

BATTERY FUSE



ETI BATTERY FUSE
 Obreza 5
 SI-1411 izlake
 NH3L 
630A gBat
 1500V d.c. 100kA
 L/R=3ms IEC 60269-7
 004110779
 RoHS ENEC CE 
 Made in Slovenia W3/2022

$\frac{L}{+}$
 BATTERY
 FUSE

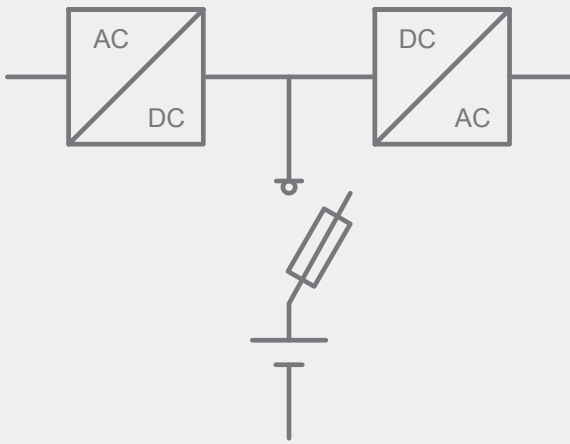
BECAUSE EVERY SECOND COUNTS

Application

- in battery storage systems
- in UPS systems
- in e-mobility

Battery Protection Fuses

Battery storage fuse selection

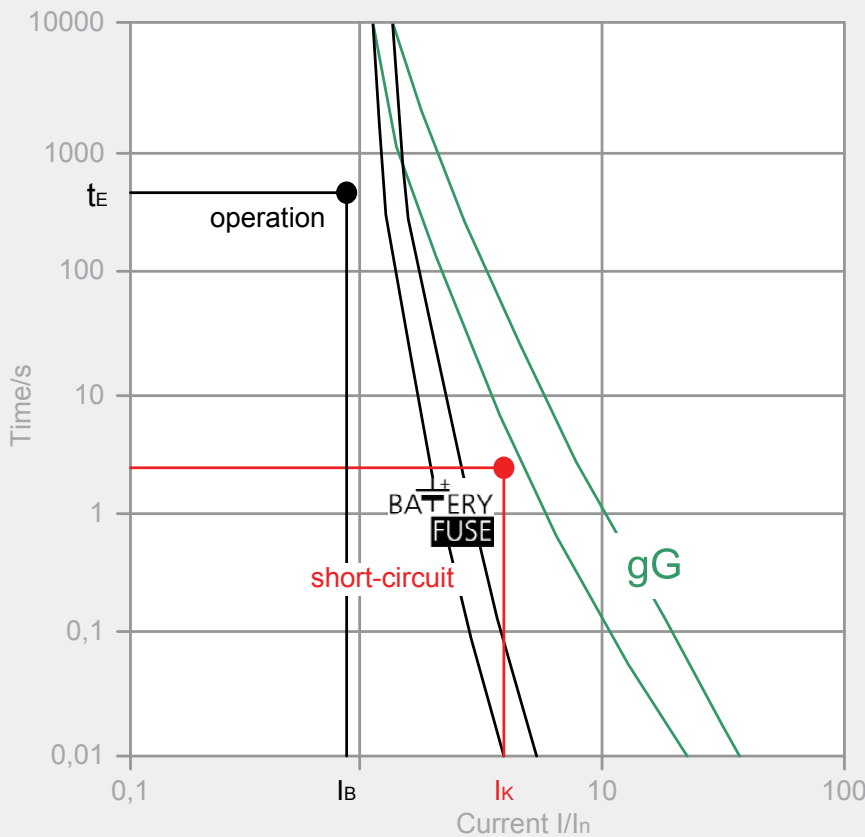


Short circuit current

- Short circuit current depending on battery model, type and capacity, low compared to operating current
- Short circuit current has to be interrupted in <5 seconds
- Required steep characteristics: protection with Battery fuse-link required!

Operating current

- Operating current depends on battery storage specification
- Battery operation: voltage of DC link circuit decreases to the final discharge voltage
- Consider maximum current at final discharge voltage for fuse-link selection



In accordance with IEC 60269-7

Short circuit point (I_K)

- Short circuit current depending on battery model and type
- Manufacturer datasheets to include short circuit current according to IEC896
- Operating point has to be in adequate distance below the curve
- Short-circuit point has to be above the range of tolerance of the curve

Operating point (t_E/I_B)

- maximum operating current I_B has to be calculated from battery storage true power and final discharge voltage $U_E: I_B = P_W/U_E$
- t_E is the back-up time of battery storage system

When choosing fuse switch disconnector consider fuse-link power dissipation!

$$P_d(I_B) < P_y$$

Power dissipation of fuse-link at maximal operating current (I_B):

$$P_d(I_B) = (I_B/I_n)^2 \times P_d(I_n)$$

- I_B - maximal operating current
- $P_d(I_B)$ -power dissipation of fuse-link at maximal operating current
- $P_d(I_n)$ -power dissipation of fuse-link at nominal current
- P_y - maximal permissible fuse-link power dissipation mounted in fuse switch disconnector

NH gBat fuse-link 700V d.c.

General characteristics	
Rated voltage	700V d.c. (L/R=10ms)
Breaking capacity	30kA d.c.
Standard	IEC 60269-7
Application	Battery protection



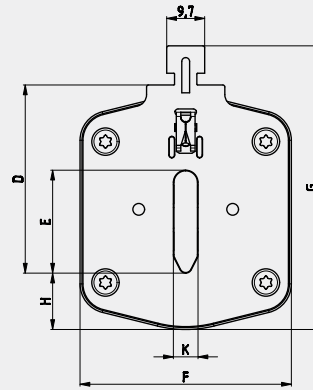
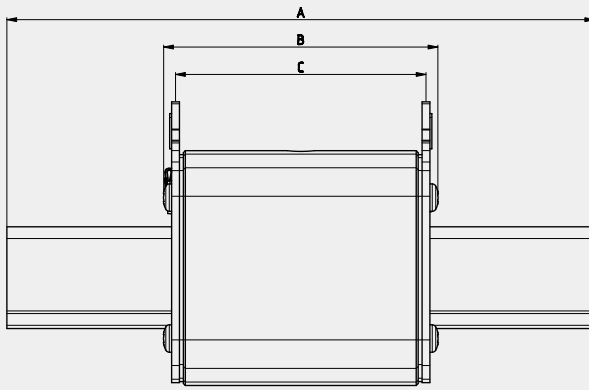
NH gBat fuse-link 700 V d.c.											
Size	I_n	Standard indicator	Striker indicator	Standard indicator S110mm	Power dissipation	Power dissipation $0,7 \times I_n$	Pre-arcing Joule integral L/R=10ms	Operating Joule integral L/R=10ms	For use with	Weight	Pack.
	[A]	pic. 1	pic. 2	pic. 3	[W]	[W]	[A ² s]	[A ² s]		[g]	[pcs]
1	40	004723289	004723309	004723299	6	2,7	250	1.000	PK1DC 004122025	420	3/24
	50	004723290	004723310	004723300	7	3,1	449	1.796			
	63	004723291	004723311	004723301	9	4	700	2.800			
	80	004723292	004723312	004723302	12	5,4	1.200	4.800			
	100	004723293	004723313	004723303	15	6,7	1.650	6.600			
	125	004723294	004723314	004723304	20	9	2.200	8.800			
	160	004723295	004723315	004723305	26	11,7	4.300	17.200			
	200	004723296	004723316	004723306	32	14,4	8.500	34.000			
	224	004723297	004723317	004723307	37	16,6	10.000	40.000			
	250	004723298	004723318	004723308	43	19,3	15.000	60.000			
2	125	004724290	004724310	004724300	20	9	2.200	11.682	PK2DC 004122024	660	3/24
	160	004724291	004724311	004724301	26	11,7	4.300	22.833			
	200	004724292	004724312	004724302	32	14,4	8.500	45.135			
	224	004724293	004724313	004724303	37	16,6	10.000	53.100			
	250	004724294	004724314	004724304	43	19,3	15.000	79.650			
	315	004724295	004724315	004724305	57	26,6	20.000	106.200			
	350	004724296	004724316	004724306	67	30	28.000	148.680			
3	250	004725290	004725304	004725297	43	19,3	15.000	75.000	PK3DC 004122023	870	3/24
	315	004725291	004725305	004725298	57	26,6	20.000	100.000			
	350	004725292	004725306	004725299	67	30	28.000	140.000			
	400	004725293	004725307	004725300	76	34,2	32.000	160.000			
	425	004725294	004725308	004725301	84	37,8	40.000	200.000			
	500	004725295	004725309	004725302	110	49,5	44.000	220.000			
	630	004725296	004725310	004725303	160	72	80.000	400.000			

Green protect - gBat

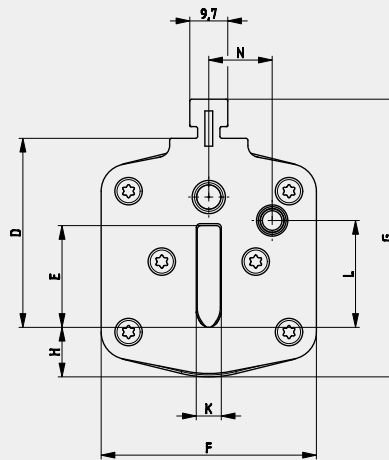
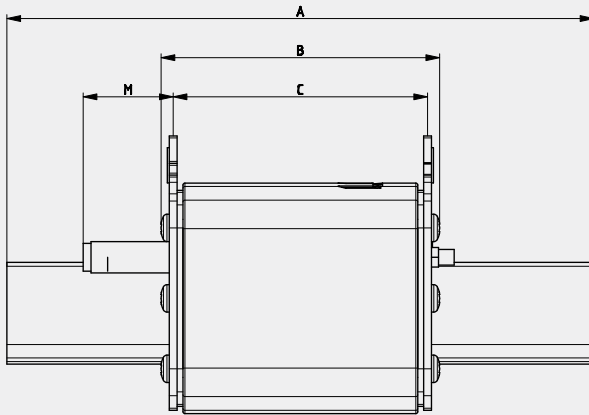


Dimensions

pic. 1

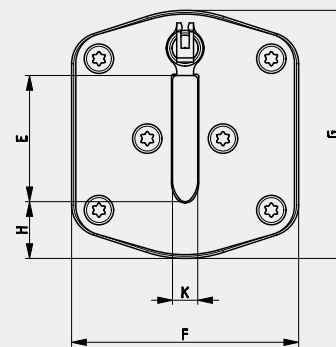
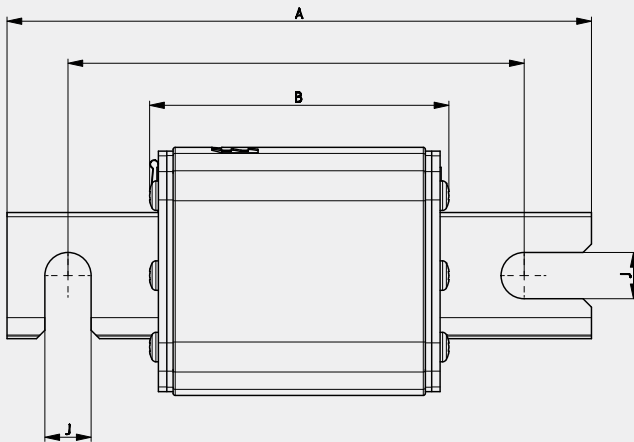


pic. 2



Size	A	B	C	D	E	F	G	H	K	L	M	M
1	135	73	65	40	24	46	62	12	6	20,5	27,5	13,7
2	150	73	65	48	30	54	71	13	6	27,3	27,5	16,2
3	150	73	65	60	37	64	84	14	6	35,6	27,5	17

pic. 3



Size	A	B	E	F	G	H	J	K
1	140	72	24	46	51	12	11	6
2	140	72	30	54	59	13	11	6
3	140	72	37	64	70	14	11	6