

Fuses for DC Energy Storage(ES) Applications

SIBA ES(Energy Storage) fuses have been 100% specifically designed and tested for the stringent requirements of Energy Storage (ES) applications, and have been utilized by large OEM's globally.

Battery Energy Storage applications have special demanding requirements of fuses for the protection of devices downstream. The fault conditions to the input of the DC side of the converter generally have very high short circuit current capability and the inductance of the fault loop is very low, thus yielding L/R time constants that generally are 3ms or less. With the L/R being low, the rate of rise of the current di/dt is very large – meaning that very large currents are obtained in a very short time. Devices that need to be protected have a peak withstand current capability that the fuse must limit this current to this value or less than and must coordinate with the battery fuse. This requires careful analysis of the system to determine the fault loop L/R time constant along with: the maximum voltage encountered, discharge current and current charging current profiles, cycles per day, and maximum ambient temperature that the fuse is exposed to so that proper fusing can be provided.

When you need solutions, you will find that SIBA Fuses is the one stop you need to make to resolve all your Energy Storage protection requirements. SIBA Fuses US Headquarters is located in West Caldwell, NJ. We have a full-time Sales and Engineering staff, who are anxious to assist with time critical requests. We're very confident you will appreciate our efficiency, product knowledge, superior technology, and the imaginative solutions that we can offer. Give us a call, or send us an email. We would appreciate having you as one of our many satisfied SIBA FUSES customers.

440V_{DC}, 25A - 100A



900V_{DC}, 63A - 350A



900V_{DC}, 50A - 800A



1 000V_{DC}, 3.15A - 63A



1 000V_{DC}, 400A - 630A



1 100V_{DC}, 40A - 400A



1 200V_{DC}, 1 000A - 2 000A



1 500V_{DC}, 200A - 630A



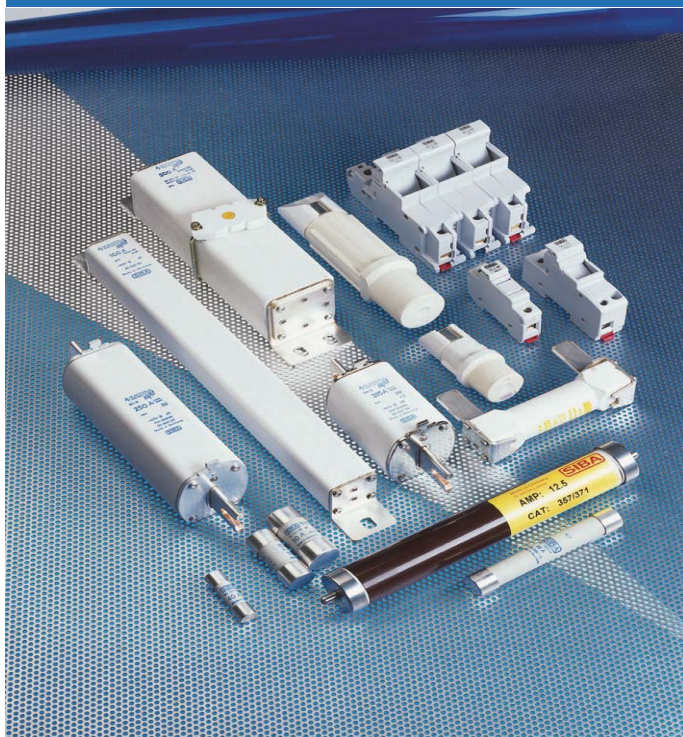
SIBA LLC

29 Fairfield Place
West Caldwell, New Jersey 07006

Phone 1-973-575-7422
Fax 1-973-575-5858

portal: www.siballc.net
e-mail: info@sibafuse.com

Fuses for DC Energy Storage(ES) Applications



Class: aR / gR / gRL(gS)

Voltage ratings: 440V_{DC} to 4200V_{DC}

Current ratings: 6A to 2000A

Standards: UL 248-13
IEC 60269-4
IEC 60077-5
VDE 0636-40

SIBA DC Fuses are available for clip-mounted and bolt design. The fuses are used for traction, battery and railway power circuit applications.

Due to the variety of applications, please contact SIBA for information regarding use at different voltage ratings, class or L/R time constants

Approvals:  E180276

Features and Benefits



Designed for heavy duty applications



Developed according to customer's specifications



Designed for long life under severe service conditions

Fuses for DC Energy Storage(ES) Applications

Article Number	Description	Selection Guide	Technical Data
440V _{DC} Breaking Capacity 30kA			
14x51mm			
5012434		No blown fuse indication	343
5012634		With 2.5N striker	
5012934	63.5mm mounting centers	No blown fuse indication	
22x58mm			
5014034		No blown fuse indication	345
5014234		With 2.5N striker	
5014534	80mm mounting centers	No blown fuse indication	
5014634	PCB mounting	No blown fuse indication	
900V _{DC} Breaking Capacity 226kA(L/R=2.7ms) - See URS section - Contact SIBA			
SQB1 - DC - 082			
2054534	Bladed - Through Hole	With fitting for microswitch	347
SQB1 - See URS section			
2071832	Bladed - US Long	With fitting for microswitch	465 - 467
2071931		No blown fuse indication	
2071332		With blown fuse indication	
2071432	Bladed - DIN 110mm	With fitting for microswitch	
2071532		With fitting for microswitch	
2076331		No blown fuse indication	
2076432	Threaded - 5/16" - UNC	With fitting for microswitch	
2076031		No blown fuse indication	
2076032		With blown fuse indication	
2076132	Threaded - DIN M8	With fitting for microswitch	
SQB2 - See URS section			
2072832	Bladed - US Long	With fitting for microswitch	470 - 472
2072931		No blown fuse indication	
2072332		With blown fuse indication	
2072432	Bladed - DIN 110mm	With fitting for microswitch	
2072532		With fitting for microswitch	
2077632		With fitting for microswitch	
2077331	Threaded - 3/8" - UNC	No blown fuse indication	
2077432		With blown fuse indication	
2077032		With blown fuse indication	
2077132	Threaded - DIN M10	With blown fuse indication	
SQB3 - See URS section			
2073832	Bladed - US Long	With fitting for microswitch	477 - 479
2073931		No blown fuse indication	
2073332		With blown fuse indication	
2073432	Bladed - DIN 110mm	No blown fuse indication	
2073532		With fitting for microswitch	
2078632		With fitting for microswitch	
2078331	Threaded - 1/2" - UNC	No blown fuse indication	
2078432		With fitting for microswitch	
2078031		No blown fuse indication	
2078032	Threaded - DIN M12	With blown fuse indication	
2078132		With fitting for microswitch	
1000V _{DC} Breaking Capacity 30kA			
9008010	20mm x 127 mm	No blown fuse indication	348 - 349
9008210	20mm x 127 mm	With blown fuse indication	
1000V _{DC} Breaking Capacity 200kA			
9028026	SQB DC103 - M12	With fitting for microswitch	350
9028125	SQB DC103 - Bladed - US Long	With fitting for microswitch	
9028126		No blown fuse indication	
9054025		No blown fuse indication	
9054026	SQB DC101 - Bladed - DIN 110	With fitting for microswitch	

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Phone 1-973-575-7422

Fax 1-973-575-5858

29 Fairfield Place
West Caldwell, New Jersey 07006portal: www.siballc.net
e-mail: info@sibafuse.com

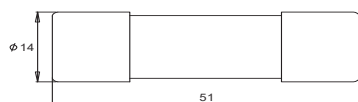
Fuses for DC Energy Storage(ES) Applications

Article Number	Description		Selection Guide	Technical Data
1000V _{DC} Breaking Capacity 200kA				
9029025	SQB DC104 - 2XM12	No blown fuse indication	351	—
9029026		With fitting for microswitch		
9029125	SQB DC104 - 4XM10	No blown fuse indication		
9029126		With fitting for microswitch		
1200V _{DC} Breaking Capacity 100kA				
2002834	NH1XL	With blown fuse indication	352	—
2002933	NH1XL-SM160	No blown fuse indication		
2002934		With fitting for microswitch		
9039025	SQB DC94 - 2XM12	No blown fuse indication	353	—
9039026		With fitting for microswitch		
9039125	SQB DC94 - 4XM10	No blown fuse indication		
9039126		With fitting for microswitch		
1500V _{DC} Breaking Capacity 100kA				
9044125	NH1XL	No blown fuse indication	354	—
9044525	SQB1 - Bladed - US Short			
9044325	NH3L	No blown fuse indication	355	—
9044326		With blown fuse indication		
9044725	SQB3 - Bladed - US Short	No blown fuse indication		
9044727		With fitting for microswitch		
9044825	SQB3 - Bladed - DIN	No blown fuse indication		
9044826		With blown fuse indication		
9039225	SQB DC94 - 2XM12	No blown fuse indication		
9039226		With fitting for microswitch		
9039325	SQB DC94 - 4XM10	No blown fuse indication		
9039326		With blown fuse indication		

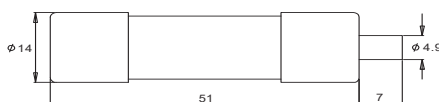
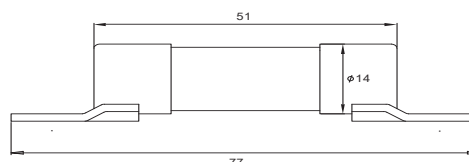
URDC - ES		Rated Voltage		Rated Breaking Test Class			Standard(s)	
		[U _n]	Capacity	Voltage	gRL	UL 248-13		
		440V _{DC}	30kA @ L/R=30ms	440V _{DC}	(gS)	IEC 60269-4		
						VDE 0636-40		
14x51mm						*ES (Energy Storage)		
Rated current I _n [A]	Without indicator Article Number	With striker 2.5N striker* Article Number	Without indicator 63mm Article Number		Pre-arcing I ² t [A ² s]	Total I ² t* @ 440V _{DC} [A ² s]	Power loss [W]	
10	5012434.10	5012634.10	5012934.10		8	70	1.9	
12	5012434.12	5012634.12	5012934.12		12	105	2.3	
16	5012434.16	5012634.16	5012934.16		25	210	2.8	
20	5012434.20	5012634.20	5012934.20		46	400	3.0	
25	5012434.25	5012634.25	5012934.25		100	850	3.2	
30	5012434.30	5012634.30	5012934.30		190	1 600	3.8	
32	5012434.32	5012634.32	5012934.32		250	2 100	4.0	
35	5012434.35	5012634.35	5012934.35		370	3 150	4.2	
40	5012434.40	5012634.40	5012934.40		420	3 600	4.4	
		*Striker minimum operating Voltage 10V						*L/R=30ms
	Weight [kg/1]							
	0.02	0.02	0.028					

Coefficients for Heavy Duty Applications

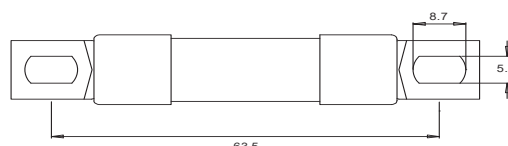
a	A2	B1 _{max}	B2	Cf3
130	1.0	1.25	0.6	0.8



5012434



5012634



5012934



Accessories

Article Description	Article Number	Page	Article Description	Article Number	Page
Fuse module, 1-Pole	5105805.1DC	558	Fuse clips screw mounting	6100101.2	563
Fuse module, 1-Pole w/neon lamp indicator	5105805.1LDC		Clamping plate for 6100101.2	6301701	
Fuse module, 2-Pole	5105805.2DC		Fuse clips PCB mounting	5805806	
Fuse module, 2-Pole w/neon lamp indicator	5105805.2LDC				

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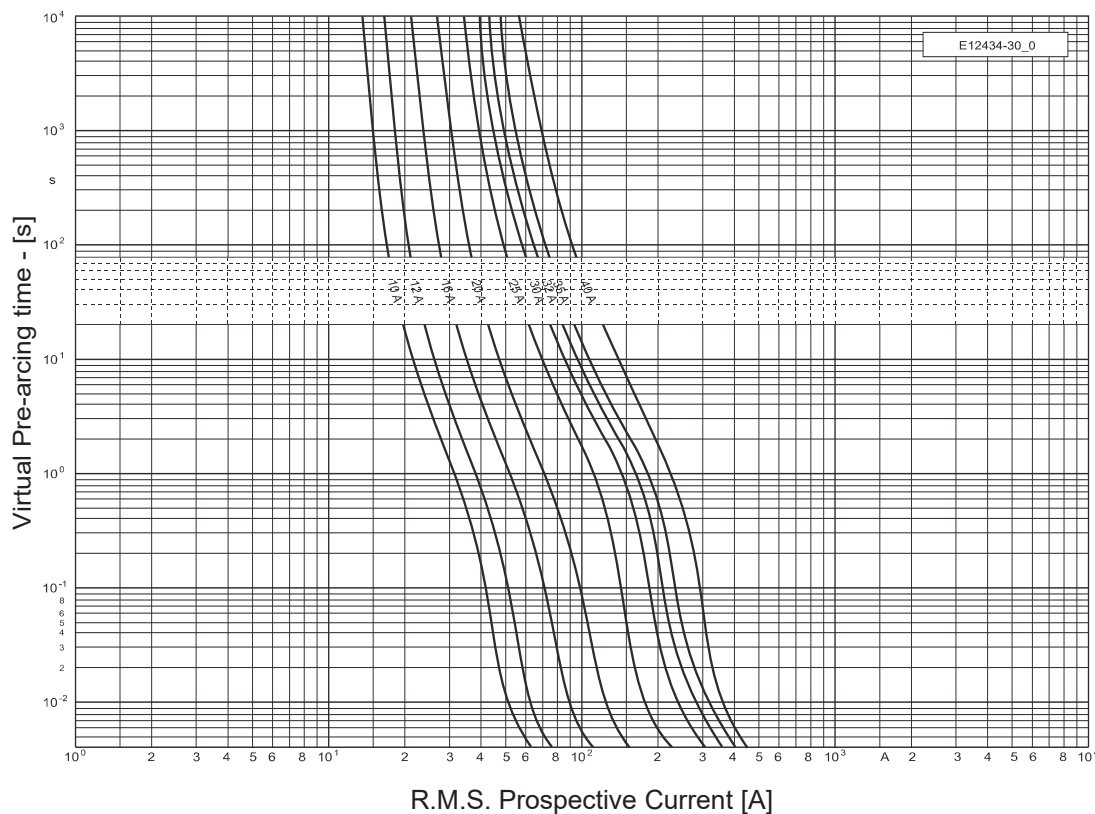
Phone 1-973-575-7422
Fax 1-973-575-5858

29 Fairfield Place
West Caldwell, New Jersey 07006

portal: www.siballc.net
e-mail: info@sibafuse.com

URDC - ES	Rated Voltage [U _n] 440V _{DC}	Rated Breaking Test Capacity 30kA @ L/R=30ms	Voltage 440V _{DC}	Class gRL (gS)	Standard(s) UL 248-13 IEC 60269-4 VDE 0636-40
		14x51mm			*ES (Energy Storage)

Time-Current Characteristics



Full size graphs available upon request

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URDC - ES	Rated Voltage [U _n] 440V _{DC}	Rated Breaking Test Class Capacity 30kA @ L/R=30ms	Voltage 440V _{DC}	gRL (gS)	Standard(s) UL 248-13 IEC 60269-4 VDE 0636-4
22x58mm					*ES (Energy Storage)

Rated current I _n [A]	Without indicator Article Number	With 2.5N striker ^a Article Number	Without indicator 80mm Article Number	Without indicator PCB Article Number	Pre-arcing I ² t [A ² s]	Total I ² t* @ 440V _{DC} [A ² s]	Power loss [W]
25	5014034.25	5014234.25	5014534.25	5014634.25	100	800	3.6
30	5014034.30	5014234.30	5014534.30	5014634.30	190	1 500	4.6
32	5014034.32	5014234.32	5014534.32	5014634.32	250	2 000	4.8
35	5014034.35	5014234.35	5014534.35	5014634.35	370	2 900	5.0
40	5014034.40	5014234.40	5014534.40	5014634.40	420	3 300	5.2
50	5014034.50	5014234.50	5014534.50	5014634.50	870	6 800	5.4
63	5014034.63	5014234.63	5014534.63	5014634.63	1 300	10 200	6.8
80	5014034.80	5014234.80	5014534.80	5014634.80	2 500	19 500	7.5
100	5014034.100	5014234.100	5014534.100	5014634.100	4 600	35 800	9.7

^aStriker minimum operating Voltage 10V

*L/R=30ms

Weight [kg/1]

0.061

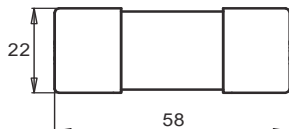
0.057

0.078

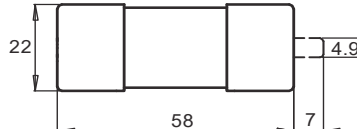
0.069

Coefficients for Heavy Duty Applications

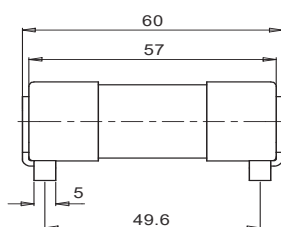
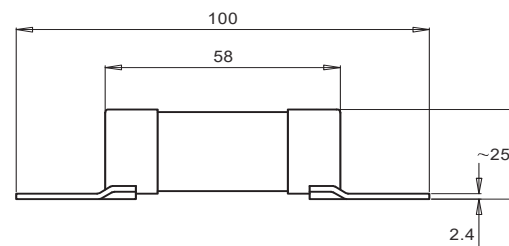
a	A2	B1 _{max}	B2	Cf3
130	1.0	1.25	0.6	0.8



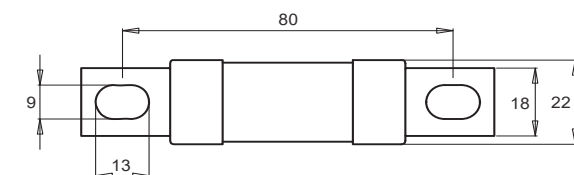
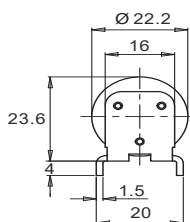
5014034



5014234



5014634



5014534



Accessories

Article Description	Article Number	Page	Article Description	Article Number	Page
Fuse Base 1-Pole	2118928	546	Fuse clips screw mounting	6100201.3	564
	2119028		Clamping plate for 6100101.3	6300201	
			Terminal link for 6100201.3	6100201.4	
			Fuse clips PCB mounting	5806006	

SIBA LLC

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Fax 1-973-575-5858

29 Fairfield Place
West Caldwell, New Jersey 07006

portal: www.siballc.net
e-mail: info@sibafuse.com

URDC -ES

Rated Voltage

[U_n]440V_{DC}

Rated Breaking Test

Capacity

30kA @ L/R=30ms

Voltage

440V_{DC}

Class

gRL

(gS)

Standard(s)

UL 248-13

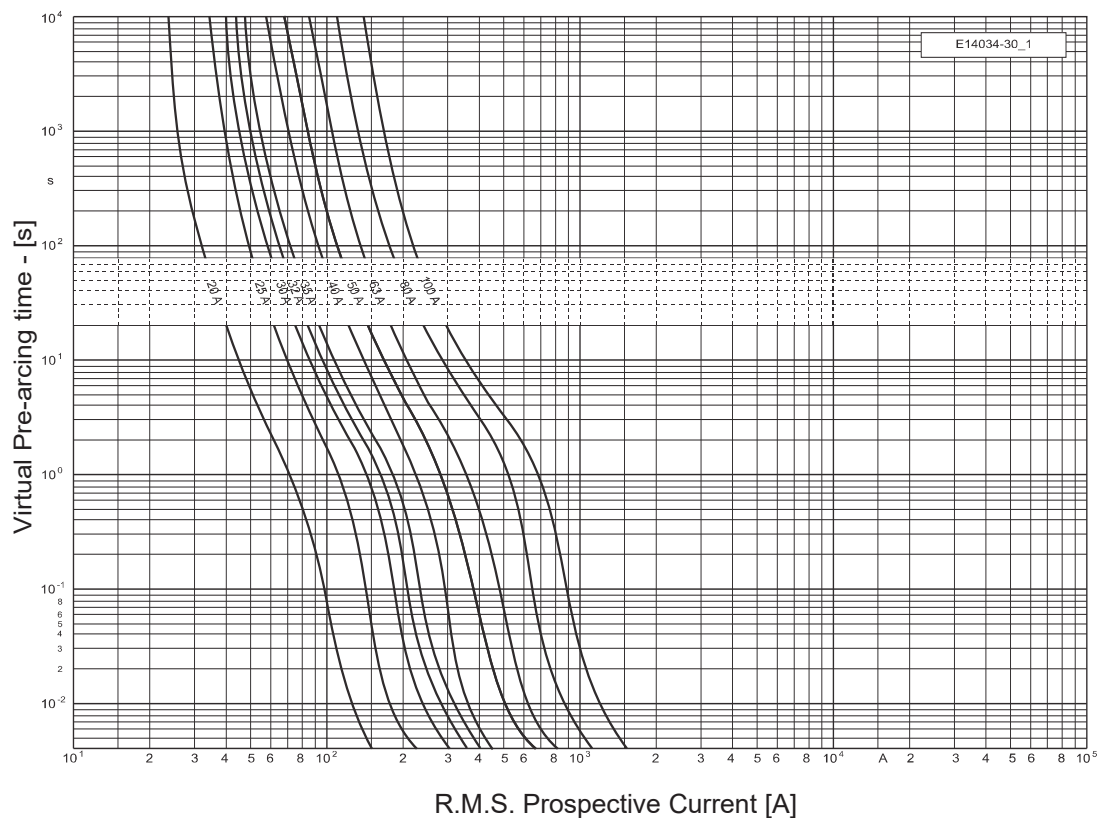
IEC 60269-4

VDE 0636-4

22x58mm

*ES (Energy Storage)

Time-Current Characteristics



Full size graphs available upon request

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Fax 1-973-575-5858

portal: www.siballc.nete-mail: info@sibafuse.com

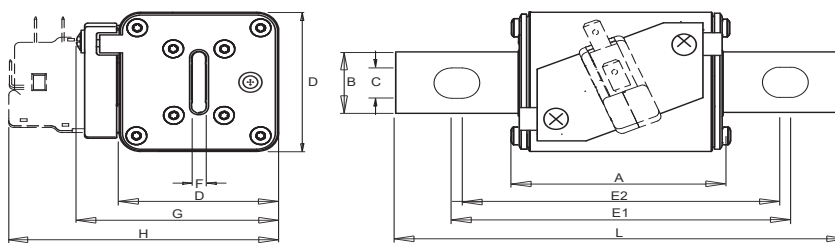
URDC - ES	Rated Voltage	Rated Breaking Test	Class	Standard(s)
	[U _n] 900V _{DC}	Capacity 226kA @ L/R = 2.7ms	gRL 900V _{DC}	UL 248-13 IEC 60269-4 VDE 0636-4
UL File E180276	SQB - DC082		*ES (Energy Storage)	

Rated current I _n [A]	Bolted blade with fitting for microswitch Article Number		Pre-arcing I ² t [A ² s]	Total I ² t* @ 900V _{DC} [A ² s]	Power loss [W]
63	2054534.63		865	2 600	12
80	2054534.80		1 300	3 900	13
100	2054534.100		2 500	7 500	14
125	2054534.125		4 600	13 600	18
160	2054534.160		7 800	23 100	22
200	2054534.200		12 300	36 500	28
250	2054534.250		23 700	70 200	34
315	2054534.315		42 400	126 000	37
350	2054534.350		55 400	164 000	43
Weight [kg/1]			* L/R=2.7ms		

Coefficients for Heavy Duty Applications				
a	A2	B1 _{max}	B2	Cf3
130	0.9	1.25	0.5	0.8

For Time-Current Curves, contact SIBA 973-575-7422 or e-mail
info@sibafuse.com.

Dimensions	
[in / mm]	
A	3.15 / 80
B	1.02 / 26
C	0.41 / 10.3
D	2.32 / 59
E1	5.12 / 130
E2	5.39 / 137
F	0.24 / 6
G	2.95 / 75
H	3.86 / 98
L	7.13 / 181



Accessories

Article Description	Article Number	Page	Article Description	Article Number	Page
			Microswitch - N0-NC, UL E309038		
			Standard level	2800114	541
			Low level	2801114	

URDC - ES	Rated Voltage [U _n] 1000V _{DC}	Rated Breaking Test Capacity 30kA	Class aR gR ≥ 6A	Standard(s) EN IEC 60269-4 DIN VDE-0636-40
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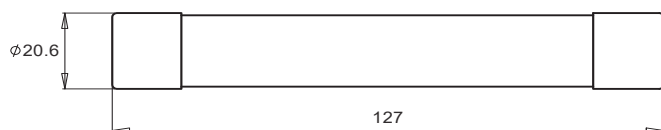
20x127mm

*ES (Energy Storage)

Rated current I _n [A]	With indicator ≥ 6A Article Number	With 2.5N striker Article Number		Pre-arcing I ² t [A ² s]	Total I ² t @ 1000V _{DC} [A ² s]	Power loss [W]
3.15	9008010.3.15	aR		2	13	4.1
6	9008010.6	gR	9008210.6	3	17	3.0
8	9008010.8	gR	9008210.8	7	42	3.2
10	9008010.10	gR	9008210.10	13	75	3.4
12	9008010.12	gR	9008210.12	20	120	4.6
16	9008010.16	gR	9008210.16	52	300	5.7
20	9008010.20	gR	9008210.20	82	470	6.8
25	9008010.25	gR	9008210.25	118	670	8.1
32	9008010.32	gR	9008210.32	184	1 050	10
40	9008010.40	gR	9008210.40	472	2 700	12
50	9008010.50	gR	9008210.50	737	4 200	13
63	9008010.63	gR	9008210.63	1 300	7 500	19
Weight [kg/1]						
0.12						

Coefficients for Heavy Duty Applications

a	A2	B1 _{max}	B2	Cf3
130	0.6	1.25	0.6	0.8



9008010.3.15



9008010 / 9008210

≥6A



Accessories

Article Description	Article Number	Page	Article Description	Article Number	Page
Fuse module, 1-Pole	9108001	562	Fuse clips screw mounting	6100201.3	564
Fuse module, 2-Pole	9108001.2		Clamping plate for 6100201.3	6300201	
Fuse base, 1-Pole	9108001-B1		Terminal link for 6100201.3	6100201.4	
			Fuse clips PCB mounting	5806006	
Fuse module, 1-Pole w/ microswitch Fitting	9108003	562	Microswitch (black hammer)	Standard level 2800201	540
			(UL File E309038)	Low level 2800203	

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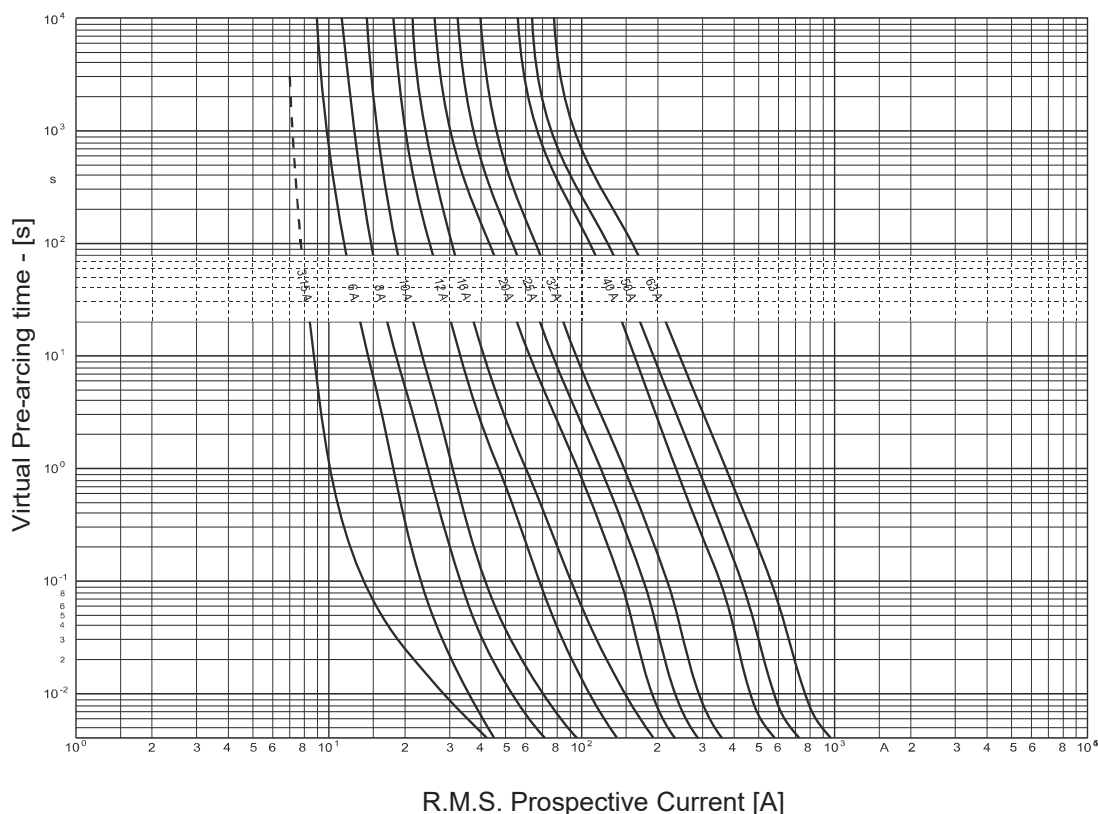
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West Caldwell, New Jersey 07006

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Fax 1-973-575-5858

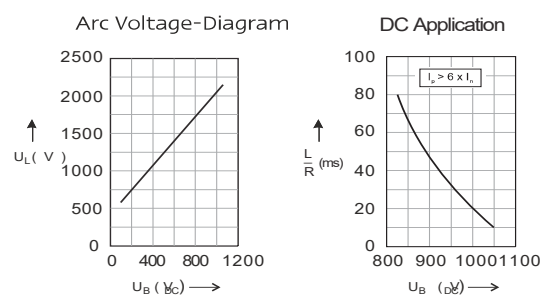
portal: www.siballc.net
e-mail: info@sibafuse.com

URDC - ES	Rated Voltage [U _n] 1000V _{DC}	Rated Breaking Test Capacity 30kA	Class Voltage 1000V _{DC} aR ≥ 6A	Standard(s) EN IEC 60269-4 DIN VDE 0636-40
20x127mm				*ES (Energy Storage)

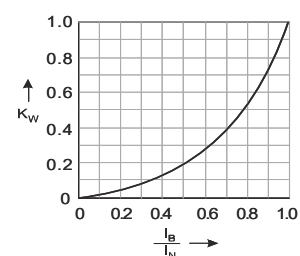
Time-Current Characteristics



Correction Curves



Reduction factor for power Loss



Full size graphs available upon request

URDC - ES

Rated Voltage

Rated Breaking Test

Class

Standard(s)

[U_n]

Capacity

Voltage

aR

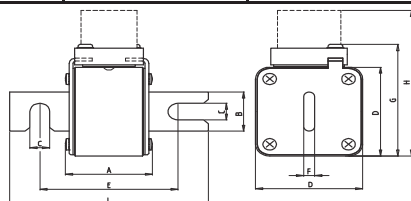
UL 248-13

SQB DC101 1000V_{DC} 200kA @ L/R = 3ms1000V_{DC}SQB DC103 1000V_{DC} 135kA @ L/R = 6ms1000V_{DC}

UL File E180276

*ES (Energy Storage)

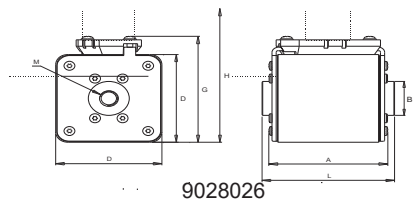
Rated current I _n [A]	SQB DC101		SQB DC103			Pre-arcing I ² t [A ² s]	Total I ² t* @ 1000V _{DC} [A ² s]	Power loss [W]
	DIN 110mm Without indicator	DIN 110mm With fitting for microswitch	M12 With fitting for microswitch	Blade US Long Without indicator	Blade US Long With fitting for microswitch			
	Article Number	Article Number	Article Number	Article Number	Article Number			
63	9054025.63	9054026.63				330	1 600	—
80	9054025.80	9054026.80				620	3 000	—
100	9054025.100	9054026.100				1 300	6 400	—
125	9054025.125	9054026.125				2 050	10 000	—
160	9054025.160	9054026.160				3 700	14 500	39
200	9054025.200	9054026.200				5 600	21 500	55
225	9054025.225	9054026.225				7 800	37 500	65
250	9054025.250	9054026.250				9 900	38 000	74
315	9054025.315	9054026.315				18 500	61 000	80
350	9054025.350	9054026.350				27 000	130 000	83
400	9054025.400	9054026.400				39 000	190 000	85
For Time-Current Curves, contact SIBA 973-575-7422 or e-mail info@sibafuse.com.								
								*L/R=3ms
400			9028026.400	9028125.400	9028126.400	31 150	170 000	94
450			9028026.450	9028125.450	9028126.450	39 650	217 000	98
500			9028026.500	9028125.500	9028126.500	64 200	351 000	102
550			9028026.550	9028125.550	9028126.550	89 200	488 000	105
630			9028026.630	9028125.630	9028126.630	124 600	681 000	110



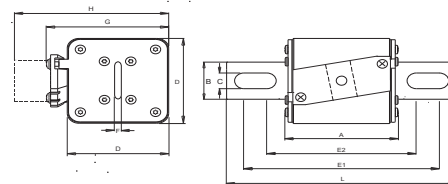
Coefficients for Heavy Duty Applications

a	A2	B1 _{max}	B2	Cf3
130	0.6	1.25	0.6	0.8

9054025/ 954026



9028026



9028125/ 9028126



Dimensions [in / mm]					
	9054025	9054026	9028026	9028125	9028126
A	3.15 / 80	3.15 / 80	3.23 / 82	3.23 / 82	3.23 / 82
B	1.02 / 26	1.02 / 26	1.10 / 28	—	—
C	0.43 / 11	0.43 / 11	—	—	—
D	1.97 / 50	1.97 / 50	2.87 / 73	2.87 / 73	2.87 / 73
E	4.25 / 108	4.25 / 108	—	—	—
E1	—	—	—	5.59 / 142	5.59 / 142
E2	—	—	—	4.25 / 108	4.25 / 108
F	0.24 / 6	0.24 / 6	—	0.24 / 6	0.24 / 6
G	—	2.56 / 65	3.46 / 88	—	3.46 / 88
H	—	3.46 / 88	4.37 / 111	—	4.37 / 111
L	5.55 / 141	5.55 / 141	3.58 / 91	6.57 / 167	6.57 / 167
M	—	—	M12	—	—
			Thread depth - 0.47 / 12 Torque max. - 52N•m / 38.3lb•ft		

Accessories

Article Description	Article Number	Page	Article Description	Article Number	Page
			Microswitch - N0-NC, UL E309038		
			Standard level	2800114	541
			Low level	2801114	

SIBA LLC

29 Fairfield Place

West Caldwell, New Jersey 07006

Phone 1-973-575-7422

Fax 1-973-575-5858

portal: www.siballc.net

e-mail: info@sibafuse.com

URDC - ES	Rated Voltage [U _n]	Rated Breaking Test Capacity	Rated Breaking Test Voltage	Class aR	Standard(s) UL 248-13
	1000V _{DC}	135kA @ L/R = 6ms	1000V _{DC}		

UL File E180276

SQB - DC104

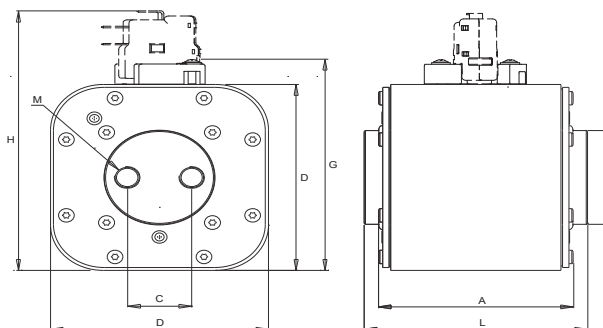
*ES (Energy Storage)

Rated current I_n [A]	2XM12 Without indicator Article Number	2XM12 With fitting for microswitch Article Number	4XM10 Without indicator Article Number	4XM10 With fitting for microswitch Article Number		Pre-arcing I^2t [A ² s]	Total I^2t @ 1000V _{DC} [A ² s]	Power loss @ 0.8I _n [W]
1000	9029025.1000	9029026.1250	9029125.1000	9029126.1000		257 000	1 210 000	109
1100	9029025.1100	9029026.1100	9029125.1100	9029126.1100		346 000	1 630 000	115
1250	9029025.1250	9029026.1250	9029125.1250	9029126.1250		498 000	2 345 000	122
1400	9029025.1400	9029026.1400	9029125.1400	9029126.1400		678 000	3 200 000	140
1600	9029025.1600	9029026.1600	9029125.1600	9029126.1600		1 000 000	4 710 000	153
	Weight [kg/1]						L/R=6ms	
	2.93	2.93	2.93	2.93				

Coefficients for Heavy Duty Applications

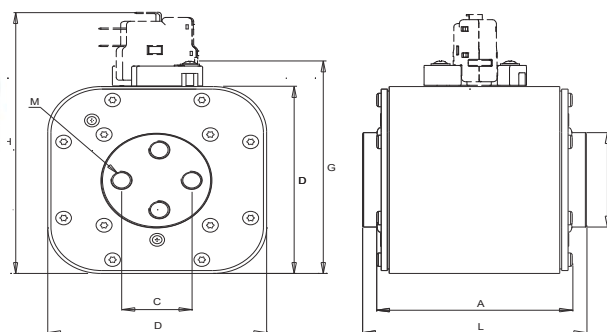
a	A2	B1 _{max}	B2	Cf3
130	0.6	1.25	0.6	0.8

Dimensions [in / mm]		
9029025		9029026
3.66 / 93	A	3.36 / 93
2.05 / 52	B	2.05 / 52
1.30 / 33	C	1.30 / 33
4.06 / 103	D	4.06 / 103
—	G	4.65 / 118
—	H	5.55 / 141
4.19 / 106.5	L	4.19 / 106.5
M12	M	M12
Thread depth - 0.47 / 12		
Torque max. - 52N•m / 38.3lb•ft		



For Time-Current Curves, contact SIBA 973-575-7422 or e-mail
info@sibafuse.com.

Dimensions [in / mm]		
9029125		9029126
3.66 / 93	A	3.36 / 93
2.05 / 52	B	2.05 / 52
1.30 / 33	C	1.30 / 33
4.06 / 103	D	4.06 / 103
—	G	4.65 / 118
—	H	5.55 / 141
4.19 / 106.5	L	4.19 / 106.5
M10	M	M10
Thread depth - 0.39 / 10		
Torque max. - 39N•m / 28.7lb•ft		



Accessories

Article Description	Article Number	Page	Article Description	Article Number	Page
			Microswitch - NO-NC, UL E309038		
			Standard level	2800114	541
			Low level	2801114	

SIBA LLC

29 Fairfield Place
West Caldwell, New Jersey 07006

Phone 1-973-575-7422
Fax 1-973-575-5858

portal: www.siballc.net
e-mail: info@sibafuse.com

URDC - ES



Pending

UL File E180276

Rated Voltage

[U_n]1100V_{DC}

Rated Breaking Test

Capacity

100kA @ L/R = 10ms

Voltage

1100V_{DC}

Class

gR - UL

gRL - IEC

Standard(s)

UL 248-13

IEC 60269-4

VDE 0636-4

NH1XL

*ES (Energy Storage)

Rated current I _n [A]	With flap indicator NH1XL Article Number	Without indicator NH1X-SM160 Article Number	With flap indicator NH1XL-SM160 Article Number		Pre-arcing I ² t [A ² s]	Total I ² t* @ 1100V _{DC} [A ² s]	Power loss [W]
50	2002834.50	2002933.50	2002934.50		360	1 900	14
63	2002834.63	2002933.63	2002934.63		900	7 300	15
75	2002834.75	2002933.75	2002934.75		1 400	4 700	17
80	2002834.80	2002933.80	2002934.80		1 700	8 900	18
100	2002834.100	2002933.100	2002934.100		3 600	19 000	19
125	2002834.125	2002933.125	2002934.125		6 700	35 000	21
150	2002834.160	2002933.160	2002934.160		11 200	59 000	25
160	2002834.160	2002933.160	2002934.160		11 200	59 000	30
175	2002834.175	2002933.175	2002934.175		14 900	98 000	32
200	2002834.200	2002933.200	2002934.200		19 200	126 000	38

*L/R=10ms

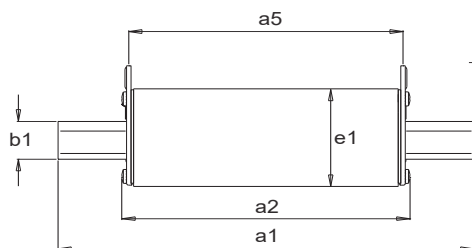
Coefficients for Heavy Duty Applications

a	A2	B1 _{max}	B2	Cf3
130	0.9	1.25	0.5	0.8

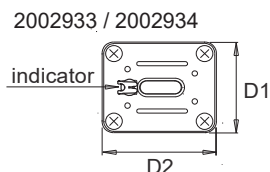
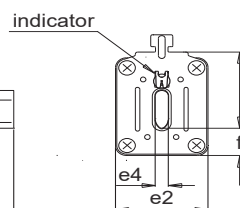
For Time-Current Curves, contact SIBA 973-575-7422 or e-mail

info@sibafuse.com.

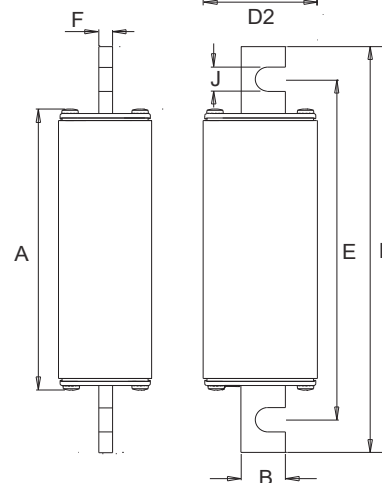
	Dimensions [in / mm]
a1	7.60 / 193
a2	5.08 / 129
a5	4.88 / 124
b1	0.79 / 20
e1	2.01 / 51
e2	2.01 / 51
e4	0.24 / 6
c1	1.57 / 40
f	0.57 / 14.5



2002834



	Dimensions [in / mm]
A	5.20 / 132
B	0.79 / 20
D1	165 / 42
D2	2.02 / 51.3
E	6.30 / 160
F	0.24 / 6
J	0.35 / 9
L	7.44 / 189



Accessories

Article Description	Article Number	Page	Article Description	Article Number	Page
Fuse base 1-Pole-Contact SIBA	2102801		Fuse handle insertion / removal tool		
Contact covers	2100301.26	547	Standard	2203101	566
			w/ Leather sleeve	2203102	

SIBA LLC

29 Fairfield Place

West Caldwell, New Jersey 07006

Phone 1-973-575-7422

Fax 1-973-575-5858

portal: www.siballc.net

e-mail: info@sibafuse.com

URDC - ES	Rated Voltage [U _n] 1200V _{DC}	Rated Breaking Test Capacity 170kA @ L/R = 10ms	Rated Breaking Test Voltage 1200V _{DC}	Class aR	Standard(s) UL 248-13
cRU[®] US					

UL File E180276

SQB - DC124

*ES (Energy Storage)

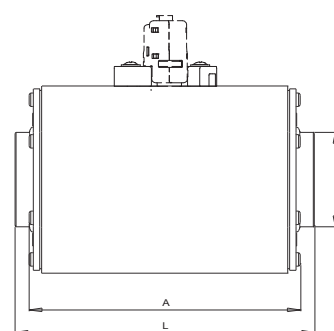
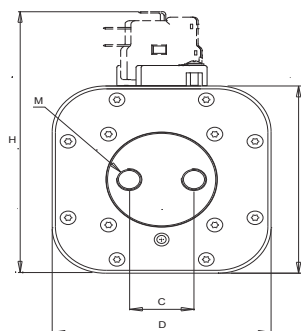
Rated current I _n [A]	2XM12 Without indicator Article Number	2XM12 With fitting for microswitch Article Number	4XM10 Without indicator Article Number	4XM10 With fitting for microswitch Article Number		Pre-arcing I ² _t [A ² s]	Total I ² _t * @ 1200V _{DC} [A ² s]	Power loss @ 0.8I _n [W]
800	9039025.800 ¹	9039026.800 ¹	9039125.800 ¹	9039126.800 ¹		210 000	1 400 000	140
900	9039025.900 ¹	9039026.900 ¹	9039125.900 ¹	9039126.900 ¹		270 000	1 800 000	145
1000	9039025.1000	9039026.1000	9039125.1000	9039126.1000		388 000	2 500 000	150
1100	9039025.1100	9039026.1100	9039125.1100	9039126.1100		468 000	3 100 000	155
1250	9039025.1250	9039026.1250	9039125.1250	9039126.1250		664 000	4 320 000	160
1400	9039025.1400	9039026.1400	9039125.1400	9039126.1400		955 000	6 210 000	175
1500	9039025.1500	9039026.1500	9039125.1500	9039126.1500		1 120 000	7 300 000	190
1600	9039025.1600	9039026.1600	9039125.1600	9039126.1600		1 300 000	8 450 000	215
1800	9039025.1800	9039026.1800	9039125.1800	9039126.1800		1 920 000	12 500 000	220
2000	9039025.2000	9039026.2000	9039125.2000	9039126.2000		2 450 000	15 900 000	230
Weight [kg/1]						¹ Not UL recognized		
	3.94	3.94	3.94	3.94		*L/R=10ms		

Coefficients for Heavy Duty Applications

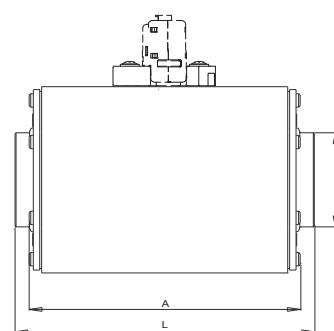
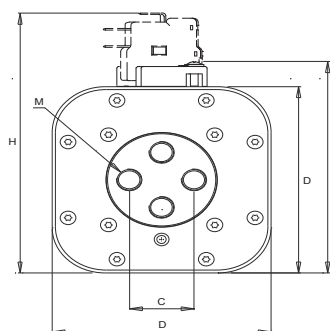
a	A2	B ¹ _{max}	B2	Cf3
130	0.6	1.25	0.6	0.8

Dimensions [in / mm]		
9039025		9039026
5.16 / 131	A	5.16 / 131
2.05 / 52	B	2.05 / 52
1.30 / 33	C	1.30 / 33
4.06 / 103	D	4.06 / 103
—	G	4.65 / 118
—	H	5.55 / 141
5.67 / 144	L	5.67 / 144
M12	M	M12
Thread depth - 0.47 / 12		
Torque max. - 52N•m / 38.3lb•ft		

Dimensions [in / mm]		
9039125		9039126
5.16 / 131	A	5.16 / 131
2.05 / 52	B	2.05 / 52
1.30 / 33	C	1.30 / 33
4.06 / 103	D	4.06 / 103
—	G	4.65 / 118
—	H	5.55 / 141
5.67 / 144	L	5.67 / 144
M10	M	M10
Thread depth - 0.39 / 10		
Torque max. - 39N•m / 28.7lb•ft		



For Time-Current Curves, contact SIBA 973-575-7422 or e-mail
info@sibafuse.com.



Accessories

Article Description	Article Number	Page	Article Description	Article Number	Page
			Microswitch - NO-NC, UL E309038		
			Standard level	2800114	541
			Low level	2801114	

URDC - ES

Rated Voltage

Rated Breaking Test

Class

Standard(s)

[U_n]

Capacity

Voltage

aR

UL 248-13

1500V_{DC}

100kA @ L/R = 10ms

1500V_{DC}

UL File E180276

NH1XL and SQB1

*ES (Energy Storage)

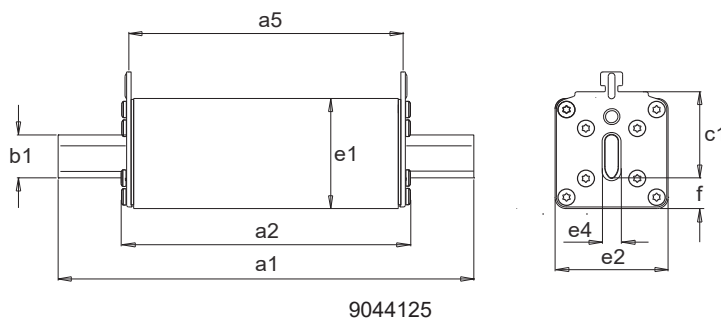
Rated current I _n [A]	NH1XL Without indicator Article Number	SQB1 - US short Without indicator Article Number				Pre-arcing I ² t [A ² s]	Total I ² t* @ 1500V _{DC} [A ² s]	Power loss @ 0.8I _n [W]
50	9044125.50	9044525.50				—	—	—
63	9044125.63	9044525.63				—	—	—
80	9044125.80	9044525.80				—	—	—
100	9044125.100	9044525.100				—	—	—
125	9044125.125	9044525.125				—	—	—
160	9044125.160	9044525.160				—	—	—
200	9044125.200	9044525.200				—	—	—
Weight [kg/1]							*L/R=10ms	

Coefficients for Heavy Duty Applications

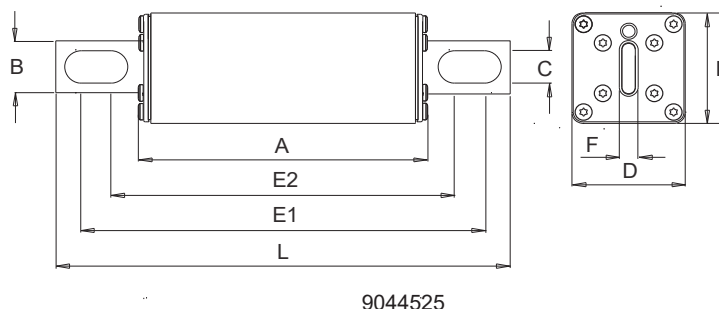
a	A2	B1 _{max}	B2	Cf3
130	0.6	1.25	0.6	0.8

For Time-Current Curves, contact SIBA 973-575-7422 or e-mail
info@sibafuse.com.

	Dimensions [in / mm]
a1	7.60 / 193
a2	5.08 / 129
a5	4.88 / 124
b1	0.79 / 20
e1	2.01 / 51
e2	2.01 / 51
e4	0.24 / 6
c1	1.57 / 40
f	0.57 / 14.5



	Dimensions [in / mm]
A	5.08 / 129
B	1.02 / 26
C	0.55 / 14
D	2.01 / 51
E1	7.48 / 190
E2	6.06 / 154
F	0.24 / 6
L	8.46 / 215



Accessories

Article Description	Article Number	Page	Article Description	Article Number	Page
Fuse base 1-Pole (9044125)	2102828	547	Fuse handel insertion / removal tool		
Contact covers	2100301.26		Standard	2203101	566
			w/ Leather sleeve	2203102	

SIBA LLC

29 Fairfield Place
West Caldwell, New Jersey 07006

portal: www.siballc.net
e-mail: info@sibafuse.com

URDC - ES	Rated Voltage	Rated Breaking Test Capacity	Class	Standard(s)
	1500V _{DC}	100kA @ L/R = 5ms	aR	UL 248-13
For higher breaking capacity contact SIBA				
UL File E180276 NH3L and SQB3				
*ES (Energy Storage)				

Rated current I _n [A]	NH3L Without indicator Article Number	NH3L With flap Indicator Article Number	SQB3 - US Without indicator Article Number	SQB3 - US With microswitch adapter Article Number	SQB3 - DIN Without indicator Article Number	SQB3 - DIN With flap indicator Article Number	Pre-arcing I ² t [A ² s]	Total I ² t* @1500V _{DC} [A ² s]	Power loss [W]
200	9044325.200	9044326.200	9044725.200	9044727.200	9044825.200	9044826.200	11 200	58 000	54
250	9044325.250	9044326.250	9044725.250	9044727.250	9044825.250	9044826.250	19 200	99 000	62
315	9044325.315	9044326.315	9044725.315	9044727.315	9044825.315	9044826.315	32 000	165 000	71
350	9044325.350	9044326.350	9044725.350	9044727.350	9044825.350	9044826.350	57 000	294 000	75
400	9044325.400	9044326.400	9044725.400	9044727.400	9044825.400	9044826.400	77 000	397 000	81
450	9044325.450	9044326.450	9044725.450	9044727.450	9044825.450	9044826.450	106 000	545 000	87
500	9044325.500	9044326.500	9044725.500	9044727.500	9044825.500	9044826.500	153 000	790 000	96
550	9044325.550	9044326.550	9044725.550	9044727.550	9044825.550	9044826.550	189 000	975 000	105
630	9044325.630	9044326.630	9044725.630	9044727.630	9044825.630	9044826.630	272 000	1 400 000	120

For drawings and dimensions see page 337

2024328	2024329	2024728	2024727	2024528	2024529
Use drawing for					
9044325	9044326	9044725	9044727	9044825	9044826

Coefficients for Heavy Duty Applications

a	A2	B1 _{max}	B2	Cf3
130	0.6	1.25	0.6	0.8

For
Time - Current Characteristic Curves
Contact SIBA
973-575 7422
or
e-mail info@sibafuse.com

SQB DC94						*ES (Energy Storage)		
Rated current I _n [A]	2XM12 Without indicator Article Number	2XM12 With microswitch adapter Article Number	4XM10 Without indicator Article Number	4XM10 With microswitch adapter Article Number		Pre-arcing I ² t [A ² s]	Total I ² t* @1500V _{DC} [A ² s]	Power loss [W]
900	9039225.900	9039226.900	9039325.900	9039326.900		Contact SIBA for data		
1 000	9039225.1000	9039226.1000	9039325.1000	9039326.1000				
1 100	9039225.1100	9039226.1100	9039325.1100	9039326.1100				
1 250	9039225.1250	9039226.1250	9039325.1250	9039326.1250				
1 400	9039225.1400	9039226.1400	9039325.1400	9039326.1400				
1 500	9039225.1500	9039226.1500	9039325.1500	9039326.1500				

For drawings and dimensions see page 353

9039025	9039026	9039125	9039126
Use drawing for			
9039225	9039226	9039325	9039326

*L/R=10ms

Coefficients for Heavy Duty Applications

a	A2	B1 _{max}	B2	Cf3
130	0.6	1.25	0.6	0.8

For
Time - Current Characteristic Curves
Contact SIBA
973-575 7422
or
e-mail info@sibafuse.com

Accessories

Article Description	Article Number	Page	Article Description	Article Number	Page
Fuse base 1-Pole	2103128	547	Microswitch, Standard level, single NO-NC	2800310	542
Contact covers	2100501.26		Microswitch, Standard level, single NO-NC	2800410	
Fuse handel insertion / removal tool					
Standard	2203101	566			
w/ Leather sleeve	2203102				