	\	88	126
PKI 00 M8-M8 1p S	PKI 00 M8-M8 3p S	M8-M8	Ø 7,5	87	140	\	\	\
PKI 00 2M6-2M6 1p S	PKI 00 2M6-2M6 3p S	2M6-2M6	Ø 7,5	87	140	\	\	\
PKI 00 M8-2M6 1p S	PKI 00 M8-2M6 3p S	M8-2M6	Ø 7,5	87	140	\	\	\
PKI 00 M8-P00 1p S	PKI 00 M8-P00 3p S	M8-P00	Ø 7,5	87	140	\	\	\
PKI 00 M8-2P00 1p S	PKI 00 M8-2P00 3p S	M8-2P00	Ø 7,5	87	140	\	\	\
PKI 00 P00-P00 1p S	PKI 00 P00-P00 3p S	P00-P00	Ø 7,5	87	140	\	\	\
PKI 00 P00-2P00 1p S	PKI 00 P00-2P00 3p S	P00-2P00	Ø 7,5	87	140	\	\	\
PKI 00 2P00-2P00 1p S	PKI 00 2P00-2P00 3p S	2P00-2P00	Ø 7,5	87	140	\	\	\
PKIP 00 M8-M8 1p S	PKIP 00 M8-M8 3p S	M8-M8	Ø 7,5	87	140	95	\	\
PKIP 00 2M6-2M6 1p S	PKIP 00 2M6-2M6 3p S	2M6-2M6	Ø 7,5	87	140	95	\	\
PKIP 00 M8-2M6 1p S	PKIP 00 M8-2M6 3p S	M8-2M6	Ø 7,5	87	140	95	\	\
PKIP 00 M8-P00 1p S	PKIP 00 M8-P00 3p S	M8-P00	Ø 7,5	87	140	95	\	\
PKIP 00 M8-2P00 1p S	PKIP 00 M8-2P00 3p S	M8-2P00	Ø 7,5	87	140	95	\	\
PKIP 00 P00-P00 1p S	PKIP 00 P00-P00 3p S	P00-P00	Ø 7,5	87	140	95	\	\
PKIP 00 P00-2P00 1p S	PKIP 00 P00-2P00 3p S	P00-2P00	Ø 7,5	87	140	95	\	\
PKIP 00 2P00-2P00 1p S	PKIP 00 2P00-2P00 3p S	2P00-2P00	Ø 7,5	87	140	95	\	\

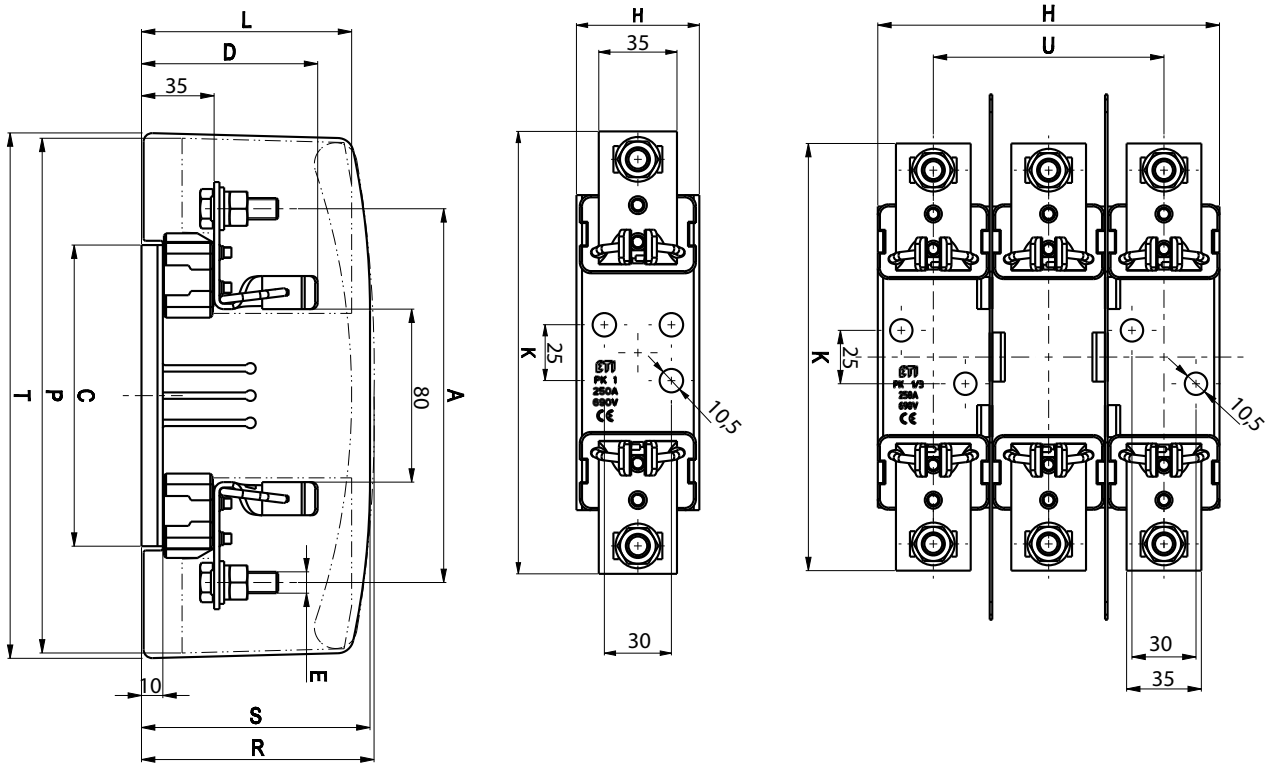
*Protective barriers; included with PK 00 3p fuse bases or sold separately



Dimensions for sizes 1, 2, 3

1p	3p	A	C	D	E	H - 1p	H - 3p	K	L**	P**	R**	S*	T*	U
PK 1 M10-M10 1p S	PK 1 M10-M10 3p S	175	141	82	M10-M10	55,5	160	200	108	245	113	108	245	106
PK 1 M10-S12 1p S	PK 1 M10-S12 3p S	175	141	82	M10-S12	55,5	160	200	108	245	113	108	245	106
PK 1 S12-S12 1p S	PK 1 S12-S12 3p S	175	141	82	S12-S12	55,5	160	200	108	245	113	108	245	106
PK 1 M10-P1 1p S	PK 1 M10-P1 3p S	175	141	82	M10-P1	55,5	160	200	108	245	113	108	245	106
PK 1 M10-2P1 1p S	PK 1 M10-2P1 3p S	175	141	82	M10-2P1	55,5	160	200	108	245	113	108	245	106
PK 1 P1-P1 1p S	PK 1 P1-P1 3p S	175	141	82	P1-P1	55,5	160	200	108	245	113	108	245	106
PK 1 P1-2P1 1p S	PK 1 P1-2P1 3p S	175	141	82	P1-2P1	55,5	160	200	108	245	113	108	245	106
PK 1 2P1-2P1 1p S	PK 1 2P1-2P1 3p S	175	141	82	2P1-2P1	55,5	160	200	108	245	113	108	245	106
PK 2 M10-M10 1p S	PK 2 M10-M10 3p S	200	166	87	M10-M10	65	185	225	115	266	125	117	266	125
PK 2 M10-S12 1p S	PK 2 M10-S12 3p S	200	166	87	M10-S12	65	185	225	115	266	125	117	266	125
PK 2 S12-S12 1p S	PK 2 S12-S12 3p S	200	166	87	S12-S12	65	185	225	115	266	125	117	266	125
PK 2 M10-P2 1p S	PK 2 M10-P2 3p S	200	166	87	M10-P2	65	185	225	115	266	125	117	266	125
PK 2 M10-2P2 1p S	PK 2 M10-2P2 3p S	200	166	87	M10-2P2	65	185	225	115	266	125	117	266	125
PK 2 P2-P2 1p S	PK 2 P2-P2 3p S	200	166	87	P2-P2	65	185	225	115	266	125	117	266	125
PK 2 P2-2P2 1p S	PK 2 P2-2P2 3p S	200	166	87	P2-2P2	65	185	225	115	266	125	117	266	125
PK 2 2P2-2P2 1p S	PK 2 2P2-2P2 3p S	200	166	87	2P2-2P2	65	185	225	115	266	125	117	266	125
PK 3 M12-M12 1p S	PK 3 M12-M12 3p S	210	166	99	M12-M12	65	208	240	127	266	135	130	266	148
PK 3 M12-P3 1p S	PK 3 M12-P3 3p S	210	166	99	M12-P3	65	208	240	127	266	135	130	266	148
PK 3 M12-2P3 1p S	PK 3 M12-2P3 3p S	210	166	99	M12-2P3	65	208	240	127	266	135	130	266	148
PK 3 P3-P3 1p S	PK 3 P3-P3 3p S	210	166	99	P3-P3	65	208	240	127	266	135	130	266	148
PK 3 P3-2P3 1p S	PK 3 P3-2P3 3p S	210	166	99	P3-2P3	65	208	240	127	266	135	130	266	148
PK 3 2P3-2P3 1p S	PK 3 2P3-2P3 3p S	210	166	99	2P3-2P3	65	208	240	127	266	135	130	266	148

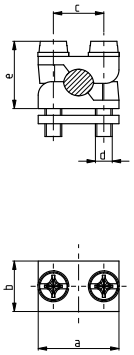
*Protective barriers; included with 3p fuse bases or sold separately
**Terminal covers and fuse covers; sold separately



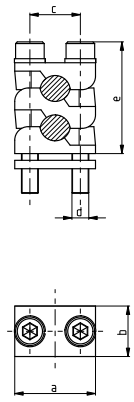
Type of connections

	a	b	c	d	emax	Tightening torque [Nm]	Connections [mm²]
P00	24	15	15	M5	25	2,6	10-70 Cu/Al
2P00	24	15	15	M5	35	2,6	2x(10-50) Cu/Al
P1	37	20	25	M6	30	4,5	70-150 Cu/Al
2P1	37	20	25	M6	42	4,5	2x(70-95) Cu/Al
P2	42	22	28	M8	40	11	120-240 Cu/Al
2P2	42	22	28	M8	55	11	2x(120-150) Cu/Al
P3	50	25	30	M8	44	11	120-300 Cu/Al
2P3	50	25	30	M8	66	11	2x(120-240) Cu/Al
2xM6	26	15	14	M6	16	4	6-70 Cu
S12	36	16	25	M6	25	9,5	25-150Cu
M8				M8	20	10	
MI0				M10	30	32	
M12				M12	30	32	
V shaped clamp	35	23	58		45	22	SM: 50-240 Cu/Al SE: 300 Cu/Al RM: 37-70 Cu/Al RE: 25-50 Cu/Al

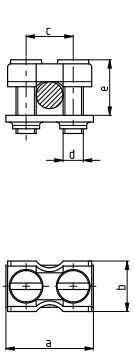
P00, P1, P2, P3



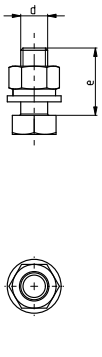
2P00, 2P1, 2P2, 2P3



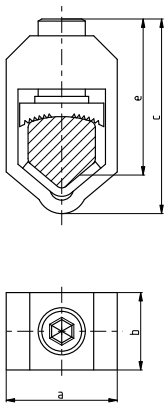
2xM6, S12



M8, M10, M12

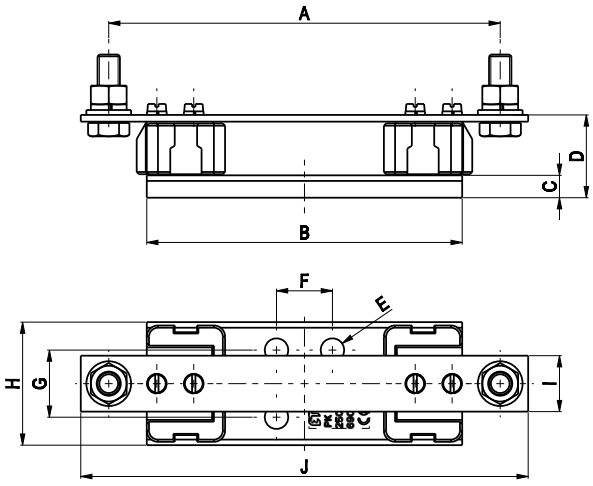


V shaped clamp



Dimensions for Neutral Terminal Base / Earth Clamp

[mm]	A	B	C	D	E	F	G	H	I	J
PK 00/0 M8-2M5 S	100	84	4,5	26,5	Ø 7,5	25	\	31	20	115
PK 1 M10-M10 S	175	141	10	38	Ø 10,5	25	30	55,5	26	200
PK 2 M10-M10 S	200	166	10	40	Ø 10,5	25	30	65	30	225
PK 3 M12-M12 S	210	166	10	40	Ø 10,5	25	30	65	30	240



Plastic fuse bases type PT size 00 to 3

Rated voltage
690 V

Plastic fuse bases PT for NH fuses are suitable for screw mounting / surface mounting on mounting plates or mounting on DIN-rails, and can be used in combination with NH fuse-links according to DIN VDE 0636-2/IEC 60269-2 as well as solid links.

They offer a compact and simple solution for application of fuses as protective elements in low voltage distribution boards and are characterized by silver plated contacts and a broad range of connections.

PT fuse bases are available in sizes 00 to 3, in 1-pole and 3-pole version. The range comes with accessories including protection barriers, IP20 finger safe protection kits and neutral links, which, along with the possibility of attaching additional poles, provides an optimal solution for every application.

Technical data

Size			00	1	2	3
Electrical characteristics						
Rated voltage	Un	V a.c.	690			
Rated current	In	A	160	250	400	630
Conv. free air thermal current with fuse links	Ith	A	160	250	400	630
Conv. free air thermal current with solid links	Ith	A	200	320	500	800
Rated frequency		Hz	40-60			
Max. permis. power dissipation per fuse link	Pa	W	12	32	45	60
Max. breaking capacity per fuse link	Icu	kA	120			
Derating temperature factors for max. current	≤ 35	0C	1			
	40	0C	0,95			
	50	0C	0,85			
Mechanical characteristics						
Ambient temperature range	Tamb	0C	-25...+55			
Rated operating mode			uninterrupted			
Mounting position			vertical, horizontal			
Pollution degree			3			
Overvoltage category			III			
Degree of protection			IP00 without covers; IP20 with covers fitted			
Standards			IEC 60269-2, DIN VDE 0636, DIN 43620			

1-pole fuse base size 00

Type	I_n [A]	Code No.	g	
PT 00 M8-M8 1p	160	004121300	110	3
PT 00 2M6-2M6 1p	160	004121301	114	3
PT 00 M8-2M6 1p	160	004121302	112	3
PT 00 M8-P00 1p	160	004121303	126	3
PT 00 M8-2P00 1p	160	004121304	140	3
PT 00 P00-P00 1p	160	004121305	143	3
PT 00 P00-2P00 1p	160	004121306	157	3
PT 00 2P00-2P00 1p	160	004121307	172	3
PTI 00 M8-M8 1p	160	004121311	150	3
PTI 00 2M6-2M6 1p	160	004121312	154	3
PTI 00 M8-2M6 1p	160	004121313	152	3
PTI 00 M8-P00 1p	160	004121314	166	3
PTI 00 M8-2P00 1p	160	004121315	180	3
PTI 00 P00-P00 1p	160	004121316	183	3
PTI 00 P00-2P00 1p	160	004121317	197	3
PTI 00 2P00-2P00 1p	160	004121318	212	3
PTIP 00 M8-M8 1p	160	004121321	160	3
PTIP 00 2M6-2M6 1p	160	004121322	164	3
PTIP 00 M8-2M6 1p	160	004121323	162	3
PTIP 00 M8-P00 1p	160	004121324	176	3
PTIP 00 M8-2P00 1p	160	004121325	190	3
PTIP 00 P00-P00 1p	160	004121326	193	3
PTIP 00 P00-2P00 1p	160	004121327	207	3
PTIP 00 2P00-2P00 1p	160	004121328	222	3

PT basic version
PTI fuse base with terminal covers
PTIP fuse base with terminal covers and fuse cover

3-pole fuse base size 00

Type	I_n [A]	Code No.	g	
PT 00 M8-M8 3p	160	004131200	360	1
PT 00 2M6-2M6 3p	160	004131201	374	1
PT 00 M8-2M6 3p	160	004131202	367	1
PT 00 M8-P00 3p	160	004131203	410	1
PT 00 M8-2P00 3p	160	004131204	453	1
PT 00 P00-P00 3p	160	004131205	460	1
PT 00 P00-2P00 3p	160	004131206	502	1
PT 00 2P00-2P00 3p	160	004131207	545	1
PTI 00 M8-M8 3p	160	004131211	425	1
PTI 00 2M6-2M6 3p	160	004131212	438	1
PTI 00 M8-2M6 3p	160	004131213	431	1
PTI 00 M8-P00 3p	160	004131214	475	1
PTI 00 M8-2P00 3p	160	004131215	518	1
PTI 00 P00-P00 3p	160	004131216	525	1
PTI 00 P00-2P00 3p	160	004131217	567	1
PTI 00 2P00-2P00 3p	160	004131218	610	1
PTIP 00 M8-M8 3p	160	004131221	450	1
PTIP 00 2M6-2M6 3p	160	004131222	463	1
PTIP 00 M8-2M6 3p	160	004131223	456	1
PTIP 00 M8-P00 3p	160	004131224	500	1
PTIP 00 M8-2P00 3p	160	004131225	543	1
PTIP 00 P00-P00 3p	160	004131226	550	1
PTIP 00 P00-2P00 3p	160	004131227	592	1
PTIP 00 2P00-2P00 3p	160	004131228	635	1

PT basic version
PTI fuse base with terminal covers
PTIP fuse base with terminal covers and fuse cover

1-pole fuse base PT 1, 2, 3

Type	I_n [A]	Code No.	g	
PT 1 M10-M10 1p	250	004121400	364	3
PT 1 M10-S12 1p	250	004121401	357	3
PT 1 S12-S12 1p	250	004121402	349	3
PT 1 M10-P1 1p	250	004121403	427	3
PT 1 M10-2P1 1p	250	004121404	477	3
PT 1 P1-P1 1p	250	004121405	489	3
PT 1 P1-2P1 1p	250	004121406	539	3
PT 1 2P1-2P1 1p	250	004121407	589	3
PT 2 M10-M10 1p	400	004121500	394	3
PT 2 M10-S12 1p	400	004121501	387	3
PT 2 S12-S12 1p	400	004121502	379	3
PT 2 M10-P2 1p	400	004121503	517	3
PT 2 M10-2P2 1p	400	004121504	583	3
PT 2 P2-P2 1p	400	004121505	639	3
PT 2 P2-2P2 1p	400	004121506	705	3
PT 2 2P2-2P2 1p	400	004121507	771	3
PT 3 M12-M12 1p	630	004121600	649	3
PT 3 M12-P3 1p	630	004121601	810	3
PT 3 M12-2P3 1p	630	004121602	905	3
PT 3 P3-P3 1p	630	004121603	966	3
PT 3 P3-2P3 1p	630	004121604	1061	3
PT 3 2P3-2P3 1p	630	004121605	1156	3

*Terminal covers and fuse covers sold separately

3-pole fuse base PT 1, 2, 3

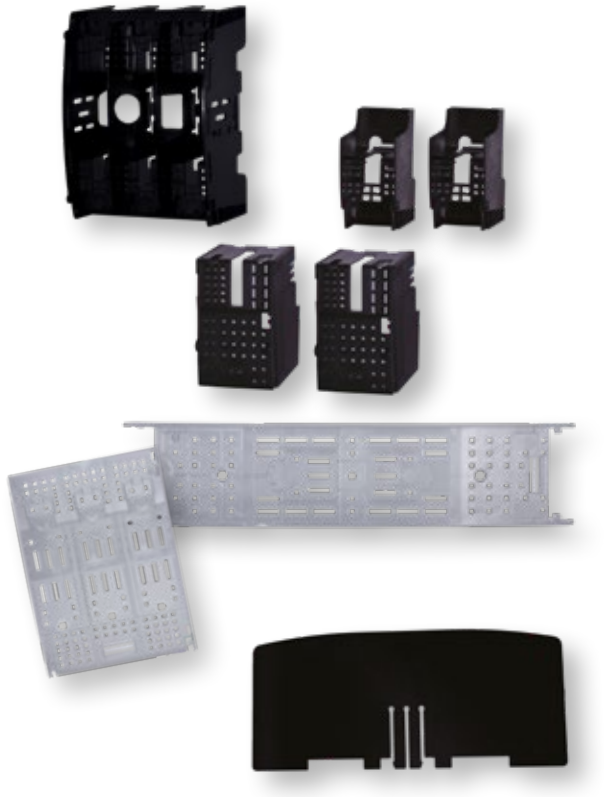
Type	I_n [A]	Code No.	g	
PT 1 M10-M10 3p	250	004131300	1204	1
PT 1 M10-S12 3p	250	004131301	1183	1
PT 1 S12-S12 3p	250	004131302	1159	1
PT 1 M10-P1 3p	250	004131303	1393	1
PT 1 M10-2P1 3p	250	004131304	1543	1
PT 1 P1-P1 3p	250	004131305	1579	1
PT 1 P1-2P1 3p	250	004131306	1729	1
PT 1 2P1-2P1 3p	250	004131307	1879	1
PT 2 M10-M10 3p	400	004131400	1312	1
PT 2 M10-S12 3p	400	004131401	1291	1
PT 2 S12-S12 3p	400	004131402	1267	1
PT 2 M10-P2 3p	400	004131403	1681	1
PT 2 M10-2P2 3p	400	004131404	1879	1
PT 2 P2-P2 3p	400	004131405	2047	1
PT 2 P2-2P2 3p	400	004131406	2245	1
PT 2 2P2-2P2 3p	400	004131407	2443	1
PT 3 M12-M12 3p	630	004131500	2105	1
PT 3 M12-P3 3p	630	004131501	2588	1
PT 3 M12-2P3 3p	630	004131502	2873	1
PT 3 P3-P3 3p	630	004131503	3056	1
PT 3 P3-2P3 3p	630	004131504	3341	1
PT 3 2P3-2P3 3p	630	004131505	3626	1

PT basic version with protective barriers

*Terminal covers and fuse covers sold separately

Accessories

Type	Code No.	g	
Terminal covers			
ZP PT 00-1	004129010	20	6
ZP PT 00-3	004129011	106,7	1
ZP PT 1-1	004129012	47,5	6
ZP PT 2-1	004129013	62	6
ZP PT 3-1	004129014	73,5	6
Fuse covers			
PZP PT 00-1	004129020	9,5	6
PZP PT 00-3	004129021	24,7	6
PZP PT 1-1	004129022	36,2	6
PZP PT 2-1	004129023	44,75	6
PZP PT 3-1	004129024	50,7	6
Protective barriers			
PR PT00-1	004941330	18,1	20
PR PT00-3	004941331	17,5	20
PR PT1	004941332	38	20
PR PT2	004941333	45,7	20
PR PT3	004941334	52,4	20



Technical data for Neutral Terminal Base / Earth Clamp

Size			00	1	2	3
Electrical characteristics						
Rated voltage	Un	V a.c./d.c.	690			
Rated current	In	A	160	250	400	630
Cable terminal						
Connection			M8-2M5	M10-M10		M12-M12
Tightening torque		Nm	10-2,6	32		

Neutral terminal base / Earth clamp

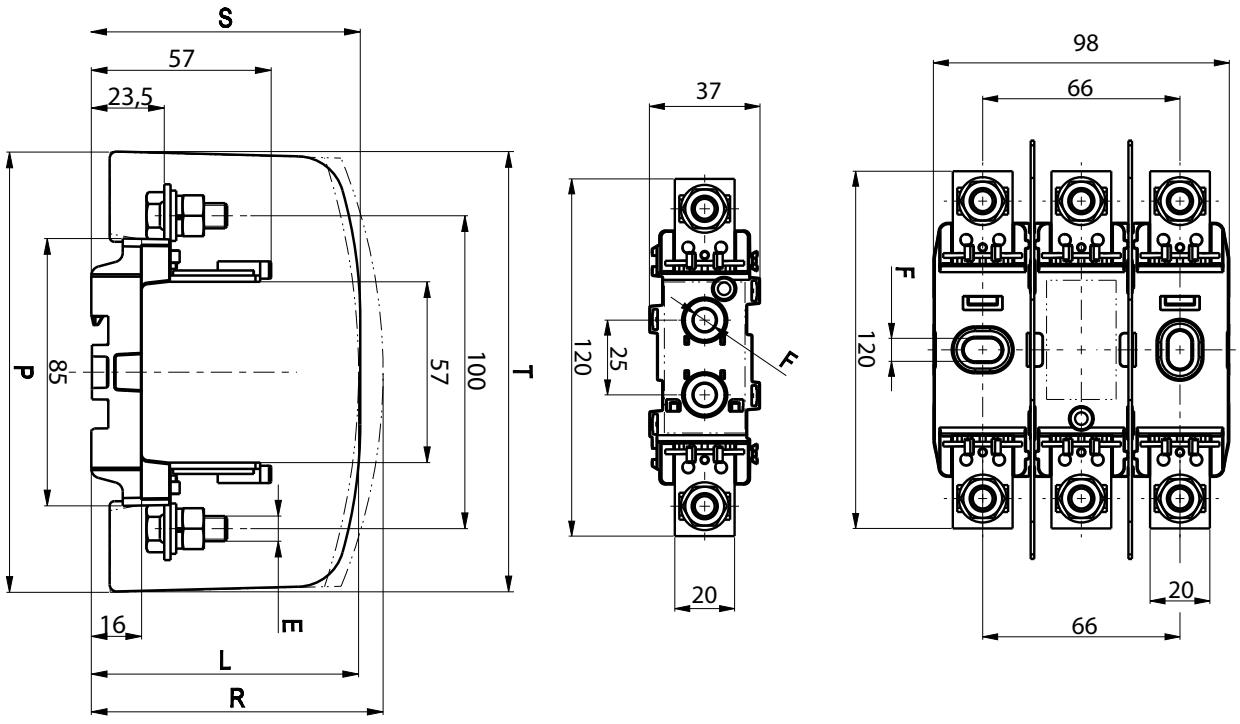
Type	I_n [A]	Code No.	g	
PT 00/0 M8-2M5	160	004941502	103	3
PT 1/0 M10-M10	250	004941503	396	3
PT 2/0 M10-M10	400	004941504	570	3
PT 3/0 M12-M12	630	004941505	609	3

Fuse Bases PT Dimensions

Dimensions for size 00

1p	3p	E	F	L	P	R	S*	T*
PT 00 M8-M8 1p	PT 00 M8-M8 3p	M8-M8	Ø 7,5	\	\	\	86	140
PT 00 2M6-2M6 1p	PT 00 2M6-2M6 3p	2M6-2M6	Ø 7,5	\	\	\	86	140
PT 00 M8-2M6 1p	PT 00 M8-2M6 3p	M8-2M6	Ø 7,5	\	\	\	86	140
PT 00 M8-P00 1p	PT 00 M8-P00 3p	M8-P00	Ø 7,5	\	\	\	86	140
PT 00 M8-2P00 1p	PT 00 M8-2P00 3p	M8-2P00	Ø 7,5	\	\	\	86	140
PT 00 P00-P00 1p	PT 00 P00-P00 3p	P00-P00	Ø 7,5	\	\	\	86	140
PT 00 P00-2P00 1p	PT 00 P00-2P00 3p	P00-2P00	Ø 7,5	\	\	\	86	140
PT 00 2P00-2P00 1p	PT 00 2P00-2P00 3p	2P00-2P00	Ø 7,5	\	\	\	86	140
PTI 00 M8-M8 1p	PTI 00 M8-M8 3p	M8-M8	Ø 7,5	87	140	\	\	\
PTI 00 2M6-2M6 1p	PTI 00 2M6-2M6 3p	2M6-2M6	Ø 7,5	87	140	\	\	\
PTI 00 M8-2M6 1p	PTI 00 M8-2M6 3p	M8-2M6	Ø 7,5	87	140	\	\	\
PTI 00 M8-P00 1p	PTI 00 M8-P00 3p	M8-P00	Ø 7,5	87	140	\	\	\
PTI 00 M8-2P00 1p	PTI 00 M8-2P00 3p	M8-2P00	Ø 7,5	87	140	\	\	\
PTI 00 P00-P00 1p	PTI 00 P00-P00 3p	P00-P00	Ø 7,5	87	140	\	\	\
PTI 00 P00-2P00 1p	PTI 00 P00-2P00 3p	P00-2P00	Ø 7,5	87	140	\	\	\
PTI 00 2P00-2P00 1p	PTI 00 2P00-2P00 3p	2P00-2P00	Ø 7,5	87	140	\	\	\
PTIP 00 M8-M8 1p	PTIP 00 M8-M8 3p	M8-M8	Ø 7,5	87	140	95	\	\
PTIP 00 2M6-2M6 1p	PTIP 00 2M6-2M6 3p	2M6-2M6	Ø 7,5	87	140	95	\	\
PTIP 00 M8-2M6 1p	PTIP 00 M8-2M6 3p	M8-2M6	Ø 7,5	87	140	95	\	\
PTIP 00 M8-P00 1p	PTIP 00 M8-P00 3p	M8-P00	Ø 7,5	87	140	95	\	\
PTIP 00 M8-2P00 1p	PTIP 00 M8-2P00 3p	M8-2P00	Ø 7,5	87	140	95	\	\
PTIP 00 P00-P00 1p	PTIP 00 P00-P00 3p	P00-P00	Ø 7,5	87	140	95	\	\
PTIP 00 P00-2P00 1p	PTIP 00 P00-2P00 3p	P00-2P00	Ø 7,5	87	140	95	\	\
PTIP 00 2P00-2P00 1p	PTIP 00 2P00-2P00 3p	2P00-2P00	Ø 7,5	87	140	95	\	\

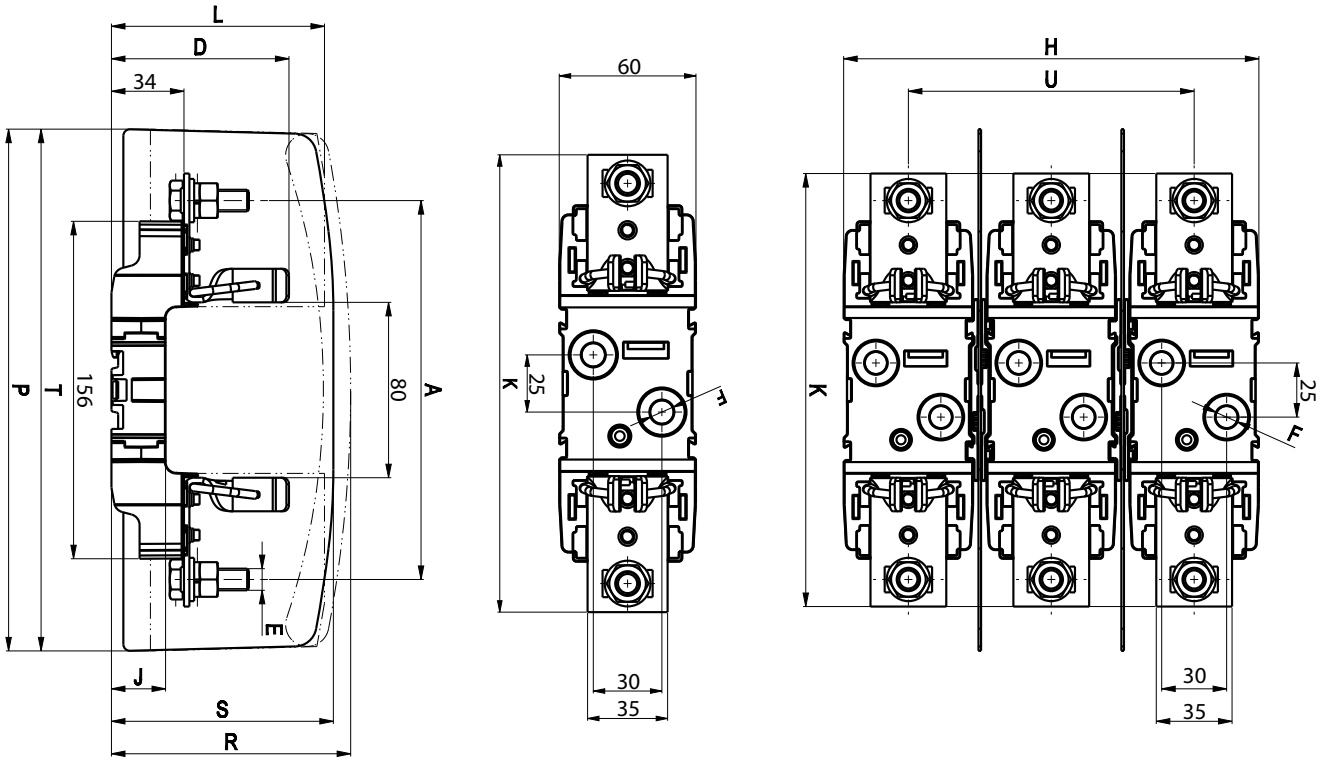
*Protective barriers



Dimensions for sizes 1, 2, 3

1p	3p	A	D	E	F	H	J	K	L**	P**	R**	S*	T*	U
PT 1 M10-M10 1p	PT 1 M10-M10 3p	175	81	M10-M10	10,5	190	25	200	103	244	110	108	241	130
PT 1 M10-S12 1p	PT 1 M10-S12 3p	175	81	M10-S12	10,5	190	25	200	103	244	110	108	241	130
PT 1 S12-S12 1p	PT 1 S12-S12 3p	175	81	S12-S12	10,5	190	25	200	103	244	110	108	241	130
PT 1 M10-P1 1p	PT 1 M10-P1 3p	175	81	M10-P1	10,5	190	25	200	103	244	110	108	241	130
PT 1 M10-2P1 1p	PT 1 M10-2P1 3p	175	81	M10-2P1	10,5	190	25	200	103	244	110	108	241	130
PT 1 P1-P1 1p	PT 1 P1-P1 3p	175	81	P1-P1	10,5	190	25	200	103	244	110	108	241	130
PT 1 P1-2P1 1p	PT 1 P1-2P1 3p	175	81	P1-2P1	10,5	190	25	200	103	244	110	108	241	130
PT 1 2P1-2P1 1p	PT 1 2P1-2P1 3p	175	81	2P1-2P1	10,5	190	25	200	103	244	110	108	241	130
PT 2 M10-M10 1p	PT 2 M10-M10 3p	200	87	M10-M10	10,5	190	25	225	112	268	120	115,5	266	130
PT 2 M10-S12 1p	PT 2 M10-S12 3p	200	87	M10-S12	10,5	190	25	225	112	268	120	115,5	266	130
PT 2 S12-S12 1p	PT 2 S12-S12 3p	200	87	S12-S12	10,5	190	25	225	112	268	120	115,5	266	130
PT 2 M10-P2 1p	PT 2 M10-P2 3p	200	87	M10-P2	10,5	190	25	225	112	268	120	115,5	266	130
PT 2 M10-2P2 1p	PT 2 M10-2P2 3p	200	87	M10-2P2	10,5	190	25	225	112	268	120	115,5	266	130
PT 2 P2-P2 1p	PT 2 P2-P2 3p	200	87	P2-P2	10,5	190	25	225	112	268	120	115,5	266	130
PT 2 P2-2P2 1p	PT 2 P2-2P2 3p	200	87	P2-2P2	10,5	190	25	225	112	268	120	115,5	266	130
PT 2 2P2-2P2 1p	PT 2 2P2-2P2 3p	200	87	2P2-2P2	10,5	190	25	225	112	268	120	115,5	266	130
PT 3 M12-M12 1p	PT 3 M12-M12 3p	210	98	M12-M12	10,5	222	10	240	126	268	133	130	267	166
PT 3 M12-P3 1p	PT 3 M12-P3 3p	210	98	M12-P3	10,5	222	10	240	126	268	133	130	267	166
PT 3 M12-2P3 1p	PT 3 M12-2P3 3p	210	98	M12-2P3	10,5	222	10	240	126	268	133	130	267	166
PT 3 P3-P3 1p	PT 3 P3-P3 3p	210	98	P3-P3	10,5	222	10	240	126	268	133	130	267	166
PT 3 P3-2P3 1p	PT 3 P3-2P3 3p	210	98	P3-2P3	10,5	222	10	240	126	268	133	130	267	166
PT 3 2P3-2P3 1p	PT 3 2P3-2P3 3p	210	98	2P3-2P3	10,5	222	10	240	126	268	133	130	267	166

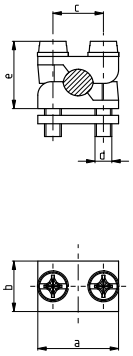
*Protective barriers; included with 3p fuse bases or sold separately
**Terminal covers and fuse covers; sold separately



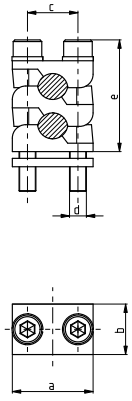
Type of connections

	a	b	c	d	emax	Tightening torque [Nm]	Connections [mm²]
P00	24	15	15	M5	25	2,6	10-70 Cu/Al
2P00	24	15	15	M5	35	2,6	2x(10-50) Cu/Al
P1	37	20	25	M6	30	4,5	70-150 Cu/Al
2P1	37	20	25	M6	42	4,5	2x(70-95) Cu/Al
P2	42	22	28	M8	40	11	120-240 Cu/Al
2P2	42	22	28	M8	55	11	2x(120-150) Cu/Al
P3	50	25	30	M8	44	11	120-300 Cu/Al
2P3	50	25	30	M8	66	11	2x(120-240) Cu/Al
2xM6	26	15	14	M6	16	4	6-70 Cu
S12	36	16	25	M6	25	9,5	25-150Cu
M8				M8	20	10	
MI0				M10	30	32	
M12				M12	30	32	
V shaped clamp	35	23	58		45	22	SM: 50-240 Cu/Al SE: 300 Cu/Al RM: 37-70 Cu/Al RE: 25-50 Cu/Al

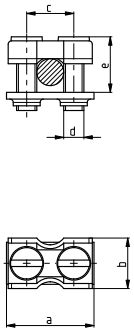
P00, P1, P2, P3



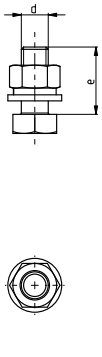
2P00, 2P1, 2P2, 2P3



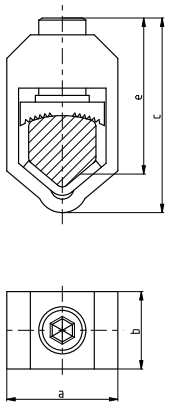
2xM6, S12



M8, M10, M12

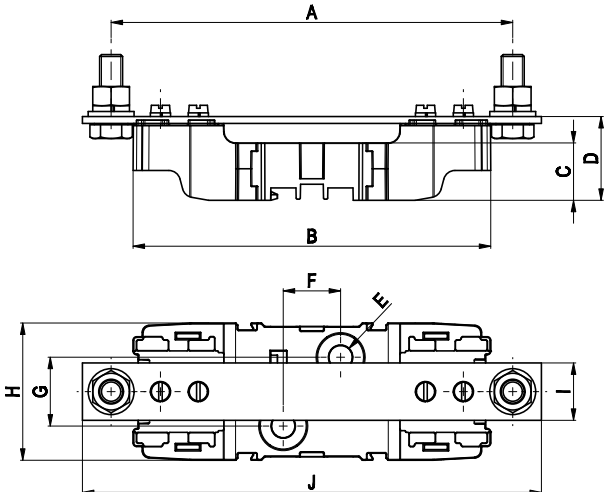


V shaped clamp



Dimensions for Neutral Terminal Base / Earth Clamp

[mm]	A	B	C	D	E	F	G	H	I	J
PT 00/0 M8-2M5 S	100	85	4,5	26,5	Ø 7,5	25	\	37	20	115
PT 1 M10-M10 S	175	156	10	38	Ø 10,5	25	30	60	26	200
PT 2 M10-M10 S	200	156	10	40	Ø 10,5	25	30	60	30	225
PT 3 M12-M12 S	210	156	10	40	Ø 10,5	25	30	60	30	240



Plastic fuse bases type PLNVV 000 and 00 (fuses with screw connection - S)

Rated voltage
690 V

1-pole PLNVV 000 and 00 (fuses with screw connection - S)

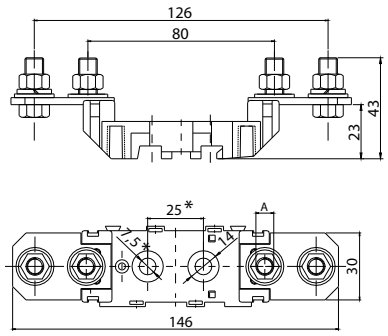
Type	I_n [A]	Code No.	kg	
PLNVV – 00/1 A	160	001701020	0,58	3

* fuse bases PLNVV have no special accessories but only protective barriers Type ZP
** all bases are ready for mounting on mounting plate
*** with use of TS NP-00 is possible to mount fuse bases size 00 on the 35mm mounting rail

Technical data:

Rated voltage Un	690 V AC
Rated current In	NH00C, 00, 0: 160 A NH1: 250 A NH2: 400 A NH3: 630 A
Degree of pollution	3 -> IEC 60947, DIN EN 60947, DIN VDE 0110
Standards	IEC 60269, DIN EN 60269, DIN VDE 0636, HRN EN 60269

Dimensions



	A
PLNVV -000	M8
PLNVV -00	M10

Neutral terminal base PLNS

Rated voltage
690 V

Neutral terminal bases PLNS 00, 1, 2

Type	I_n [A]	Code No.	kg	
PLNS - 00N A	160	001701150	0,61	5
PLNS - 00N B	160	001701151	0,56	5
PLNS - 00N C	160	001701152	0,62	5
PLNS - 00N D	160	001701153	0,63	5
PLNS - 00N E	160	001701154	0,64	5
PLNS - 00N F	160	001701155	0,64	5
PLNS - 00N G	160	001701156	0,65	5
PLNS - 00N H	160	001701157	0,66	5
2PLNS - 1N A	250	001701158	0,60	5
2PLNS - 1N B	250	001701159	0,59	5
2PLNS - 1N C	250	001701160	0,60	5
2PLNS - 1N D	250	001701161	0,61	5
2PLNS - 1N E	250	001701162	0,62	5
2PLNS - 1N F	250	001701163	0,63	5
2PLNS - 1N G	250	001701164	0,64	5
2PLNS - 1N H	250	001701165	0,64	5
2PLNS - 1N K	250	001701180	0,66	5
2PLNS - 2N A	400	001701166	0,81	5
2PLNS - 2N B	400	001701167	0,76	5
2PLNS - 2N C	400	001701168	0,84	5
2PLNS - 2N D	400	001701169	0,86	5
2PLNS - 2N E	400	001701170	0,88	5
2PLNS - 2N F	400	001701171	0,89	5
2PLNS - 2N G	400	001701172	0,89	5
2PLNS - 2N H	400	001701173	0,90	5
2PLNS - 2N K	400	001701181	0,91	5

* basic Type is 1-pole and can be composed to multipole
** for connector description A, B, ... K see table of connections PLNV
*** C-PLNS-00 is used to equalize potential between N and PE terminal through M8 screw Type connection (see table of accessories)

PLNS - 00

2PLNS – 1,2,3

C-PLNS-00 + 2x PLNS-00N A

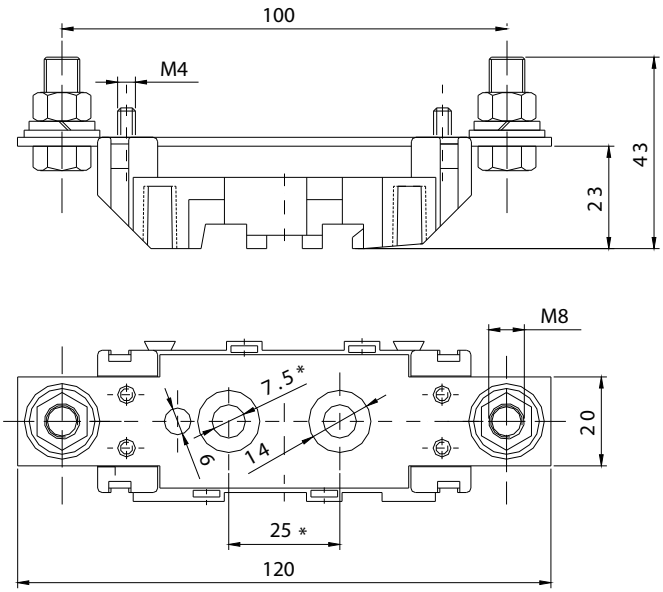
Neutral terminal base with separation function PLNSR 00

Type	Code No.	kg	
PLNSR-00 A	001701182	0,13	5
PLNSR-00 B	001701175	0,12	5
PLNSR-00 C	001701183	0,13	5
PLNSR-00 D	001701184	0,14	5
PLNSR-00 E	001701185	0,14	5
PLNSR-00 F	001701186	0,15	5
PLNSR-00 G	001701187	0,15	5
PLNSR-00 H	001701188	0,16	5

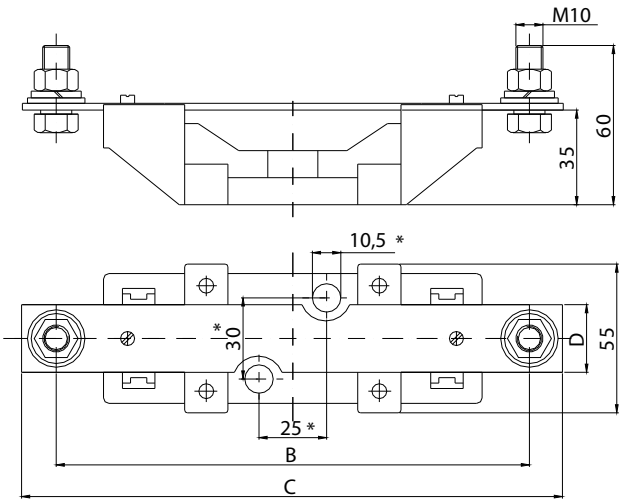
* supplied standard variant is 1-pole, 3-pole shall be made by instalments
** for connector description A, B, ... K see table of connections PLNV

PLNS Dimensions

PLNS - 00 N

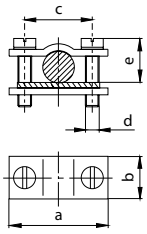


2PLNS - 1,2 N

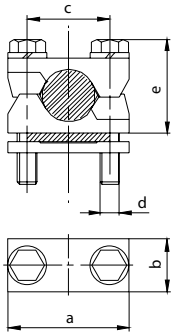


	2PLNS - 1N	2PLNS - 2N
B	175,6	200
C	200	230
D	25	30

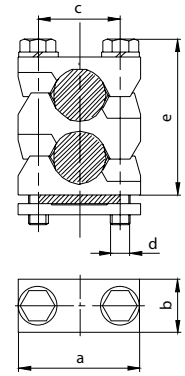
OS 00, OS 12



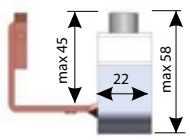
P00, P1, P2, P3



P002, P12, P22, P32



"V" shaped clamp

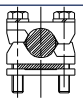
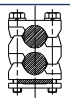
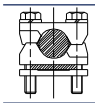
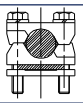
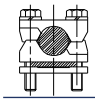
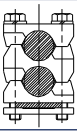
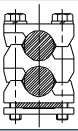


Technical data

Type	a	b	c	d	e_{ma}
OS00	24	15	15	M5	15
OS12	36	16	25	M6	25
P00	24	15	15	M5	25
P002	24	15	15	M5	35
P1	37	20	25	M6	30
P12	37	20	25	M6	42
P2	42	22	28	M8	40
P22	42	22	28	M8	55
P3	50	25	30	M8	44
P32	50	25	30	M8	66

Type of connections PLNVV and PLNS

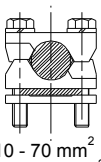
Type of connection for fuse bases PLNV and PLNS

Connection	Size	One side of fuse base			Other side of fuse base		
		Description	Type	Drawing	Description	Type	Drawing
A	00 1 2 3	screw	M8 M10 M10 M12		screw	M8 M10 M10 M12	
B	00 1 2	clip terminal	OS00 OS12 OS12		clip terminal	OS00 OS12 OS12	
C	00 1 2	clip terminal	OS00 OS12 OS12		screw	M8 M10 M10	
D	00 1 2 3	screw	M8 M10 M10 M12		prism clamp	P00 P1 P2 P3	
E	00 1 2 3	screw	M8 M10 M10 M12		prism clamp	P002* P12 P22 P32	
F	00 1 2 3	prism clamp	P00 P1 P2 P3		prismclamp	P00 P1 P2 P3	
G	00 1 2 3	prism clamp	P00 P1 P2 P3		prism clamp	P002* P12 P22 P32	
H	00 1 2 3	prism clamp	P002* P12 P22 P32		prism clamp	P002* P12 P22 P32	
K	1 2	»V« shaped clamp			»V« shaped clamp		

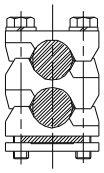
* IK00 protective cover is only as high as the terminals 2x (10-25mm^2 = height of approx. 25mm)
** interchangeability of the terminals is only possible between type OS... and P... within the same base size. Replacing the terminal with screw M... with the terminal OS... or with terminal P... is not possible.
*** »V« shaped clamp is not interchangeable.

Connections:

OS00 .... 6 - 50 mm^2 - Cu
OS12 .. 25 - 150 mm^2 - Cu



P00 ... 10 - 70 mm^2 - Cu / Al
P1 ..... 70 - 150 mm^2 - Cu / Al
P2 ... 120 - 240 mm^2 - Cu / Al
P3 ... 120 - 300 mm^2 - Cu / Al

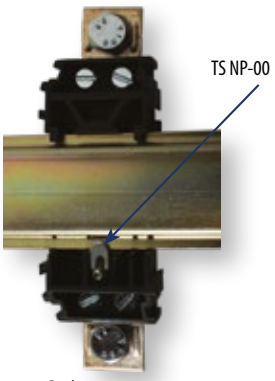


P002 ... 2 x (10 - 50 mm^2) - Cu / Al
P12 ..... 2 x (70 - 95 mm^2) - Cu / Al
P22 ... 2 x (120 - 150 mm^2) - Cu / Al
P32 ... 2 x (120 - 240 mm^2) - Cu / Al

Accessories for PLNVV, PLNS

Type	Description	Code No.	Used in combination with	kg	
TS NP-00	Mounting set (mounting on 35mm mounting rail)	001701221	PLNV 00, PLNVV - 000, 00	0,01	3
C-PLNS-00	Linking element to equalize potential between N and PE terminal	001701222	PLNS-00N	0,02	5

* for mounting 1-pole PLNVV, PLNS on 35mm mounting rail one set of TS NP-00 is needed.
** C-PLNS-00 is used to equalize potential between N and PE terminal through M8 screw Type connection on PLNS-00N base.



Back view

TS NP-00

C-PLNS-00

NV/NH Accessories

NV/NH separator uninsulated

Type	I_N [A]	Code No. (Ni)	Code No. (Ag)	g	
NVL 00	160	004941230	004941235	75,5	20
NVL 0	160	004941231	004941236	120	20
NVL 1	250	004941232	004941237	145,5	20
NVL 2	400	004941233	004941238	210	20
NVL 3	630	004941234	004941239	275	6/48
NVL 4	1250	004941208		692	5
NVL 4a	1600	004941209		553	5

*size NVL 00, 0,1,2,3….drawing A in technical data
size NVL 4, 4a…..drawing B in technical data

NV/NH separator insulated

Type	I_N [A]	Code No.	g	
NVLI 00 Ag*	160	004941220	70	5/60
NVLI 0 Ag*	160	004941221	120	5/40
NVLI 1 Ag*	250	004941222	145	5/40
NVLI 2 Ag*	400	004941223	215	5/40
NVLI 3 Ag*	630	004941224	315	5/40

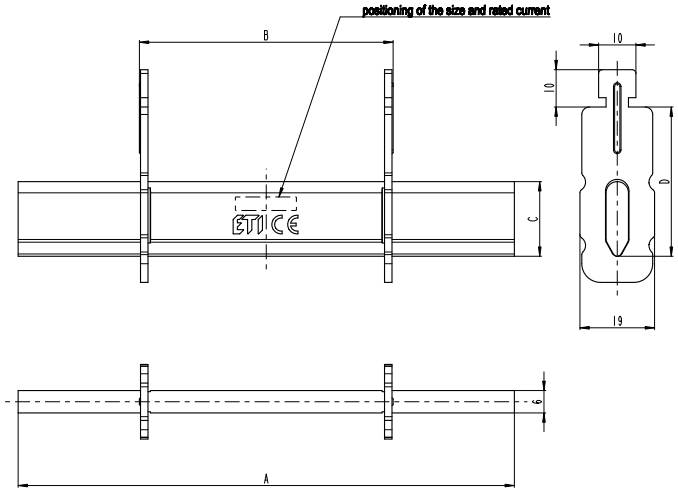
*silver plated

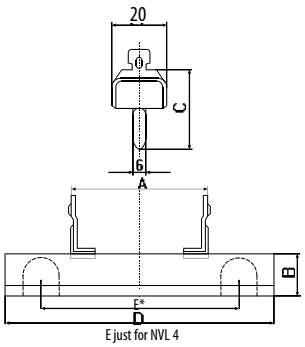
NV separator - Drawing A

Type	dimension				
	I_N(A)	A	B	C	D
NV L 00	160	77,5	49	15	35
NV L 0	160	125	68	15	35
NV L 1	250	133	68	20	40
NV L 2	400	148	68	26	48
NV L 3	630	148	68	33	60

NV separator - Drawing B

Type	dimension				
	A	B	C	D	E
NV L 4	68	51	87	200	150
NV L 4a	89	50	86	200	-



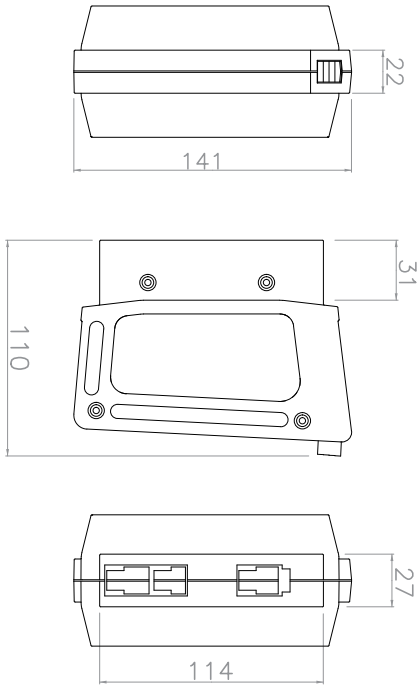


Handle

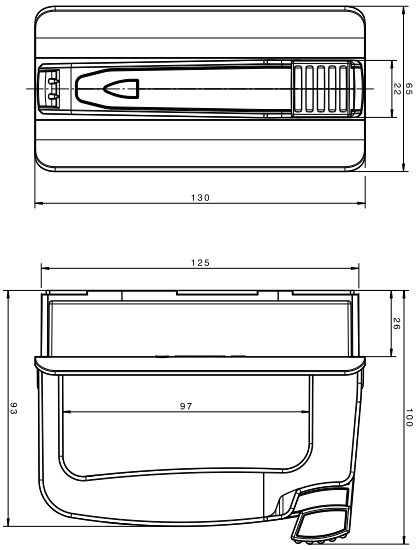
Type	I_N [A]	Code No.	g	
R 00-3	2-630	004941111	276	10
VRRN 00-3*	2-630	001691061	320	1
VRRL 85	25-160	001691064	550	1

*handle with sleeve

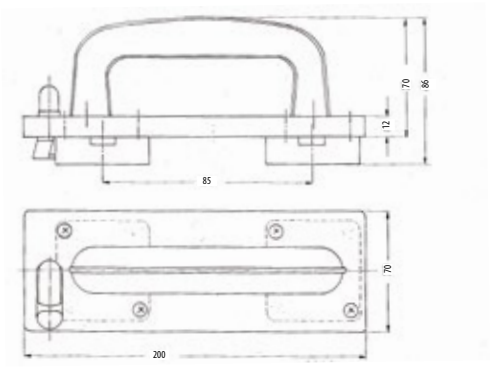
R 00-3 dimension

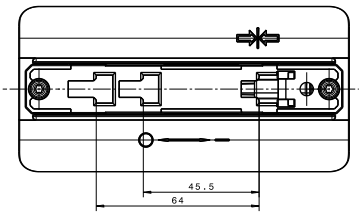


VRRN 00-3 dimension



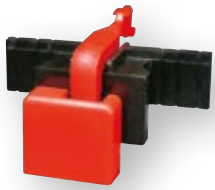
VRRL 85 dimension





Signal Switch NVS 5

Type	Code No.	g	
NVS 5	004117001	11,5	10/340



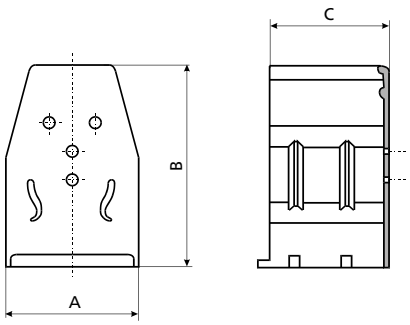
NVS 5 is used for signalling of interruption of fuse-links of the Type NV/NH of the size NV/NH 00 C to NV/NH 3 (except NV/NH 1 ultra with knives for fastening with screws). NVS is activated through the indicator spring. We also offer Electronic Fuse Monitors - see page 196.

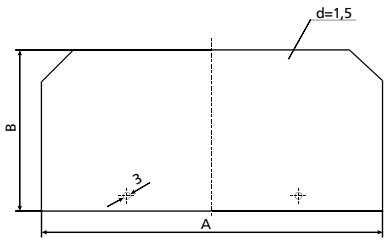
Protection link

Type	Code No.	g	
NVL00	004941206	30	10
NVL 1-3	004941207	78	10

Base separating elements

Type	Code No.	g	
PP 00, PK 00	004941301	50	20/100
PK 0	004941302	50	20/100
PK 1	004941303	50	20/100
PK 2	004941304	50	20/100
PK 3	004941305	50	20/100





Insulating sleeve of contact spring PK and PP

type	dimension		
	A	B	C
PP 00	32	68	41
PK 1	40	52	33
PK 2	44	63	40
PK 3	44	67	40

Base separating element

type	dimension	
	A	B
PP 00, PK 00	125	83
PK 0	175	82
PK 1	210	100
PK 2	240	110
PK 3	250	110

NV/NH Low Voltage Fuse-Rails

NV/NH fuse-rail sizes 00, 1, 2, 3

Characteristics of LV NV fuse-rails
The LV NV/NH fuse-rails are 3-pole bases of LV fuse-links, intended for busbar mounting. The LV NV/NH fuse-rails comprises three single-pole connections in one unit. Each contact at an individual phase is connected to the phase on the busbar system. The other contacts are fitted with cable connecting terminals or intended for attachment of the following busbar system.

Use
The LV NV/NH fuse-rails are mainly used for cable distribution and power supply systems. Principle of operation The LV NV/NH fuse-rails are intended for insertion of LV fuse-links that are inserted and removed from the LV NV/NH fuse-rails by means of a special handle (refer to Catalogue ETI - LV fuse-links, Code No. number 4941111 and 4941100). Design of LV NV/NH fuse-rails The insulated supporting body is made of one piece, the material is polyester reinforced with glass fibres. A silver-plated contact system, fitted with tinned extinction chambers, ensures a low power dissipation, optimum thermal characteristics, and a high breaking capacity. The contact derived parts are intended for cable connections or for attachment of the next busbar system. All the live parts are protected against accidental contacts - in conformity with BVG A2. A special form of the contact part cover provides for safe insertion and removal of the LV fuse-links.

Short description
The LV NV/NH fuse-rails are manufactured in compliance with the DIN 43623 standard, and are mostly used for installation into cable distribution cabinets and power supply systems.
They are available in sizes of 00/160 A to 3/630 A. Covers provide insulation protection for all live parts. All the LV NV/NH fuse-rails are fitted with new, modern Delta contact systems allowing optimum pressure contact between the fuse cartridge and the LV NV/NH fuse-rails, resulting in extremely low level of power dissipation and heating-up.
All standard insulated LV NV/NH fuse-rails shown in the Catalogue are intended for general usage.
Upon request appropriate individual configurations can be designed - in such cases please contact our sales engineers, or call us to the factory.

Advantages
- upper or lower cable connection - as required
- optimum pull contact
- simple installation
- modular design

Technical data of insulated fuse-rails (in accordance with VDE 0636, part 201, IEC 60269-2-1)

Technical Specifications			VL00/100	VL00/185	VL1	VL1H
Electrical Characteristics						
Rated operational voltage	Ue	V	690 AC	690 AC	690 AC	690 AC
Rated operational current	Ie	A	160	160	250	250
Rated frequency	-	Hz	40-60	40-60	40-60	40-60
Rated insulation voltage	Ui	V	800 AC		1000 AC	
Total power loss at Ith (without fuse)	Pv	W	18	23	23	29
Fuse links						
Size - DIN 43 620, IEC 60269-2	-	-	000/00		1	
Max. rated current (gG)	In	A	160	160	250	250
Max. permissible power loss per fuse link	Pv	W	12		32	23
Dimensions						
Mass	-	kg	100 mm = 0,8	185mm=1,5	3,5	
Busbars (distance)	-	mm	100	185	185	
Cable connection						
Screw	-	-	M8		M10	
Torque	Ma	Nm	12-15		30-35	
V-clip	-	mm^2	10-95		25-300	25-240 / 25-300
Torque	Ma	Nm	10		32	
Protection						
Operational state	-	-	IP10			
Operating conditions						
Ambient temperature	Tu	°C	-25 ... +55			
Operating condition	-	-	Continuous operation			
Mounting	-	-	vertical, horizontal			
Altitude	-	m	≤ 2000			
Pollution degree	-	-	3			
Overvoltage category	-	-	III		IV	

Technical data of insulated fuse-rails (in accordance with VDE 0636, part 201, IEC 60269-2-1)

Technical Specifications			VL2	VL2H	VL3
Electrical Characteristics					
Rated operational voltage	Ue	V	690 AC	690 AC	690 AC
Rated operational current	Ie	A	400	400	630
Rated frequency	-	Hz	40-60	40-60	40-60
Rated insulation voltage	Ui	V		1000 AC	
Total power loss at Ith (without fuse)	Pv	W	54	73	115
Fuse links					
Size - DIN 43 620, IEC 60269-2	-	-	2		3
Max. rated current (gG)	In	A	400	400	630
Max. permissible power loss per fuse link	Pv	W	45	34	48
Dimensions					
Mass	-	kg	3,8		4,3
Busbars (distance)	-	mm	185		
Cable connection					
Screw	-	-	M12	M12	M12
Torque	Ma	Nm	35-40	35-40	35-40
V-clip	-	mm^2	25-300	25-240 / 25-300	25-300
Torque	Ma	Nm	32	32	32
Protection					
Operational state	-	-	IP10		
Operating conditions					
Ambient temperature	Tu	°C	-25 ... +55		
Operating condition	-	-	Continuous operation		
Mounting	-	-	vertical, horizontal		
Altitude	-	m	≤ 2000		
Pollution degree	-	-	3		
Overvoltage category	-	-	IV		

General LV NV/NH fuse-rail table

Size	Code No.	Busbar system	Product designation	Connection description	Protection cover	kg	
00	001691015	100	VL00/100 M8-2	flat connection – screw M8	/	0,8	1/1
00	001691016	100	VL00/100 SP.95-2	prism 35 - 95 mm^2	/	0,8	1/1
00	001691020	185	VL00 M8	flat connection – screw M8	/	1,5	1/1
00	001691021	185	VL00 SP.95	V-clip 10-95 mm^2	/	1,5	1/1
1	001691024	185	VL1 M10	screw M10	terminal compartment cover	3,5	1/1
1	001695280	185	VL1H M10*	screw M10	terminal compartment cover	3,5	1/1
1	001691025	185	VL1 SP.300	V-clip 25-300 mm^2	terminal compartment cover	3,5	1/1
2	001691022	185	VL2 M12	screw M12	terminal compartment cover	3,8	1/1
2	001695290	185	VL2H M12*	screw M12	terminal compartment cover	3,8	1/1
2	001691029	185	VL2 M12x35	screw M12x35	terminal compartment cover	3,8	1/1
2	001691030	185	VL2 SP.240 P	V-clip 25-240 mm^2	terminal cover	3,8	1/1
2	001691031	185	VL2 SP.300	V-clip 25-300 mm^2	terminal compartment cover	3,8	1/1
3	001691027	185	VL3 M12	screw M12	terminal compartment cover	4,3	1/1
3	001691028	185	VL3 SP.300	V-clip 25-300 mm^2	terminal compartment cover	4,3	1/1

* H - "Omega" contact (make short - circuit current 80 kA)

Table of accessories for LV NV/NH fuse-rails

Type	Code No.	Description	
busbar connection KS 00/5-10	001691040	busbar thickness 5-10mm	1/3
busbar connection KS 123/10	001692460	busbar thickness 10mm	1/1
protection covering of contact connections ZPL 123/10HA	001691045	for sizes 1,2,3	1/1
busbar covering PZ 00/185	001691046	mounting thread M8	1/1
busbar covering PZ 00/100	001691047	mounting thread M8	1/1
busbar covering PZ 123/185	001691048	mounting thread M12	1/1
busbar support POP 100/185	001691055	for busbar system 100 mm and 185 mm	1/1
protection covering of POP busbar support ZP POP 100	001691056	Lateral cover for busbar support 100 mm	1/1
protection covering of POP busbar support ZP POP 185	001691057	Lateral cover for busbar support 185 mm	1/1

busbar support

busbar connection

busbar covering

Busbar connection
Busbar connections are used for drill-free direct contacting of the strip-fuseways on the busbars.

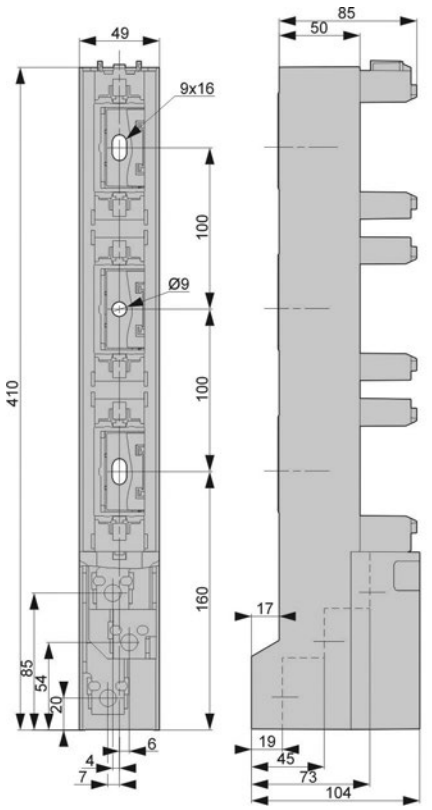
Protection cover
The terminal compartment and terminal covers provide probe-safe frontal protective covering of the terminal compartment.

Busbar cover, screw-Type
The screw-Type covers of 100 mm width are fixed at busbars with M12 thread or stud. The covers of 50 mm width are fixed on busbars or adapters with M8 thread.

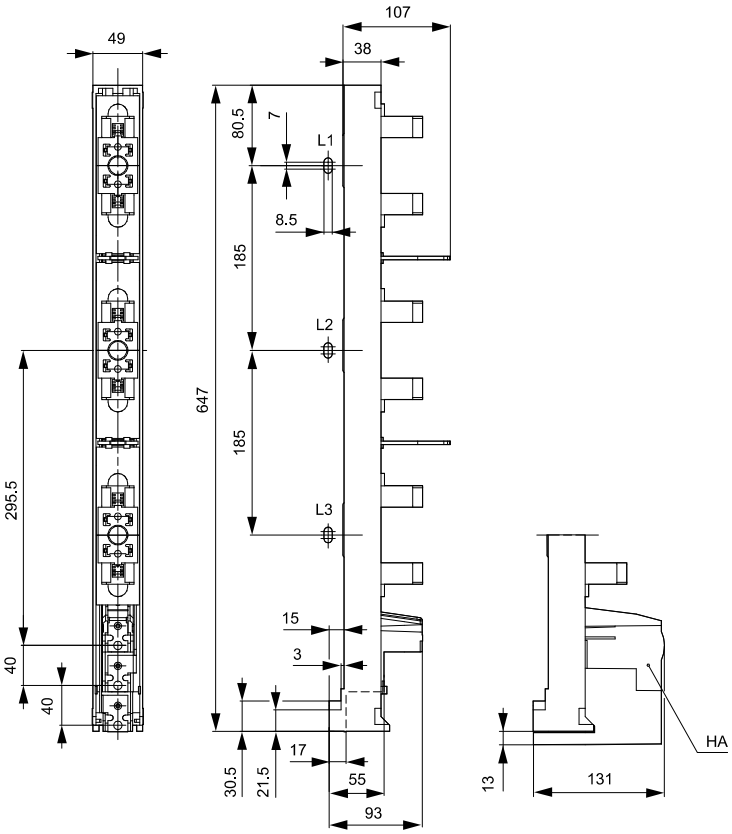
Busbar support
The 3-pole busbar support is used for the fixing of flat bars at 100 mm and 185 mm distances.

protection covering of contact connections

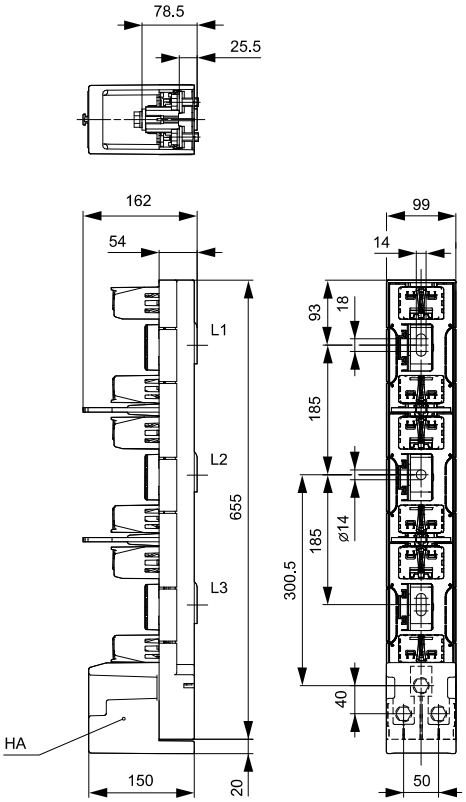
Dimensional overview of VL NV fuse-rails



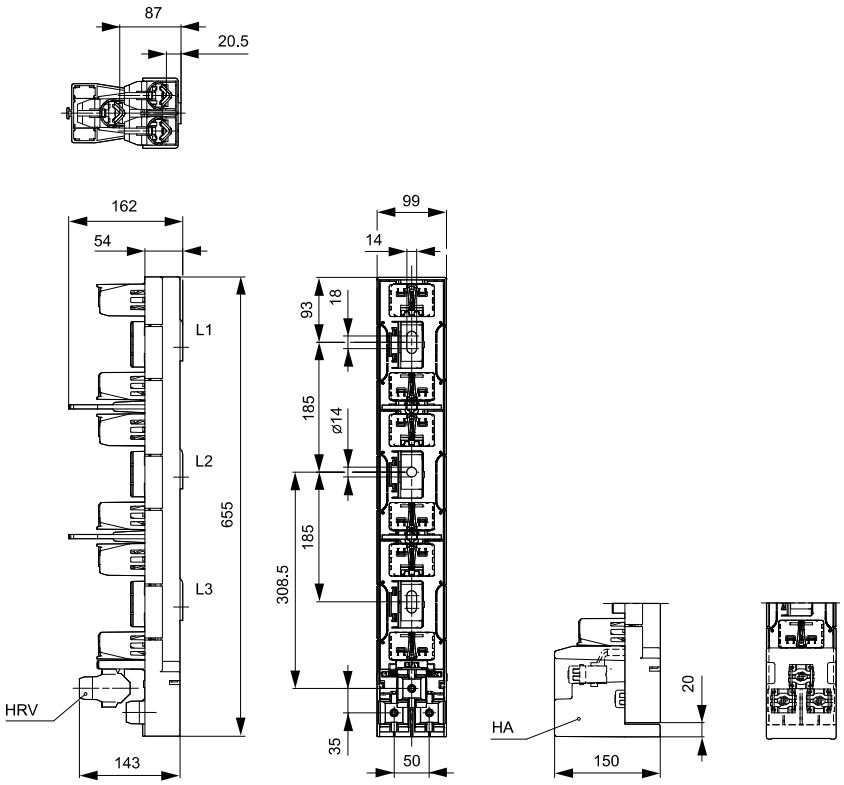
size 00/100



size 00/185

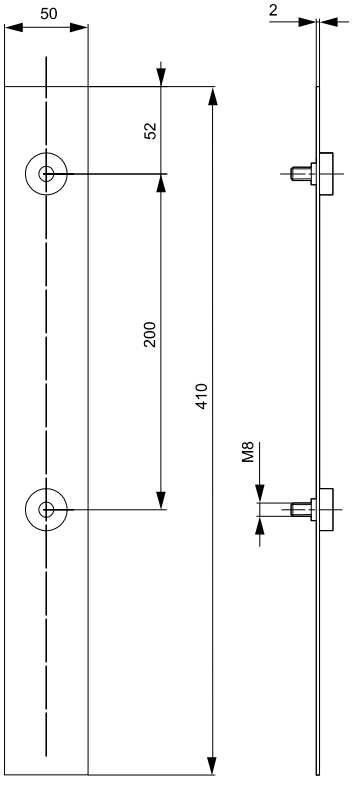


size 1, 2, 3 (M terminal)

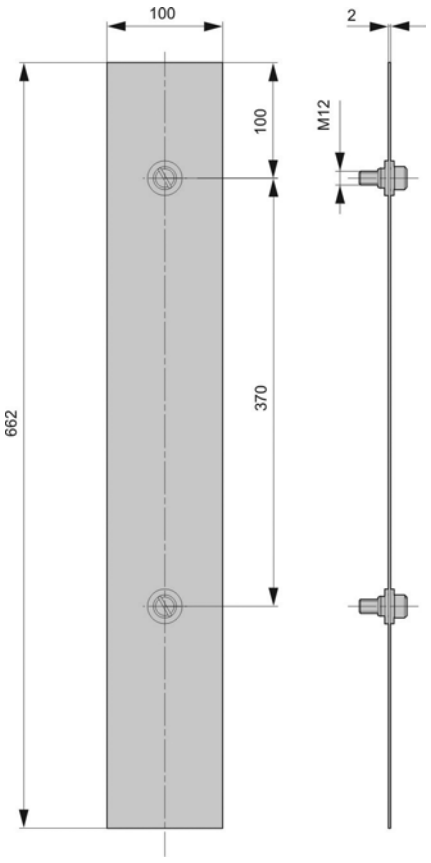


size 1, 2, 3 (SP terminal)

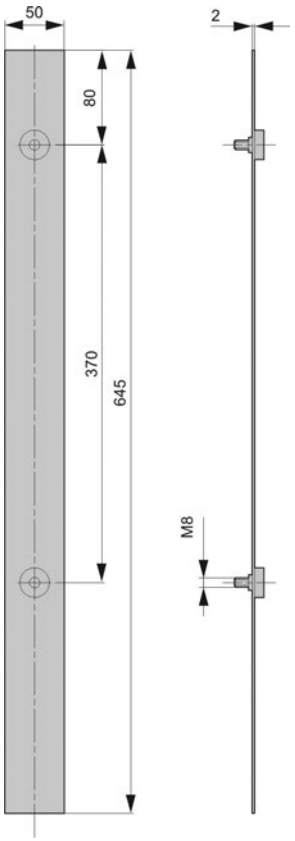
Dimensional overview of accessories for VL NV fuse-rails



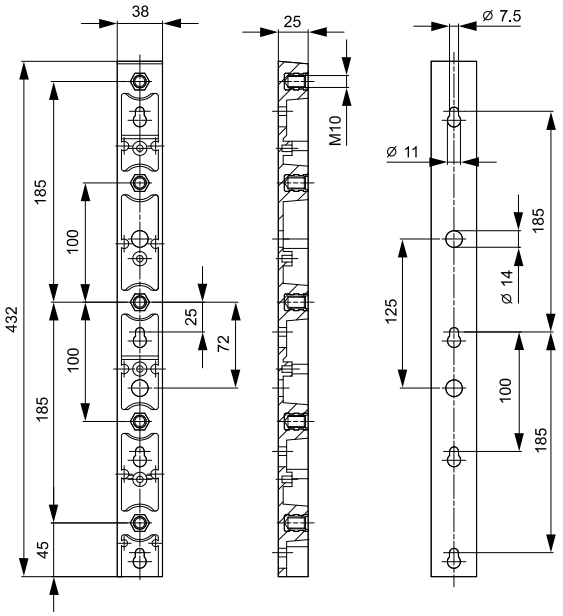
busbar covering PZ 00/100



busbar covering PZ 123/185, busbar covering PZ 00/185



busbar covering PZ 00/185

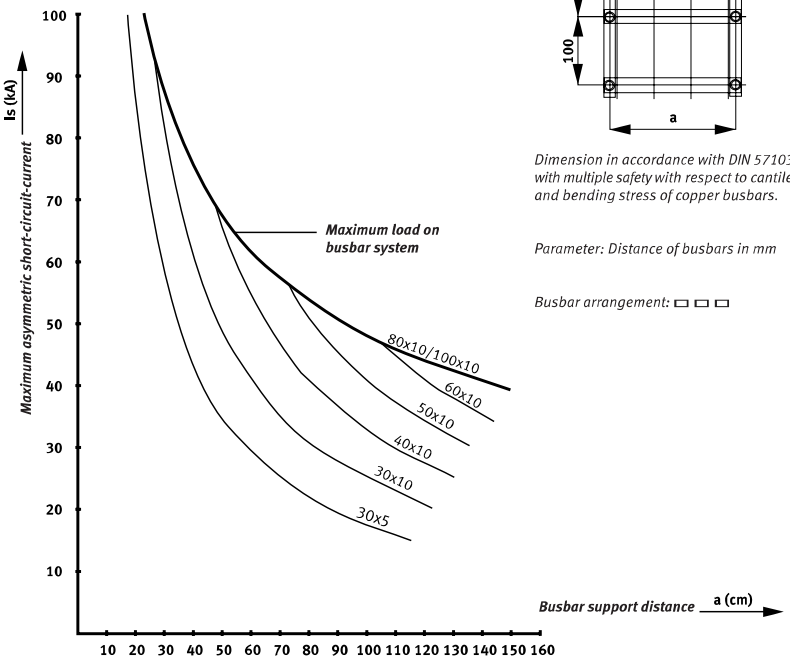


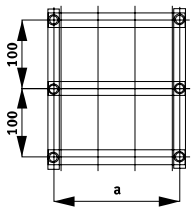
busbar support POP 100/185

Busbar support

POP 100

Short-circuit resistance
as a function of the support distance (busbar system: 100mm)





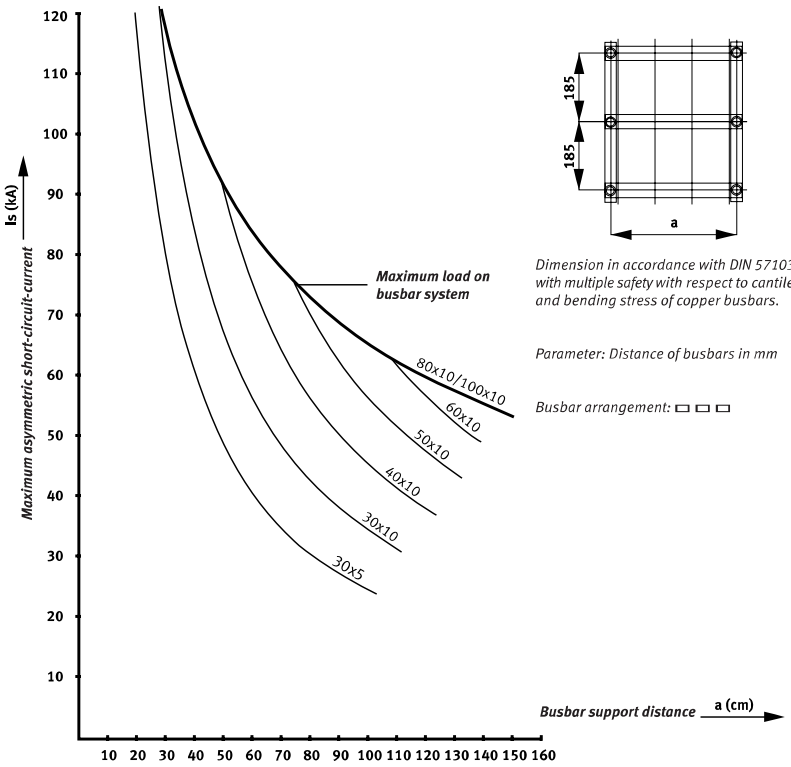
Dimension in accordance with DIN 57103/VDE 0103 with multiple safety with respect to cantilever strength and bending stress of copper busbars.

Parameter: Distance of busbars in mm

Busbar arrangement: ▭ ▭ ▭

POP 185

Short-circuit resistance
as a function of the distance between supports (busbar system: 185mm)



Dimension in accordance with DIN 57103/VDE 0103 with multiple safety with respect to cantilever strength and bending stress of copper busbars.

Parameter: Distance of busbars in mm

Busbar arrangement: ▭ ▭ ▭

NV/NH fuse-rail type VL00 EK

Description
Fuse-rail type VL00/100 EK is a three-pole fuse-base in vertical design for mounting on busbar system. Intended for use with fuse-links size 000 (00C), 00 fuse-rail protects equipment in electrical circuits from overload and short circuit. Special designed contact cover enables safe manipulation with fuse-links (insertion / pull out) with special handle.
Application
- transformer substation
- distribution boards, distribution panels
- public lightening cabinets
- cable distribution cabinets
- industry

Mounting
Rails can be mounted on 100mm busbar system directly, with additional adapters can be mounted also to 185mm busbar system. Mounting in vertical and horizontal position.
Standards
VL00/100 EK are in accordance with the following standards:
- IEC 60947-1
- IEC 60947-3
- IEC 60269-1
- IEC 60269-2.

Technical data

Type		VL00/100 EK
Conventional free air thermal current (Ith)	A	160
Rated insulation voltage	V	AC690
Rated withstand impulse voltage	Kv	6
Rated frequency	Hz	50 (40-60)
Power dissipation (without fuse-links)	W	16,6
Degree of protection (cover closed)		IP20
Degree of protection (cover opened)		IP20
Pollution degree		3
Permissible ambient temperature**	°C	-25°C ... +55°C
Storage temperature	°C	-30°C ... +70°C
Weight (without fuse-links)	kg	0,86
Package	pcs	1

** with ambient temperature between 40-45°C, reduce Ith by 5%; with ambient temperature above 45°C, reduce Ith by 10%

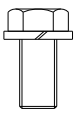
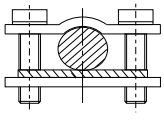
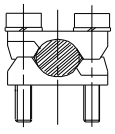
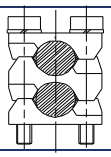
VL00/100 EK M8

Fuse-rail type VL00/100 EK

Type	Code No.	kg	
VL00/100 EK M8	001701600	0,95	1
VL00/100 EK BT00 10-70	001701601	0,95	1
VL00/100 EK OS00 6-50	001701602	0,94	1
VL00/100 EK P00 10-70	001701603	0,94	1
VL00/100 EK P002 50	001701605	0,96	1

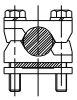
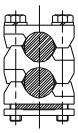
*VL00/100 EK fuse-rails are used only for 100mm busbar system
** VL00/100 EK is possible to mount on 185mm busbar using special adapters
*** for Type of terminals see table of terminal for SL00/100 EK and VL00/100 EK
**** busbar connection for drill-free direct contacting of the fuse-rail is not at disposal

Table of connections for SL00/100 EK and VL00/100 EK

Cable terminal drawing					
Cable terminal type	M8	BT00 10-70*	OS00 6-50	P00 10-70	P002 50
Clamping cross-section	70 mm^2	10-70 mm^2 Al/Cu	(6-50) mm^2 Cu	(10-70) mm^2 Al/Cu	2x50 mm^2 Al/Cu
Screw type	M8x12	M6	2x(M5x14)	2x(M5x25)	2x(M5x40)
Tightening torque	12-15 Nm	4,5 Nm	2,6 Nm	4,5 Nm	4,5 Nm
Package	3	3	3	3	3

* connection type BT00 10-70 have to be ordered with the product, latter excahange is not possible

Additional connections for VL00/100 EK

Type	Code No.	Connector drawing	Suitability	
0S00 6-50	001701480	 Cu*	SL00/100 EK VL00/100 EK	set = 3
P00 10-70	001701481	 Al/Cu*	SL00/100 EK VL00/100 EK	set = 3
P002 50	001701467	 Al/Cu*	SL00/100 EK VL00/100 EK	set = 3

* cable type for direct connection is indicated on the connector drawing
** exchange between connection Type is possible

RA-1 100/185

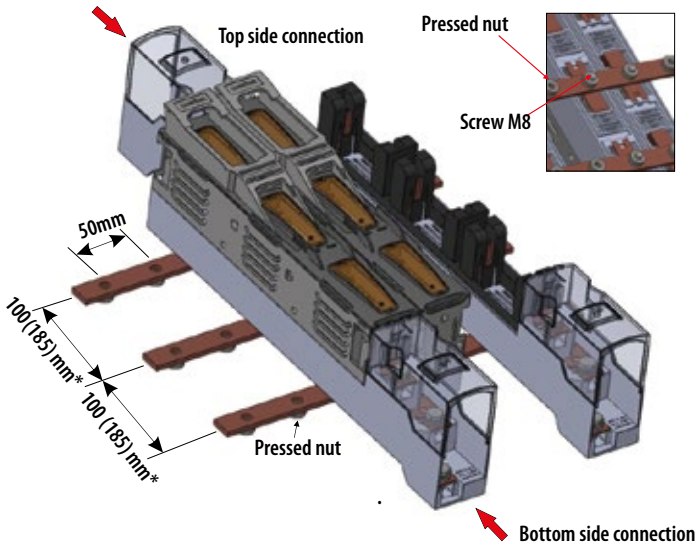
PRS-SL/VL EK

Accesories for VL00/100 EK

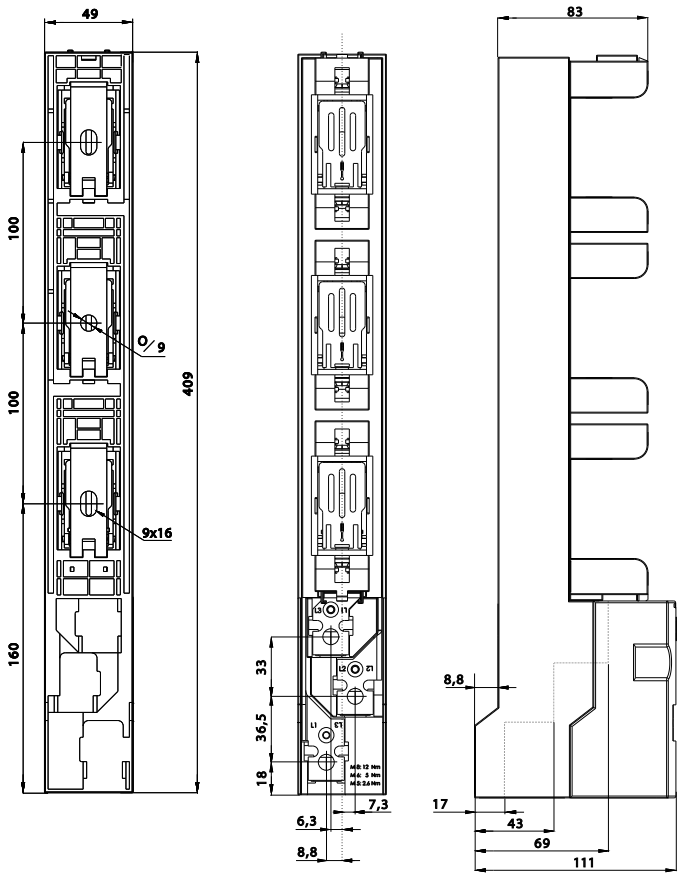
Type	Code No.	Description	kg	
PRS-SL/VL EK	001701470	Protection cover for connection terminals	0,05	1
RA-1 100/185	001701471	Mounting adapter for 185mm busbar, single	0,25	1
RA-2 100/185	001701472	Mounting adapter for 185mm busbar, double	0,60	1

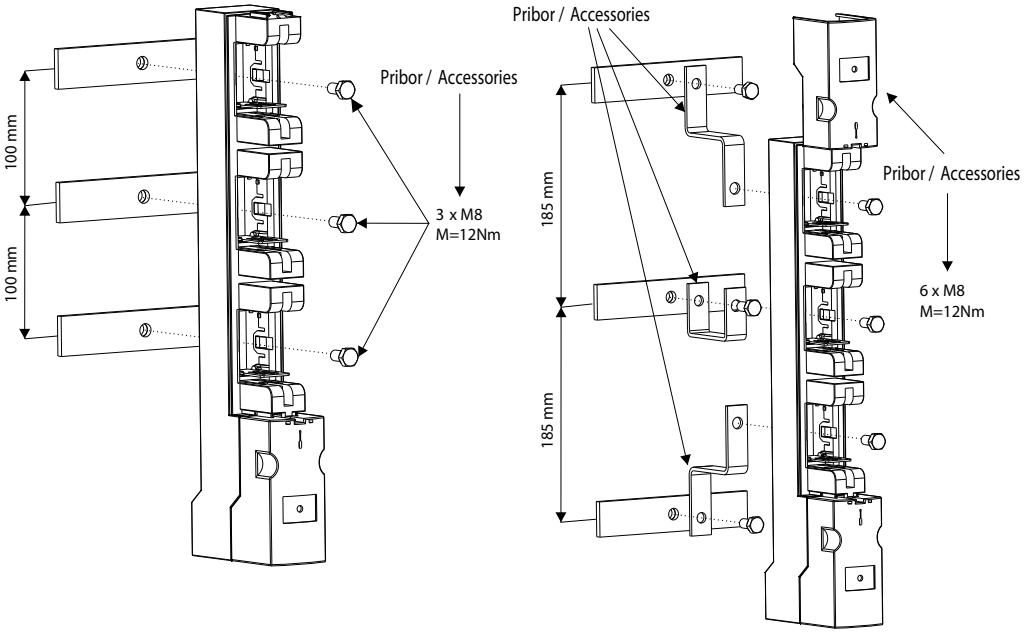
* PRS-SL/VL EK is needed for additional protection covering when using mountin adapter RA-…
** RA-1 100/185 is adapter that is needed if one SL00/100 EK or VL00/100 EK have to be mounted on 185mm busbar. With adapter RA-2 100/185 two SL00/100 EK or VL00/100 EK can be mounted on 185mm busbar same time.

RA-2 100/185



Dimensions


49
83
100
100
160
409
9
9x16
33
36,5
18
7,3
6,3
8,8
8,8
17
43
69
111


Pribor / Accessories
100 mm
100 mm
3 x M8
M=12Nm
Pribor / Accessories
185 mm
185 mm
Pribor / Accessories
6 x M8
M=12Nm

NV/NH Strip Type Fuse-Switch-Disconnectors

NV/NH Strip type fuse-switch-disconnector sizes 00, 1, 2, 3

Characteristics of the NV/NH Strip type fuse-switch-disconnectors
The NV/NH Strip type fuse-switch-disconnectors are 3-pole bases of NV/NH fuse cartridges, intended for busbar mounting. An NV/NH Strip type fuse-switch-disconnectors comprises three single-pole connections in one unit. Each contact at an individual phase is connected to the phase on the busbar system. The other contacts are fitted with cable connecting terminals or intended for attachment of the following busbar system.

Use
The NV/NH Strip type fuse-switch-disconnectors are mainly used for cable distribution and power supply systems, transformer systems, where they are connected when electric energy transmission is required. The following rated currents are available: 160 A, 250 A, 400 A, 630 A.

Principle of operation
The NV/NH Strip type fuse-switch-disconnectors are used in combination with NV/NH fuse cartridges protecting the circuit against shorts. The upper part of the NV/NH Strip type fuse-switch-disconnectors with insulation class IP3X is provided with a separate test opening through which the live state can be tested according to DIN VDE 0680, part 5.
Design of the NV/NH Strip type fuse-switch-disconnectors
The insulated supporting body is made of one piece, the material is polyester reinforced with glass fibres. A silver-plated contact system, fitted with tinned extinction chambers, ensures a low power dissipation, optimum thermal characteristics and a high breaking capacity. The contact derived parts are intended for cable connections or for attachment of the next busbar system. All the live parts are protected against accidental contacts - in conformity with BVG A2. A special form of the contact part cover ensures a safe insertion and removal of the NV/NH fuse cartridges.

Short description
The NV/NH Strip type fuse-switch-disconnectors are mostly used for installation into cable distribution cabinets and power supply systems - in accordance with IEC/EN 61439-1. The NV/NH Strip type fuse-switch-disconnectors have been tested in accordance with IEC/EN 60947-3. They are available for the sizes of fuse cartridges from 00 to 3, with both single-pole and 3-pole switching-on.

Advantages
- upper or lower cable connection - as required
- optimum pull contact
- direct connection
- double strip connection up to 1250 A
- universal cover
- high breaking capacity
- low power disipation
- use of standard earthing connections
- modular conctruction

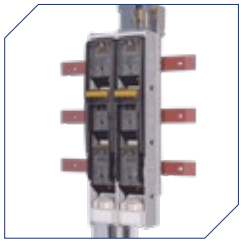
Main types of the NV/NH Strip type fuse-switch-disconnectors - characteristics
Basically, as shown, there are several types of the NV/NH Strip type fuse-switch-disconnectors:
- for a 3-pole switching-in
- for a single-pole switching-in
- for attachment directly to a busbar system
- with side contacts for a busbar system

All the NV/NH Strip type fuse-switch-disconnectors are fitted with new, modern Delta contact systems allowing optimum pressure contact between the fuse cartridge and the NV/NH Strip type fuse-switch-disconnectors, resulting in extremely low level of power dissipation and heating-up. All the standard NV/NH Strip type fuse-switch-disconnectors shown in the catalogue are intended for general usage. Upon request appropriate individual configurations can be designed - in such cases please contact our sales engineers, or call us to the factory.

- Option to lock the disconnector handle in both ON and OFF positions

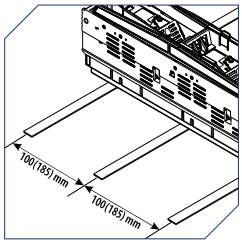
- Capability to measure current and voltage in each phase

- Supports top or bottom connection



- Frame Sizes
  NH 00 (160A) / NH 1 (250A)
  NH 2 (400A) / NH 3 (630A)

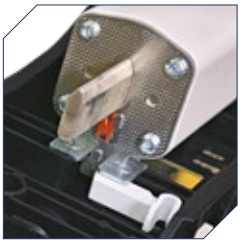
- Mounting on a 100mm (185mm) busbar system



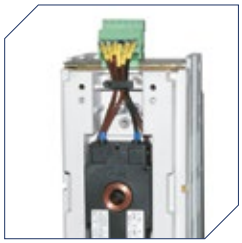
- Three-phase switching
- High-quality, non-flammable, halogen-free plastic
- Phase-by-phase switching

- Universal grounding kit for NV/NH 00 – NV/NH 3

- Front-side protection degree: IP30



- Reliable fuse locking mechanism



- Capability to install current transformers

- Handle position indication via microswitch

- Connection via screw-mounted cable lugs, with options for solid cables up to 240 mm² and flexible conductors up to 300 mm²

- Protection against accidental contact, IP1X (removable covers)

Technical data of NV strip type fuse-switch-disconnectors (in accordance with IEC/EN 60947-3)

Technical Specifications			SL00/100			SL00/185			SL1		
Rated operational voltage	Ue	V	500 AC	690 AC	400 AC	500 AC	690 AC	400 AC	500 AC	690 AC	400 AC
Rated operational current	Ie	A	160	100	160	160	160	160	250	250	250
Rated frequency	-	Hz	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60
Rated insulation voltage	Ui	V	AC 800						AC 1000		
Total power loss at Ith (without fuse)	Pv	W	18			23					
Rated impulse withstand voltage	Uimp	kV	8						12		
Utilization category	-	-	AC22B	AC22B	AC22B	AC23B	AC22B	AC23B	AC22B	AC22B	AC23B
Fuse links											
Size - DIN 43 620, IEC 60269-2	-	-	000/00						1		
Max. rated current (gG)	In	A	160	100	160	160	160	160	250	250	250
Max. permissible power loss per fuse link	Pv	W	12						32		
Dimensions											
Mass	-	kg	100 mm = 1,40			185mm=2,4			4,9		
Busbars (distance)	-	mm	100			185			185		
Cable connection											
Screw	-	-	M8						M10		
Torque	Ma	Nm	12-15						30-35		
V-clip	-	mm^2	10-95						25-300		
Torque	Ma	Nm	15						32		
Protection											
Operational state	-	-	IP30						IP30		
Cover open	-	-	IP10						IP10		
Operating conditions											
Ambient temperature	Tu	°C	-25 ... +55						-25 ... +55		
Operating condition	-	-	Continuous operation								
Mounting	-	-	vertical, horizontal								
Altitude	-	m	≤ 2000								
Pollution degree	-	-	3								
Overvoltage category	-	-	III			IV					

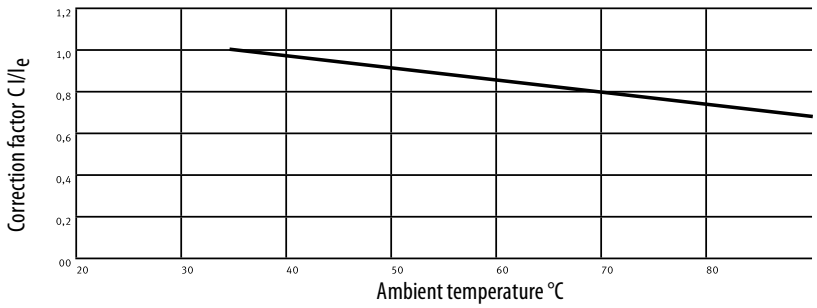
Technical data of NV strip type fuse-switch-disconnectors (in accordance with IEC/EN 60947-3)

Technical Specifications			SL1H			SL2		
Rated operational voltage	Ue	V	500 AC	690 AC	400 AC	500 AC	690 AC	400 AC
Rated operational current	Ie	A	250			400	400	400
Rated frequency	-	Hz	40-60			40-60	40-60	40-60
Rated insulation voltage	Ui	V	AC 1000					
Total power loss at Ith (without fuse)	Pv	W	29			54		
Rated impulse withstand voltage	Uimp	kV	12			12		
Utilization category	-	-	AC22B	AC21B	AC23B	AC22B	AC21B	AC23B
Fuse links								
Size - DIN 43 620, IEC 60269-2	-	-	1			2		
Max. rated current (gG)	In	A	250			400	400	400
Max. permissible power loss per fuse link	Pv	W	23			45		
Dimensions								
Mass	-	kg	4,9					
Busbars (distance)	-	mm	185					
Cable connection								
Screw	-	-	M10			M12		
Torque	Ma	Nm	30-35			35-40		
V-clip	-	mm^2	25-240 / 25-300			25-300		
Torque	Ma	Nm	32					
Protection								
Operational state	-	-	IP30					
Front cover open	-	-	IP10					
Operating conditions								
Ambient temperature	Tu	°C	-25 ... +55					
Operating condition	-	-	Continuous operation					
Mounting	-	-	vertical, horizontal					
Altitude	-	m	≤ 2000					
Pollution degree	-	-	3					
Overvoltage category	-	-	IV					

Technical data of NV strip type fuse-switch-disconnectors (in accordance with IEC/EN 60947-3)

Technical Specifications			SL2H			SL3		
Electrical Characteristics								
Rated operational voltage	Ue	V	500 AC	690 AC	400 AC	500 AC	690 AC	400 AC
Rated operational current	Ie	A	400			630	630	630
Rated frequency	-	Hz	40-60			40-60	40-60	40-60
Rated insulation voltage	Ui	V	AC 1000					
Total power loss at Ith (without fuse)	Pv	W	73			115		
Rated impulse withstand voltage	Uimp	kV	12			12		
Utilization category	-	-	AC22B	AC21B	AC23B	AC22B	AC21B	AC23B
Fuse links								
Size - DIN 43 620, IEC 60269-2	-	-	2			3		
Max. rated current (gG)	In	A	400			630	630	630
Max. permissible power loss per fuse link	Pv	W	34			48		
Dimensions								
Mass	-	kg	4,9			5,6		
Busbars (distance)	-	mm	185					
Cable connection								
Screw	-	-	M12			M12		
Torque	Ma	Nm	35-40			35-40		
V-clip	-	mm^2	25-240 / 25-300			25-300		
Torque	Ma	Nm	32					
Protection								
Operational state	-	-	IP30					
Front cover open	-	-	IP10					
Operating conditions								
Ambient temperature	Tu	°C	-25 ... +55					
Operating condition	-	-	Continuous operation					
Mounting	-	-	vertical, horizontal					
Altitude	-	m	≤ 2000					
Pollution degree	-	-	3					
Overvoltage category	-	-	IV					

Influence of ambient temperature on rated current of NH strip-type fuse-switch-disconnectors



Rated diversity factor acc to IEC EN 61439-2:2012-06 table 101

No. of main circuits	Rated diversity factor
2 & 3	0,9
4 & 5	0,8
6 ... 9	0,7
10 ≤	0,6

General table of NV/NH strip type-fuse-switch-disconnector-single-pole switching-in

Size	Code No.	Busbar system	Product designation	Product designation	Switch lever	kg	
00	001692010	185	SL00 1P M8	flat connection - screw M8	standard	2,4	1/1
00	001692012	185	SL00 1P SP.95	V-clip 10-95 mm^2	standard	2,4	1/1
1	001692110	185	SL1 1P M10	screw M10	standard	4,9	1/1
1	001695200	185	SL1H 1P M10*	screw M10	standard	4,9	1/1
1	001692111	185	SL1 1P SP.300	V-clip 25-300 mm^2	standard	4,9	1/1
1	001695201	185	SL1H 1P SP.300*	V-clip 25-300 mm^2	standard	4,9	1/1
1	001692112	185	SL1 1P SP.240	V-clip 25-240 mm^2	standard	4,9	1/1
1	001695202	185	SL1H 1P SP.240*	V-clip 25-240 mm^2	standard	4,9	1/1
2	001692210	185	SL2 1P M12	screw M12	standard	4,9	1/1
2	001695220	185	SL2H 1P M12*	screw M12	standard	4,9	1/1
2	001692211	185	SL2 1P SP.300	V-clip 25-300 mm^2	standard	4,9	1/1
2	001695221	185	SL2H 1P SP.300*	V-clip 25-300 mm^2	standard	4,9	1/1
2	001692212	185	SL2 1P SP.240	V-clip 25-240 mm^2	standard	4,9	1/1
2	001695222	185	SL2H 1P SP.240*	v-clip 25-240 mm^2	standard	4,9	1/1
3	001692310	185	SL3 1P M12	screw M12	standard	5,6	1/1
3	001692311	185	SL3 1P SP.300	V-clip 25-300 mm^2	standard	5,6	1/1
3	001692312	185	SL3 1P SP.240	V-clip 25-240 mm^2	standard	5,6	1/1

* H - "Omega" contact (make short - circuit current 80 kA)

General tabel of NV/NH Strip type fuse-switch-disconnector-three-pole switching-in

Size	Code No.	Busbar system	Product designation	Connection description	kg	
00	001692034	100	SL00/100 3P M8-2	flat connection – screw M8	1	1/1
00	001692035	100	SL00/100 3P SP.70-2	V-clip 10-70 mm^2	1	1/1
00	001692032	185	SL00 3P M8	flat connection – screw M8	2,4	1/1
00	001692033	185	SL00 3P SP.95	V-clip 10-95 mm^2	2,4	1/1
1	001692130	185	SL1 3P M10	screw M10	4,9	1/1
1	001695210	185	SL1H 3P M10 *	screw M10	4,9	1/1
1	001692131	185	SL1 3P SP.300	V-clip 25-300 mm^2	4,9	1/1
1	001695211	185	SL1H 3P SP.300*	V-clip 25-300 mm^2	4,9	1/1
1	001692132	185	SL1 3P SP.240	V-clip 25-240 mm^2	4,9	1/1
1	001695212	185	SL1H 3P SP.240*	V-clip 25-240 mm^2	4,9	1/
2	001692000	185	SL2 3P SP.300	V-clip 25-300 mm^2	4,9	1/1
2	001695231	185	SL2H 3P SP.300*	V-clip 25-300 mm^2	4,9	1/1
2	001692230	185	SL2 3P M12	screw M12	4,9	1/1
2	001695230	185	SL2H 3P M12*	screw M12	4,9	1/1
2	001692231	185	SL2 3P SP.240	V-clip 25-240 mm^2	4,9	1/1
2	001695232	185	SL2H 3P SP.240*	V-clip 25-240 mm^2	4,9	1/1
3	001692330	185	SL3 3P M12	screw M12	5,6	1/1
3	001692331	185	SL3 3P SP.300	V-clip 25-300 mm^2	5,6	1/1
3	001692332	185	SL3 3P SP.240	V-clip 25-240 mm^2	5,6	1/1

* H - "Omega" contact (make short - circuit current 80 kA)

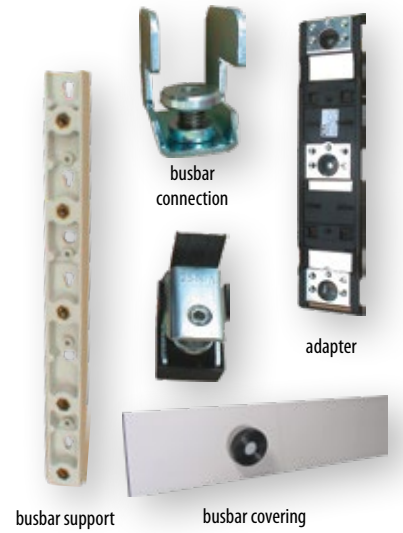
NV/NH Strip type fuse-switch-disconnector with current transformer

Size	Code No.	Busbar system	Product designation	Connection description	Current transformer	kg	
00	001693000	100	SL00/100 3P M8 150/5 Kl.1	flat connection, M8	150/5 class 1	1,7	1/1
1	001693010	185	SL1 3P M10 250/5 Kl.1	screw M10	250/5 class 1	3,1	1/1
2	001693020	185	SL2 3P M12 400/5 Kl.1	screw M12	400/5 class 1	4,6	1/1
3	001693030	185	SL3 3P M12 600/5 Kl.1	screw M12	600/5 class 1	4,6	1/1
00	001693040	100	SL00/100 3P SP.70 150/5 Kl.1	V-clip 10-70mm^2	150/5 class 1	1,7	1/1
1	001693050	185	SL1 3P SP.300 250/5 Kl.1	V-clip 25-300mm^2	250/5 class 1	3,1	1/1
2	001693060	185	SL2 3P SP.300 400/5 Kl.1	V-clip 25-300mm^2	400/5 class 1	4,6	1/1
3	001693070	185	SL3 3P SP.300 600/5 Kl.1	V-clip 25-300mm^2	600/5 class 1	4,6	1/1

Table of accessories for NV Strip type fuse-switch-disconnector

Type	Code No.	Description	
busbar connection KS 00/5-10	001691040	busbar thickness 5-10mm	3
busbar connection KS 123/10	001692460	for size 1,2,3	1/1
adapter DA 185/185 42	001692411	for system 185 mm height 42 mm	1/1
adapter DA 185/100 52	001692412	for system 185/100mm, height 52 mm, for 2 x SL00	1/1
protection covering of contact connections ZP 00 HA BOTTOM	001692420	for size 00; used when cable connects from the bottom	1/1
protection covering of contact connections ZP 00 HA TOP	001692424	for size 00; used when cable connects from the top	1/1
protection covering of contact connections ZP 123/10HA	001692421	for size 1,2,3; universal - for top / bottom cable connections	1/1
busbar covering PZ 00/185	001691046	mounting thread M8	1/1
busbar covering PZ 00/100	001691047	mounting thread M8	1/1
busbar covering PZ 123/185	001691048	mounting thread M12	1/1
nameplate NP 123	001692431	for size 1,2,3	1/1
busbar support POP 100/185	001691055	for systems 100 mm and 185 mm	1/1
Deriv. connection OP L	001692440	for size 1,2,3	1/1
double connection DP 3x2 (6)*	001692450	for size 1,2,3	1/1
double protection cover ZP 3x2/10HA*	001692422	for size 1,2,3	1/1
double terminal connections SPD 2x3 3x300*	001692423	for size 1,2,3	1/1
micro switch MST SL00/100 3p**	001691050	open/close position of SL	1/1
micro switch MST SL00 3p**	001691051	open/close position of SL	1/1
micro switch MST SL123 3p**	001691052	open/close position of SL	1/1
protection covering of POP busbar support ZP POP 100	001691056	Lateral cover for busbar support 100 mm	1/1
protection covering of POP busbar support ZP POP 185	001691057	Lateral cover for busbar support 185 mm	1/1
SP SL123 M/2x95-150	001692452	Retrofit kit for 2 conductors	1/1
SP SL123 M/2x240	001692453	Retrofit kit for 2 conductors	1/1
SP SL123 V/2x95-150	001692454	Retrofit kit for 2 conductors	1/1
SP SL123 V/2x150-240	001692455	Retrofit kit for 2 conductors	1/1

* accessories for assembling: SL 1250 (2 parallel connected fuse-switch-disconnectors)
** one MST can be installed inside SL



protection covering of contact connections sizes 1,2,3

SP SL123 M/2x95-150

BUSBAR CONNECTION

Busbar connections are used for drill-free direct contacting of the strip-fuseways on the busbars.

PROTECTION COVER

The terminal compartment and terminal covers provide probe-safe frontal protecive covering of the terminal compartment.

BUSBARCOVER, SCREW-TYPE

The screw-type covers of 100 mm width are fixed at busbars with M12 thread or stud. The covers of 50 mm width are fixed on busbars or adapters with M8 thread.

BUSBAR SUPPORT

The 3-pole busbar support is used for the fixing of flat bars at 100 mm and 185 mm distances.

DOUBLE CONNECTOR

The connector kits are used for parallel switching of 2 strips.

DOUBLE TERMINAL CONNECTION

The kit for 1250 A allows 2 strips to be connected at the terminal and 3 or 4 cables per phase to be connected.

NAMEPLATE

The designation plate mount is plugged on the strips at the end face. It allows fitting of an additional designation plate. When fitted in switch boards, it can also be used as support for a system cover.

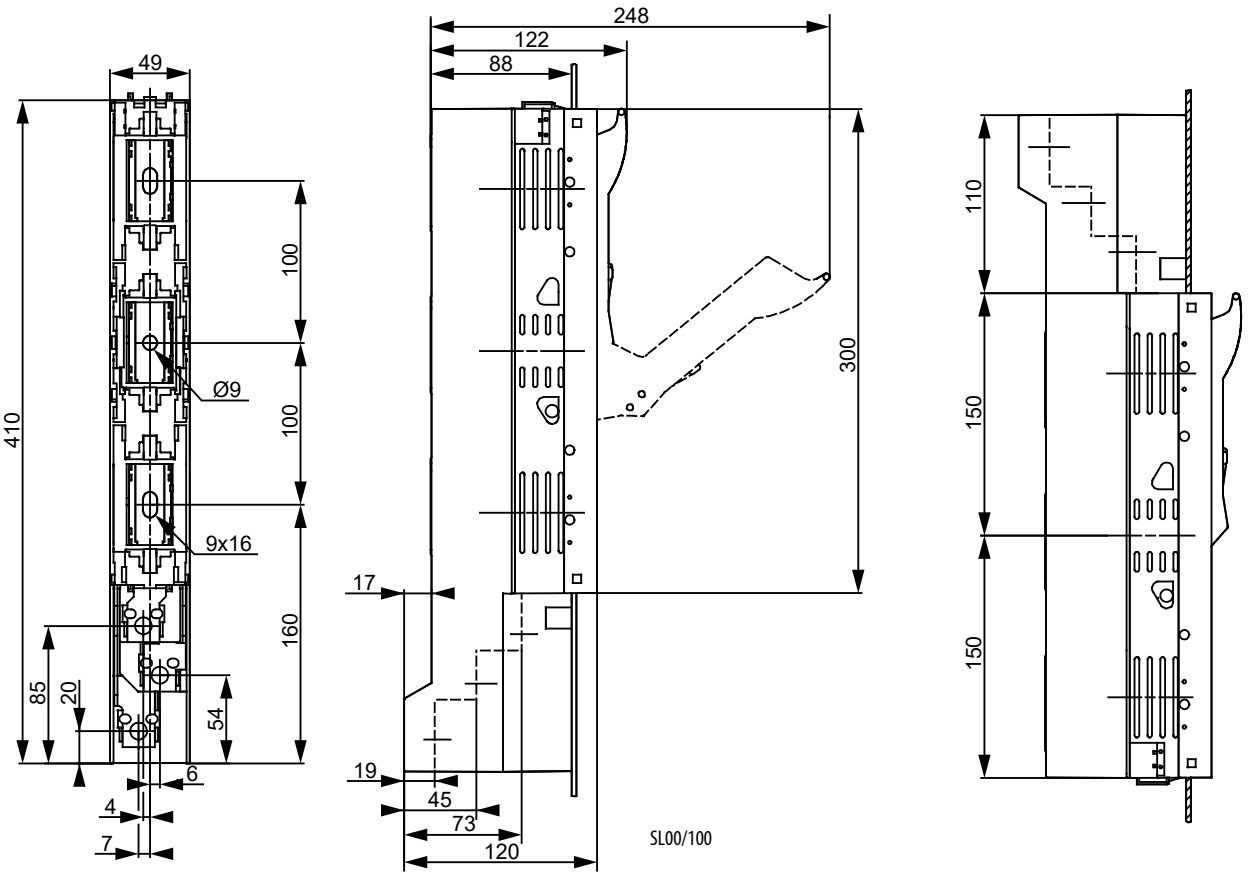
BUSBAR ADAPTERS

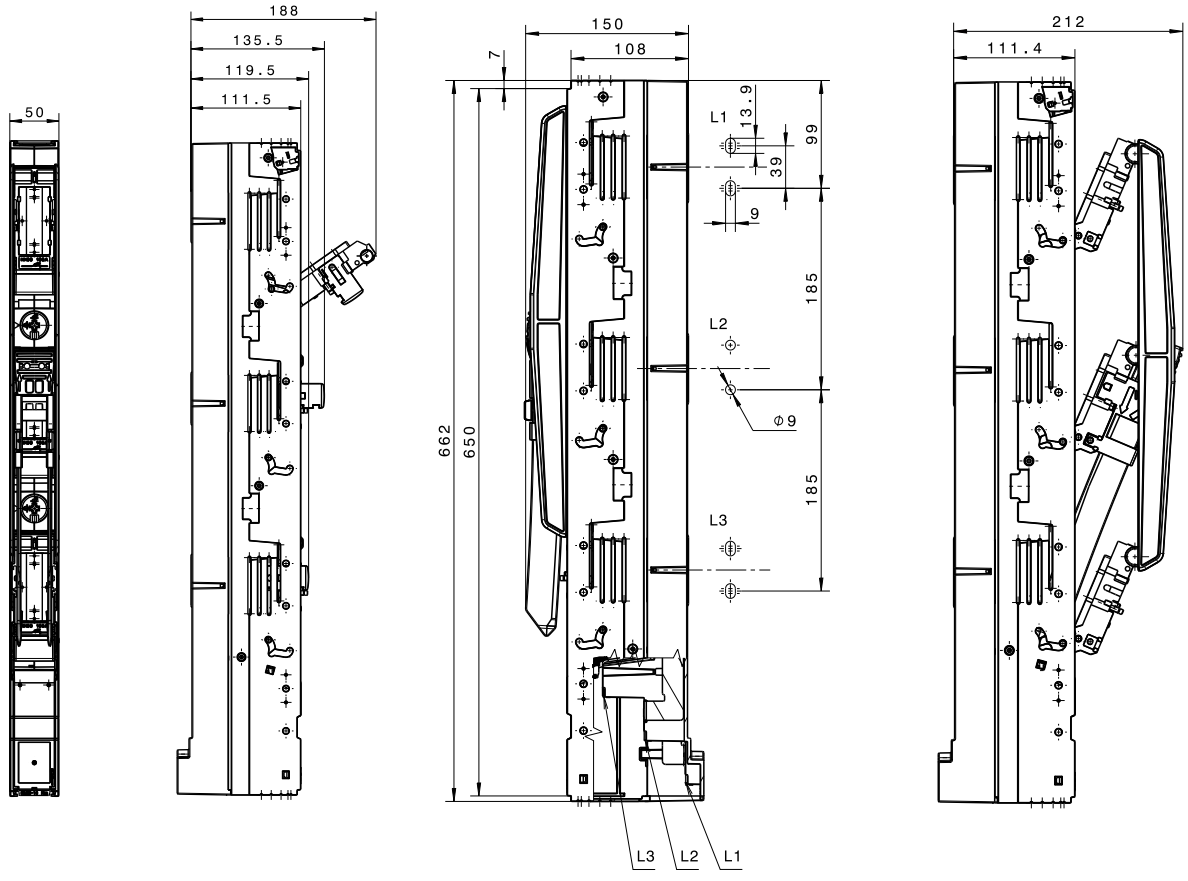
The adapters are required for combining different strip sizes, e.g. size 00 with sizes 1 to3.

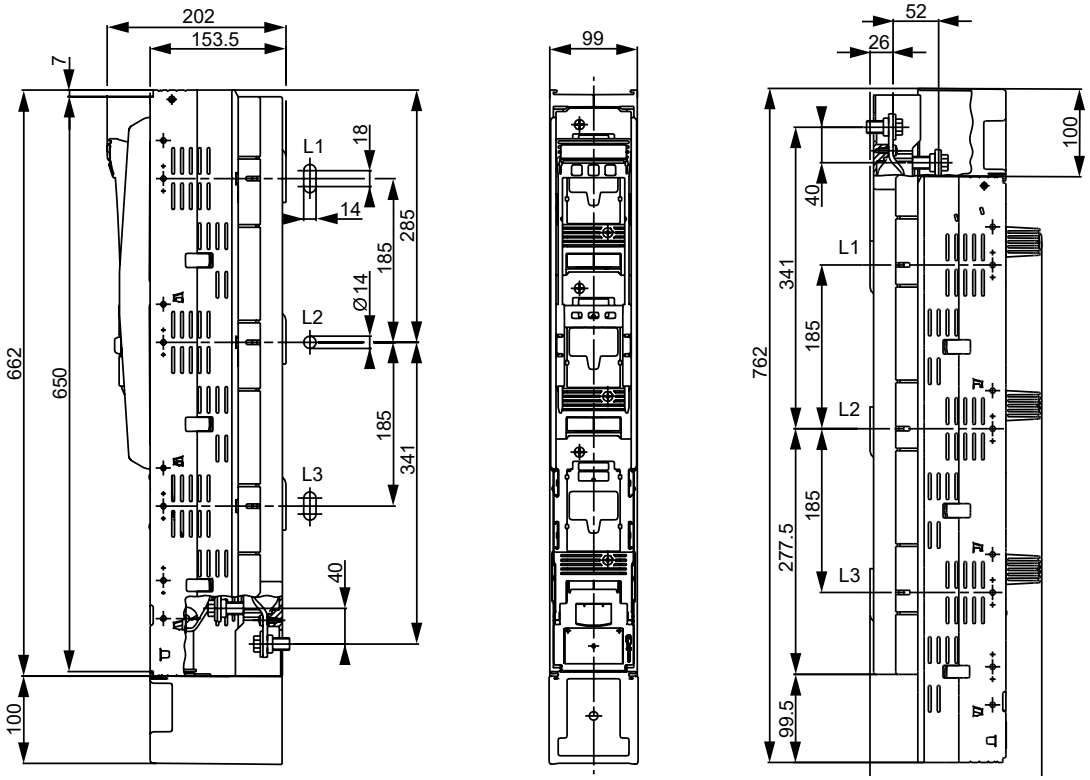
DERIVED CONNECTION

The derived connection enables fuse-protected temporary connections (worksite electrical supply) to size 1 to 3 LV NV strip-fuseways.

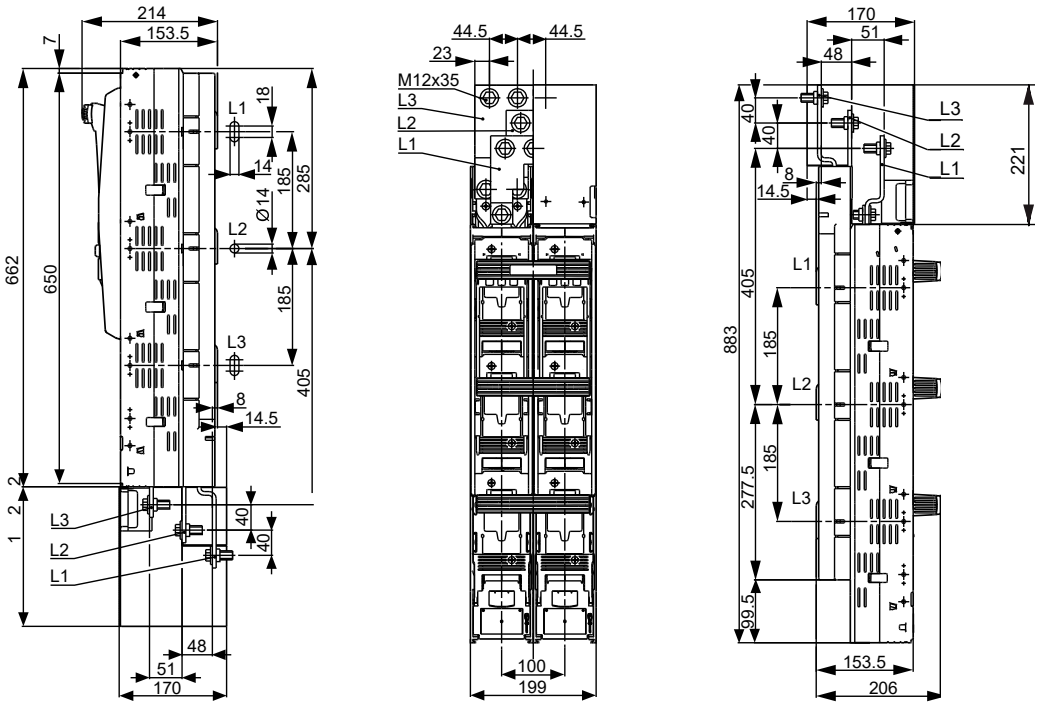
Dimensional overview of NV strip type fuse-switch-disconnectors





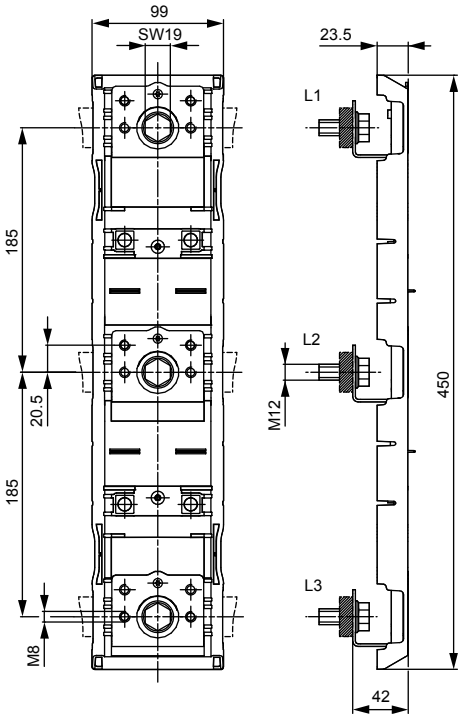


SL1(H), SL2(H), SL3

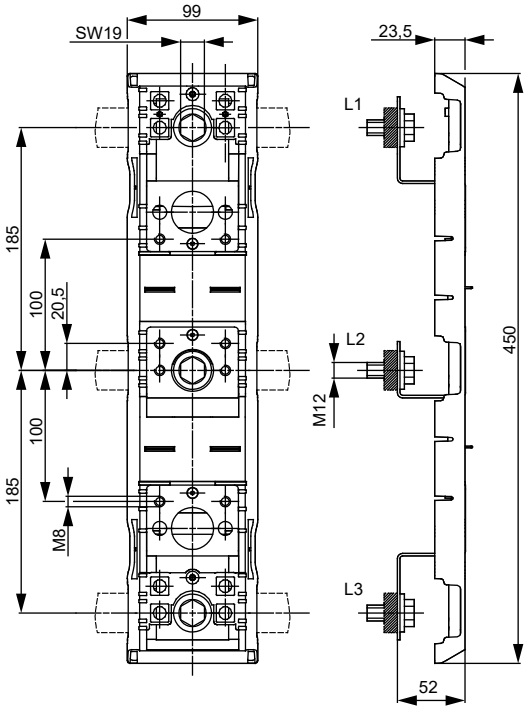


SL3 DOUBLE

Dimensional overview of accessories for NV strip type fuse-switch-disconnectors



adapter DA 185-185/42



adapter DA 185-100/52

Strip type fuse-switch disconnectors type SL00 EK

Characteristics of the NV/NH Strip type fuse-switch-disconnectors

Strip type fuse-switch disconnector SL00/100 EK is a three-pole low-voltage switching device which enables safely manual connecting and disconnecting electrical circuits under load, depending on voltage and utilization category. It`s purpose is protection of low voltage electrical equipment against specified overload currents and short circuit currents using fuse-links size 000 (00C), 00. SL00/100 EK are three-pole switching.

Application

Strip type fuse-switch disconnectors are intended for:

- transformer substation
- distribution boards, distribution panels
- public lightening cabinets
- cable distribution cabinets
- industry

Mounting

Strip type fuse-switch disconnectors can be mounted on 100mm busbar system directly and with additional adapters can be mounted also to 185mm busbar system. Mounting in vertical and horizontal position.

Standards

SL00/100 EK are in accordance with the following standards:

- IEC 60947-1
- IEC 60947-3
- IEC 60269-1
- IEC 60269-2

Technical data

Type		SL00/100 EK		
Conventional free air thermal current (Ith)	A	160		
Rated insulation voltage	V	AC690		
Rated withstand impulse voltage	Kv	6		
Rated frequency	Hz	50 (40-60)		
Rated operational (making and breaking) voltage	V	400V	500V	690 V
Utilization category/Rated operational (making and breaking) current	AC21-B	160A	160A	125A
Utilization category/Rated operational (making and breaking) current	AC22-B	160A	160A	100A
Rated conditional short-circuit current	kAeff	63		
Mechanical durability (operating cycles)		1400		
Electrical durability (operating cycles)		200		
Power dissipation (without fuse-links)	W	19,5		
Degree of protection (cover closed)		IP30		
Degree of protection (cover opened)		IP20		
Pollution degree		3		
Permissible ambient temperature**	°C	-25°C ... +55°C		
Storage temperature	°C	-30°C ... +70°C		
Weight (without fuse-links)	kg	1,2		
Package	pcs	1		

** with ambient temperature between 40-45°C, reduce Ith by 5%; with ambient temperature above 45°C, reduce Ith by 10%

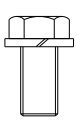
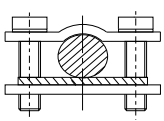
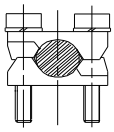
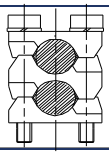
Fuse-switch disconnector strip type SL00/100 EK, three pole switching

Type	Code No.	kg	
SL00/100 EK 3p M8	001701500	1,20	1
SL00/100 EK 3p BT00 10-70	001701501	1,20	1
SL00/100 EK 3p OS00 6-50	001701502	1,10	1
SL00/100 EK 3p P00 10-70	001701503	1,10	1
SL00/100 EK 3p P002 50	001701505	1,30	1

* SL00/100 EK strip type fuse-switch disconnectors are used only for 100mm busbar system
** SL00/100 EK is possible to mount on 185mm busbar using special adapters
*** for Type of terminals see table of terminal for SL00/100 EK and VL00/100 EK
**** busbar connection for drill-free direct contacting of the strip type fuse-switch disconnector is not at disposal

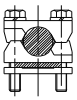
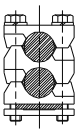
SL00/100 EK

Table of connections for SL00/100 EK and VL00/100 EK

Cable terminal drawing					
Cable terminal type	M8	BT00 10-70*	OS00 6-50	P00 10-70	P002 50
Clamping cross-section	70 mm^2	10-70 mm^2 Al/Cu	(6-50) mm^2 Cu	(10-70) mm^2 Al/Cu	2x50 mm^2 Al/Cu
Screw type	M8x12	M6	2x(M5x14)	2x(M5x25)	2x(M5x40)
Tightening torque	12-15 Nm	4,5 Nm	2,6 Nm	4,5 Nm	4,5 Nm
Package	3	3	3	3	3

* connection type BT00 10-70 have to be ordered with the product, latter excahange is not possible

Additional connections for SL00/100 EK

Type	Code No.	Connector drawing	Suitability	
OS00 6-50	001701211	 Cu*	SL00/100 EK VL00/100 EK	set = 3
P00 10-70	001701213	 Al/Cu*	SL00/100 EK VL00/100 EK	set = 3
P002 50	001701467	 Al/Cu*	SL00/100 EK VL00/100 EK	set = 3

* cable Type for direct connection is indicated on the connection drawing
** exchange between connection Type is possible

RA-1 100/185

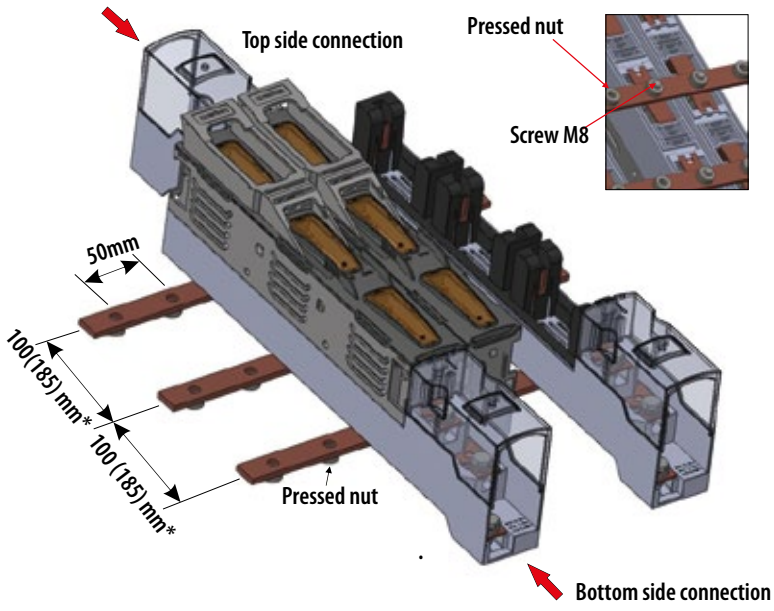
PRS-SL/VL EK

Accesories for SL00/100 EK

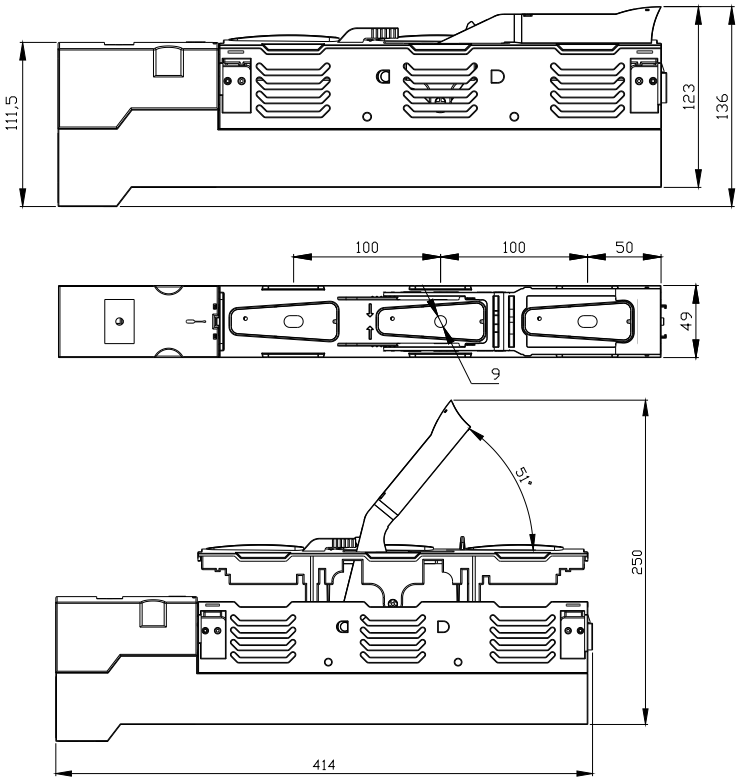
Type	Code No.	Description	kg	
PRS-SL/VL EK	001701470	Protection cover for connection terminals	0,05	1
RA-1 100/185	001701471	Mounting adapter for 185mm busbar, single	0,25	1
RA-2 100/185	001701472	Mounting adapter for 185mm busbar, double	0,60	1

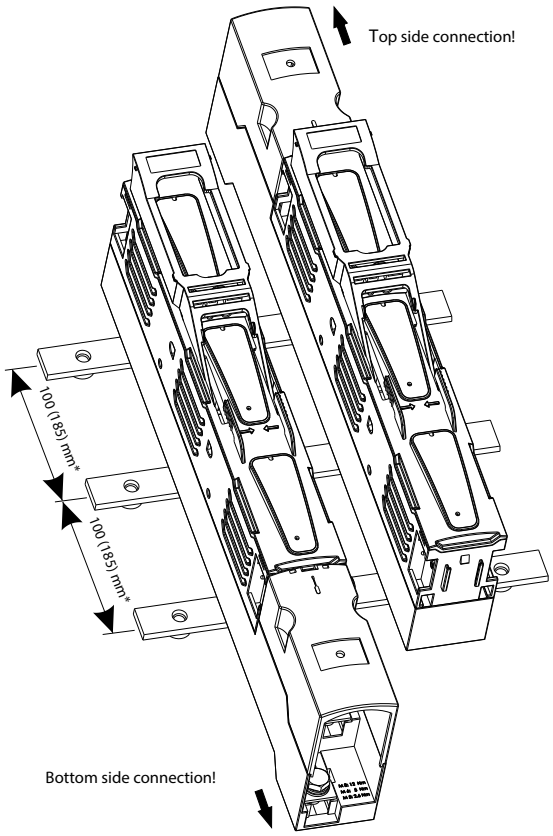
* PRS-SL/VL EK is needed for additional protection covering when using mountin adapter RA-...
** RA-1 100/185 is adapter that is needed if one SL00/100 EK or VL00/100 EK have to be mounted on 185mm busbar. With adapter RA-2 100/185 two SL00/100 EK or VL00/100 EK can be mounted on 185mm busbar same time.

RA-2 100/185



Dimensions


111.5
123
136
100
100
50
49
9
51°
250
414

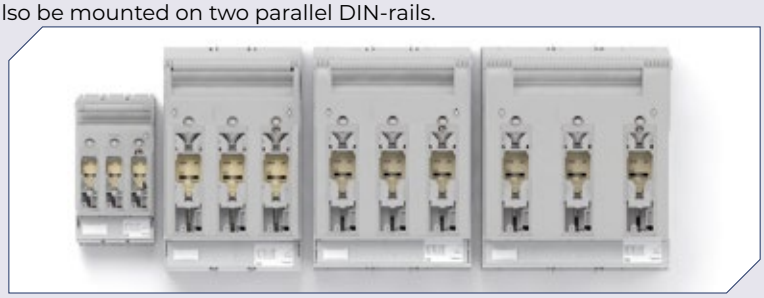

Top side connection!
100 (185) mm*
100 (185) mm*
Bottom side connection!

NV/NH Disconnectors with Fuses

NV/NH horizontal fuse-switch disconnectors KVL

Uniform cover cutout
KVL - horizontal fuse-switch disconnectors with different sizes can be combined together and form uniform cover cutout. The new assortment contains four cover support levels at 32, 60, 70 and 90 mm above the uper of busbar. KVL fuse-switch disconnectors can be mounted on baseplates and DIN rails (for busbars see chapter ETIBUSBAR).
- Available with 1-, 2-, 3-, 4- pole versions
- Four sizes: size 00, size 1, size 2, size 3
- Use with NV/NH Fuse-links 000, 00, 1, 2, 3

Baseplate and DIN-rail mounting
KVL disconnectors have multiple mounting holes for variability of installations.
KVL-00 and KVL-1 can also be mounted on two parallel DIN-rails.



KVL size 00	KVL size 1	KVL size 2	KVL size 3
Ie = 160A	Ie = 250A	Ie = 400A	Ie = 630A
Overall width: 106mm	Overall width: 184mm	Overall width: 210mm	Overall width: 250mm
System size: 195mm	System size: 300mm	System size: 300mm	System size: 300mm

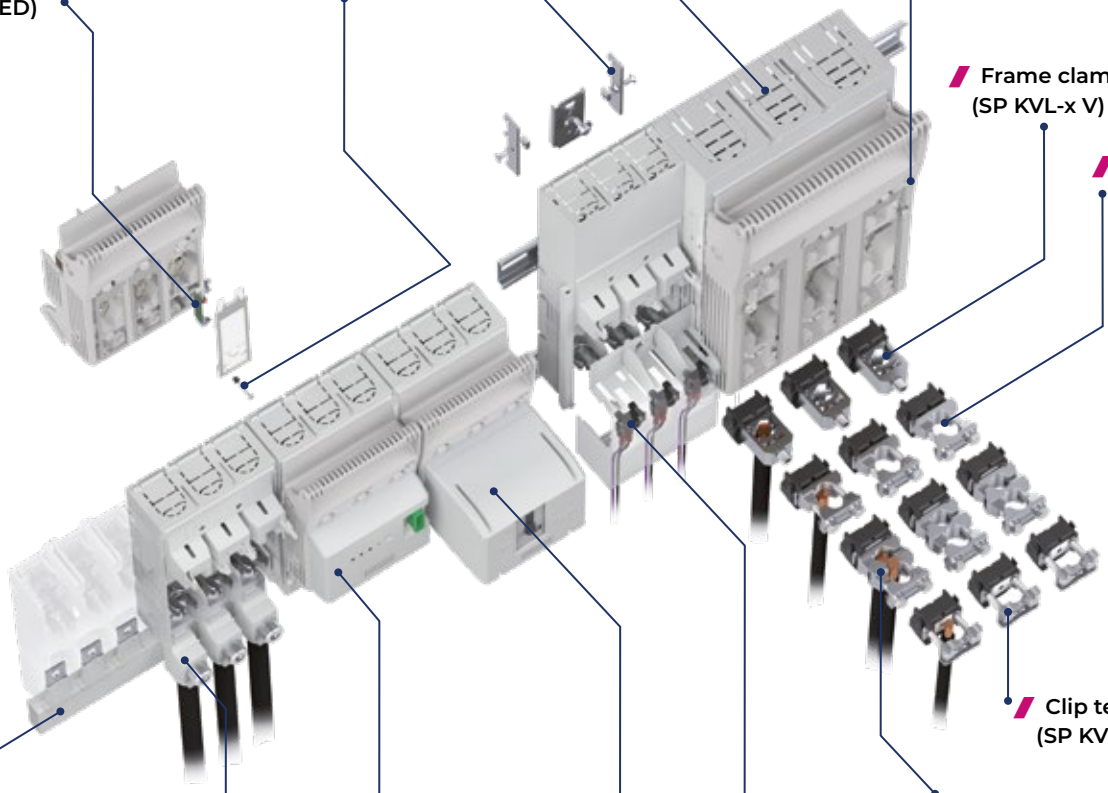
Easy voltage measurements
- Easy access with standard voltage testers.
- Window in the handle is movable.
- Protection degree IP2XC in normal operating condition

Safety lock
- Prevents unauthorized operation
- Can be used for all sizes

Simple and practical parking position
- Safe parking position of the handle
- Accidental reclosing not possible

WATCH THE VIDEO

Montage on DIN rails
- Time saving installation
- KVL-00 and KVL-1 can fit on the same TH rails



DIN-rail fixing kit
for mounting on DIN-rails
- Used for KVL-00 and KVL-1 (DIN KVL-x 100-150)

Terminal cover
- extendable
-cable entry adjustable (PRS KVL-x 3p)

For sealing disconnector
- For all sizes
- It is integrated in disconnector

Fuse-monitoring ESlight
- Fault indication
- Red LED per phase
(KVL-xx 3p x LED)

Power theft protection
- Tamper-proof locking of the windows

Frame clamp
(SP KVL-x V)

Prism clamp
(SP KVLx P1)

Clip terminal
(SP KVLx)

Prism clamp for 2-conductors connection (SP KVLx P2)

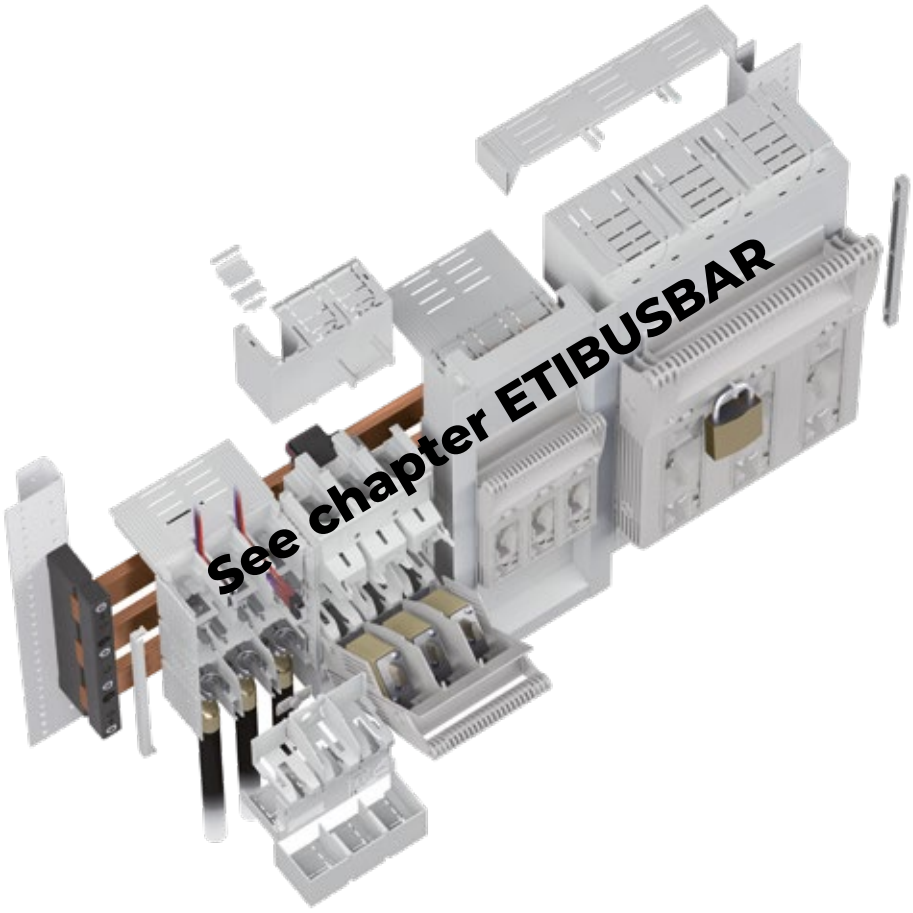
3-phase busbar
Feeding system is touch-protected
- Can feed up to to five KVL-00
(IZx KVL-00 3p)

Electronic fuse-monitoring unit (ES10)
The universal-solution for AC400-500V
- with stand-by indicator
- fault simulation
- selective fault indicator for fuse failure
(EFMU KVL-x 3p)

Mechanical fuse-monitoring unit
For use with NV/NH-fuse-links with striker (MFM KVL-x 1p/2p/3p)

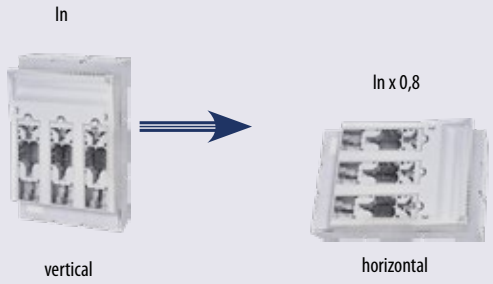
Feeding clamp
(25-95mm²), touch-protected
- Used with KVL-00, terminal M8
(SP KVL-00 FC95)

Electromechanical fuse-monitoring unit AM
Monitoring with motor-protection switch
- For special applications AC690V/DC150V
(MPFMU KVL-x 3p)

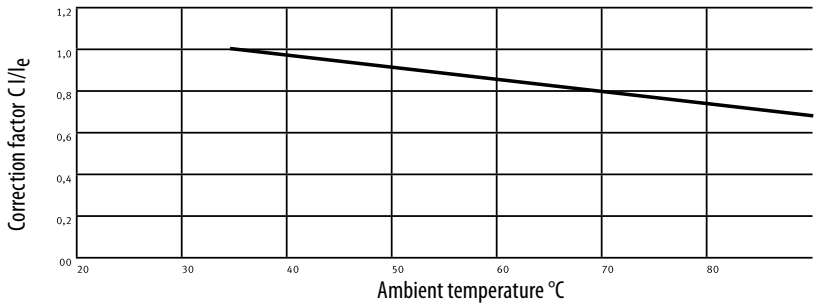


Derating factor: to operate the fuse switch disconnector in horizontal mounted position

The fuse switch disconnectors are designed to operate in both horizontal as well as vertical mounted positions. However the main field of application is for vertical mounting because the heat dissipation on this type of mounting is considerably low. To operate them on horizontal mounted position a derating factor has to be taken in to consideration.



Influence of ambient temperature on rated current of NH strip-type fuse-switch-disconnectors



Rated diversity factor acc to IEC EN 61439-2:2012-06 table 101

No. of main circuits	Rated diversity factor
2 & 3	0,9
4 & 5	0,8
6 ... 9	0,7
10 ≤	0,6

3-pole, Baseplate mounting

Size	Code No.	Type	kg	
00	001690870	KVL-00 3p M8-M8	0,63	1
	001690871	KVL-00 3p BC95-BC95	0,67	1
1	001690872	KVL-1 3p M10-M10	2,03	1
2	001690873	KVL-2 3p M10-M10	3,42	1
3	001690874	KVL-3 3p M10-M10	3,95	1
4a	001692620	HVL4a 3P M16 1250	15,7	1
4a	001692630	HVL4a 3P 2xM12 1600	15,7	1

BC95-BC95

3-pole, Baseplate mounting, LED indication

Size	Code No.	Type	kg	
00	001690880	KVL-00 3p M8-M8 LED	0,66	1
	001690881	KVL-00 3p BC95-BC95 LED	0,7	1
1	001690882	KVL-1 3p M10-M10 LED	2,06	1
2	001690883	KVL-2 3p M10-M10 LED	3,45	1
3	001690884	KVL-3 3p M10-M10 LED	3,92	1

! Only used for 400 V AC
! Not used for DC

1-pole, Baseplate mounting

Size	Code No.	Type	kg	
00	001690890	KVL-00 1p M8-M8	0,31	2
1	001690891	KVL-1 1p M10-M10	0,93	1
2-3	001690892	KVL-3 1p M10-M10	1,57	1
4a	001692498	HVL4a 1P M16 1250A	5,3	1
4a	001692499	HVL4a 1P 2xM12 1600A	5,3	1

2-pole, Baseplate mounting

Size	Code No.	Type	kg	
00	001690895	KVL-00 2p M8-M8	0,72	1
1	001690896	KVL-1 2p M10-M10	1,88	1
2-3	001690897	KVL-3 2p M10-M10	3,19	1

4-pole, Baseplate mounting

Size	Code No.	Type	kg	
00	001690900	KVL-00 4p M8-M8	1,19	1
1	001690901	KVL-1 4p M10-M10	2,91	1
2-3	001690902	KVL-3 4p M10-M10	5,76	1

Accessories for KVL

Type		Description	(1)
SP KVL00	001692701	Clip terminal, 1,5 – 50 mm² Cu	3
SP KVL1	001692702	Clip terminal, 25– 150 mm² Cu	3
SP KVL2	001692703	Clip terminal, 25– 240 mm² Cu	3
SP KVL3	001692704	Clip terminal, 11x21 mm² Cu	3
SP KVL00 P1	001692760	Prism clamp, 10 – 70 mm² Al/Cu	3
SP KVL1 P1	001692761	Prism clamp, 70 – 150 mm² Al/Cu	3
SP KVL2 P1	001692762	Prism clamp, 120 – 240 mm² Al/Cu	3
SP KVL3 P1	001692763	Prism clamp, 120 – 300 mm² Al/Cu	3
SP KVL1 P2	001692764	Prism clamp for 2-conductors connection, 2x70 – 95 mm² Al/Cu	3
SP KVL2 P2	001692765	Prism clamp for 2-conductors connection, 2x120 – 150 mm² Al/Cu	3
SP KVL3 P2	001692766	Prism clamp for 2-conductors connection, 2x120 – 240 mm² Al/Cu	3
SP HVL 4a D2	001692767	Direct terminal clamp for 2-conductors connection, 2x120– 300mm² Al/Cu	1
SP HVL 4a D3	001692768	Direct terminal clamp for 3-conductors connection, 3x95 – 150 mm² Al/Cu	1
SP HVL 4a D4	001692769	Direct terminal clamp for 4-conductors connection, 4x95 – 150 mm² Al/Cu	1
SP KVL-1 V	001690940	Frame clamp, 35-150mm² Al/Cu	3
SP KVL-23 V	001690941	Frame clamp, 95-300mm² Al/Cu	3
SP KVL-00 FC95	001690942	Feeding clamp, 25-95mm² Cu/Al, isolated, terminal M8,*	3
MTB KVL00 2x25/1x16/M8	001690978	Terminal block with multiple wire connections	3
MTB KVL00 4x10/M8	001690979	Terminal block with multiple wire connections	3
IZ2 KVL-00 3p	001690943	Phase busbars, 2 x 3pole KVL-00 50mm²	5
IZ3 KVL-00 3p	001690944	Phase busbars, 3 x 3pole KVL-00 50mm²	5
IZ4 KVL-00 3p	001690945	Phase busbars, 4 x 3pole KVL-00 50mm²	3
IZ5 KVL-00 3p	001690946	Phase busbars, 5 x 3pole KVL-00 50mm²	3
MST KVL-00 1p	001690947	Switch position indicator, 1-pole, size 00, **	1
MST KVL-00 3p	001690948	Switch position indicator, 3-pole, size 00, **	1
MST KVL-123 1p/2p/3p	001690949	Switch position indicator, 1/2/3 -pole, size 1, 2, 3, **	1
MST 4a 1p+3p	001692714	Switch position indicator + mechanical fuse monitor, size 4a, 1p/3p	1
MFM KVL-00 1p/2p/3p	001690950	Mechanical fuse monitor, size 00, **	3
MFM KVL-123 1p/2p/3p	001690951	Mechanical fuse monitor, size 1, 2, 3, **, ***	3
PRS KVL-00 3p L	001690952	Terminal cover, 3-pole, variable to open, Length 66mm, size 00	2
PRS KVL-00 3p S	001690953	Terminal cover, 3-pole, variable to open, Length 36mm, size 00	2
PRS KVL-1 3p	001690954	Terminal cover, 3-pole, variable to open, Length 42mm, size 1	2
PRS KVL-2 3p	001690955	Terminal cover, 3-pole, variable to open, Length 42mm, size 2	2
PRS KVL-3 3p	001690956	Terminal cover, 3-pole, variable to open, Length 42mm, size 3	2
PRS KVL-00 1p L	001690957	Terminal cover, 1-pole, variable to open, Length 66mm, size 00	2
PRS KVL-00 1p S	001690958	Terminal cover, 1-pole, variable to open, Length 36mm, size 00	2
PRS KVL-1 1p	001690959	Terminal cover, 1-pole, variable to open, Length 42mm, size 1	2
PRS KVL-3 1p	001690960	Terminal cover, 1-pole, variable to open, Length 42mm, size 3	2
DIN KVL-00 100-150	001690964	DIN rail fixing parts, For mounting on DIN rails, size 00	3
DIN KVL-1 100-150	001690965	DIN rail fixing parts, For mounting on DIN rails, size 1	3
EFMU KVL-00 3p	001690966	Electronic fuse monitoring unit, 3-pole, size 00, ****	1
EFMU KVL-1 3p	001690967	Electronic fuse monitoring unit, 3-pole, size 1, ****	1
EFMU KVL-2 3p	001690968	Electronic fuse monitoring unit, 3-pole, size 2, ****	1
EFMU KVL-3 3p	001690969	Electronic fuse monitoring unit, 3-pole, size 3, ****	1
MPFMU KVL-00 3p	001690974	Elektromechanical fuse monitoring unit (AM), 3-pole, size 00, ****	1
MPFMU KVL-1 3p	001690975	Elektromechanical fuse monitoring unit (AM), 3-pole, size 1, ****	1
MPFMU KVL-2 3p	001690976	Elektromechanical fuse monitoring unit (AM), 3-pole, size 2, ****	1
MPFMU KVL-3 3p	001690977	Elektromechanical fuse monitoring unit (AM), 3-pole, size 3, ****	1
CK KVL-00 2p/4p	001690970	Connecting kit 2- and 4-pole, For making of 2- and 4-pole disconnectors, size 00	1
CK KVL-123 2p/4p	001690971	Connecting kit 2- and 4-pole, For making of 2- and 4-pole disconnectors, size 1, 2, 3	1
LP KVL-00123	001690972	Interlock device, locking with padlock, diameter 6mm max., size 00, 1, 2, 3	10
IC KVL-00123	001690973	Contact cover interlock, only be operated by tool, size 00-3	10

(1) min order in pcs

* Feeding clamp, AC690V/DC1000V-250A

** 1 Changeover, AC250V, 10/3A (ohmic/ind.)

*** Only in combination with ETI fuse-links with striker-pin; not in combination with frame-clamp or 2-wire-prism clamp.

**** For monitoring of fuse-links with live gripping lugs

! For other pictures of Accessories, see chapter ETIBUSBAR


PRS KVL-00 1p


PRS KVL-00 1p S


SP KVL


SP KVL...P1


DIN KVL-00 100-150

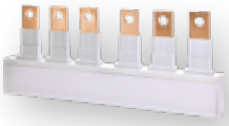

SP KVL-1 V


SP KVL-23 V

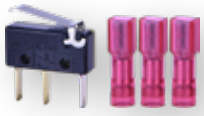

SP KVL-00 FC95


MTB KVL00 2x25/1x16/M8


MTB KVL00 4x10/M8


IZ2 KVL-00 3p


MST KVL- ...


MFM KVL-123 1p 2p 3p


PRS KVL-... 3p


CK KVL-00 2p/4p

Technical data (in accordance with IEC/EN 60947-3)

Size			00					1				
Technical Characteristics												
Rated operational voltage	Ue	V	400 AC	500 AC	690 AC	250 DC	440 DC	400 AC	500 AC	690 AC	250 DC	440 DC
Rated operational current*	Ie	A	160	160	160	160	160	250	250	250	250	250
Conv. free air thermal current with fuse-links*	Ith	A	160					250				
Conv. free air thermal current with solid-links*	Ith	A	210					325				
Rated frequency	f	Hz	40-60	40-60	40-60	/	/	40-60	40-60	40-60	/	/
Rated insulation voltage	Ui	V	1000 AC					1000 AC				
Total power loss (without fuse)	Pv	W	1P - 3W, 3P - 9W					1P - 5W, 3P - 15W				
Power loss at 80% Ith (without fuse-links), **	Pv	W	1P - 1,9 W, 3P - 5,8 W					1P - 3,2 W, 3P - 9,6 W				
Rated impulse withstand voltage	Uimp	kV	8					8				
Utilisation category***			AC-23B	AC-22B	AC-21B	DC-22B	DC-21B	AC-23B	AC-22B	AC-21B	DC-22B	DC-21B
Rated conditional short-circuit current, ***, ****		kA	120 (500V), 100 (690V)					120 (500V), 100 (690V)				
Rated short-time withstand current	Icw	kA	5/1s					8,6/1s				
Fuse links												
Size - DIN VDE 0636-2	-	-	000/00					1				
Max. rated current (gG)	In	A	160	160	160	160	160	250	250	250	250	250
Max. permissible power loss per fuse link	Pa	W	12					23				
Cable terminal												
Flat terminal-Screw			M8					M10				
Tightening torque	Ma	Nm	12-15					30-35				
Clip terminal, Clamping cross-section		mm^2	Round conductor: 1,5-70 Cu , Laminated copper bar: 6 x 9 x 0,8 Cu					Round conductor: 2,5-150 Cu , Laminated copper bar: 6 x 16 x 0,8 Cu				
Tightening torque	Ma	Nm	2,6					9,5				
Prism Clamp, Clamping cross-section		mm^2	(SP KVL00 P1); 10-70 Al/Cu , 35-95 Al/Cu					(SP KVL1 P1); 10-150 Al/Cu				
Tightening torque	Ma	Nm	(SP KVL00 P1); 2,6					(SP KVL1 P1); 4,5				
Prism Clamp, Clamping cross-section		mm^2						(SP KVL1 P2); 2 x (10-150) Al/Cu				
Tightening torque	Ma	Nm						(SP KVL1 P2); 4,5				
Frame clamp, Clamping cross-section		mm^2	1,5-95 Al/Cu , (Al 95: max. 125A), ******					35-150 Al/Cu				
Torque	Ma	Nm	4,5					12				
Degree of Protection, front side device												
Front cover close	-	-	IP20					IP20				
Front cover open	-	-	IP10					IP10				
With clamp- and lateral cover	-	-	IP2XC					IP2XC				
Operating condition												
Ambient temperature *****	Tamb	°C	-25 ... +55					-25 ... +55				
Operating condition	-	-	Continuous operation									
Mounting position	-	-	vertical, horizontal									
Altitude	-	m	≤ 2000									
Pollution degree	-	-	3									
Overvoltage category	-	-	III					III				

* Mounting of several units in low voltage switchgear-combinations, please think about rated diversity factors acc. to DIN EN 61439.
** Reference value for replacement of devices acc. to DIN EN 61439-1 clause 10.10.4.2.
*** minimum distance to earthed, conductive parts: Lateral: 20mm/Above: 50mm
*** a) Lateral: 50mm/Above: 100mm
**** Type tested with NH fuse-links characteristic gG
***** 35°C Normal temperature, at 55°C with reduced operating current

Technical data (in accordance with IEC/EN 60947-3)

Size			2					3				
Technical Characteristics												
Rated operational voltage	Ue	V	400 AC	500 AC	690 AC	250 DC	440 DC	400 AC	500 AC	690 AC	250 DC	440 DC
Rated operational current*	Ie	A	400	400	400	400	400	630	630	630	630	630
Conv. free air thermal current with fuse-links*	Ith	A	400					630				
Conv. free air thermal current with solid-links*	Ith	A	520					910				
Rated frequency	f	Hz	40-60	40-60	40-60	/	/	40-60	40-60	40-60	/	/
Rated insulation voltage	Ui	V	1000 AC					1000 AC				
Total power loss (without fuse)	Pv	W	1P - 9W, 3P - 28W					1P - 17W, 3P - 51W				
Power loss at 80% Ith (without fuse-links), **	Pv	W	1P - 6 W, 3P - 17,9 W					1P - 10,9 W, 3P - 32,6 W				
Rated impulse withstand voltage	Uimp	kV	8					8				
Utilisation category***			AC-23B	AC-22B	AC-21B	DC-22B	DC-21B	AC-23B	AC-22B	AC-21B	DC-22B	DC-21B
Rated conditional short-circuit current, ***, ****		kA	120 (500V), 100 (690V)					120 (500V), 100 (690V)				
Rated short-time withstand current	Icw	kA	15/1s					15/1s				
Fuse links												
Size - DIN VDE 0636-2	-	-	2					3				
Max. rated current (gG)	In	A	400	400	400	400	400	630	630	630	630	630
Max. permissible power loss per fuse link	Pa	W	34					48				
Cable terminal												
Flat terminal-Screw			M10					M10 / M12				
Tightening torque	Ma	Nm	30-35					30-35				
Clip terminal, Clamping cross-section		mm^2	Round conductor: 25-150 Cu, Laminated copper bar: 10 x 16 x 0,8 Cu					Laminated copper bar: 11 x 21 x 1 Cu				
Tightening torque	Ma	Nm	23					23				
Prism Clamp, Clamping cross-section		mm^2	(SP KVL2 P1); 120-240 Al/Cu					(SP KVL3 P1); 120-300 Al/Cu				
Tightening torque	Ma	Nm	(SP KVL2 P1); 11					(SP KVL3 P1); 11				
Prism Clamp, Clamping cross-section		mm^2	(SP KVL2 P2); 2 x (120-150) Al/Cu					(SP KVL3 P2); 2 x (120-240) Al/Cu				
Tightening torque	Ma	Nm	(SP KVL2 P2); 11					(SP KVL3 P2); 11				
Frame clamp, Clamping cross-section		mm^2	95 -300 Al/Cu					95-300 Al/Cu				
Torque	Ma	Nm	20					20				
Degree of Protection, front side device												
Front cover close	-	-	IP20					IP20				
Front cover open	-	-	IP10					IP10				
With clamp- and lateral cover	-	-	IP2XC					IP2XC				
Operating condition												
Ambient temperature *****	Tamb	°C	-25 ... +55					-25 ... +55				
Operating condition	-	-	Continuous operation									
Mounting position	-	-	vertical, horizontal									
Altitude	-	m	≤ 2000									
Pollution degree	-	-	3									
Overvoltage category	-	-	III					III				

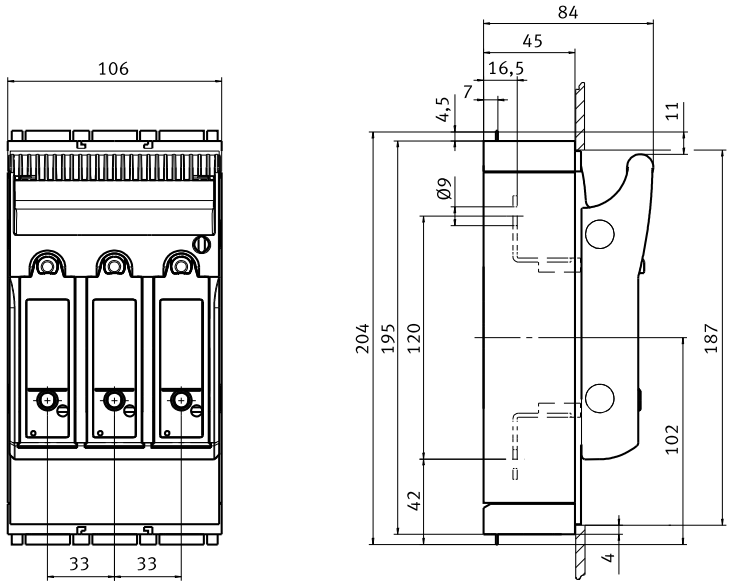
* Mounting of several units in low voltage switchgear-combinations, please think about rated diversity factors acc. to DIN EN 61439.
** Reference value for replacement of devices acc. to DIN EN 61439-1 clause 10.10.4.2.
*** minimum distance to earthed, conductive parts: Lateral: 20mm/Above: 50mm
*** a) Lateral: 50mm/Above: 100mm
**** Type tested with NH fuse-links characteristic gG
***** 35°C Normal temperature, at 55°C with reduced operating current

Technical data (in accordance with IEC/EN 60947-3)

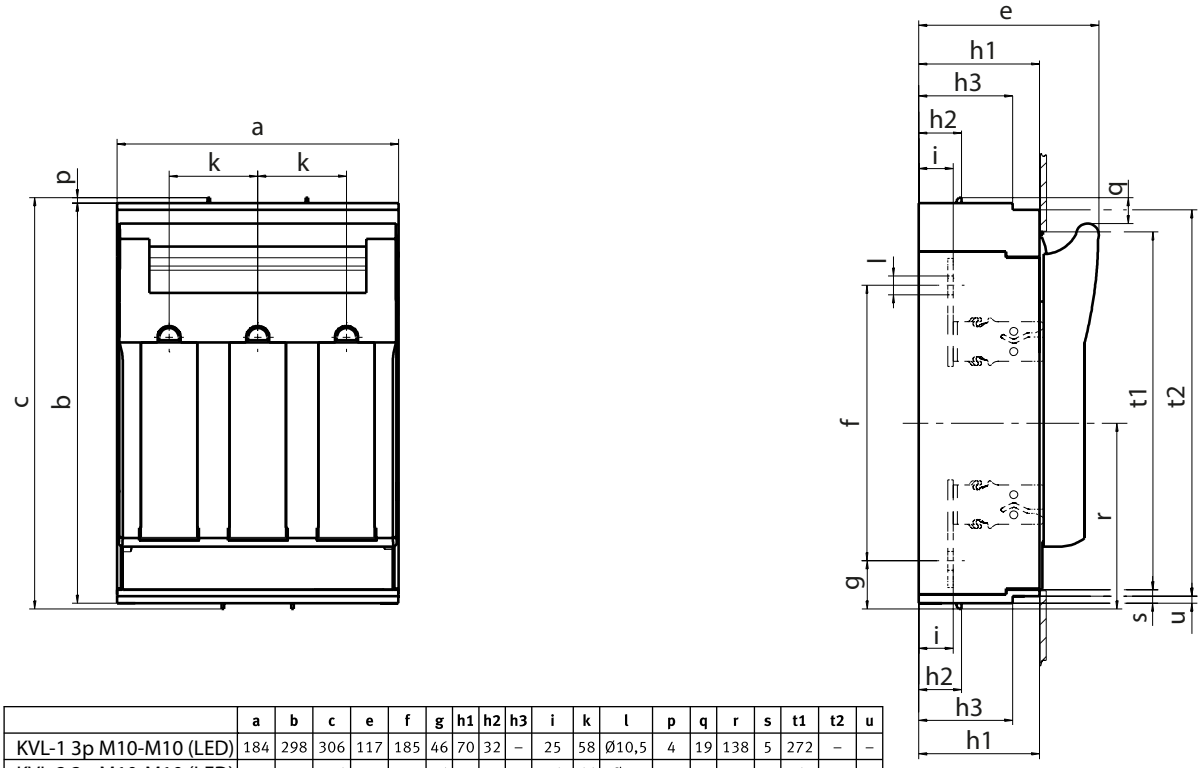
Size			4a			4a		
Technical Characteristics								
Rated operational voltage	Ue	V	500 AC	690 AC	220 DC	500 AC	690 AC	220 DC
Rated operational current	Ie	A	1250			1600		
Conv. free air thermal current with fuse-links	Ith	A	1250			1600		
Conv. free air thermal current with solid-links	Ith	A	1250			1600		
Rated frequency	f	Hz	40-60	40-60	/	40-60	40-60	/
Rated insulation voltage	Ui	V	800			800		
Total power loss (without fuse)	Pv	W	32			52		
Rated impulse withstand voltage	Uimp	kV	8			8		
Utilisation category			AC-23B	AC-21B	DC-21B	AC-22B	AC-21B	DC-21B
Rated conditional short-circuit current		kA	80 (500V), 50 (690V)					
Rated short-time withstand current	Icw	kA	35					
Fuse links								
Size - DIN VDE 0636-2	-	-	4a					
Max. rated current (gG)	In	A	1250			1600		
Max. permissible power loss per fuse link	Pa	W	110			164		
Cable terminal								
Flat terminal-Screw			M16			2x M12		
Tightening torque	Ma	Nm	50-60			35-40		
Cable lug Flat bar		mm^2 mm						
Degree of Protection front side device								
Front cover close	-	-	IP20			IP20		
Front cover open	-	-	IP10			IP10		
Operating condition								
Ambient temperature *	Tamb	°C	-25 ... +55			-25 ... +55		
Operating condition	-	-	Continuous operation					
Mounting position	-	-	vertical, horizontal					
Altitude	-	m	≤ 2000					
Pollution degree	-	-	3					
Overvoltage category	-	-	III			III		

* 35°C Normal temperature, at 55°C with reduced operating current

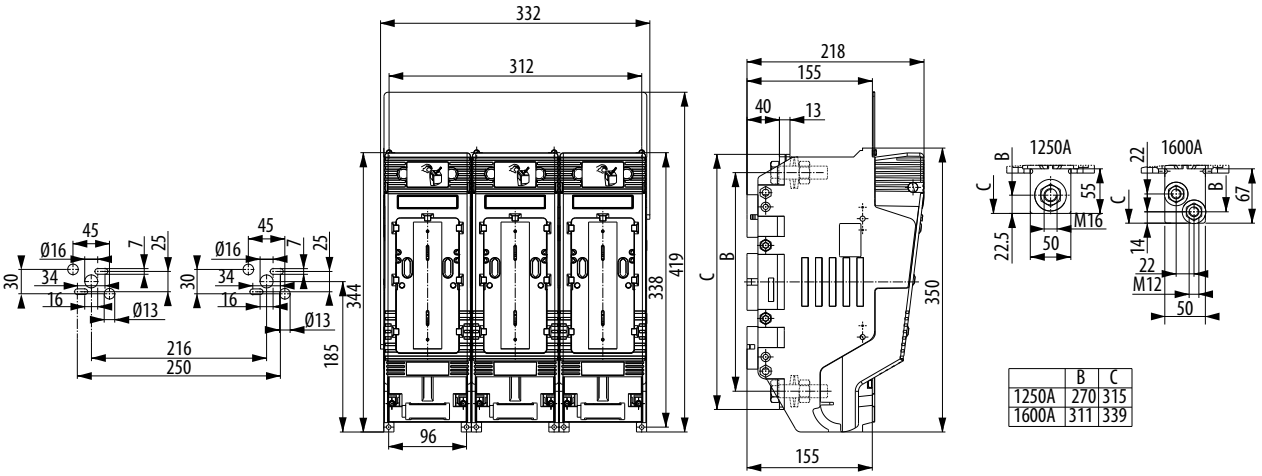
Dimensions



KVL-00 3p M8-M8
KVL-00 3p BC95-BC95
KVL-00 3p M8-M8 LED
KVL-00 3p BC95-BC95 LED



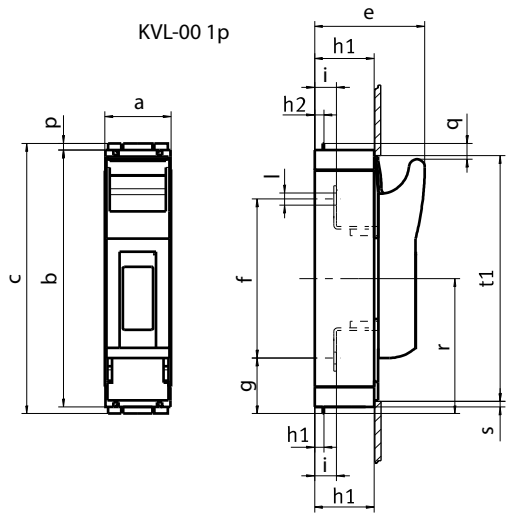
	a	b	c	e	f	g	h1	h2	h3	i	k	l	p	q	r	s	t1	t2	u
KVL-1 3p M10-M10 (LED)	184	298	306	117	185	46	70	32	–	25	58	Ø10,5	4	19	138	5	272	–	–
KVL-2 3p M10-M10 (LED)	210	298	306	134	205	36	90	32	70	26	66	Ø14	4	19	138	10	268	288	5
KVL-3 3p M10-M10 (LED)	250	298	306	143	205	36	90	32	70	26	82	Ø14	4	19	138	10	268	288	5



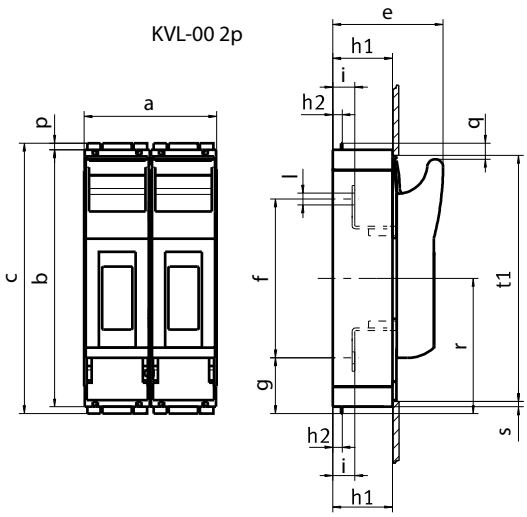
	B	C
1250A	270	315
1600A	311	339

HVL 4a 3p

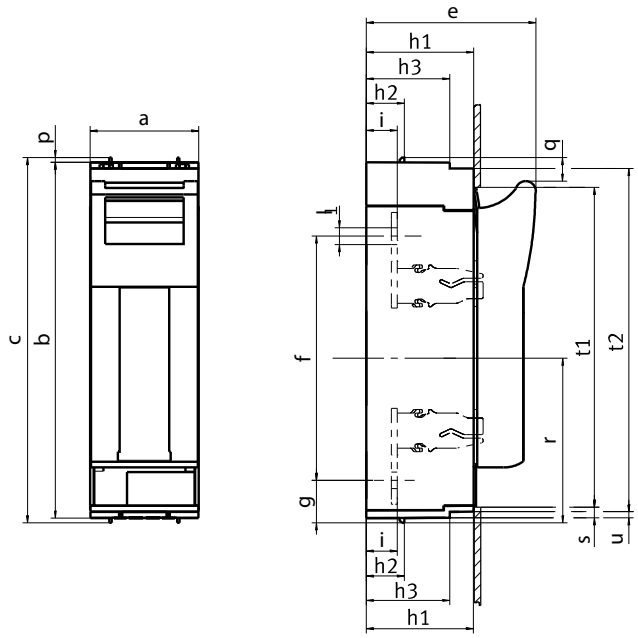
KVL-00 1p



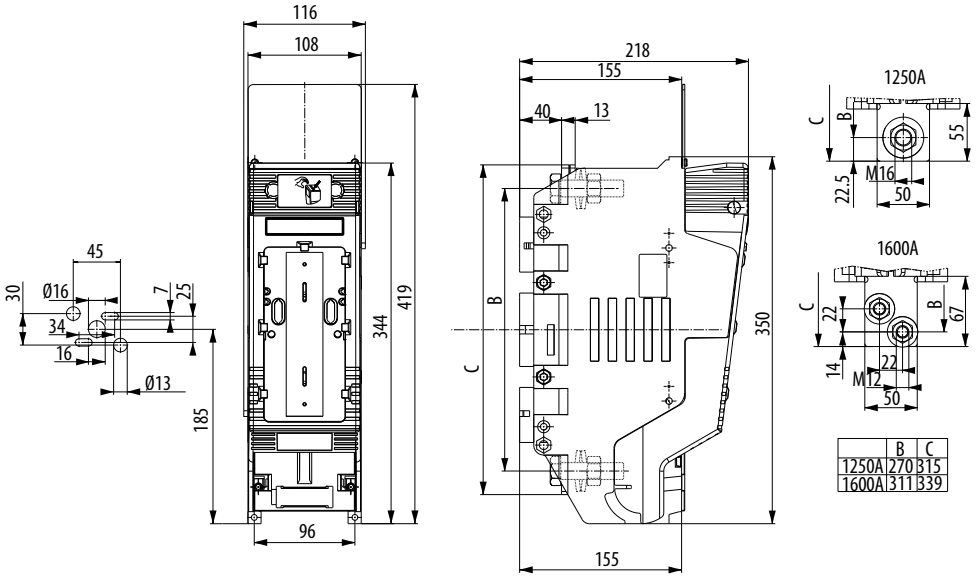
KVL-00 2p



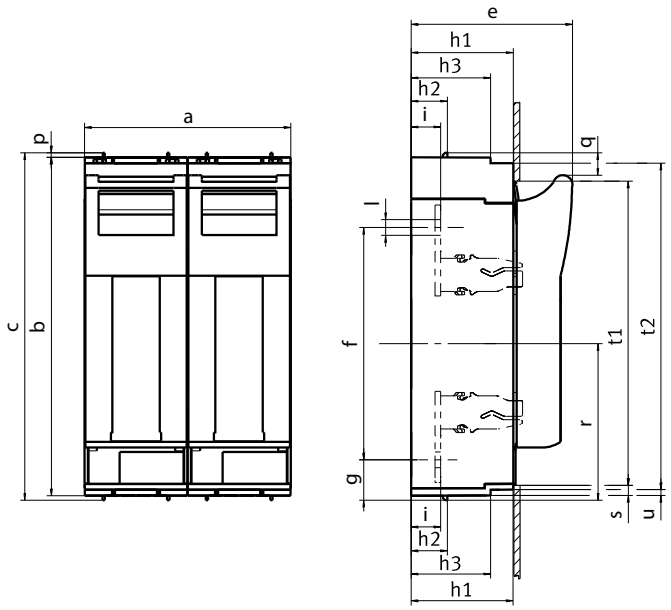
	a	b	c	e	f	g	h1	h2	h3	i	l	p	q	r	s	t1
KVL-00 1p M8-M8	50	195	204	84	120	42	45	7	–	16,5	Ø9	4,5	12	102	5	187
KVL-00 2p M8-M8	100	195	204	84	120	42	45	7	–	16,5	Ø9	4,5	12	102	5	187



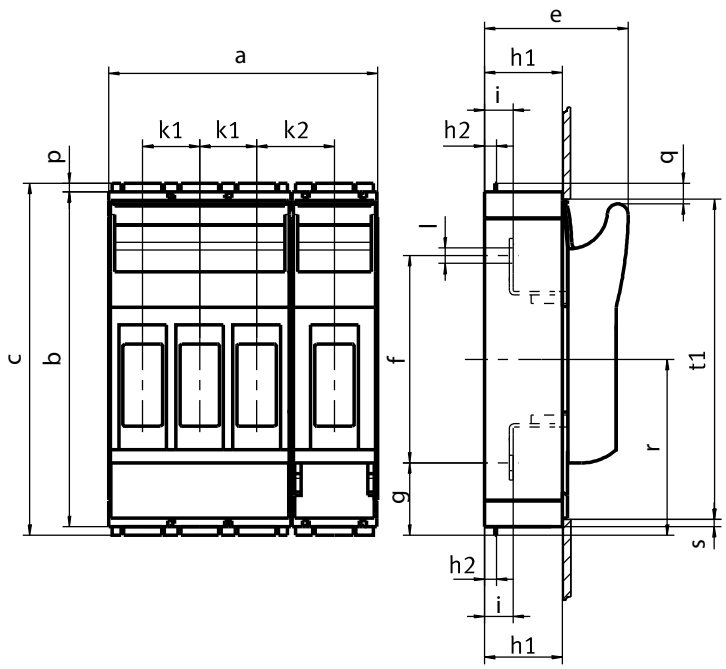
	a	b	c	e	f	g	h1	h2	h3	i	l	p	q	r	s	t1	t2	u
KVL-1 1p M10-M10	69	298	306	117	185	46	70	32	–	25	Ø10,5	4	19	138	5	272	–	–
KVL-3 1p M10-M10	91	298	306	143	205	36	90	32	70	26	Ø14	4	19	138	10	268	288	5



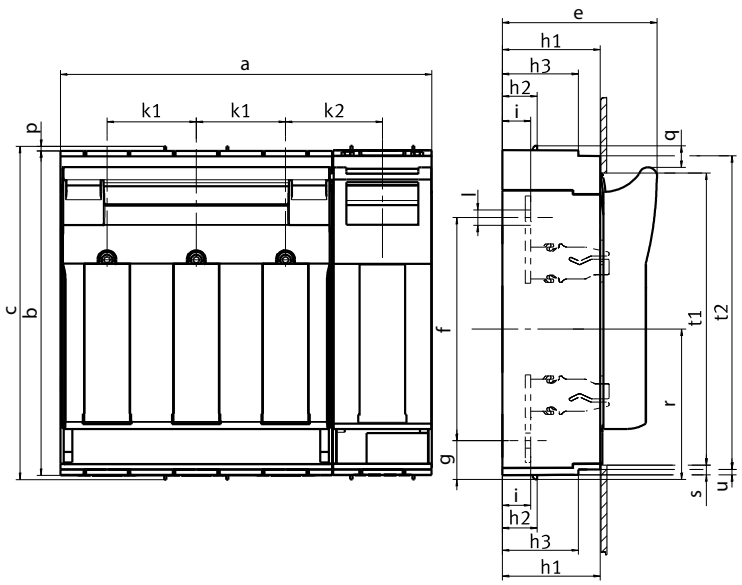
	B	C
1250A	270	315
1600A	311	339



	a	b	c	e	f	g	h1	h2	h3	i	l	p	q	r	s	t1	t2	u
KVL-1 2p M10-M10	138	298	306	117	185	46	70	32	–	25	Ø10,5	4	19	138	5	272	–	–
KVL-3 2p M10-M10	182	298	306	143	205	36	90	32	70	26	Ø14	4	19	138	10	268	288	5



	a	b	c	e	f	g	h1	h2	h3	k1	k2	i	l	p	q	r	s	t1	t2	u
KVL-00 4p M8-M8	156	195	204	84	120	42	45	7	–	33	45	16,5	Ø9	4,5	12	102	5	187	–	–



	a	b	c	e	f	g	h1	h2	h3	k1	k2	i	l	p	q	r	s	t1	t2	u
KVL-1 4p	254	298	306	117	185	46	70	32	–	58	69	25	Ø10,5	4	19	138	5	272	–	–
KVL-3 4p	341,5	298	306	143	205	36	90	32	70	82	89	26	Ø14	4	19	138	10	268	288	5

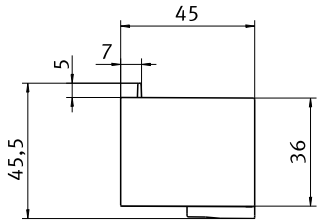
Technical data - Feeding clamps

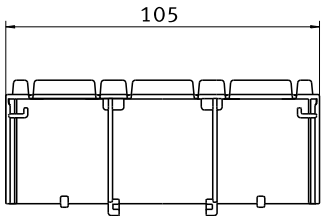
Technical Characteristics			
Max. electrical load			AC690V/DC1000V-250A
Heat deflection temp.			125°C UL94: V0
Comparative tracking index			600
Cross sections			
Conductor - Max. Diameter Ø14 mm			
single wire		mm^2	25 - 95
multi wire		mm^2	25 - 95
fine wire (with end sleeve)		mm^2	25 - 70
Torque	Ma	Nm	13
Degree of protection			IP20
Regulations			EN 60998-1:2004; EN 60998-2:2004; EN 60999-1:2000; EN 60999-2:2003

Important
This Terminal is suitable for Al and Cu conductors. Please pay attention to the common handling guidelines
when connecting the Aluminium conductors. Clean and brush the contact surfaces and lubricate them with an appropriate grease.

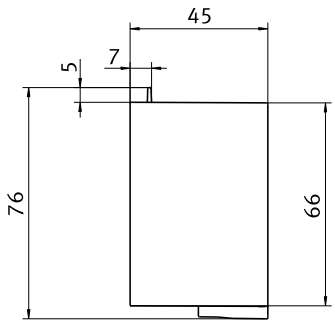
Technical data - Phase busbars

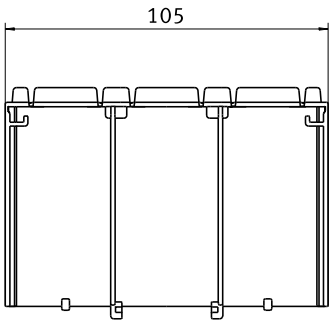
Technical Characteristics			
Rated cross section of the conductor		mm^2	50
Impulse voltage strenght		kV	≥8,5
Min. air distance		mm	>8
Min. creeping distance		mm	>9
Max. operating voltage		V	AC690
Protection class			IP20
Short circuit rating			IPK=25kA/0,1s, Surge energy capacity IPK, ICC 100kA - NH3 355A gL 500V
Dielectric strenght	kV/mm		≥32
Capacity at 35°C ambient temperature depending of feeding point cross section			
Busbar lenght		mm	max. 300
Feeding at beginning/ending			
Max. current Is /Phase		A	250
Connection cross current		mm^2	95
Other feedings			
Max. feeding current Ie /Phase		A	250
Connection cross current		mm^2	95
Overvoltage category / degree of pollution			III / 2
Regulations			IEC 60947-1:2007

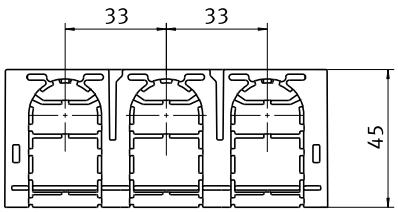


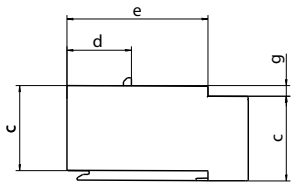


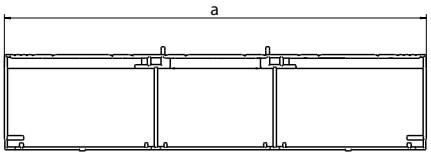
PRS KVL-00 3p S
PRS KVL-00 3p L



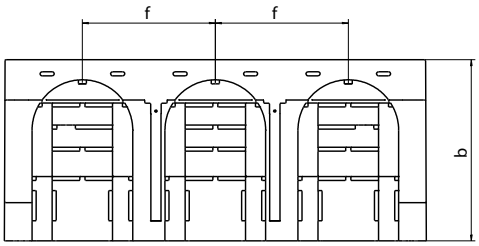




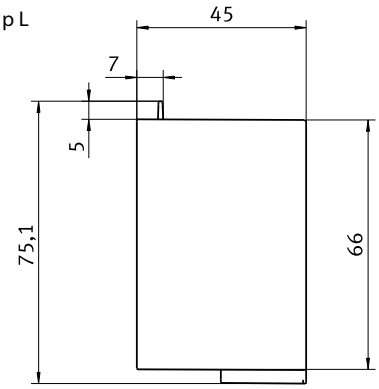


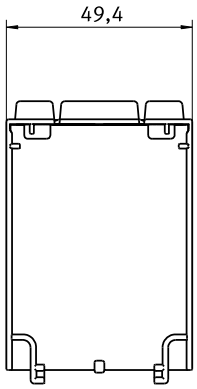


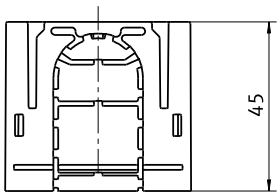
	a	b	c	d	e	f	g
PRS KVL-1 3p	184	70	42	32	–	58	–
PRS KVL-2 3p	210	90	42	32	70	66	5
PRS KVL-3 3p	250	90	42	32	70	82	5



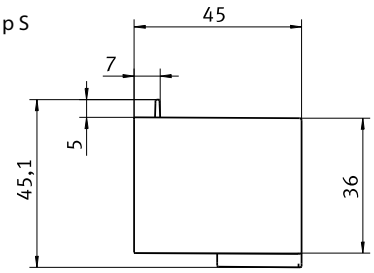
PRS KVL-00 1p L

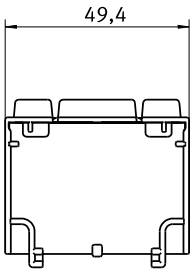


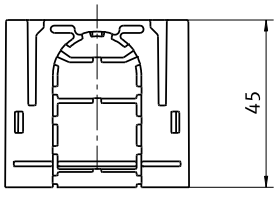




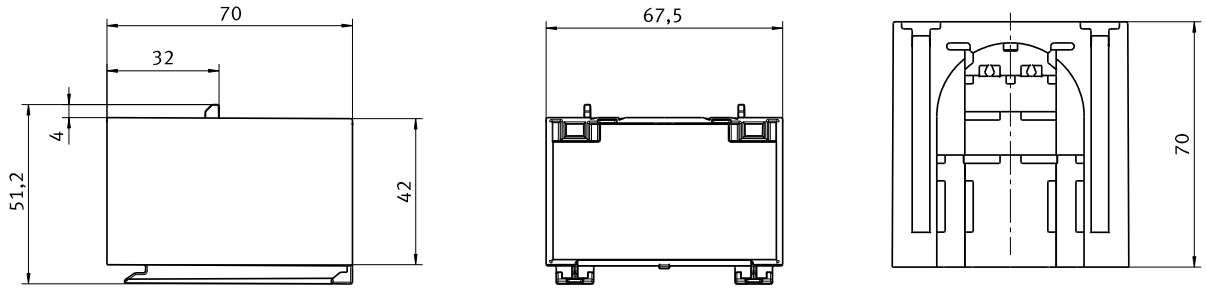
PRS KVL-00 1p S



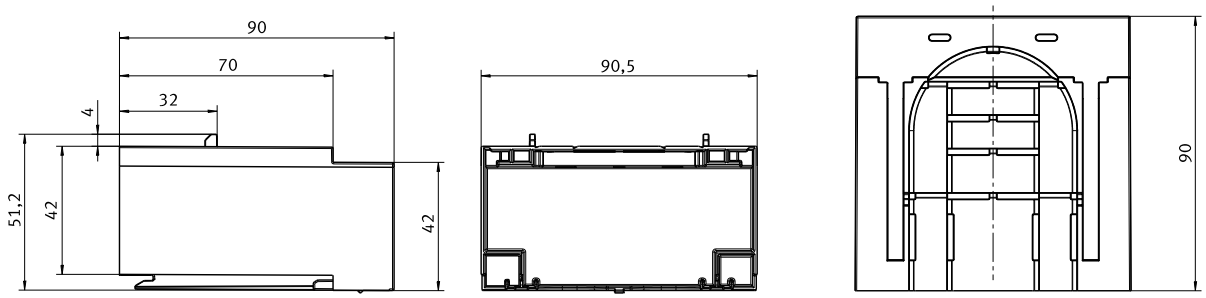




PRS KVL-1 1p



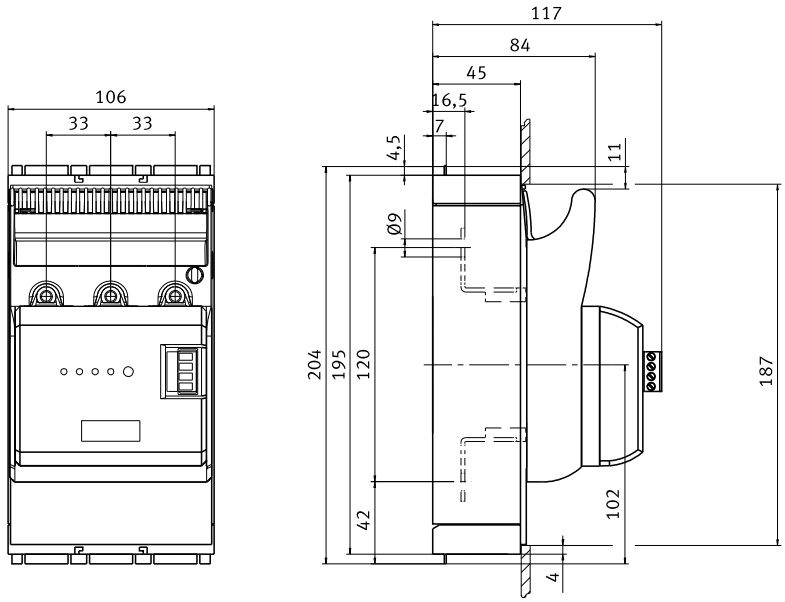
PRS KVL-3 1p



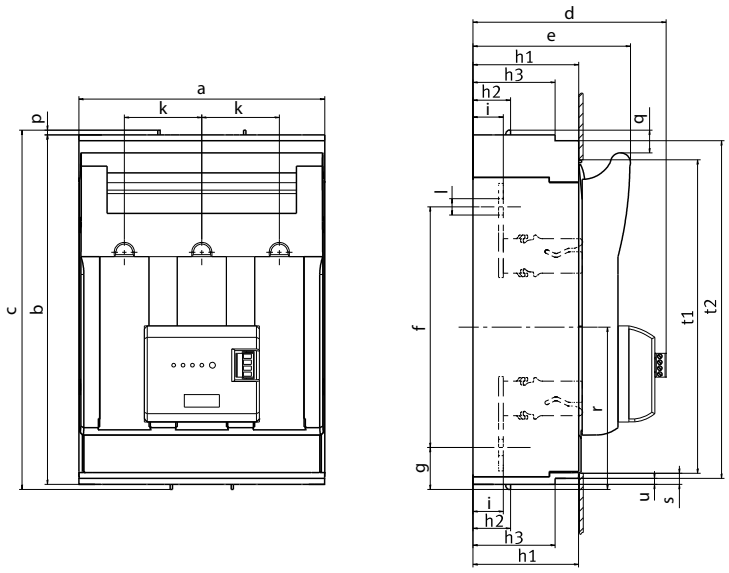
Technical data - Electronic fuse monitoring unit EFMU KVL

Technical Characteristics			
Rated operational voltage	Ue	V	AC400-500 (+/-10%)
Power supply			Self-powered
Input power		VA	1,5
Overvoltage category			230/400 V : III , (4kV) 500 V : II , (4kV)
Rated frequency	f	Hz	50-60
Input resistance			>1k Ohm/V
Output channels			
Relay output			1NC/1NO
Maximum voltage		V	AC250/DC24
Maximum switching current		A	1
General data			
Operation indicator			1 LED green
Alarm indicator			3 LED (F1, F2, F3) red
Functional test			Test key for relay + LEDs
EMC			IEC 61000-4-5/IEC 61000-4-4
Degree of protection			IP 3X
Operating conditions			
Ambient temperature	Tamb	°C	-5 ... +55

No single detection of parallel connected fuses!



KVL-00 3p M8-M8 + EFMU KVL-00 3p
KVL-00 3p BC95-BC95 + EFMU KVL-00 3p



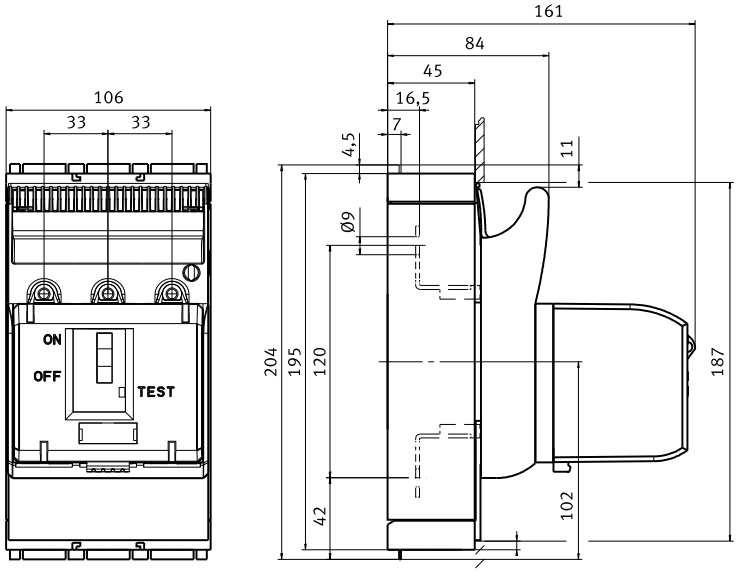
	a	b	c	d	e	f	g	h1	h2	h3	i	k	l	p	q	r	s	t1	t2	u
KVL-1 3p M10-M10 + EFMU KVL-1 3p	184	298	306	148	117	185	46	70	32	–	25	58	Ø10,5	4	19	138	5	272	–	–
KVL-2 3p M10-M10 + EFMU KVL-2 3p	210	298	306	165	134	205	36	90	32	70	26	66	Ø14	4	19	138	10	268	288	5
KVL-3 3p M10-M10 + EFMU KVL-3 3p	250	298	306	173	143	205	36	90	32	70	26	82	Ø14	4	19	138	10	268	288	5

Technical data - Electromechanical fuse monitoring unit MPFMU KVL

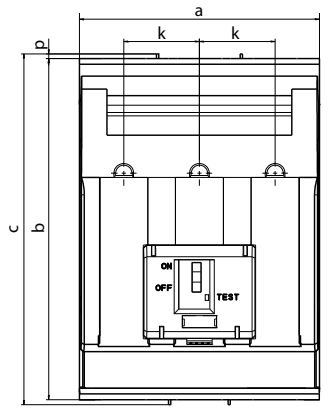
Technical Characteristics			
Rated operational voltage	Ue	V	AC24…690 DC24…250
Rated short-circuit breaking capacity	Icn	kA	100
Overvoltage category			230/400V : III (4kV) 500V : II (4kV)
Output channels			
Relay output			1NC/1NO
Maximum voltage		V	AC230/DC24
Maximum switching current			2,5A...AC-12 / 1A...DC-13

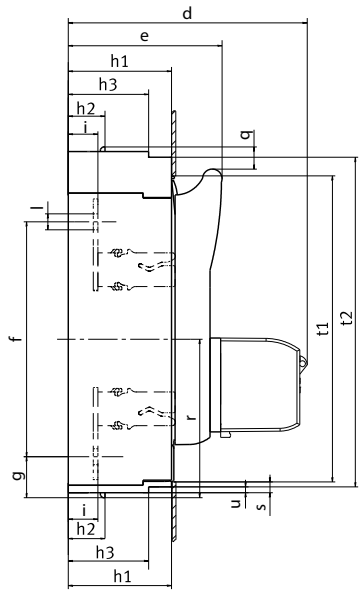
No single detection of parallel connected fuses!

Safety notes
May not be used for safety monitoring in feeders with power control units where, in the event of a fault, it is possible for a DC feedback of >300V (or >600V where 3 current paths are connected in parallel) to occur.
If equipment has to be disconnected on the load side of the fuses to be monitored, make sure that no parasitic voltages can arise in the circuit-breaker that is connected in parallel with the fuse-monitoring device.

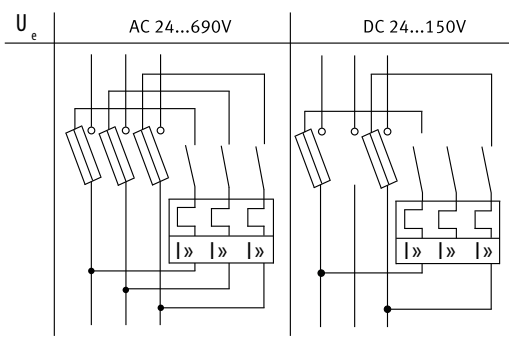


KVL-00 3p M8-M8 + MPFMU KVL-00 3p
KVL-00 3p BC95-BC95 + MPFMU KVL-00 3p





	a	b	c	d	e	f	g	h1	h2	h3	i	k	l	p	q	r	s	t1	t2	u
KVL-1 3p M10-M10 + MPFMU KVL-1 3p	184	298	306	192	117	185	46	70	32	–	25	58	Ø10,5	4	19	138	5	272	–	–
KVL-2 3p M10-M10 + MPFMU KVL-2 3p	210	298	306	209	134	205	36	90	32	70	26	66	Ø14	4	19	138	10	268	288	5
KVL-3 3p M10-M10 + MPFMU KVL-3 3p	250	298	306	217	143	205	36	90	32	70	26	82	Ø14	4	19	138	10	268	288	5



Horizontal fuse-switch disconnector type HVL EK size 000 and 00

Description

Horizontal fuse-switch disconnector type HVL EK is a low voltage device that provides switching of the circuits, depending on the voltage and use categories. The main purpose of HVL EK is installation of the NH fuses size 000 and 00, and protection of equipment from the harmful effects of short circuit and overload. If instead of NH fuses NH separators are installed, HVL EK provides disconnection function and meets all regulatory requirements in the open position.

Fields of use and features

Horizontal fuse-switch disconnectors are designed for use in a number of applications that require disconnection function. They are suitable for challenging the scope of the external electrical junction boxes, and public lighting, security cable branches in industrial applications and for the separation of distribution metering cabinets.
The program of horizontal fuse-switch disconnectors type HVL EK includes sizes 000 and 00 and is intended for mounting on a mounting plate, DIN rails and 60 mm busbar system. The standard offer includes 1-pole, 3-pole and 4-pole versions. Available is a wide range of different connections allowing great flexibility in use. Horizontal fuse-switch disconnectors HVL EK meet the requirements of the following standards:
IEC 60947-1,
IEC 60947-3,
IEC 60269-1,
IEC 60269-2-1

In horizontal fuse-switch disconnector type HVL EK 000 only NH knife-blade fuse links size 000 (00C) could be used while in horizontal fuse-switch disconnector type HVL EK 00 sizes 00 and 000 (00C) could be used. About additional warnings on products see technical part of the catalogue.

Technical data

Technical Specifications			HVL EK 000 1p		HVL EK 000 3p			HVL EK 00 1p		HVL EK 00 3p		
Conventional free air thermal current*	Ith	A	160									
Rated insulation voltage	Ui	V	AC 690									
Rated withstand voltage	Uimp	kV	6									
Rated frequency		Hz	50 (40-60)									
Utilisation category			AC-21B	AC-22B	AC-21B	AC-22B		AC-21B	AC-22B	AC-21B	AC-22B	
Rated operational current	Ie	A	160		125	160	100	160		125	160	125
Rated operational voltage	Ue	V	230 AC		690 AC	400 AC	500 AC	230 AC		690 AC	400 AC	500 AC
Rated conditional short-circuit current		kAeff	63									
Mechanical durability (operating cycles)			1600									
Electrical durability (operating cycles)			200									
Power dissipation (without fuse)		W	3,74		10,2			3,74		10,2		
Degree of protection (cover closed)			IP20									
Degree of protection (cover open)			IP10									
Pollution degree			3									
Permissible ambient temperature**		°C	-25 ÷ +55									
Storage temperature		°C	-30 ÷ +70									

* In case of mounting of the fuse-switch disconnector in cabinet, the thermal current should be corrected (Ith x derating factor), depending on the number of built apparatuses (see table 1)
** In case of using the fuse-switch disconnector at temperatures +450C to +550C, the thermal current Ith should be reduced for 5%-10%

Table 1

Number of built apparatuses	2 - 3	4 - 5	6 - 9	>9
Derating factor	0,9	0,8	0,7	0,6

3-pole horizontal fuse-switch disconnector HVL EK 000

Type	Code No.	kg	
HVL EK 000 3p M8	001701000	0,58	1
HVL EK 000 3p OS00 6-16	001701001	0,52	1
HVL EK 000 3p OS00 25-50	001701002	0,58	1
HVL EK 000 3p P00 10-35	001701003	0,62	1
HVL EK 000 3p P00 50-70	001701004	0,63	1
HVL EK 000 3p P002 10-16	001701005	0,66	1
HVL EK 000 3p P002 25-35	001701006	0,67	1

* HVL EK 000 are ready for mounting on mounting plate or mounting on 35mm mounting rail without accessories
** connections are described in table of connections for HVL EK 000
*** given Type connector for the HVL EK means same connectors on both sides of HVL EK
**** different combinations of connections on both sides of the separator can be made with terminals that are available as accessories
***** highest clamp that can be placed on top side is P002 25-35, and on bottom side P002 50

1-pole horizontal fuse-switch disconnector HVL EK 000

Type	Code No.	kg	
HVL EK 000 1p M8	001701400	0,23	3
HVL EK 000 1p OS00 6-16	001701401	0,22	3
HVL EK 000 1p OS00 25-50	001701402	0,22	3
HVL EK 000 1p P00 10-35	001701403	0,24	3
HVL EK 000 1p P00 50-70	001701404	0,24	3
HVL EK 000 1p P002 10-16	001701405	0,25	3
HVL EK 000 1p P002 25-35	001701406	0,25	3

* HVL EK 000 are ready for mounting on mounting plate or mounting on 35mm mounting rail without accessories
** connections are described in table of connections for HVL EK 000
*** two-pole design can be done using two single-pole
**** highest clamp that can be placed on top side is P002 25-35, and on bottom side P002 50

4-pole horizontal fuse-switch disconnector HVL EK 000

Type	Code No.	kg	
HVL EK 000 4p M8	001701420	0,82	1

* HVL EK 000 are ready for mounting on mounting plate or mounting on 35mm mounting rail without accessories
** connections are described in table of connections for HVL EK 000
*** switching off neutral pole (N) same time as switching phase polarity
**** highest clamp that can be placed on top side is P002 25-35, and on bottom side P002 50

3-pole horizontal fuse-switch disconnector HVL-B EK 000 (5-10mm Busbar)

Type	Code No.	kg	
HVL-B EK 000 3p M8	001701011	0,85	1
HVL-B EK 000 3p BT00 10-70	001701012	0,88	1

* HVL-B EK 000 are ready for mounting on 60mm busbar system, 5-10 mm thick
** connections are described in table of connections for HVL EK 000
*** connector BT00 10-70 in combination with HVL-B EK have clamping cross-section up to 50mm^2.
**** connecting from top/bottom (read installation manual carefully to avoid wrong connection!)
***** for additional remarks on product see technical part of the catalogue.
****** highest clamp that can be placed on top side is P002 25-35, and on bottom side P002 50

3-pole horizontal fuse-switch disconnector HVL-P EK 000 (flat bar connection)

Type	Code No.	kg	
HVL-P EK 000 3p M8	001701013	0,59	1
HVL-P EK 000 3p OS00 6-50	001701014	0,53	1
HVL-P EK 000 3p P00 10-70	001701015	0,59	1

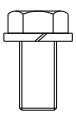
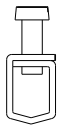
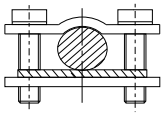
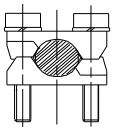
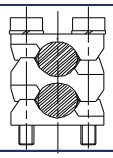
* HVL-P EK 000 are ready for mounting on mounting plate or mounting on 35mm mounting rail without accessories
** HVL-P EK 00 are supplied with extra protective covering of connectors on the bottom side (PRS EK 000/3)
*** connections are described in table of connections for HVL EK 000
**** highest clamp that can be placed on top side is P002 25-35, and on bottom side P002 50

Accessories for HVL EK 000

Type	Code No.	Description	kg		Min order [pcs]
PRS EK 000/1	001701450	Protecting cover, 1p	0,02	set = 2	1 set
PRS EK 000/3	001701451	Protecting cover, 3p	0,03	set = 2	1 set
PRS-B EK 000/3	001701452	Protecting cover, 3p	0,03	set = 2	1 set

* PRS EK 000… to be used for HVL EK 000, supplied in pairs covering the TOP and BOTTOM side
** PRS-B EK 000 to be used for HVL-B EK 000, supplied in pairs covering the TOP and BOTTOM side

Table of connections for HVL EK 000

Cable terminal drawing									
Cable terminal type	M8	BT00 10-70	OS00 6-16	OS00 25-50	P00 10-35	P00 50-70	P002 10-16	P002 25-35	P002 50
Clamping cross-section	70 mm^2	10-50 mm^2 Al/Cu	(6-16) mm^2 Cu	(25-50) mm^2 Cu	(10-35) mm^2 Al/Cu	(50-70) mm^2 Al/Cu	2x(10-16) mm^2 Al/Cu	2x(25-35) mm^2 Al/Cu	2x50 mm^2 Al/Cu
Screw type	M8x12	M6	2x(M5x12)	2x(M5x14)	2x(M5x20)	2x(M5x25)	2x(M5x25)	2x(M5x30)	2x(M5x35)
Tightening torque	12-15 Nm	4,5 Nm	2,6 Nm	2,6 Nm	4,5 Nm	4,5 Nm	4,5 Nm	4,5 Nm	4,5 Nm
Package	3	3	3	3	3	3	3	3	3

* basic type of HVL EK 000 is screw connection M8
** connector BT00 10-70 at disposal only in combination with HVL-B EK for busbar (HVL-B EK 000 3p BT00 10-70)
*** HVL EK 00 allows an easy change of mutual connections (except BT00 10-70)

3-pole horizontal fuse-switch disconnector HVL EK 00

Type	Code No.	kg	
HVL EK 00 3p M8	001701250	0,65	1
HVL EK 00 3p OS00 6-50	001701251	0,63	1
HVL EK 00 3p P00 10-70	001701252	0,69	1
HVL EK 00 3p P00 35-95	001701255	0,72	1
HVL EK 00 3p BT00 10-70	001701256	0,66	1

* HVL EK 00 are ready for mounting on mounting plate
** basic Type of HVL EK 000 is screw connection M8
*** connections are described in table of connection s for HVL EK 00
**** clamps that can be placed on top side are OS00 and P00 , while on bottom side there is no limitation (see table range of connections for HVL EK 000/00)
***** For clamp limitation, see table of accessories

1-pole horizontal fuse-switch disconnector HVL EK 00

Type	Code No.	kg	
HVL EK 00 1p M8	001701410	0,28	3
HVL EK 00 1p OS00 6-50	001701411	0,26	3
HVL EK 00 1p P00 10-70	001701412	0,28	3
HVL EK 00 1p P00 35-95	001701415	0,30	3
HVL EK 00 1p BT00 10-70	001701416	0,28	3

* HVL EK 00 are ready for mounting on mounting plate
** basic Type of HVL EK 000 is screw connection M8
*** connections are described in table of connections for HVL EK 00
**** two-pole design can be made using two single-pole
***** For clamp limitation, see table of accessories

4-pole horizontal fuse-switch disconnector HVL EK 00

Type	Code No.	kg	
HVL EK 00 4p M8	001701430	0,92	1
HVL EK 00 4p BT00 10-70	001701431	0,92	1

* HVL EK 00 are ready for mounting on mounting plate
** basic Type of HVL EK 000 is screw connection M8
*** connections are described in table of connection s for HVL EK 00
*** switching off neutral pole (N) same time as switching phase polarity
***** For clamp limitation, see table of accessories

3-pole horizontal fuse-switch disconnector HVL-P EK 00 (additional flat bar connection)

Type	Code No.	kg	
HVL-P EK 00 3p M8	001701260	0,67	1
HVL-P EK 00 3p OS00 6-50	001701261	0,65	1
HVL-P EK 00 3p P00 10-70	001701262	0,71	1

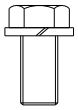
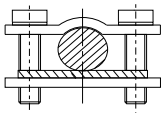
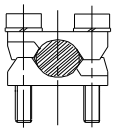
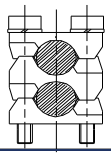
* HVL-P EK 00 are ready for mounting on mounting plate
** HVL-P EK 00 are supplied without any extra protective covering of connectors
*** connections are described in table of connection s for HVL EK 00
***** For clamp limitation, see table of accessories

Accesories for HVL EK 00

Type	Code No.	kg	
DIN EK 00 125-150	001701453	Mounting brackets for mounting on two rails 35mm	1 set

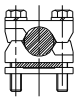
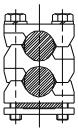
* DIN EK 00 125-150 set allows to mount HVL EK 00 on two mounting rails in distance of 125mm or 150mm.

Table of connections for HVL EK 00

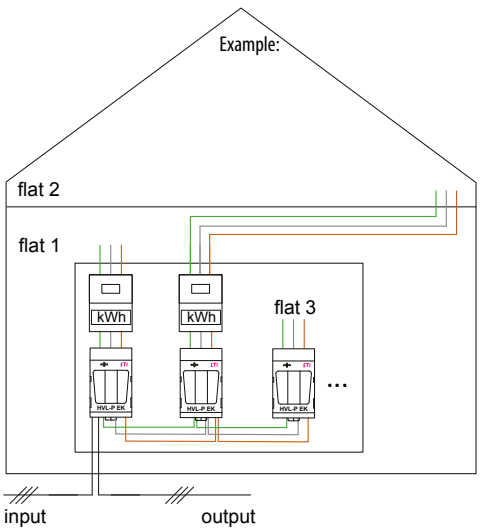
Cable terminal drawing							
Cable terminal type	M8	BT00 10-70*	OS00 6-50	P00 10-70	P00 35-95*	P002 10-35	P002 50
Clamping cross-section	70 mm^2	10-70 mm^2 Al/Cu	(6-50) mm^2 Cu	(10-70) mm^2 Al/Cu	(35-95) mm^2 Al/Cu	2x(10-35) mm^2 Al/Cu	2x50 mm^2 Al/Cu
Screw type	M8x12	M6	2x(M5x14)	2x(M5x25)	2x(M5x30)	2x(M5x30)	2x(M5x40)
Tightening torque	12-15 Nm	4,5 Nm	2,6 Nm	4,5 Nm	4,5 Nm	4,5 Nm	4,5 Nm
Package	3	3	3	3	3	3	3

* connections P00 35-95 and BT00 10-70 should be orderd with fuse-switch disconnector while latter exchange is not possible
** basic type of HVL EK 00 is screw connection M8
*** HVL EK 00 allows an easy change of mutual connections (except BT00 10-70 and P00 35-95)

Accessories for HVL EK 000/00 (connectors)

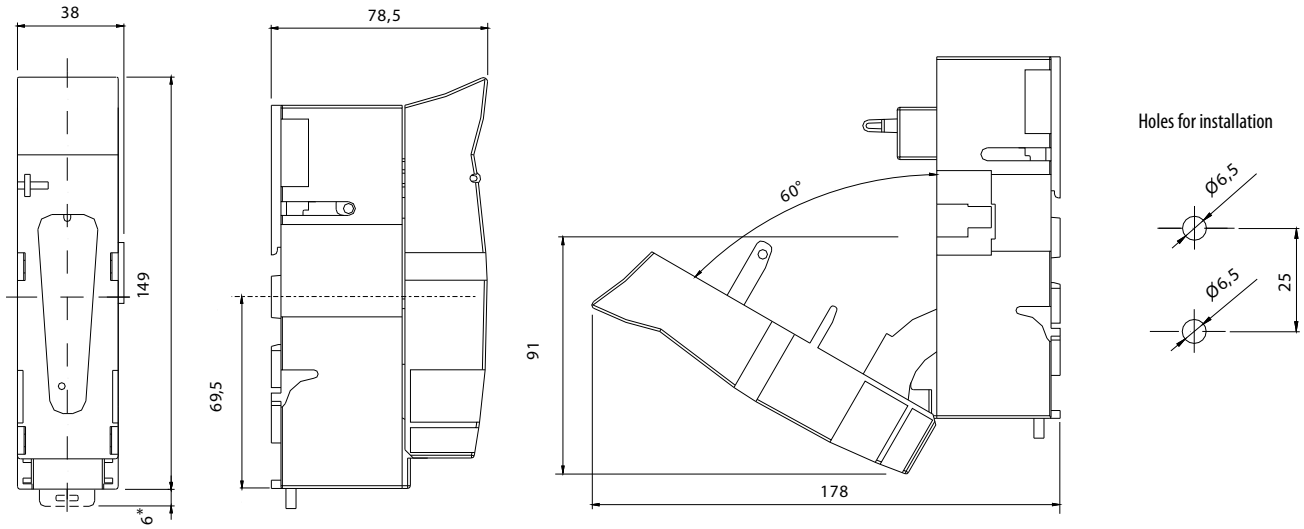
Type	Code No.	Connector drawing	Suitability	
OS00 6-16	001701460	 Cu**	HVL EK 000	set = 3
OS00 25-50	001701461		HVL EK 000	set = 3
OS00 6-50	001701480		HVL EK 00	set = 3
P00 10-35	001701462	 Cu/Al**	HVL EK 000	set = 3
P00 50-70	001701463		HVL EK 000	set = 3
P00 10-70	001701481		HVL EK 00	set = 3
P00 35-95*	001701464		HVL EK 00	set = 3
P002 10-16	001701465	 Cu/Al**	HVL EK 000	set = 3
P002 25-35	001701466		HVL EK 000	set = 3
P002 10-35	001701482		HVL EK 00***	set = 3
P002 50	001701467		HVL EK 000, 00 ***	set = 3
P002 35-70*	001701468		HVL EK 00***	set = 3

* because of wider screw distance change is only possible between these two Types of connections (however always possible to change connections OS with P00 and P002 and vice versa only the exceptions are marked with '*')
** Type of cable for direct connection is given on connector drawing
*** Double prism clamp (P002) can be used only on bottom side of HVL EK 00, while on top side clamps (OS00 and P00) remain

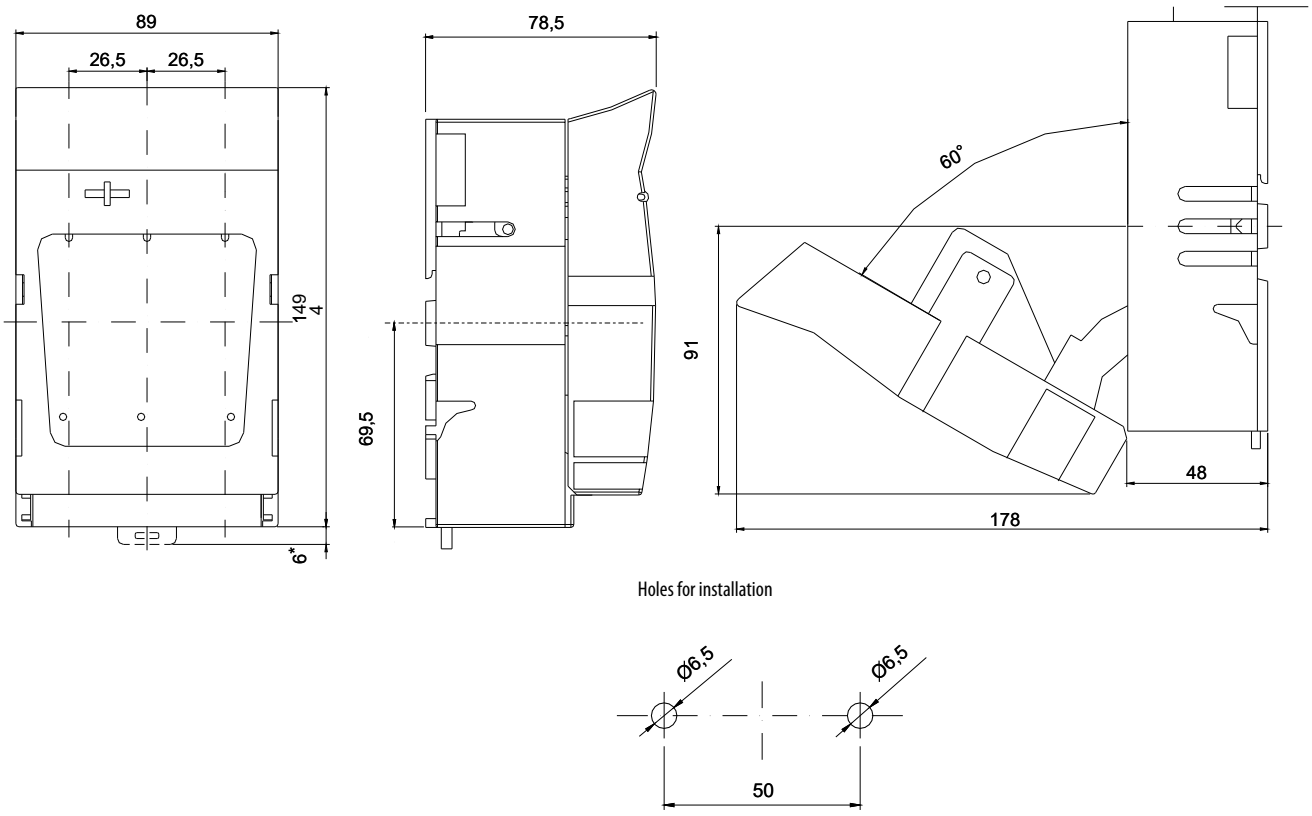


Dimensions

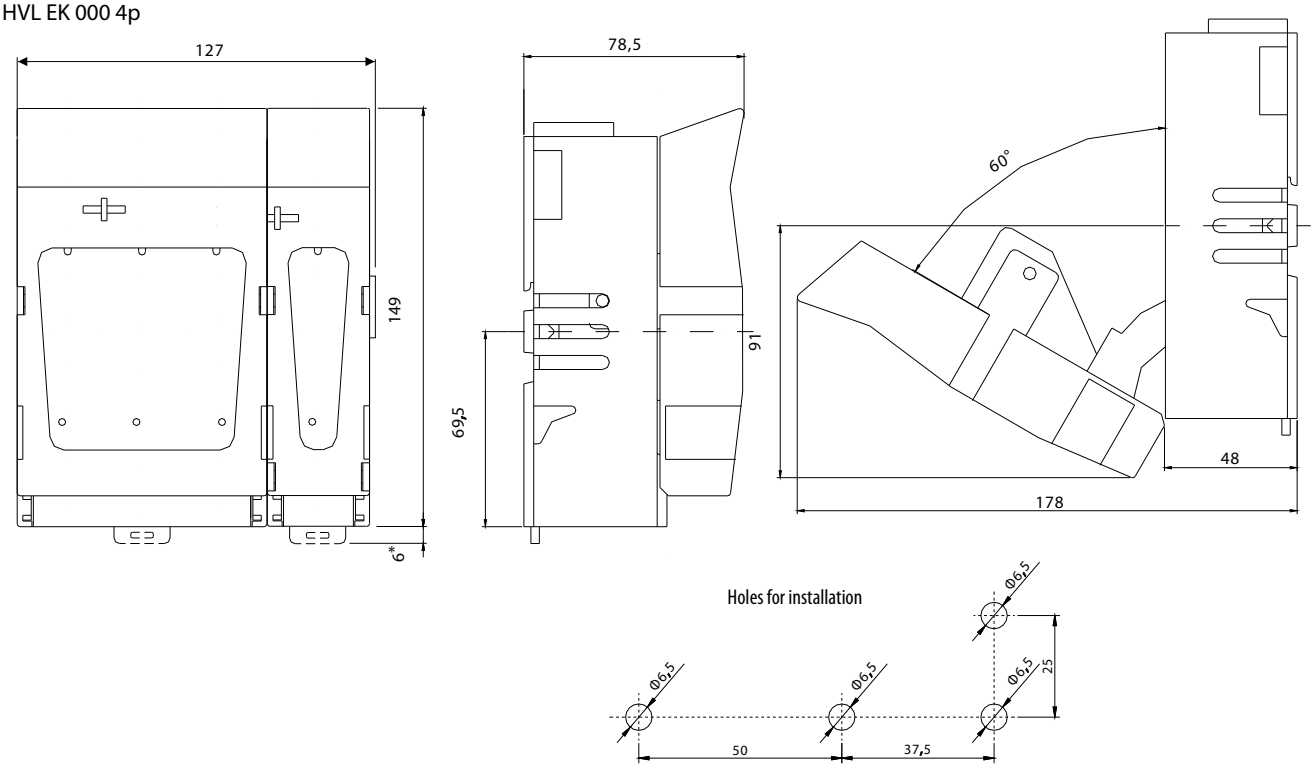
HVL EK 000 1p



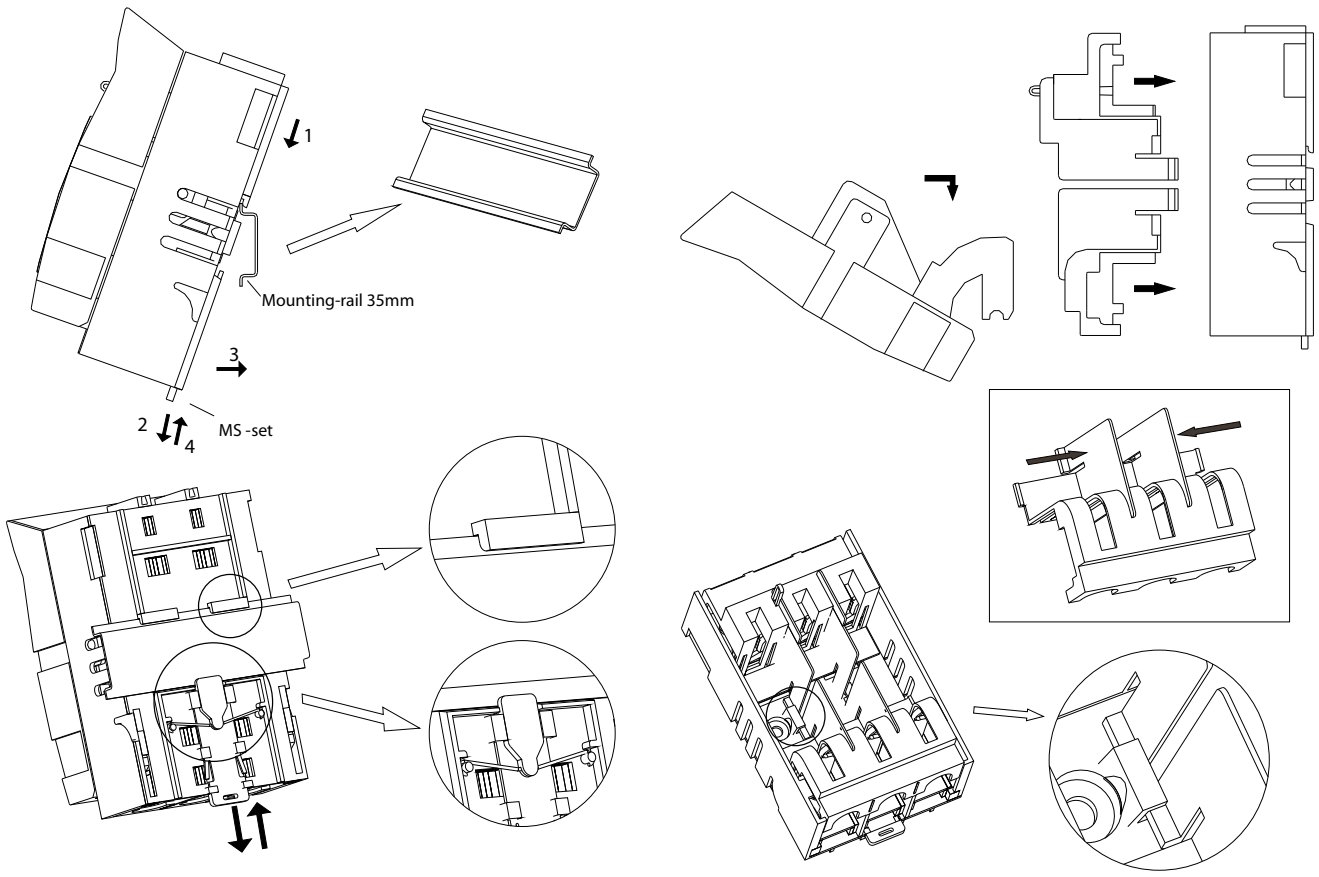
HVL EK 000 3p



HVL EK 000 4p

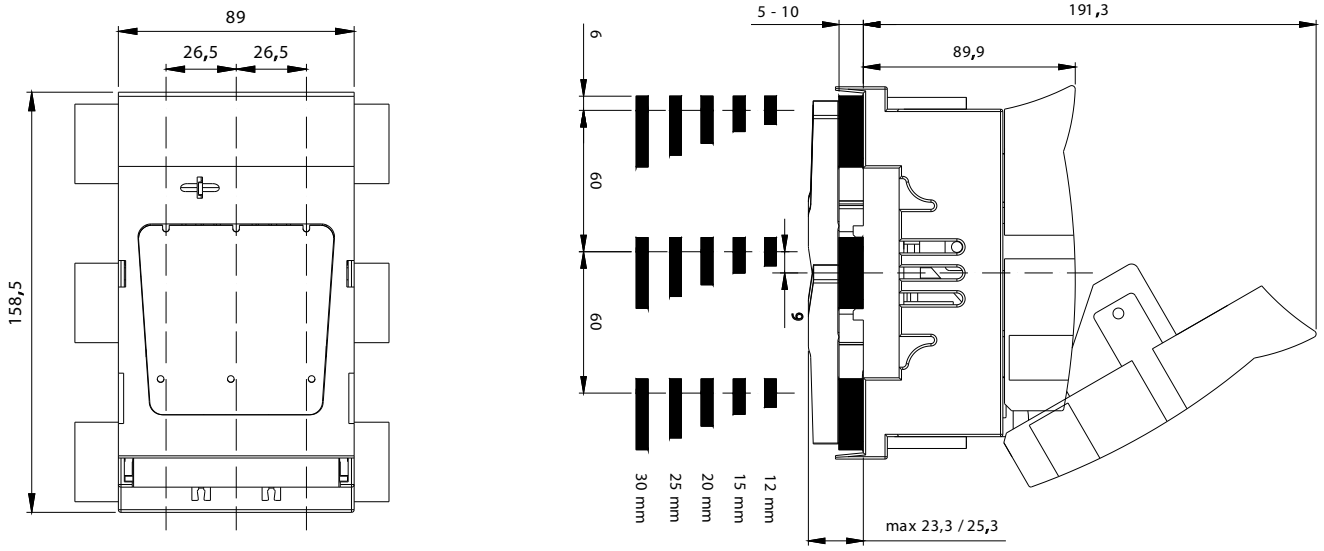


HVL EK 000 – options and Installation guide

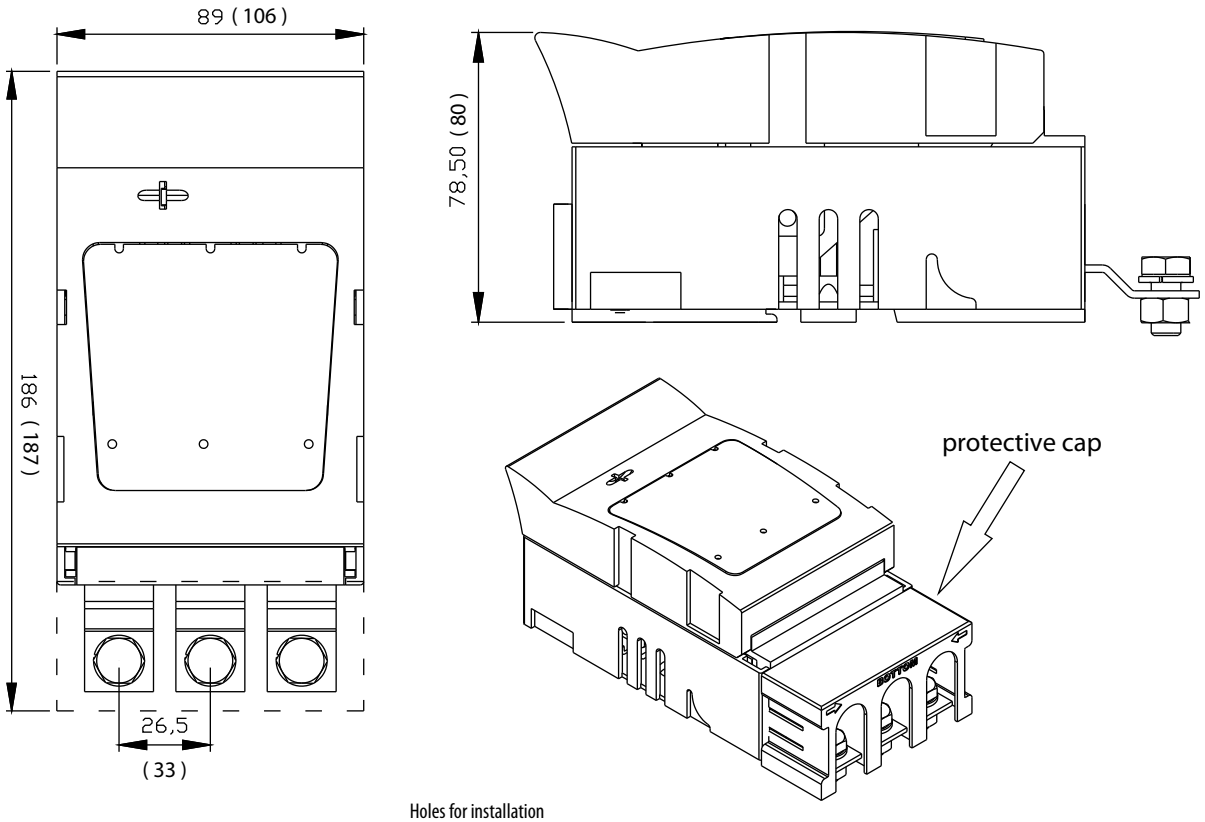


Dimensions

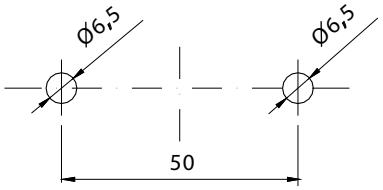
HVL-B EK 000 3p



HVL-P EK 000 3P

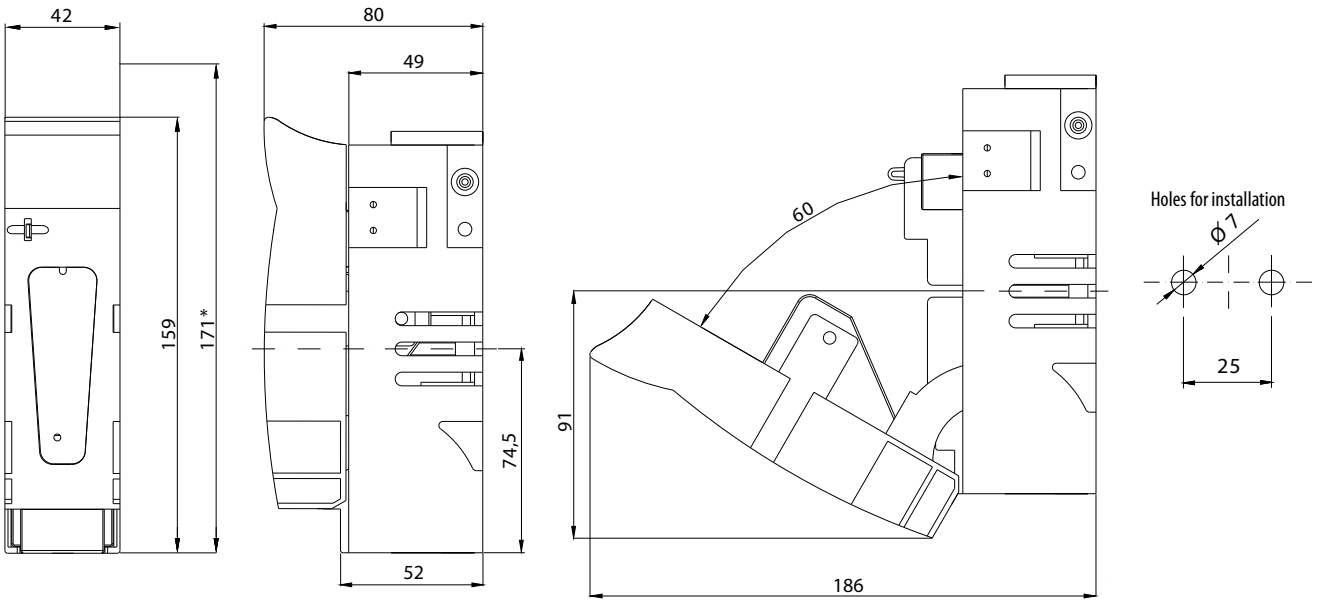


Holes for installation

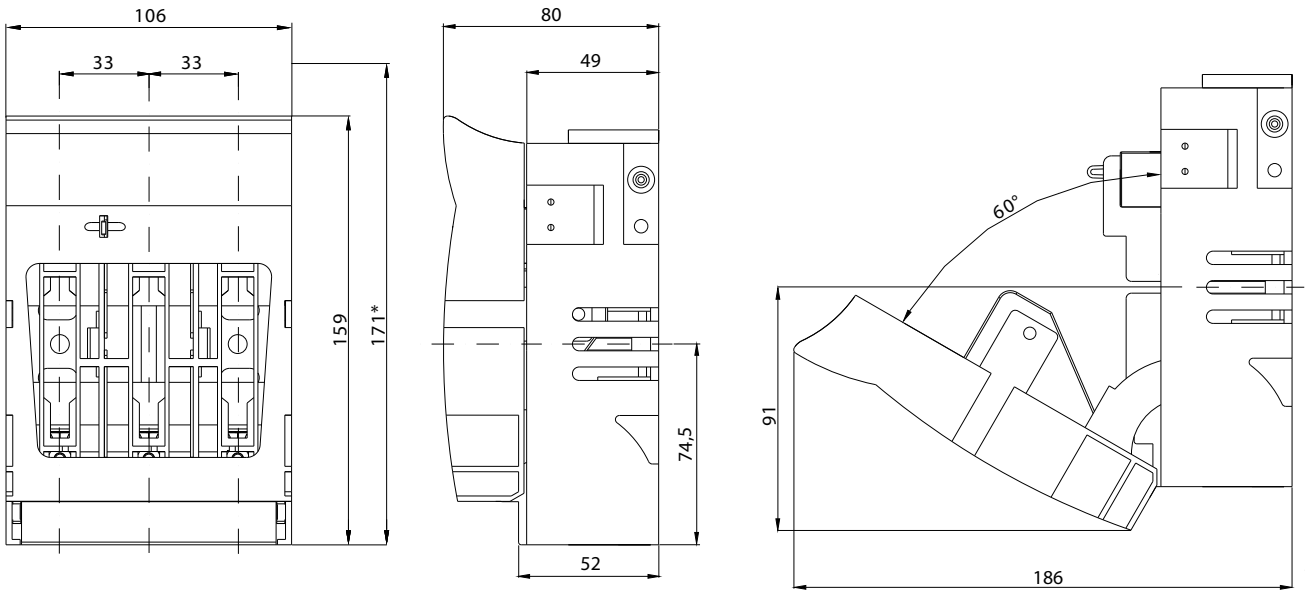


HVL-P EK 000 3p is supplied complete with a bottom covering protection. HVL-P EK 00 3p is supplied without protective coatings.

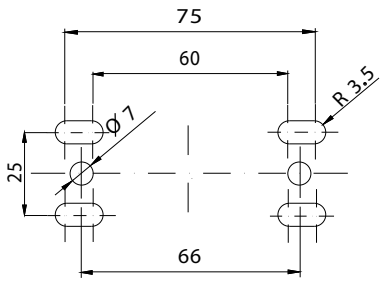
HVL EK 00 1p



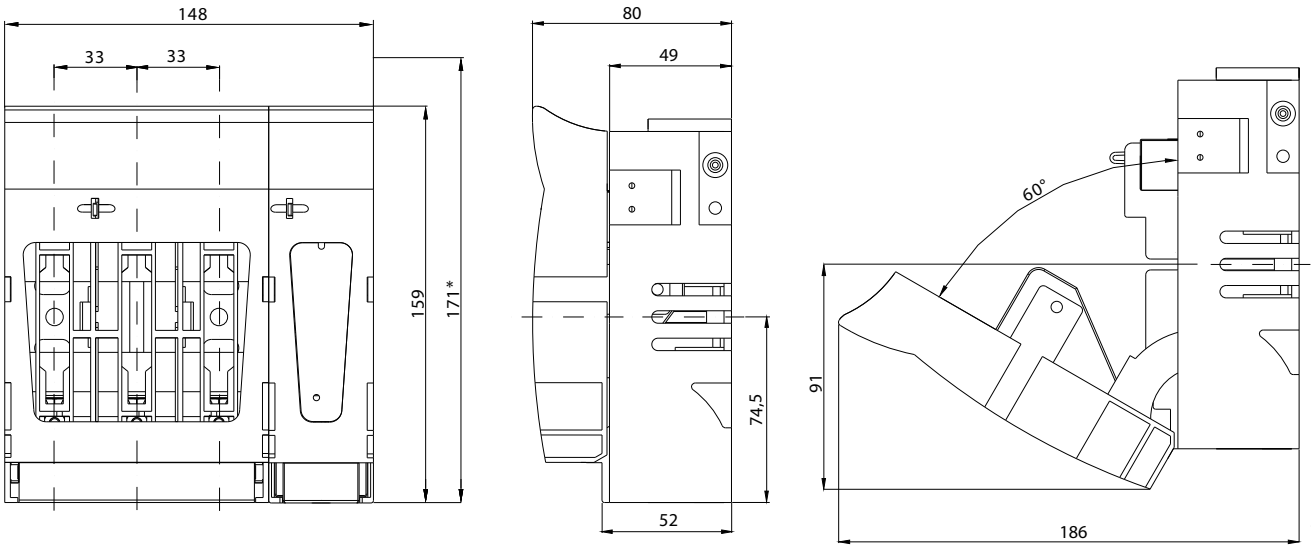
HVL EK 00 3p



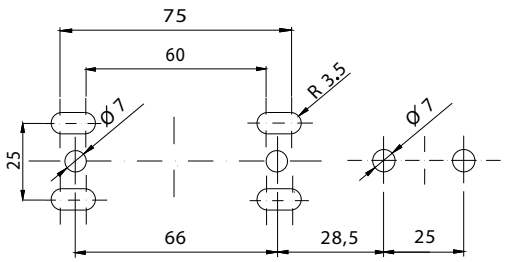
Holes for installation



HVL EK 00 4p



Holes for installation



* with set for mounting on two mounting rails in distance (125mm, 150mm)