

BATTERY FUSE



ETI BATTERY FUSE
 Obreznja 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

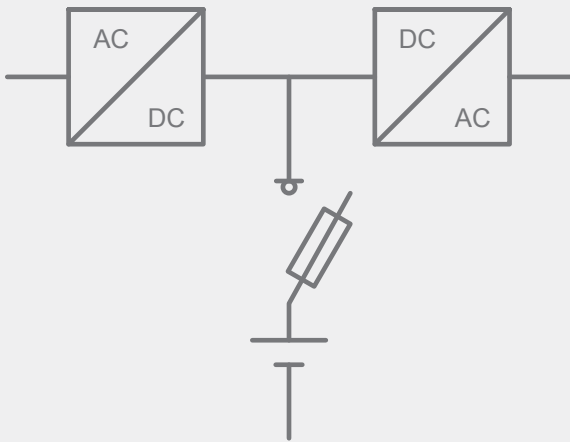
BECAUSE EVERY SECOND COUNTS

Application

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

Battery Protection Fuses

Battery storage fuse selection

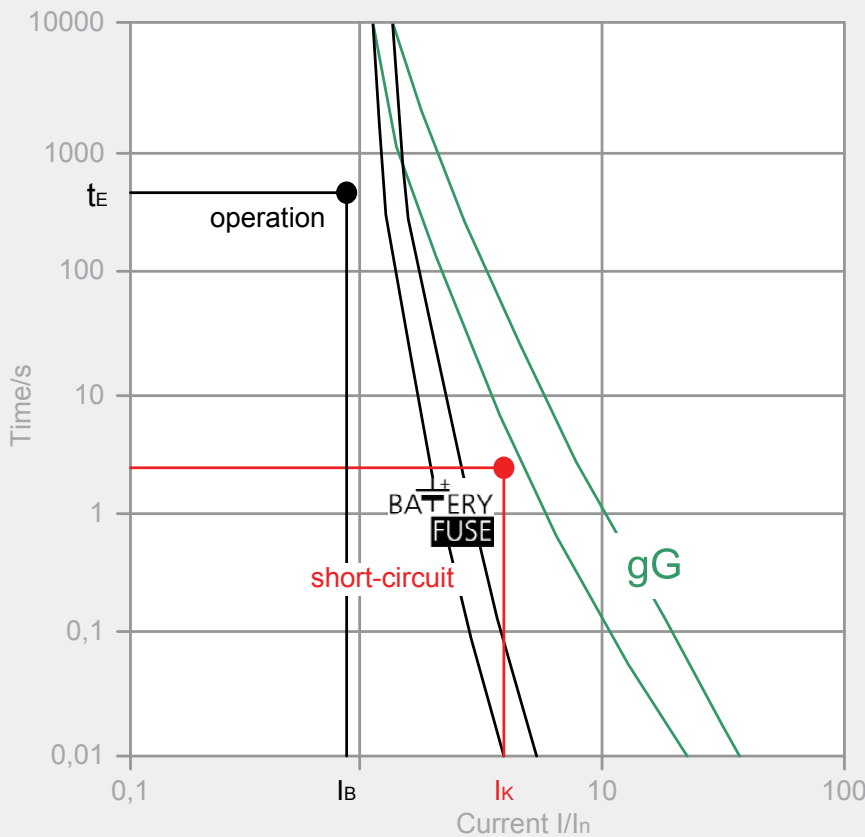


Short circuit current

- 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 80V d.c.

General characteristics	
Rated voltage	80V d.c., L/R=10ms
Breaking capacity	50kA d.c..
Standard	IEC 60269-7
Application	Battery protection
Fuse base	NH00C, NH00: 004123001 PK00 NH1C, NH1: 004123100 PK1

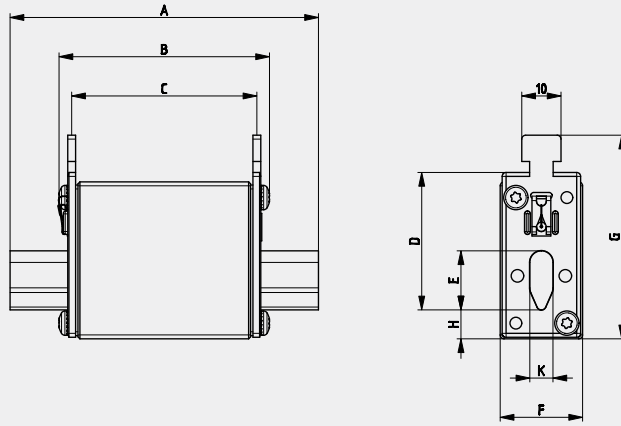
NH gBat fuse-link 80V d.c.								
Size	I_n	Standard indicator	Power dissipation	Power dissipation $0,7 \times I_n$	Pre-arcing Joule integral	Operating Joule integral	Weight	Pack.
	[A]		[W]	[W]	[A ² s]	[A ² s]	[g]	[pcs]
00C pic. 1	20	004110075	4,6	2	360	414	125	3/120
	25	004110076	5,8	2,6	710	817		
	32	004110077	6,6	3	920	1.058		
	40	004110078	9,4	4,2	1.440	1.656		
	50	004110079	11,1	5	2.820	3.243		
00 pic. 1	63	004110080	11,7	5,2	4.160	4.784	173	3/90
	80	004110081	10,4	4,7	4.670	5.371		
	100	004110082	11,1	5	9.360	10.764		
	125	004110083	13,4	6	14.750	16.963		
	160	004110084	15,5	7	27.880	32.062		
1C pic. 2	20	004110085	6,3	2,8	360	414	233	3/45
	25	004110086	7,3	3,3	710	817		
	32	004110087	9	4	920	1.058		
	40	004110088	11,2	5	1.440	1.656		
	50	004110089	14,5	6,5	2.820	3.243		
	63	004110090	16,8	7,5	4.160	4.784		
	80	004110091	11,4	5,1	4.670	5.371		
	100	004110092	12	5,4	9.360	10.764		
	125	004110093	14,8	6,6	14.750	16.963		
1 pic. 3	160	004110094	17,6	7,9	27.880	32.062	430	3/24
	200	004110095	26,6	11,9	41.990	48.289		
	250	004110096	31	13,9	81.000	93.150		



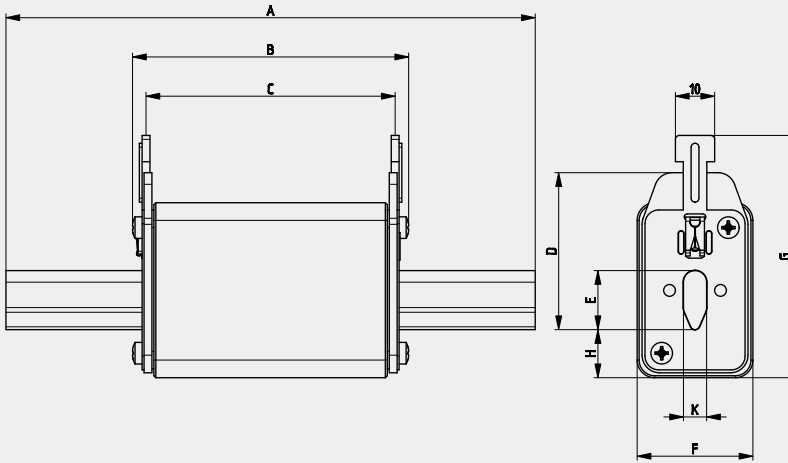
Green protect - gBat

Dimensions

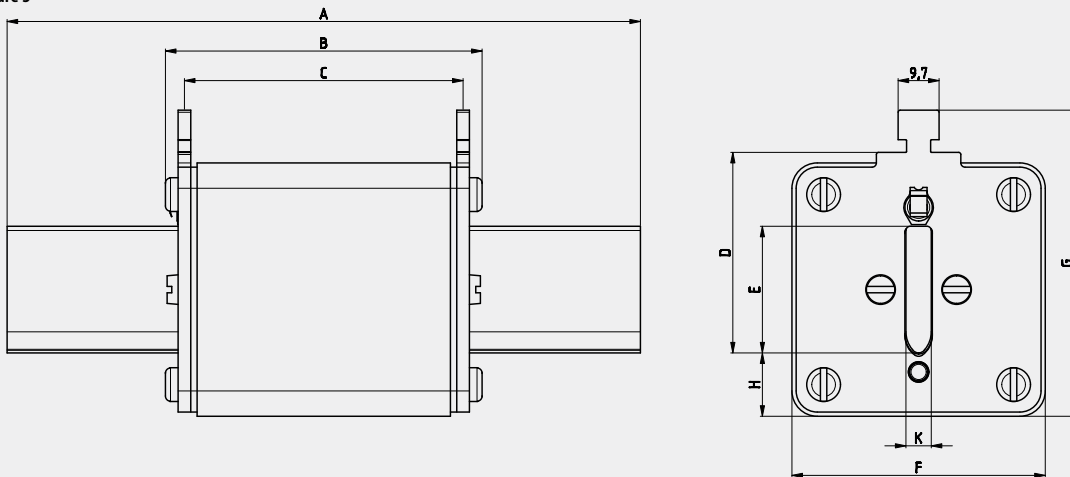
Picture 1



Picture 2



Picture 3



	A	B	C	D	E	F	G	H	K
00 C	79	53	47	35	15	21	52	7,5	6
00	79	53	47	35	15	28	56	12	6
1 C	135	68	65	40	15	28	61	12	6
1	135	72	65	40	20	46	65	14	6