

DC-Application / Traction Fuse



Classes: aR/gR/gRL
 Voltage ratings: DC 440 V to DC 4200 V
 Current ratings: 6 A to 1000 A
 Standards: UIC 550
 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, classes or L/R's.

Features / Benefits

- ▶ Designed for heavy duty applications
- ▶ Shock and vibration tested to 30 g
- ▶ Several types with additional microswitches
- ▶ Developed according to customers specifications
- ▶ Tested with different time constants
- ▶ Designed for long life under severe service conditions

Selection Guide Fuse-Links

Size	Rated Voltage DC	Part No.	Part No.	Part No.	Selector Guide Page	Technical Data Page
14 x 51	440 V	50 124 34	50 126 34	50 129 34	4	5
14 x 51	700 V	50 118 06			10	11
14 x 51	700 V	50 201 06			12	13
22 x 58	440 V	50 140 34	50 142 34		6	7
27 x 60	660 V	50 190 06	50 191 06		8	9
10 x 38	900 V	50 215 06	50 216 06	50 217 06	14	15
20 x 127	1000 V	90 080 10	90 082 10		36	37
20 x 127	1500 V	90 081 10			44	45
36 x 190	1500 V	90 094 10	90 095 10		46	47
40 x 254	3000 V	90 100 10			60	61
000	700 V	20 581 21	20 582 21	20 583 21	68	69
000 DIN 80	700 V	20 292 20	20 292 21		66	67
NH1	750 V	20 556 04			70	71
NH3	AC 1000 V	20 407 04			62	63
NH3	AC 2000 V	20 404 04			64	65
NH4	1000 V	90 083 10			38	39
SQB-DC90	900 V	90 300 20	90 300 21		16	17
SQB-DC90	900 V	90 350 20	90 350 21		18	19
SQB-DC91	900 V	90 310 20	90 310 21		20	21
SQB-DC91	900 V	90 360 20	90 360 21		22	23
SQB-DC92	900 V	90 320 20	90 320 21		24	25
SQB-DC92	900 V	90 370 20	90 370 21		26	27
SQB-DC92-2	900 V		90 378 21		28	29
SQB-DC93	900 V	90 330 20	90 330 21		30	31
SQB-DC93	900 V	90 380 20	90 380 21		32	33
SQB-DC93-2	900 V		90 388 21		34	35
SQB-DC0	900 V	90 223 25	90 223 26		40	41
SQB-DC0	1700 V	90 222 25	90 222 26		48	49
SQB-DC0	1800 V	90 221 25	90 221 26		52	53
SQB-DC0	3600 V	90 220 25	90 220 26		56	57
SQB-DC2	900 V	90 203 25	90 203 26		42	43
SQB-DC2	1700 V	90 202 25	90 202 26		50	51
SQB-DC2	1800 V	90 201 25	90 201 26		54	55
SQB-DC2	3600 V	90 200 25	90 200 26		58	59
UIC 552 VE	AC 1000 V	90 060 10			75	-
UIC 552 VE	AC 1500 V	90 062 10			75	-
UIC 552 VE	3000 V	90 061 10			75	-
UIC 552 VE	AC 1000 V	90 035 06			72	-
UIC 552 VE	AC 1000 V	90 037 06			72	-
UIC 552 VE	AC 1000 V	90 039 06			72	-
UIC 552 VE	AC 1000 V	90 057 06			72	-
UIC 552 VE	AC 1000 V	90 087 06			72	-
UIC 552 VE	1500 V	90 039 06			73	-
UIC 552 VE	1500 V	90 040 06			73	-
UIC 552 VE	3000 V	90 034 06			74	-
UIC 552 VE	3000 V	90 042 06			74	-
UIC 552 VE	3000 V	90 057 06			74	-
UIC 552 VE	3000 V	90 070 06			74	-

Selection Guide Fuse-Links

Size	Rated Voltage DC	Part No.	Selector Guide Page	Technical Data Page
UIC 552 VE	3000 V	90 057 06	72	-
UIC 552 VE	3000 V	90 057 13	72	-
UIC 552 VE	3000 V	90 070 13	72	-

Selection Guide Micro Switches

Type	Rated Voltage AC	Part No.	Selector Guide Page
GL-Switch	250 V	28 002 01	78
GL-Switch	250 V	28 002 02	78
B-Switch	250 V	28 003 10	79
B-Switch	250 V	28 003 11	79
B-Switch	250 V	28 003 12	79
B-Switch	250 V	28 003 20	79
B-Switch	250 V	28 003 21	79
B-Switch	250 V	28 003 22	79
B-Switch	250 V	28 004 10	79
B-Switch	250 V	28 004 11	79
B-Switch	250 V	28 004 12	79
B-Switch	250 V	28 004 20	79
B-Switch	250 V	28 004 21	79
B-Switch	250 V	28 004 22	79

Selection Guide Fuse-Holders

Size	Poles	Indicator Type	Part-No.	Selector Guide Page
10 x 38	1	-	51 063 04.DC	80
10 x 38	1	-	51 063 04.	80
10 x 38	2	-	51 063 04.2	80
10 x 38	3	-	51 063 04.3	80
10 x 38	1	LED indicator	51 063 04.L	80
10 x 38	2	LED indicator	51 063 04.2L	80
10 x 38	3	LED indicator	51 063 04.3L	80
14 x 51	1	-	51 058 04.	80
14 x 51	2	-	51 058 04.2	80
14 x 51	3	-	51 058 04.3	80
14 x 51	1	Microswitch	51 058 04.S	80
14 x 51	3	Microswitch	51 058 04.3S	80
22 x 58	1	-	51 060 04.	80
22 x 58	2	-	51 060 04.2	80
22 x 58	3	-	51 060 04.3	80
22 x 58	1	Microswitch	51 060 04.S	80
22 x 58	3	Microswitch	51 060 04.3S	80
20 x 127	1	-	91 080 01	81

Selection Guide Fuse-Clips

Size	Part. No.	Page	Type	Size	Part. No.	Page	Type
10 mm	61 017 01.2	76		14 mm	58 058 06	77	PCB
14 mm	61 001 01.2	76	screw	22 mm	58 060 06	77	mountable
22 mm	61 002 01.3	76	mountable				
27 mm	61 004 01.3	76					



DC-Application / Traction Fuse

Size **14 x 51 mm** Rated Voltage **AC 690 / 700 V** Breaking Test Voltage **DC 440 V** Class **gRL (gS)** Standard **IEC 60269-4 / UL 248-13**

Rated Current [A]	Part No. without Striker	Part No. with Striker	Part No. Fixing Center 63,5 mm	Weight [kg/1]	Pack
10	50 124 34.10	50 126 34.10	50 129 34.10	0.03	10
12	50 124 34.12	50 126 34.12	50 129 34.12	0.03	10
16	50 124 34.16	50 126 34.16	50 129 34.16	0.03	10
20	50 124 34.20	50 126 34.20	50 129 34.20	0.03	10
25	50 124 34.25	50 126 34.25	50 129 34.25	0.03	10
30	50 124 34.30	50 126 34.30	50 129 34.30	0.03	10
32	50 124 34.32	50 126 34.32	50 129 34.32	0.03	10
35	50 124 34.35	50 126 34.35	50 129 34.35	0.03	10
40	50 124 34.40	50 126 34.40	50 129 34.40	0.03	10

Dimensions

without striker

A 2.00" (51 mm)
B 0.55" (14 mm)

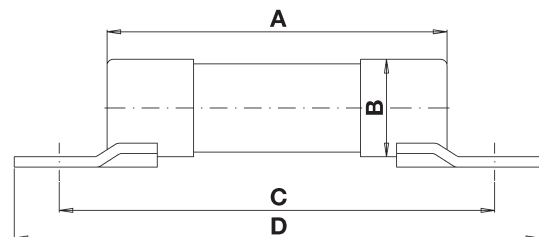
Part No. 50 124 34. ...



with striker

A 2.00" (51 mm)
B 0.55" (14 mm)
C_{min} 0.28" (7 mm)
D 0.20" (4.9 mm)

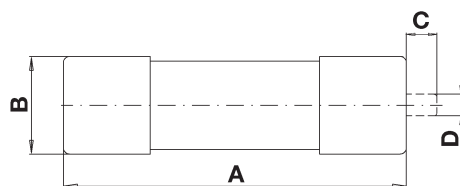
Part No. 50 129 34. ...



fixing center 63,5 mm

A 2.00" (51 mm)
B 0.55" (14 mm)
C 0.00" (63.5 mm)
D 0.00" (77 mm)
E 0.00" (8.7 mm)
F 0.00" (5.5 mm)

Part No. 50 126 34. ...



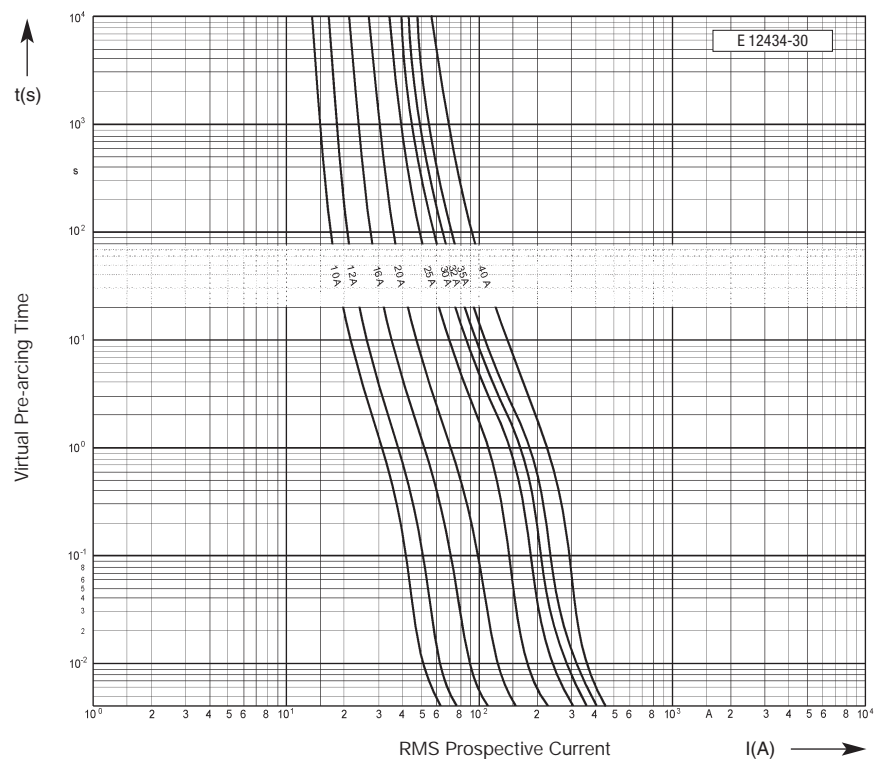
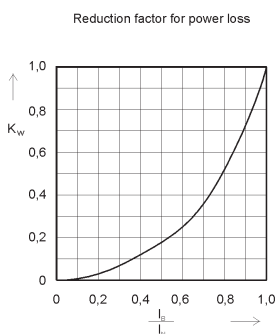
Size 14 x 51 mm	Rated Voltage AC 690 /700 V	Breaking Test Voltage DC 440 V	Class gRL (gS)	Rated Breaking Capacity 30 kA
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Rated Current [A]	Part No. without Striker	Part No. with Striker	Part No. Fixing Center 63,5 mm	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ DC 440 V (L/R = 30 ms) [A ² s]
10	50 124 34.10	50 126 34.10	50 129 34.10	1.9	8	70
12	50 124 34.12	50 126 34.12	50 129 34.12	2.3	12	105
16	50 124 34.16	50 126 34.16	50 129 34.16	2.8	25	210
20	50 124 34.20	50 126 34.20	50 129 34.20	3.0	46	400
25	50 124 34.25	50 126 34.25	50 129 34.25	3.2	100	850
30	50 124 34.30	50 126 34.30	50 129 34.30	3.8	190	1 600
32	50 124 34.32	50 126 34.32	50 129 34.32	4.0	250	2 100
35	50 124 34.35	50 126 34.35	50 129 34.35	4.2	370	3 150
40	50 124 34.40	50 126 34.40	50 129 34.40	4.4	420	3 600

Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.8	1.25	0.5	0.8	1.5

Time-Current Characteristics





DC-Application / Traction Fuse

Size **22 x 58 mm** Rated Voltage **AC 690 / 700 V** Breaking Test Voltage **DC 440 V** Class **gRL (gS)** Standard **IEC 60269-4 / UL 248-13**

Rated Current [A]	Part No. without Striker	Part No. with Striker	Weight [kg/1]	Pack
25	50 140 34.25	50 142 34.25	0.055	10
30	50 140 34.30	50 142 34.30	0.055	10
32	50 140 34.32	50 142 34.32	0.055	10
35	50 140 34.35	50 142 34.35	0.055	10
40	50 140 34.40	50 142 34.40	0.055	10
50	50 140 34.50	50 142 34.50	0.055	10
63	50 140 34.63	50 142 34.63	0.055	10
80	50 140 34.80	50 142 34.80	0.055	10
100	50 140 34.100	50 142 34.100	0.055	10

Dimensions

without Striker

A 2.28" (58 mm)

B 0.87" (22 mm)

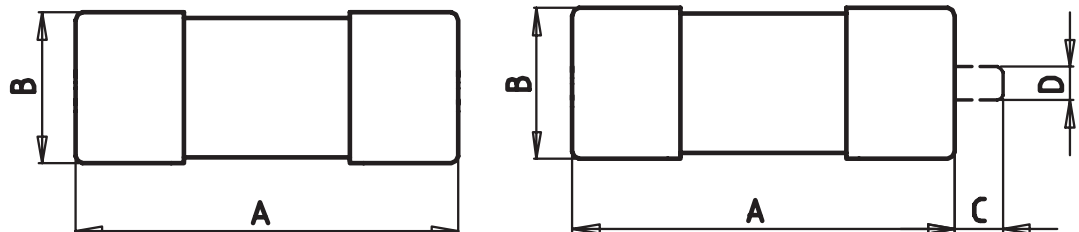
with Striker

A 2.28" (58 mm)

B 0.87" (22 mm)

C_{min} 0.28" (7 mm)

D 0.20" (4.9 mm)



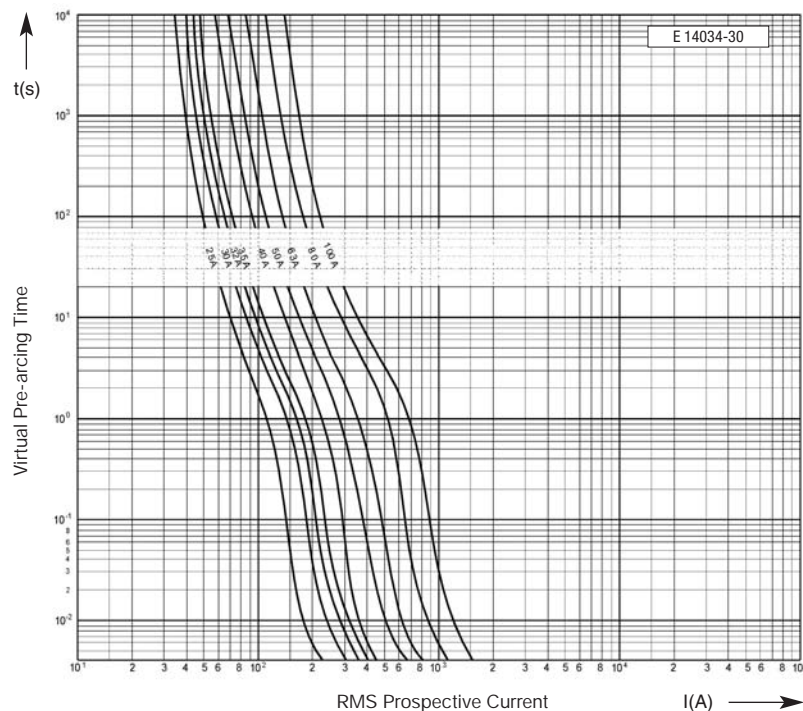
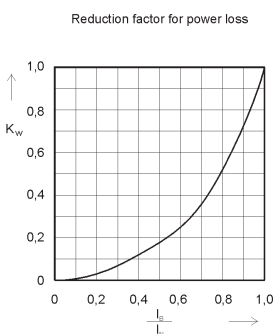
Size 22 x 58 mm	Rated Voltage AC 690 / 700 V	Breaking Test Voltage DC 440 V	Class gRL (gS)	Rated Breaking Capacity 30 kA
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Rated Current [A]	Part No. without Striker	Part No. with Striker	Power Loss [W]	Pre-arcing I^2t -value [A ² s]	Total I^2t -value @ DC 440 V (L/R = 30 ms) [A ² s]
25	50 140 34.25	50 142 34.25	3,6	100	800
30	50 140 34.30	50 142 34.30	4,6	190	1 500
32	50 140 34.32	50 142 34.32	4,8	250	2 000
35	50 140 34.35	50 142 34.35	5,0	370	2 900
40	50 140 34.40	50 142 34.40	5,2	420	3 300
50	50 140 34.50	50 142 34.50	5,4	870	6 800
63	50 140 34.63	50 142 34.63	6,8	1 300	10 200
80	50 140 34.80	50 142 34.80	7,5	2 500	19 500
100	50 140 34.100	50 142 34.100	7,7	4 600	35 800

Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.8	1.25	0.5	0.8	1.5

Time-Current Characteristics





DC-Application / Traction Fuse

Size
27 x 60 mm

Rated Voltage
DC 660 V / 440 V

Class
gR

Standard
IEC 60269-4

Rated Current [A]	Part No. without Striker	Part No. with Striker	Weight [kg/1]	Pack
8	50 190 06.8	50 191 06.8	0.1	10
10	50 190 06.10	50 191 06.10	0.1	10
12	50 190 06.12	50 191 06.12	0.1	10
16	50 190 06.16	50 191 06.16	0.1	10
20	50 190 06.20	50 191 06.20	0.1	10
25	50 190 06.25	50 191 06.25	0.1	10
32	50 190 06.32	50 191 06.32	0.1	10
40	50 190 06.40	50 191 06.40	0.1	10
50	50 190 06.50	50 191 06.50	0.1	10
63	50 190 06.63	50 191 06.63	0.1	10
80	50 190 06.80	50 191 06.80	0.1	10
100	50 190 06.100	50 191 06.100	0.1	10
110	50 190 06.110	50 191 06.110	0.1	10
125	50 190 06.125	50 191 06.125	0.1	10
160	50 190 06.160	50 191 06.160	0.1	10

Dimensions

without striker pin

A 2.36" (60 mm)

B 1.06" (27 mm)

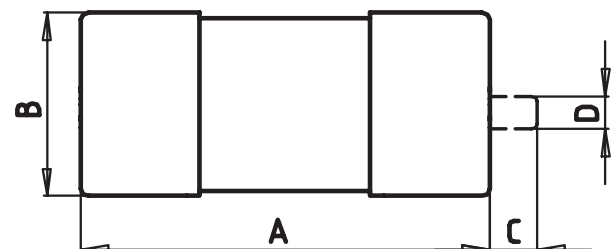
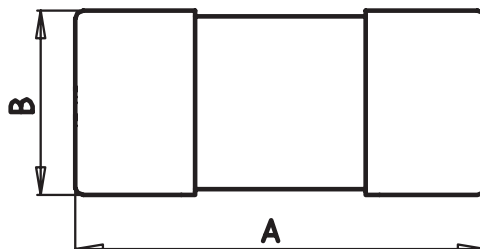
with striker pin

A 2.36" (60 mm)

B 1.06" (27 mm)

C_{min} 0.28" (7 mm)

D 0.20" (4.9 mm)



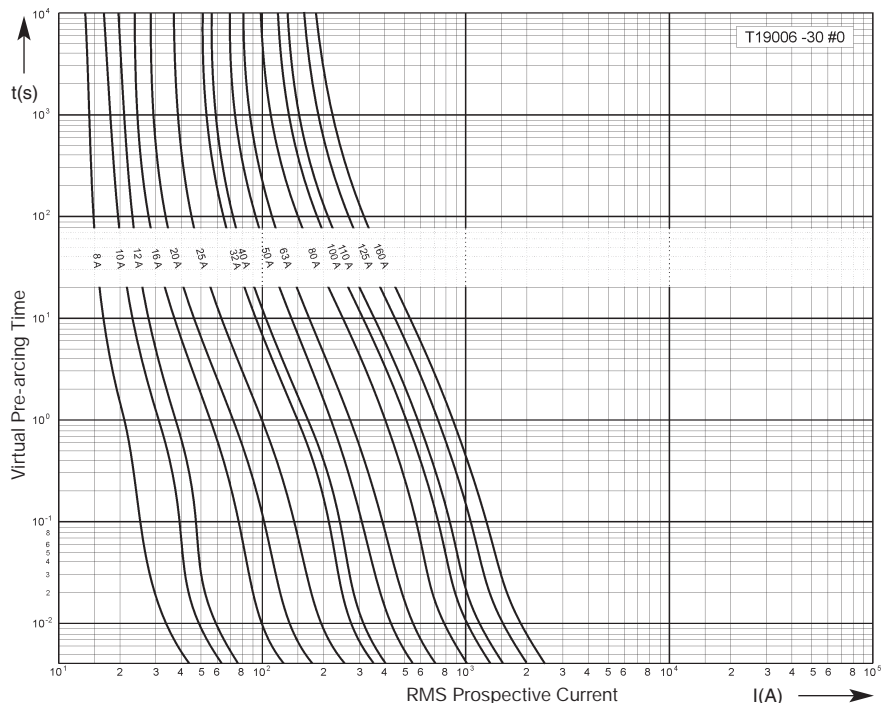
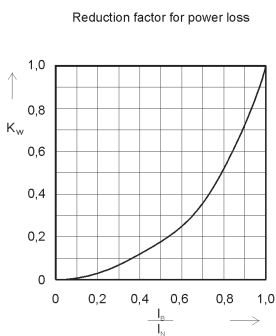
Size 27 x 60 mm	Rated Voltage DC 660 V / 440 V	Class gR	Rated Breaking Capacity 30 kA
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Rated Current [A]	Part No. without Striker	Part No. with Striker	Rated Voltage [V]	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ Rated Voltage [A ² s]
8	50 190 06.8	50 191 06.8	660	2.0	4	20
10	50 190 06.10	50 191 06.10	660	2.2	8	40
12	50 190 06.12	50 191 06.12	660	2.7	12	60
16	50 190 06.16	50 191 06.16	660	3.1	32	160
20	50 190 06.20	50 191 06.20	660	3.5	62	310
25	50 190 06.25	50 191 06.25	660	3.9	130	650
32	50 190 06.32	50 191 06.32	660	4.6	250	1 250
40	50 190 06.40	50 191 06.40	660	6.6	420	2 100
50	50 190 06.50	50 191 06.50	660	7.5	620	3 100
63	50 190 06.63	50 191 06.63	660	8.9	1 200	6 000
80	50 190 06.80	50 191 06.80	660	10.9	2 100	10 500
100	50 190 06.100	50 191 06.100	660	13.5	3 500	17 500
110	50 190 06.110	50 191 06.110	660	14.2	4 600	23 000
125	50 190 06.125	50 191 06.125	440	16.0	7 800	29 600
160	50 190 06.160	50 191 06.160	440	19.0	11 800	44 900

Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.6	1.25	0.6	0.8	1.5

Time-Current Characteristics





DC-Application / Traction Fuse

Size
14 x 51 mm

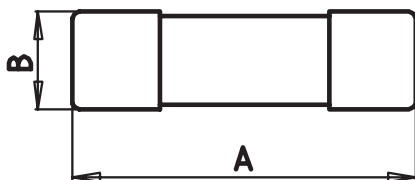
Rated Voltage
DC 700 V

Class
aR

Standard
UL 248-13

Rated Current [A]	Part No.	Weight [kg/1]	Pack	UL rec.
6	50 118 06.6	0.022	10	✓
8	50 118 06.8	0.022	10	✓
10	50 118 06.10	0.022	10	✓
12	50 118 06.12	0.022	10	✓
16	50 118 06.16	0.022	10	✓
20	50 118 06.20	0.022	10	✓
25	50 118 06.25	0.022	10	✓
30	50 118 06.30	0.022	10	✓
35	50 118 06.35	0.022	10	
40	50 118 06.40	0.022	10	
50	50 118 06.50	0.022	10	

Dimensions



A 2.00" (51 mm)

B 0.55" (14 mm)

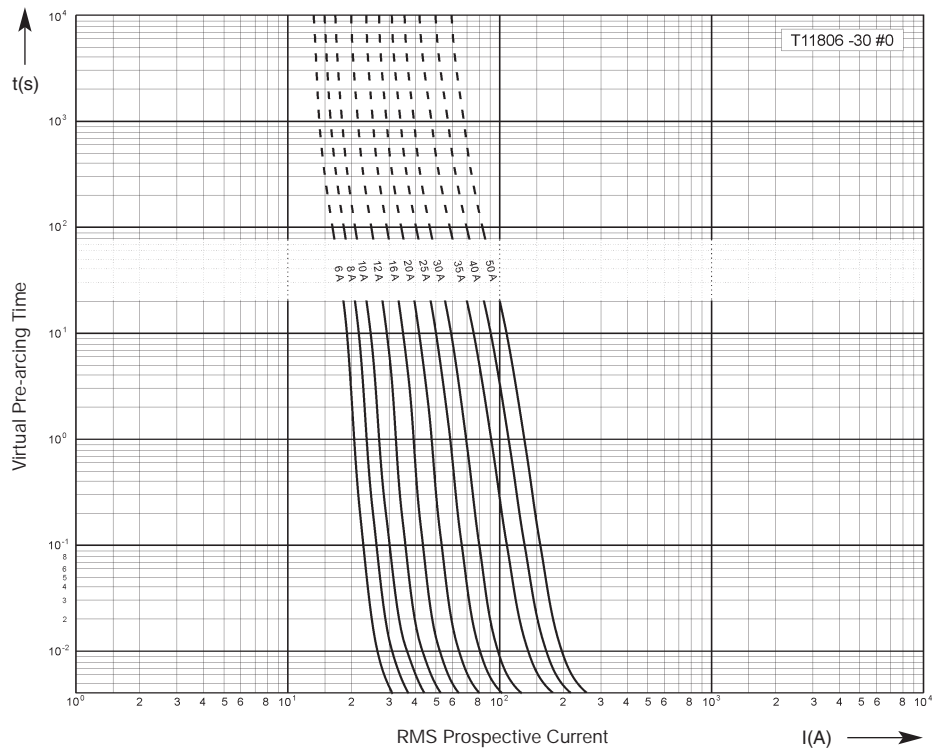
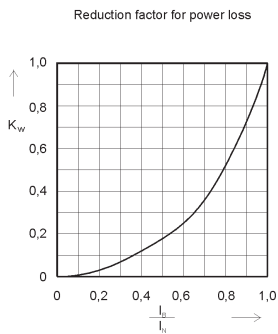
Size 14 x 51 mm	Rated Voltage DC 700 V	Class aR	Rated Breaking Capacity 50 kA
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Rated Current [A]	Part No.	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ DC 700 V (L/R = 1 ms) [A ² s]
6	50 118 06.6	1.3	2.0	12
8	50 118 06.8	1.7	2.9	17
10	50 118 06.10	2.6	3.9	25
12	50 118 06.12	3.1	6.5	41
16	50 118 06.16	4.7	8.0	52
20	50 118 06.20	6.0	12.0	70
25	50 118 06.25	7.6	20.0	130
30	50 118 06.30	9.8	32.0	190
35	50 118 06.35	10.3	72.0	430
40	50 118 06.40	11.2	103.0	620
50	50 118 06.50	12.6	128.0	770

Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
170	0.55	1.25	0.6	0.8	1.5

Time-Current Characteristics





DC-Application / Traction Fuse

Size
14 x 51 mm

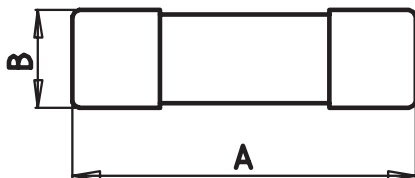
Rated Voltage
DC 700 V

Class
aR

Standard
UL 248-13

Rated Current [A]	Part No.	Weight [kg]	Pack	UL rec.
10	50 201 06.10	0.022	10	✓
12	50 201 06.12	0.022	10	✓
16	50 201 06.16	0.022	10	✓
20	50 201 06.20	0.022	10	✓
25	50 201 06.25	0.022	10	✓
32	50 201 06.32	0.022	10	✓
40	50 201 06.40	0.022	10	✓
50	50 201 06.50	0.022	10	✓

Dimensions



A 2.00" (51 mm)

B 0.55" (14 mm)

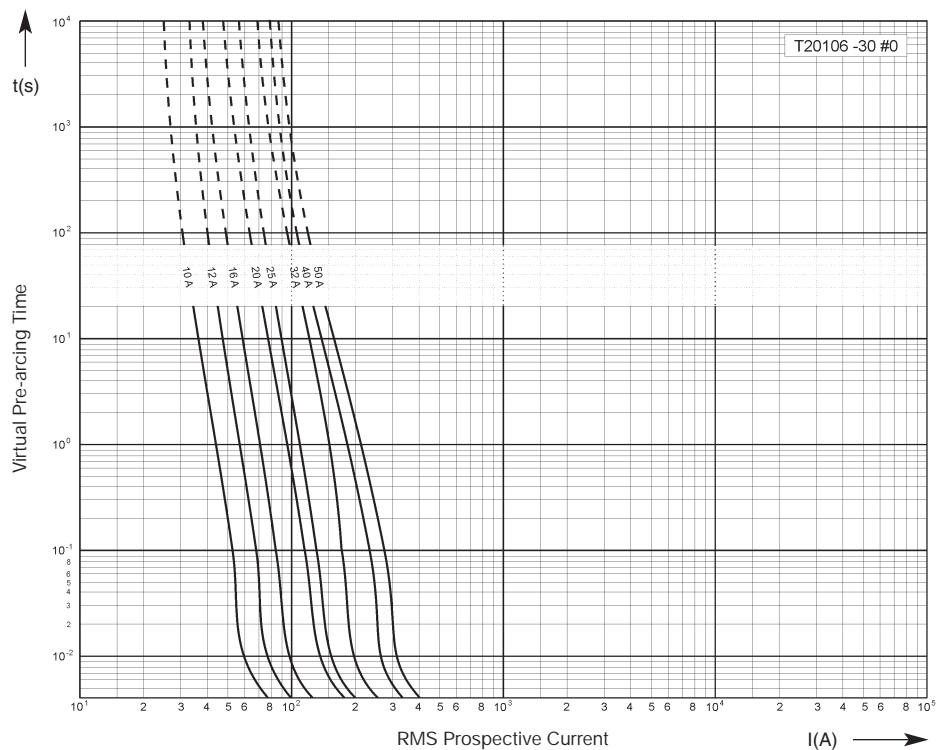
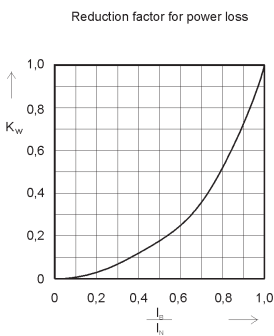
Size 14 x 51 mm	Rated Voltage DC 700 V	Class aR	Rated Breaking Capacity 30 kA
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Rated Current [A]	Part No.	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ DC 700 V (L/R = 1 ms) [A ² s]
10	50 201 06.10	1.1	12	67
12	50 201 06.12	1.2	20	120
16	50 201 06.16	2.0	32	190
20	50 201 06.20	2.3	63	360
25	50 201 06.25	3.1	82	480
32	50 201 06.32	4.1	130	740
40	50 201 06.40	4.6	250	1 460
50	50 201 06.50	7.0	330	1 900

Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
140	0.55	1.25	0.6	0.8	1.5

Time-Current Characteristics





DC-Application / Traction Fuse

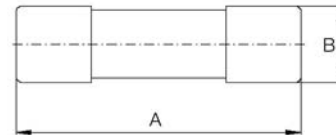
Size **10 x 38 mm** Rated Voltage **AC/DC 900 V** Breaking Test Voltage **DC 1000 V** Class **gR**

Rated Current [A]	Part No.	Part No. PCB Mounting	Part No. with Bolt Contacts	Weight [kg/1]	Pack
4	50 215 06.4	50 216 06.4	50 217 06.4	0.009	10
6	50 215 06.6	50 216 06.6	50 217 06.6	0.009	10
8	50 215 06.8	50 216 06.8	50 217 06.8	0.009	10
10	50 215 06.10	50 216 06.10	50 217 06.10	0.009	10
12	50 215 06.12	50 216 06.12	50 217 06.12	0.009	10
16	50 215 06.16	50 216 06.16	50 217 06.16	0.009	10
20	50 215 06.20	50 216 06.20	50 217 06.20	0.009	10

Dimensions

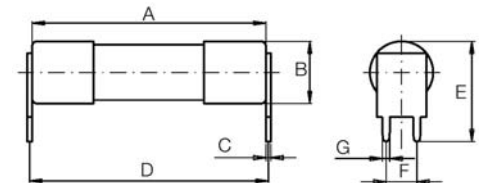
Part No. 50 215 06

- A** 1.50" (38 mm)
- B** 0.40" (10 mm)



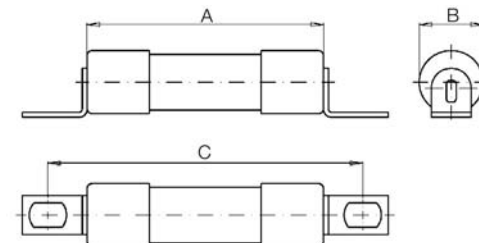
Part No. 50 216 06

- A** 1.50" (38 mm)
- B** 0.40" (10 mm)
- C** 0.03" (0.8 mm)
- D** 1.53" (38.8 mm)
- E** 0.65" (16.4 mm)
- F** 0.20" (5.1 mm)
- G** 0.05" (1.2 mm)



Part No. 50 217 06

- A** 1.50" (38 mm)
- B** 0.40" (10 mm)
- C** 1.99" (50.6 mm)



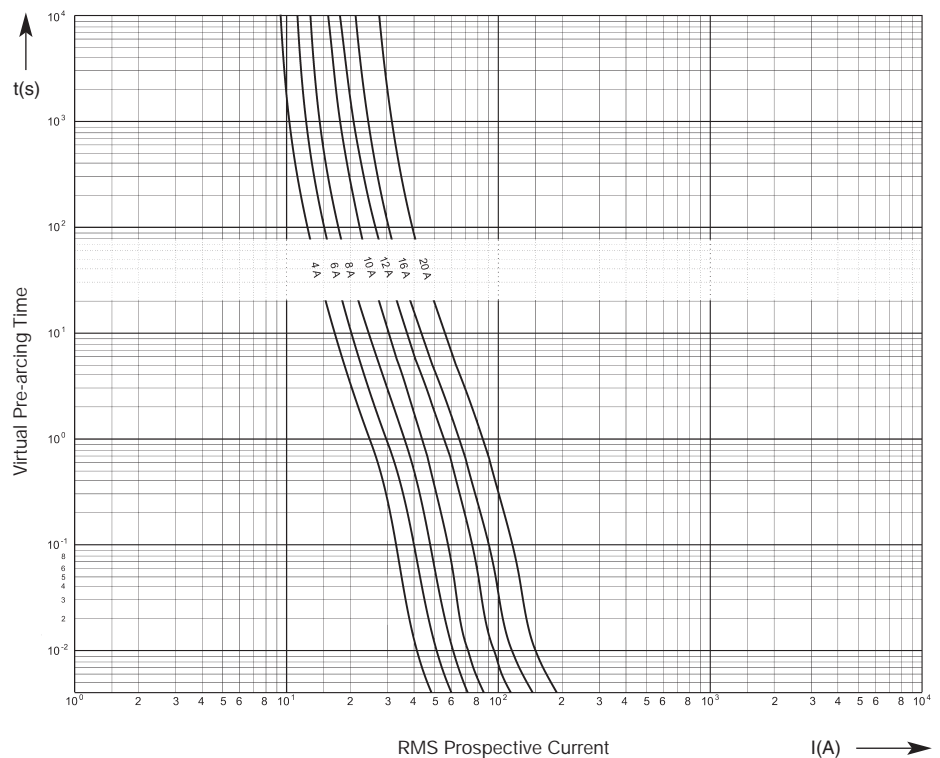
Size 10 x 38 mm	Rated Voltage AC/DC 900 V	Breaking Test Voltage DC 1000 V	Class gR	Rated Breaking Capacity 30 kA
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Rated Current [A]	Part No.	Part No. PCB Mounting	Part No. with Bolt Contacts	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ DC 1000 V (L/R = 10 ms) [A ² s]
4	50 215 06.4	50 216 06.4	50 217 06.4	0.5	3	25
6	50 215 06.6	50 216 06.6	50 217 06.6	0.7	5	40
8	50 215 06.8	50 216 06.8	50 217 06.8	1.1	7	55
10	50 215 06.10	50 216 06.10	50 217 06.10	1.5	10	77
12	50 215 06.12	50 216 06.12	50 217 06.12	1.6	20	155
16	50 215 06.16	50 216 06.16	50 217 06.16	2.1	30	230
20	50 215 06.20	50 216 06.20	50 217 06.20	2.5	52	395

Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.6	1.25	0.5	0.8	1.5

Time-Current Characteristics





DC-Application / Traction Fuse

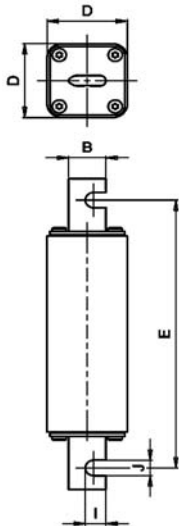
Size SQB-DC90	Rated Voltage DC 900 V	Breaking Test Voltage DC 1000 V	Class gR	Standard IEC 60 077-5/UIC 550
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Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Weight [kg/1]	Pack
50	90 300 20.50	90 300 21.50	0.7	1
63	90 300 20.63	90 300 21.63	0.7	1
80	90 300 20.80	90 300 21.80	0.7	1
100	90 300 20.100	90 300 21.100	0.7	1
125	90 300 20.125	90 300 21.125	0.7	1
160	90 300 20.160	90 300 21.160	0.7	1

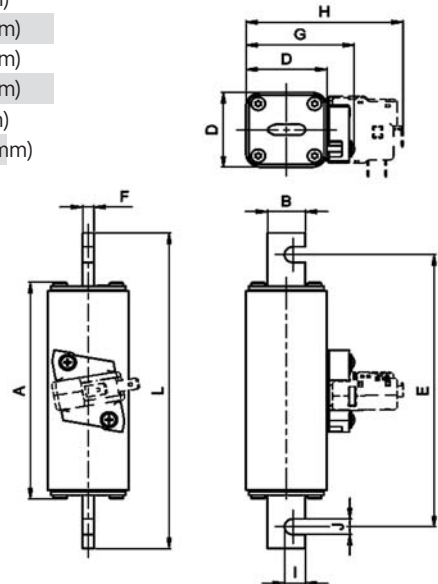
*) suitable for B-switch fitting

Dimensions

- Part No. 90 300 20**
- A 4.88"** (124 mm)
 - B 0.79"** (20 mm)
 - D 1.69"** (43 mm)
 - E 6.14"** (156 mm)
 - F 0.24"** (6 mm)
 - I 0.43"** (11 mm)
 - J 0.35"** (9 mm)
 - L 7.13"** (181 mm)



- Part No. 90 300 21**
- A 4.88"** (124 mm)
 - B 0.79"** (20 mm)
 - D 1.69"** (43 mm)
 - E 6.14"** (156 mm)
 - F 0.24"** (6 mm)
 - G 2.28"** (58 mm)
 - H 3.27"** (83 mm)
 - I 0.43"** (11 mm)
 - J 0.35"** (9 mm)
 - L 7.13"** (181 mm)



Size SQB-DC90	Rated Voltage DC 900 V	Breaking Test Voltage DC 1000 V	Class gR	Rated Breaking Capacity 100 kA**
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Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ DC 1000 V (L/R = 10 ms) [A ² s]
50	90 300 20.50	90 300 21.50	11	480	3 200
63	90 300 20.63	90 300 21.63	13	900	6 200
80	90 300 20.80	90 300 21.80	16	1 900	13 000
100	90 300 20.100	90 300 21.100	19	3 600	24 500
125	90 300 20.125	90 300 21.125	24	6 600	45 000
160	90 300 20.160	90 300 21.160	31	11 200	76 500

*) suitable for B-switch fitting

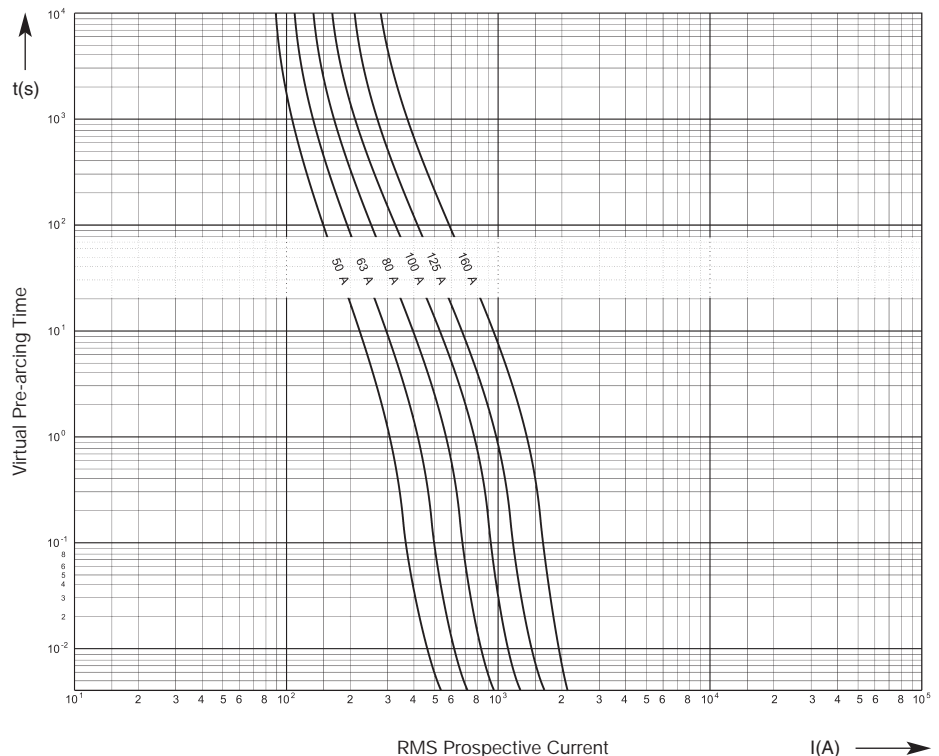
Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.6	1.25	0.5	0.8	1.5

Time-Current Characteristics

** 100 kA
DC 750 V L/R = 100 ms
DC 900 V L/R = 40 ms

30 kA
DC 1000 V L/R = 10 ms





DC-Application / Traction Fuse

Size SQB-DC90	Rated Voltage DC 900 V	Breaking Test Voltage DC 1000 V	Class gR	Standard IEC 60 077-5/UIC 550
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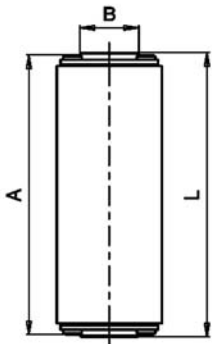
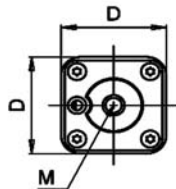
Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Weight [kg/1]	Pack
50	90 350 20.50	90 350 21.50	0.8	1
63	90 350 20.63	90 350 21.63	0.8	1
80	90 350 20.80	90 350 21.80	0.8	1
100	90 350 20.100	90 350 21.100	0.8	1
125	90 350 20.125	90 350 21.125	0.8	1
160	90 350 20.160	90 350 21.160	0.8	1

*) suitable for B-switch fitting

Dimensions

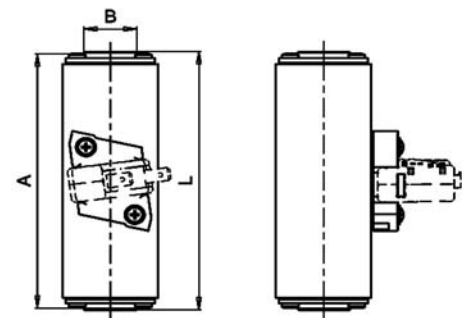
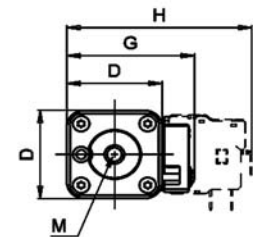
Part No. 90 350 20

- A** 4.88" (124 mm)
- B** 0.94" (24 mm)
- D** 1.69" (43 mm)
- L** 4.96" (126 mm)
- M** 10



Part No. 90 350 21

- A** 4.88" (124 mm)
- B** 0.94" (24 mm)
- D** 1.69" (43 mm)
- G** 2.28" (58 mm)
- H** 3.27" (83 mm)
- L** 4.96" (126 mm)
- M** 10



Size SQB-DC90	Rated Voltage DC 900 V	Breaking Test Voltage DC 1000 V	Class gR	Rated Breaking Capacity 100 kA**
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Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ DC 1000 V (L/R = 10 ms) [A ² s]
50	90 350 20.50	90 350 21.50	11	480	3 200
63	90 350 20.63	90 350 21.63	13	900	6 200
80	90 350 20.80	90 350 21.80	16	1 900	13 000
100	90 350 20.100	90 350 21.100	19	3 600	24 500
125	90 350 20.125	90 350 21.125	24	6 600	45 000
160	90 350 20.160	90 350 21.160	31	11 200	76 500

*) suitable for B-switch fitting

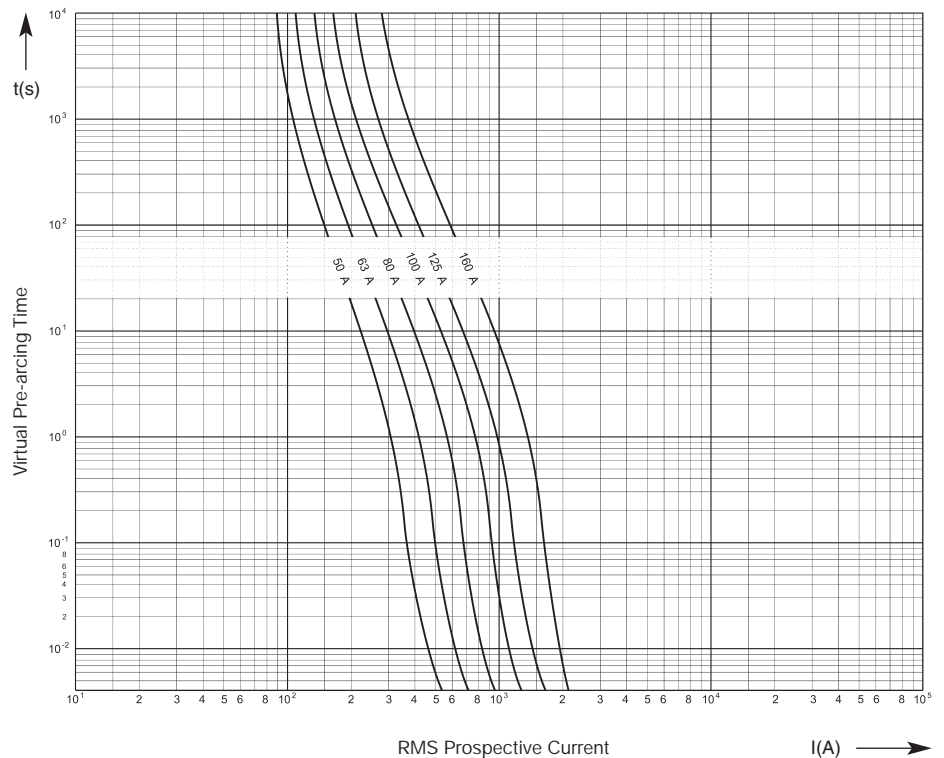
Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.6	1.25	0.5	0.8	1.5

Time-Current Characteristics

** 100 kA
DC 750 V L/R = 100 ms
DC 900 V L/R = 40 ms

30 kA
DC 1000 V L/R = 10 ms





DC-Application / Traction Fuse

Size SQB-DC91	Rated Voltage DC 900 V	Breaking Test Voltage DC 1000 V	Class gR	Standard IEC 60 077-5/UIC 550
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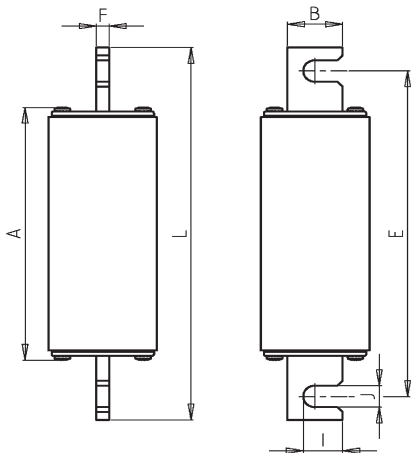
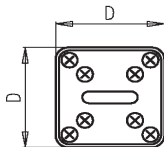
Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Weight [kg/1]	Pack
160	90 310 20.160	90 310 21.160	1.2	1
200	90 310 20.200	90 310 21.200	1.2	1
250	90 310 20.250	90 310 21.250	1.2	1

*) suitable for B-switch fitting

Dimensions

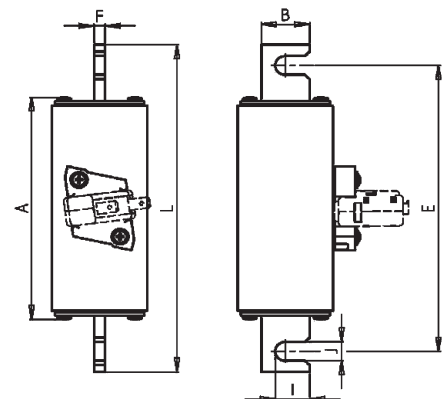
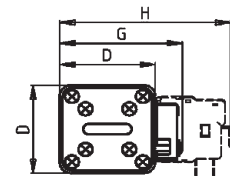
Part No. 90 310 20

- A 5.08"** (129 mm)
- B 1.02"** (26 mm)
- D 2.01"** (51 mm)
- E 6.54"** (166 mm)
- F 0.24"** (6 mm)
- I 0.73"** (18.5 mm)
- J 0.43"** (11 mm)
- L 7.48"** (190 mm)



Part No. 90 310 21

- A 5.08"** (129 mm)
- B 1.02"** (26 mm)
- D 2.01"** (51 mm)
- E 6.54"** (166 mm)
- F 0.24"** (6 mm)
- G 2.60"** (66 mm)
- H 3.58"** (91 mm)
- I 0.73"** (18.5 mm)
- J 0.43"** (11 mm)
- L 7.48"** (190 mm)



Size SQB-DC91	Rated Voltage DC 900 V	Breaking Test Voltage DC 1000 V	Class gR	Rated Breaking Capacity 100 kA**
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Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ DC 1000 V (L/R = 10 ms) [A ² s]
160	90 310 20.160	90 310 21.160	28	9 500	51 000
200	90 310 20.200	90 310 21.200	37	17 000	116 000
250	90 310 20.250	90 310 21.250	45	27 000	184 000

*) suitable for B-switch fitting

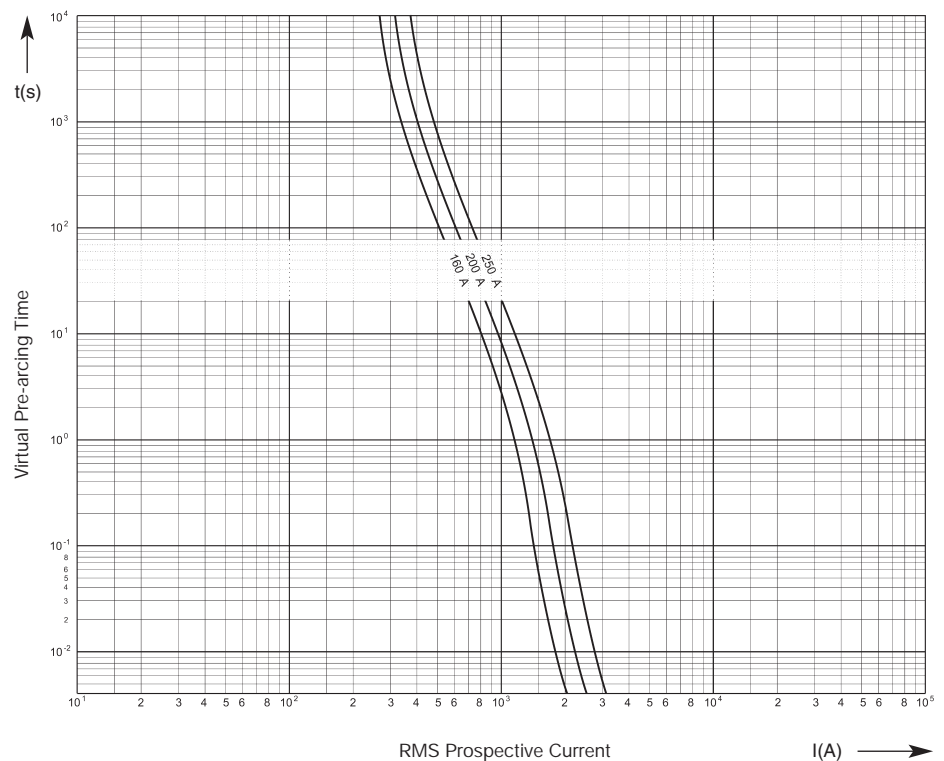
Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.6	1.25	0.5	0.8	1.5

Time-Current Characteristics

** 100 kA
DC 750 V L/R = 100 ms
DC 900 V L/R = 40 ms

30 kA
DC 1000 V L/R = 10 ms





DC-Application / Traction Fuse

Size SQB-DC91	Rated Voltage DC 900 V	Breaking Test Voltage DC 1000 V	Class gR	Standard IEC 60 077-5/UIC 550
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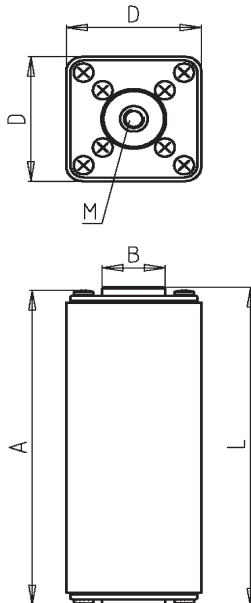
Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Weight [kg/1]	Pack
160	90 360 20.160	90 360 21.160	1.1	1
200	90 360 20.200	90 360 21.200	1.1	1
250	90 360 20.250	90 360 21.250	1.1	1

*) suitable for B-switch fitting

Dimensions

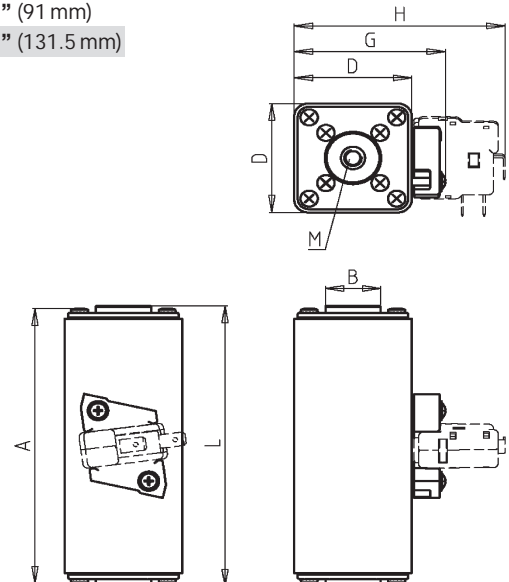
Part No. 90 360 20

- A 5.08"** (129 mm)
- B 0.94"** (24 mm)
- D 2.01"** (51 mm)
- L 5.18"** (131.5 mm)
- M 8**



Part No. 90 360 21

- A 5.08"** (129 mm)
- B 0.94"** (24 mm)
- D 2.01"** (51 mm)
- G 2.60"** (66 mm)
- H 3.58"** (91 mm)
- L 5.18"** (131.5 mm)
- M 8**



Size SQB-DC91	Rated Voltage DC 900 V	Breaking Test Voltage DC 1000 V	Class gR	Rated Breaking Capacity 100 kA**
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Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ DC 1000 V (L/R = 10 ms) [A ² s]
160	90 360 20.160	90 360 21.160	28	9 500	51 000
200	90 360 20.200	90 360 21.200	37	17 000	116 000
250	90 360 20.250	90 360 21.250	45	27 000	184 000

*) suitable for B-switch fitting

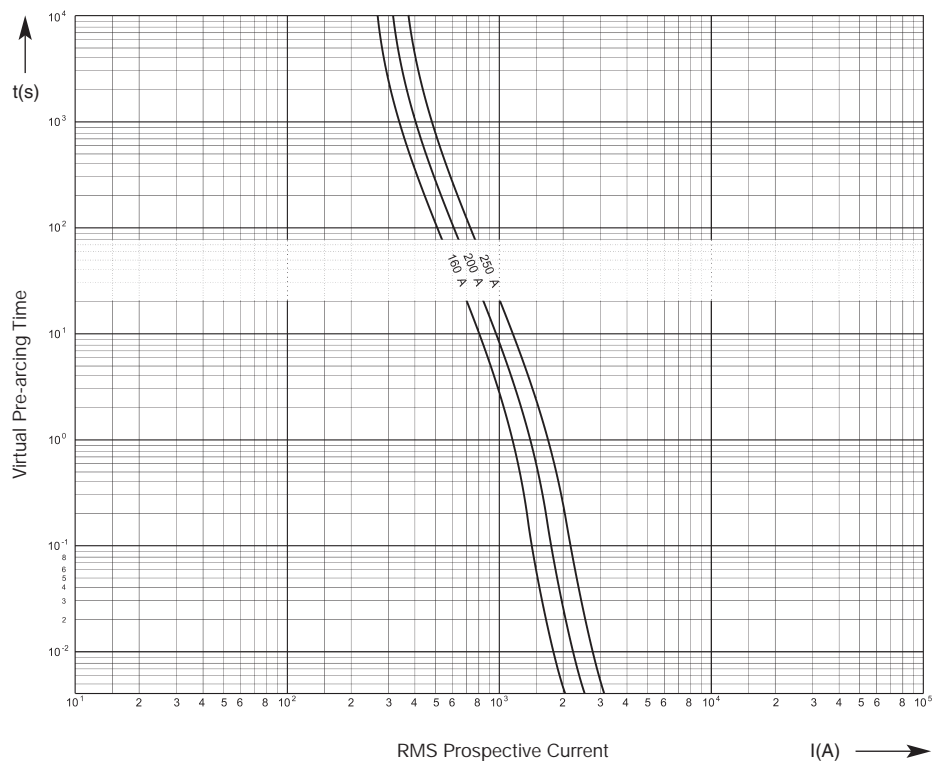
Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.6	1.25	0.5	0.8	1.5

Time-Current Characteristics

** 100 kA
DC 750 V L/R = 100 ms
DC 900 V L/R = 40 ms

30 kA
DC 1000 V L/R = 10 ms





DC-Application / Traction Fuse

Size **SQB-DC92** Rated Voltage **DC 900 V** Breaking Test Voltage **DC 1000 V** Class **gR** Standard **IEC 60 077-5/UIC 550**

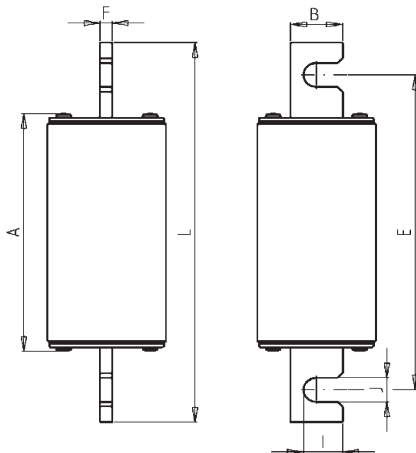
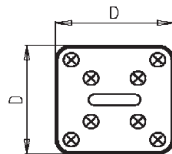
Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Weight [kg/1]	Pack
250	90 320 20.250	90 320 21.250	1.36	1
315	90 320 20.315	90 320 21.315	1.36	1
350	90 320 20.350	90 320 21.350	1.36	1
400	90 320 20.400	90 320 21.400	1.36	1

*) suitable for B-switch fitting

Dimensions

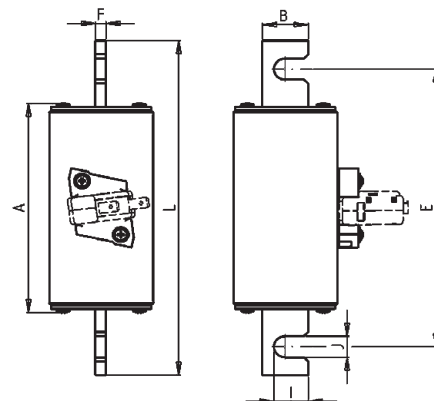
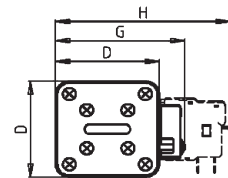
Part No. 90 320 20

- A 5.08" (129 mm)**
- B 1.02" (26 mm)**
- D 2.36" (60 mm)**
- E 6.73" (171 mm)**
- F 0.24" (6 mm)**
- I 0.77" (19.5 mm)**
- J 0.51" (13 mm)**
- L 8.11" (206 mm)**



Part No. 90 320 21

- A 5.08" (129 mm)**
- B 1.02" (26 mm)**
- D 2.36" (60 mm)**
- E 6.73" (171 mm)**
- F 0.24" (6 mm)**
- G 2.95" (75 mm)**
- H 3.94" (100 mm)**
- I 0.77" (19.5 mm)**
- J 0.51" (13 mm)**
- L 8.11" (206 mm)**



Size SQB-DC92	Rated Voltage DC 900 V	Breaking Test Voltage DC 1000 V	Class gR	Rated Breaking Capacity 100 kA**
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Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ DC 1000 V (L/R = 10 ms) [A ² s]
250	90 320 20.250	90 320 21.250	48	21 500	14 100
315	90 320 20.315	90 320 21.315	57	38 000	249 000
350	90 320 20.350	90 320 21.350	61	57 100	374 000
400	90 320 20.400	90 320 21.400	67	79 800	522 000

*) suitable for B-switch fitting

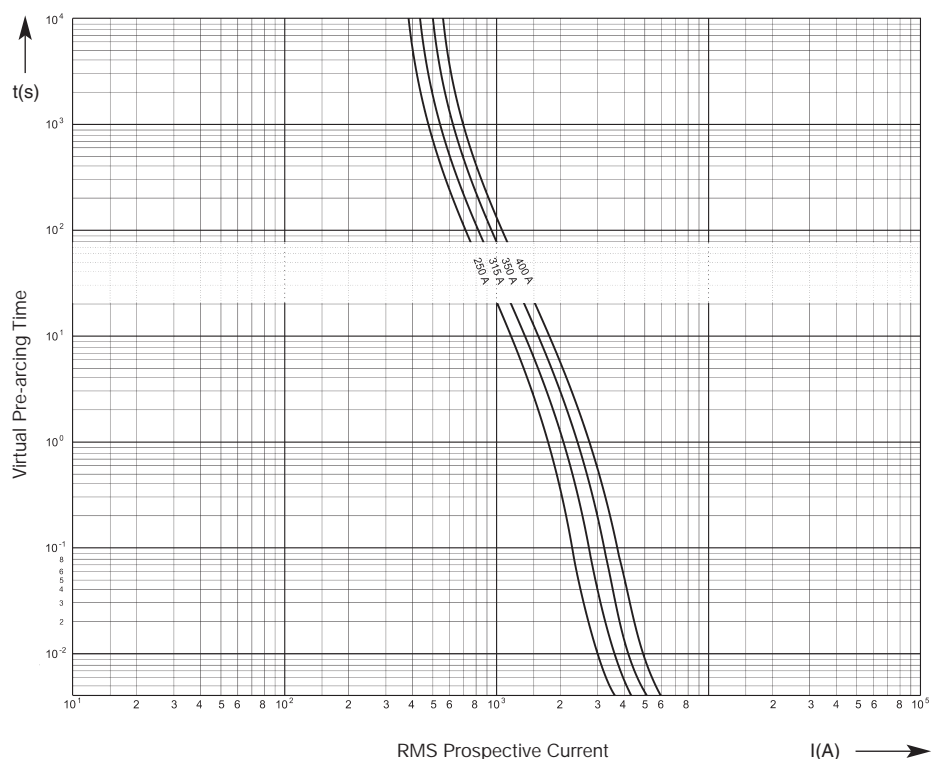
Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.6	1.25	0.5	0.8	1,5

Time-Current Characteristics

** 100 kA
DC 750 V L/R = 100 ms
DC 900 V L/R = 40 ms

30 kA
DC 1000 V L/R = 10 ms





DC-Application / Traction Fuse

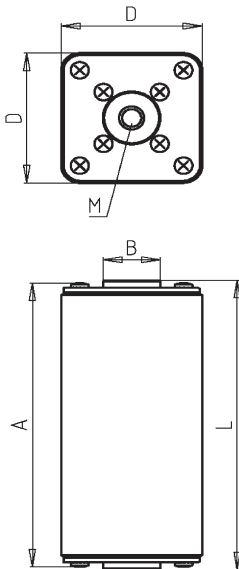
Size SQB-DC92	Rated Voltage DC 900 V	Breaking Test Voltage DC 1000 V	Class gR	Standard IEC 60 077-5/UIC 550
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Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Weight [kg/1]	Pack
250	90 370 20.250	90 370 21.250	1.26	1
315	90 370 20.315	90 370 21.315	1.26	1
350	90 370 20.350	90 370 21.350	1.26	1
400	90 370 20.400	90 370 21.400	1.26	1

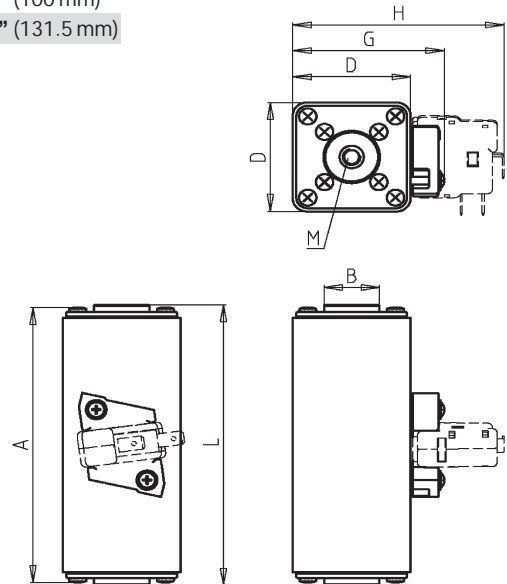
*) suitable for B-switch fitting

Dimensions

- Part No. 90 370 20**
- A** 5.08" (129 mm)
 - B** 0.94" (24 mm)
 - D** 2.36" (60 mm)
 - L** 5.18" (131.5 mm)
 - M** 10



- Part No. 90 320 21**
- A** 5.08" (129 mm)
 - B** 0.94" (24 mm)
 - D** 2.36" (60 mm)
 - G** 2.95" (75 mm)
 - H** 3.94" (100 mm)
 - L** 5.18" (131.5 mm)
 - M** 10



Size SQB-DC92	Rated Voltage DC 900 V	Breaking Test Voltage DC 1000 V	Class gR	Rated Breaking Capacity 100 kA**
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Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ DC 1000 V (L/R = 10 ms) [A ² s]
250	90 370 20.250	90 370 21.250	48	21 500	141 000
315	90 370 20.315	90 370 21.315	57	38 000	249 000
350	90 370 20.350	90 370 21.350	61	57 100	374 000
400	90 370 20.400	90 370 21.400	67	79 800	522 000

*) suitable for B-switch fitting

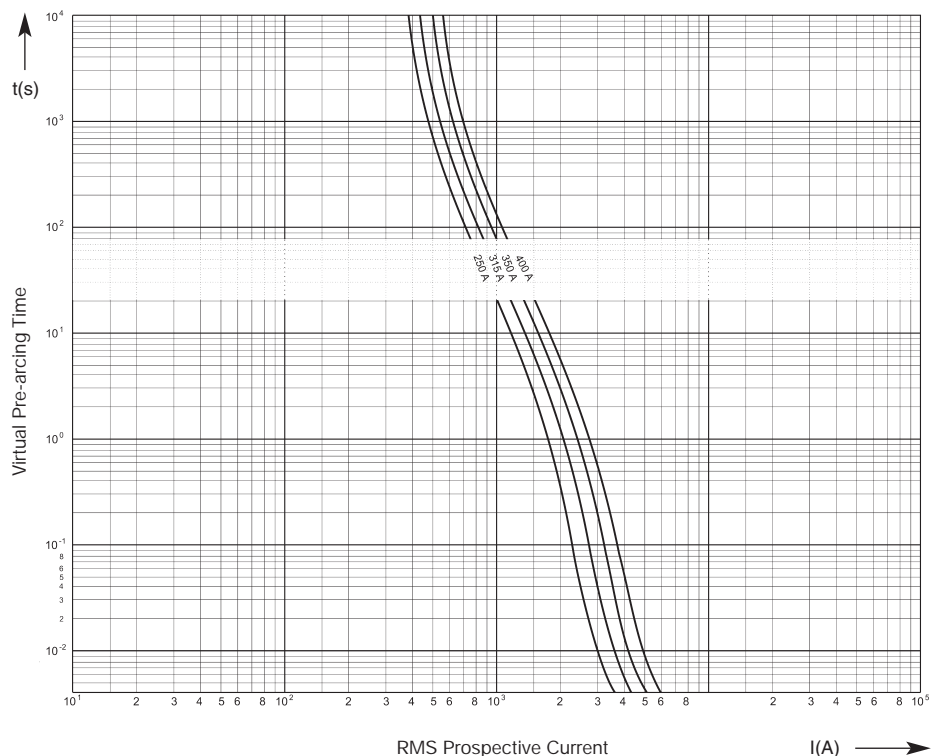
Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.6	1.25	0.5	0.8	1.5

Time-Current Characteristics

** 100 kA
DC 750 V L/R = 100 ms
DC 900 V L/R = 40 ms

30 kA
DC 1000 V L/R = 10 ms





DC-Application / Traction Fuse

Size **SQB-DC92-2** Rated Voltage **DC 900 V** Breaking Test Voltage **DC 1000 V** Class **gR** Standard **IEC 60 077-5/UIC 550**

Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Weight [kg/1]	Pack
500	-	90 378 21.500	2.59	1
630	-	90 378 21.630	2.59	1
700	-	90 378 21.700	2.59	1
800	-	90 378 21.800	2.59	1

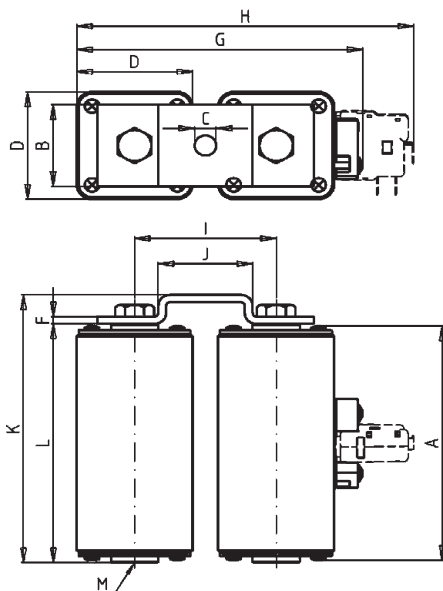
*) suitable for B-switch fitting

Double Body

Dimensions

Part No. 90 378 21

- A** 5.08" (129 mm)
- B** 1.77" (45 mm)
- C** 0.43" (11 mm)
- D** 2.36" (60 mm)
- F** 0.16" (4 mm)
- G** 2.79" (147 mm)
- H** 6.77" (172 mm)
- I** 2.83" (72 mm)
- J** 1.89" (48 mm)
- K** 5.81" (147.5 mm)
- L** 5.18" (131.5 mm)
- M** 10



Size SQB-DC92-2	Rated Voltage DC 900 V	Breaking Test Voltage DC 1000 V	Class gR	Rated Breaking Capacity 100 kA**
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Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ DC 1000 V (L/R = 10 ms) [A ² s]
500	-	90 378 21.500	96	86 000	564 000
630	-	90 378 21.630	114	152 000	996 000
700	-	90 378 21.700	122	228 400	1 496 000
800	-	90 378 21.800	134	319 200	2 088 000

*) suitable for B-switch fitting
Double Body

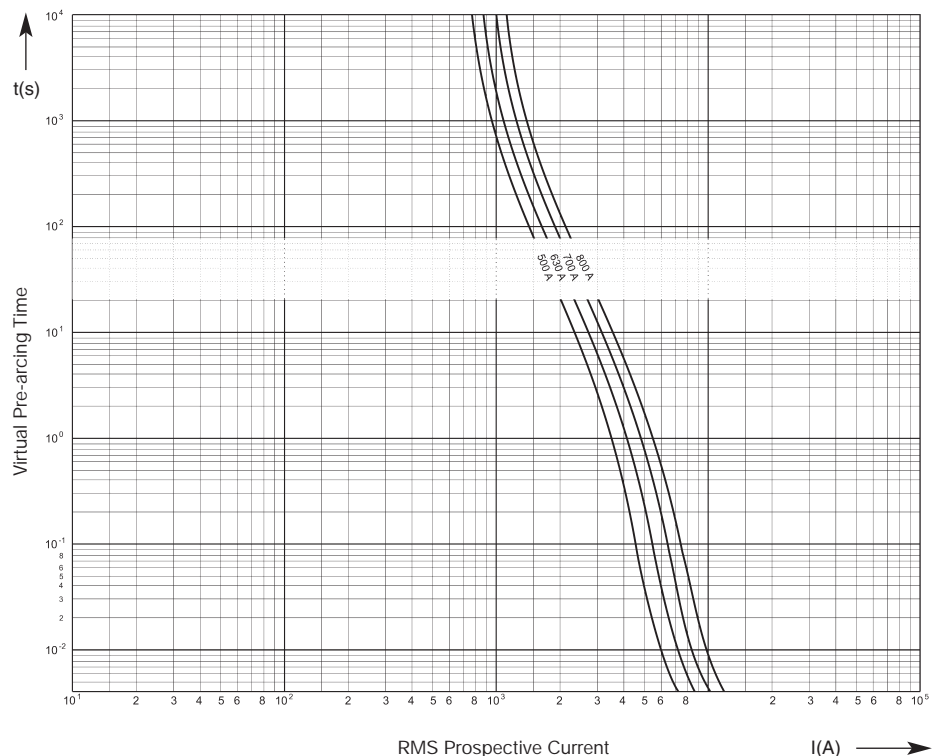
Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.6	1.25	0.5	0.8	1.5

Time-Current Characteristics

** 100 kA
DC 750 V L/R = 100 ms
DC 900 V L/R = 40 ms

30 kA
DC 1000 V L/R = 10 ms





DC-Application / Traction Fuse

Size **SQB-DC93** Rated Voltage **DC 900 V** Breaking Test Voltage **DC 1000 V** Class **gR** Standard **IEC 60 077-5/UIC 550**

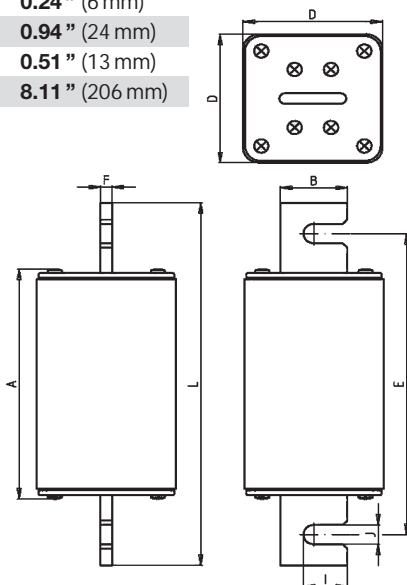
Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Weight [kg/1]	Pack
450	90 330 20.450	90 330 21.450	2.06	1
500	90 330 20.500	90 330 21.500	2.06	1
550	90 330 20.550	90 330 21.550	2.06	1
630	90 330 20.630	90 330 21.630	2.06	1
700	90 330 20.700	90 330 21.700	2.06	1

*) suitable for B-switch fitting

Dimensions

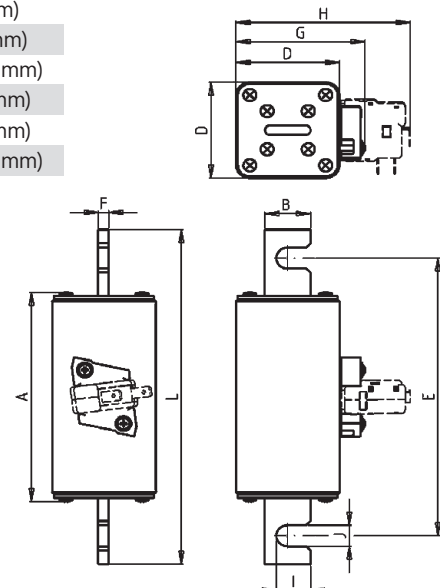
Part No. 90 330 20

- A 5.14"** (130.5 mm)
- B 1.38"** (35 mm)
- D 2.87"** (73 mm)
- E 6.73"** (171 mm)
- F 0.24"** (6 mm)
- I 0.94"** (24 mm)
- J 0.51"** (13 mm)
- L 8.11"** (206 mm)



Part No. 90 330 21

- A 5.14"** (130.5 mm)
- B 1.38"** (35 mm)
- D 2.87"** (73 mm)
- E 6.73"** (171 mm)
- F 0.24"** (6 mm)
- G 3.46"** (88 mm)
- H 4.45"** (113 mm)
- I 0.94"** (24 mm)
- J 0.51"** (13 mm)
- L 8.11"** (206 mm)



Size SQB-DC93	Rated Voltage DC 900 V	Breaking Test Voltage DC 1000 V	Class gR	Rated Breaking Capacity 100 kA**
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Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ DC 1000 V (L/R = 10 ms) [A ² s]
450	90 330 20.450	90 330 21.450	75	106 000	691 000
500	90 330 20.500	90 330 21.500	86	129 000	835 000
550	90 330 20.550	90 330 21.550	97	153 000	1 357 000
630	90 330 20.630	90 330 21.630	112	180 000	1 615 000 (DC 800 V)
700	90 330 20.700	90 330 21.700	127	240 000	2 150 000 (DC 800 V)

*) suitable for B-switch fitting

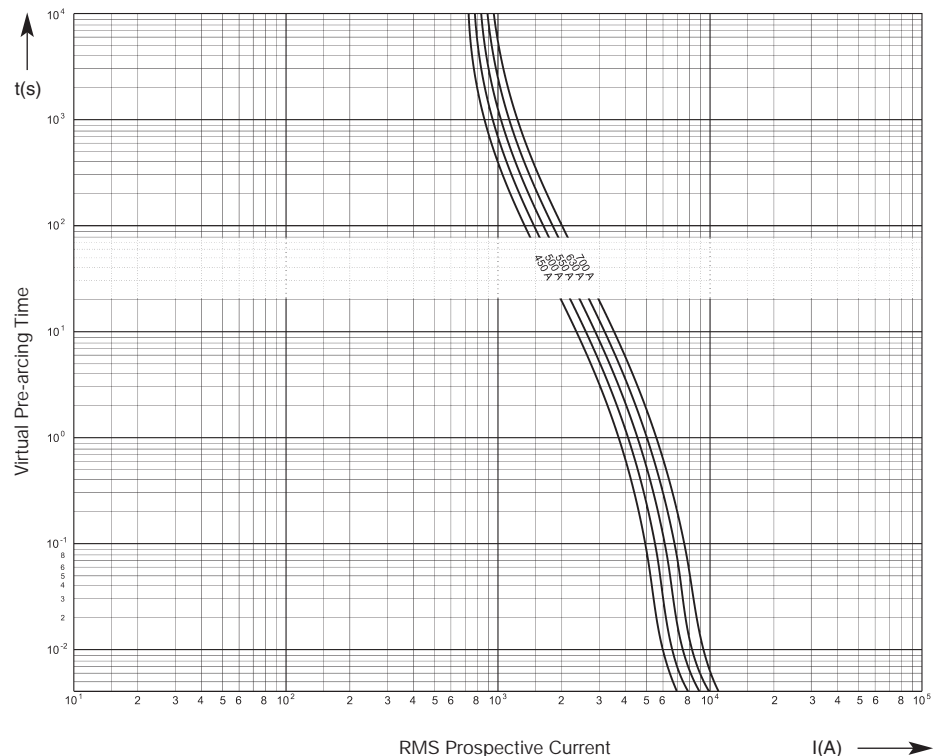
Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.6	1.25	0.5	0.8	1.5

Time-Current Characteristics

** 100 kA
DC 750 V L/R = 100 ms
DC 900 V L/R = 40 ms

30 kA
DC 1000 V L/R = 10 ms





DC-Application / Traction Fuse

Size SQB-DC93	Rated Voltage DC 900 V	Breaking Test Voltage DC 1000 V	Class gR	Standard IEC 60 077-5/UIC 550
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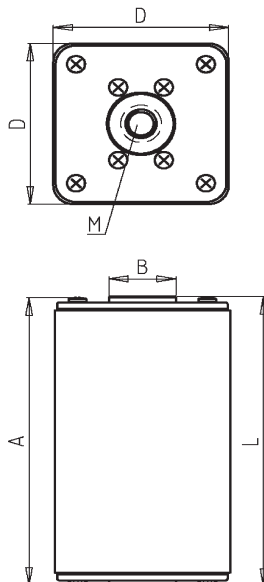
Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Weight [kg/1]	Pack
450	90 380 20.450	90 380 21.450	1.96	1
500	90 380 20.500	90 380 21.500	1.96	1
550	90 380 20.550	90 380 21.550	1.96	1
630	90 380 20.630	90 380 21.630	1.96	1
700	90 380 20.700	90 380 21.700	1.96	1

*) suitable for B-switch fitting

Dimensions

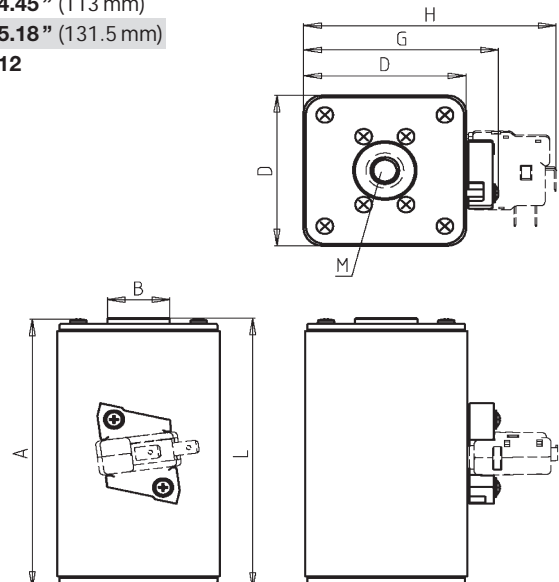
Part No. 90 380 20

- A 5.14"** (130.5 mm)
- B 1.10"** (28 mm)
- D 2.87"** (73 mm)
- L 5.18"** (131.5 mm)
- M 12**



Part No. 90 380 21

- A 5.14"** (130.5 mm)
- B 1.10"** (28 mm)
- D 2.87"** (73 mm)
- G 3.46"** (88 mm)
- H 4.45"** (113 mm)
- L 5.18"** (131.5 mm)
- M 12**



Size SQB-DC93	Rated Voltage DC 900 V	Breaking Test Voltage DC 1000 V	Class gR	Rated Breaking Capacity 100 kA**
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Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ DC 1000 V (L/R = 10 ms) [A ² s]
450	90 380 20.450	90 380 21.450	75	106 000	691 000
500	90 380 20.500	90 380 21.500	86	129 000	835 000
550	90 380 20.550	90 380 21.550	97	153 000	1 357 000
630	90 380 20.630	90 380 21.630	112	180 000	1 615 000 (DC 800 V)
700	90 380 20.700	90 380 21.700	127	240 000	2 150 000 (DC 800 V)

*) suitable for B-switch fitting

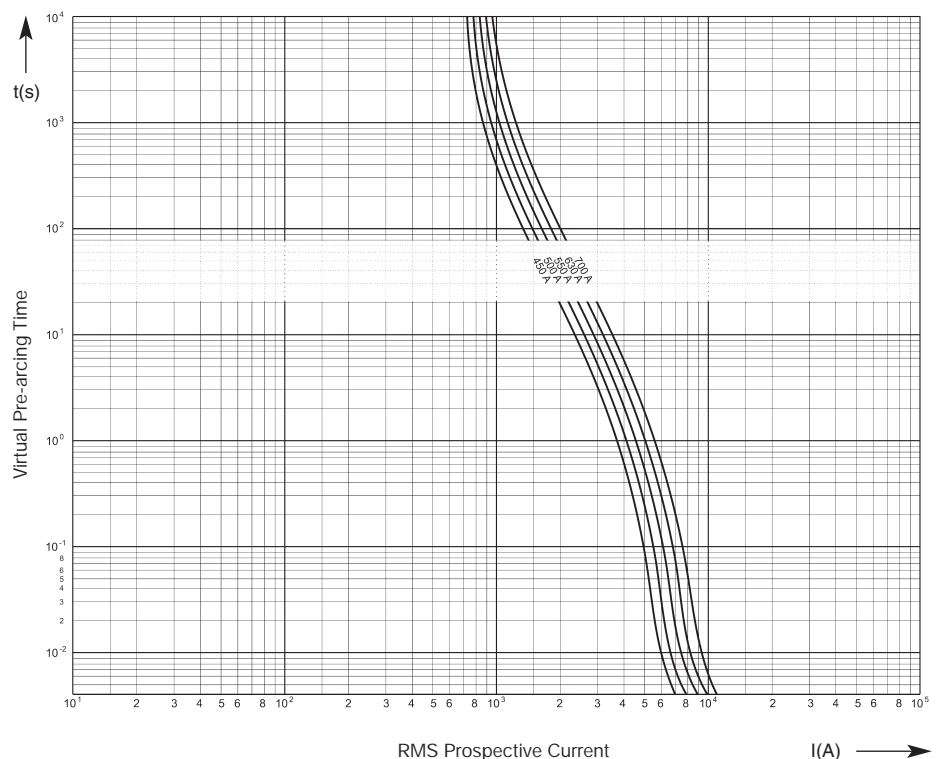
Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.6	1.25	0.5	0.8	1.5

Time-Current Characteristics

** 100 kA
DC 750 V L/R = 100 ms
DC 900 V L/R = 40 ms

30 kA
DC 1000 V L/R = 10 ms





DC-Application / Traction Fuse

Size **SQB-DC93-2** Rated Voltage **DC 900 V** Breaking Test Voltage **DC 1000 V** Class **gR** Standard **IEC 60 077-5/UIC 550**

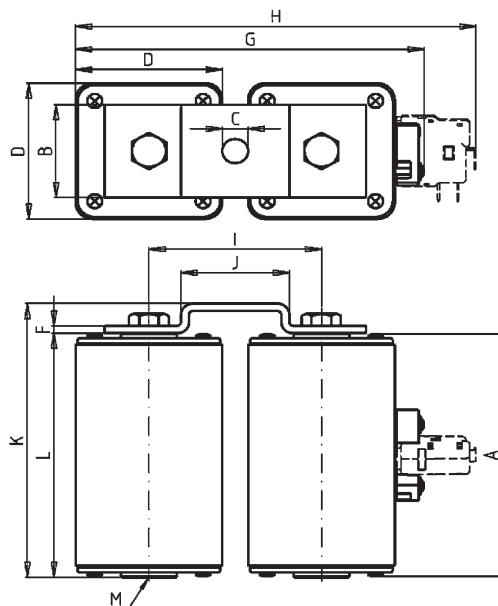
Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Weight [kg/1]	Pack
900	-	90 388 21.900	4.04	1
1 000	-	90 388 21.1000	4.04	1
1 100	-	90 388 21.1100	4.04	1
1 250	-	90 388 21.1250	4.04	1
1 400	-	90 388 21.1400	4.04	1

*) suitable for B-switch fitting
Double Body

Dimensions

Part No. 90 388 21

- A 5.14"** (130.5 mm)
- B 1.97"** (50 mm)
- C 0.51"** (13 mm)
- D 2.87"** (73 mm)
- F 0.16"** (4 mm)
- G 6.85"** (174 mm)
- H 7.83"** (199 mm)
- I 3.39"** (86 mm)
- J 2.13"** (54 mm)
- K 5.81"** (147.5 mm)
- L 5.18"** (131.5 mm)
- M 12**



Size SQB-DC93-2	Rated Voltage DC 900 V	Breaking Test Voltage DC 1000 V	Class gR	Rated Breaking Capacity 100 kA**
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Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ DC 1000 V (L/R = 10 ms) [A ² s]
900	-	90 388 21.900	150	424 000	2 764 000
1 000	-	90 388 21.1000	172	516 000	3 340 000
1 100	-	90 388 21.1100	194	612 000	5 428 000
1 250	-	90 388 21.1250	224	720 000	6 460 000 (DC 800 V)
1 400	-	90 388 21.1400	254	960 000	8 600 000 (DC 800 V)

*) suitable for B-switch fitting
Double Body

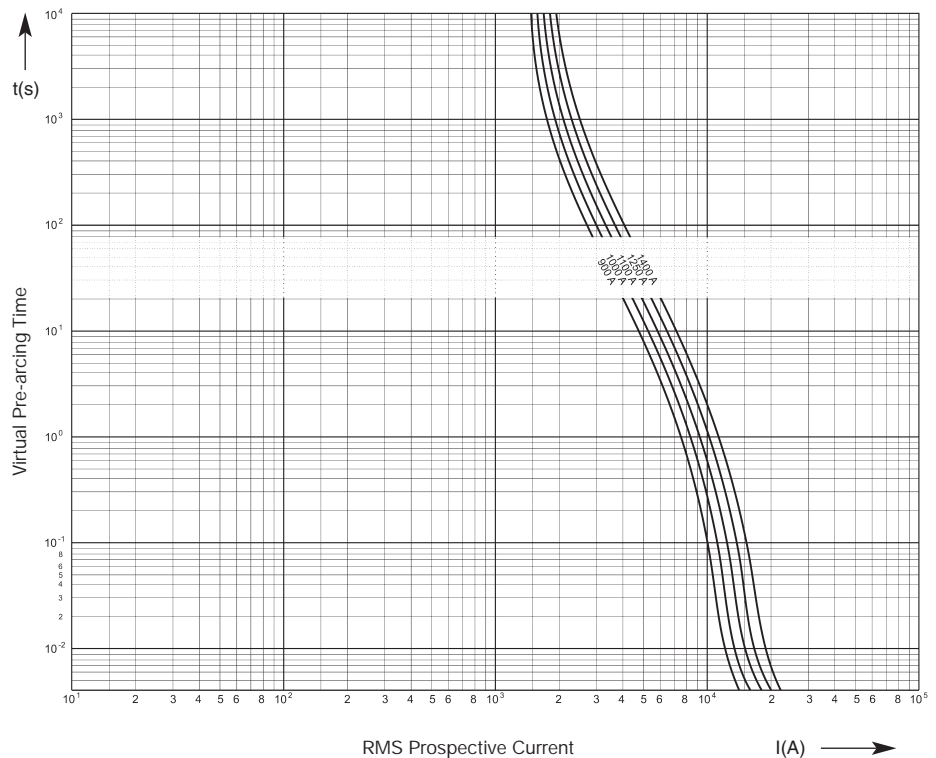
Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.6	1.25	0.5	0.8	1.5

Time-Current Characteristics

** 100 kA
 DC 750 V L/R = 100 ms
 DC 900 V L/R = 40 ms

 30 kA
 DC 1000 V L/R = 10 ms





DC-Application / Traction Fuse

Size
20 x 127 mm

Rated Voltage
DC 1000 V

Class
gR / aR

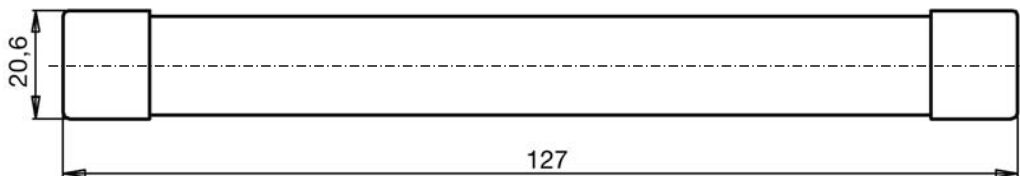
Standard
IEC 60269-4

Rated Current [A]	Part No. with Indicator	Part No. with Striker	Weight [kg/1]	Pack
3.15	90 080 10.3.15*	90 082 10.3.15*	0.1	12
6	90 080 10.6	90 082 10.6	0.1	12
8	90 080 10.8	90 082 10.8	0.1	12
10	90 080 10.10	90 082 10.10	0.1	12
12	90 080 10.12	90 082 10.12	0.1	12
16	90 080 10.16	90 082 10.16	0.1	12
20	90 080 10.20	90 082 10.20	0.1	12
25	90 080 10.25	90 082 10.25	0.1	12
32	90 080 10.32	90 082 10.32	0.1	12
40	90 080 10.40	90 082 10.40	0.1	12
50	90 080 10.50	90 082 10.50	0.1	12
63	90 080 10.63	90 082 10.63	0.1	12

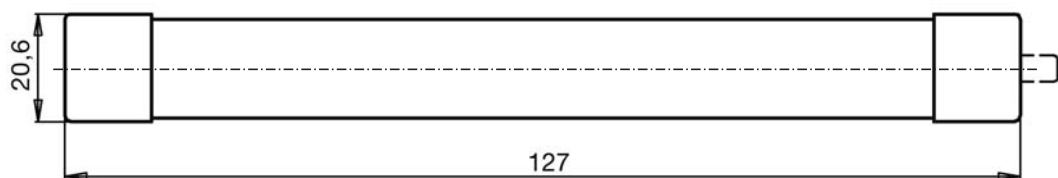
* without indicator / striker

Dimensions

Part No. 90 080 10. ... with indicator



Part No. 90 082 10. ... with striker



Size 20 x 127 mm	Rated Voltage DC 1000 V	Class gR / aR	Rated Breaking Capacity 100 kA
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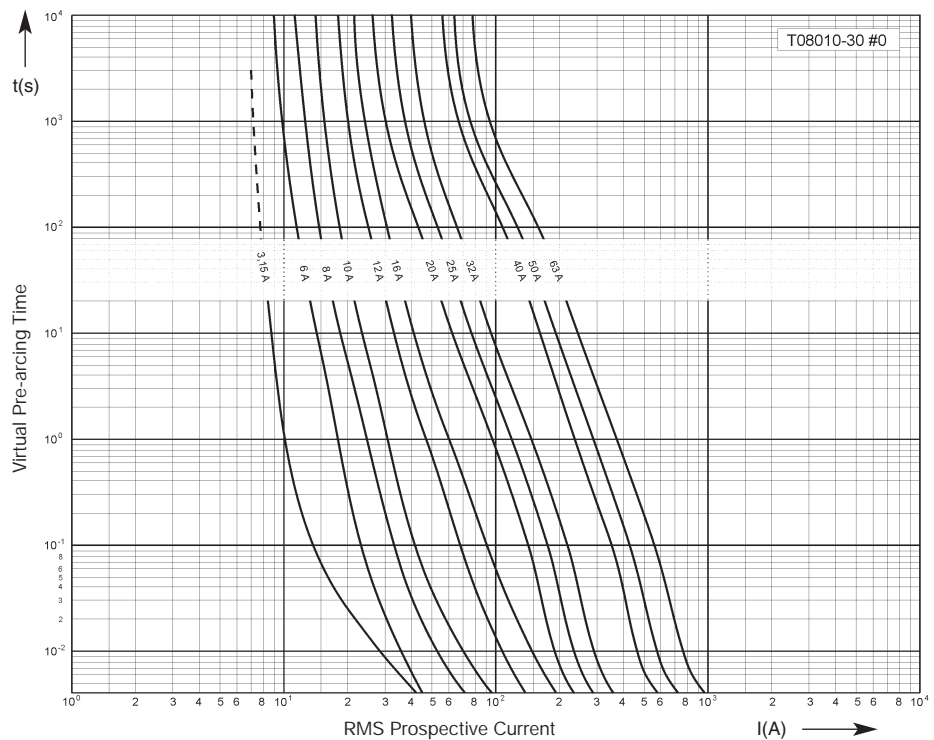
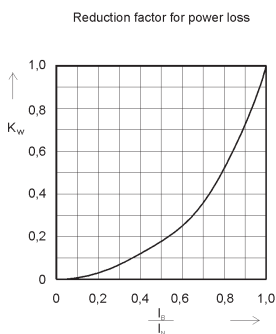
Rated Current [A]	Part No. with Indicator	Part No. with Striker	Class	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ DC 1000 V (L/R 1 ms) [A ² s]
3.15	90 080 10.3.15*	90 082 10.3.15*	aR	4.1	2	13
6	90 080 10.6	90 082 10.6	gR	3.0	3	17
8	90 080 10.8	90 082 10.8	gR	3.2	7	42
10	90 080 10.10	90 082 10.10	gR	3.4	13	75
12	90 080 10.12	90 082 10.12	gR	4.6	20	120
16	90 080 10.16	90 082 10.16	gR	5.7	52	300
20	90 080 10.20	90 082 10.20	gR	6.8	82	470
25	90 080 10.25	90 082 10.25	gR	8.1	118	670
32	90 080 10.32	90 082 10.32	gR	10.0	184	1 050
40	90 080 10.40	90 082 10.40	gR	12.0	472	2 700
50	90 080 10.50	90 082 10.50	gR	13.2	737	4 200
63	90 080 10.63	90 082 10.63	gR	17.7	1 311	7 500

* without indicator / striker

Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.6	1.25	0.6	0.8	1.5

Time-Current Characteristics





DC-Application / Traction Fuse

Size
NH 4

Rated Voltage
DC 1000 V

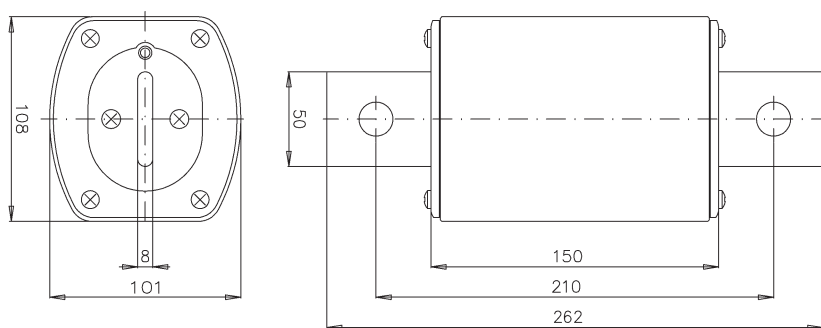
Class
gF

Standard
IEC 60269-4 / UIC 550

Rated Current [A]	Part No.	Weight [kg/1]	Pack
500	90 083 10.500	3.9	1
550	90 083 10.550	3.9	1
630	90 083 10.630	3.9	1
700	90 083 10.700	3.9	1
800	90 083 10.800	3.9	1

Dimensions

Part No. 90 083 10. ...



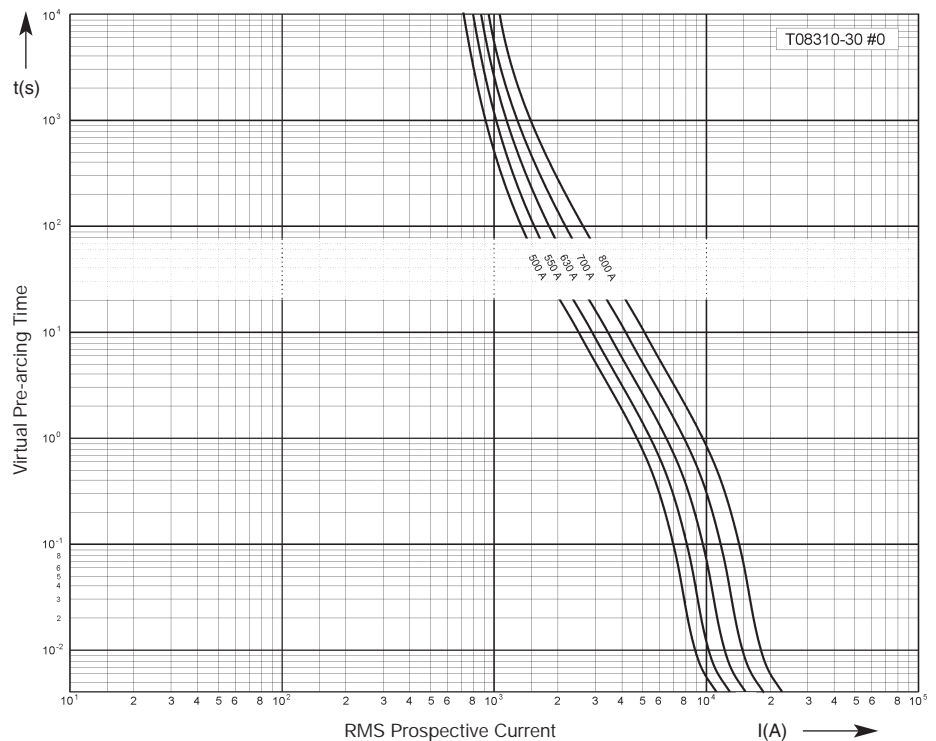
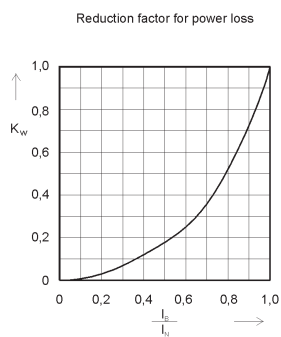
Size NH 4	Rated Voltage DC 1000 V	Class gF	Rated Breaking Capacity 40 kA
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Rated Current [A]	Part No.	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ DC 1000 V (L/R 15 ms) [A ² s]
500	90 083 10.500	250 000	750 000
550	90 083 10.550	330 000	980 000
630	90 083 10.630	480 000	1 400 000
700	90 083 10.700	695 000	2 000 000
800	90 083 10.800	1 030 000	2 900 000

Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.55	1.25	0.5	0.8	1.5

Time-Current Characteristics





DC-Application / Traction Fuse

Size
SQB-DC0

Rated Voltage
DC 900 V

Breaking Test Voltage
DC 1200 V

Class
aR

Standard
IEC 60 077-5/UIC 550

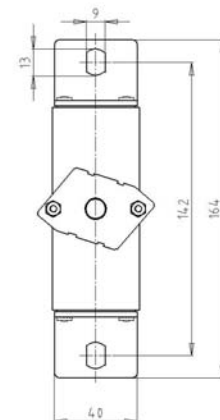
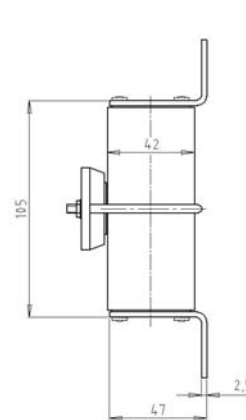
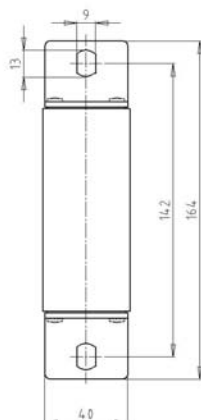
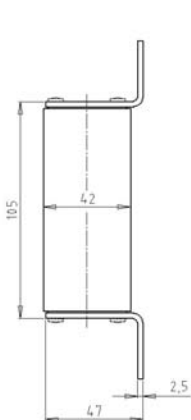
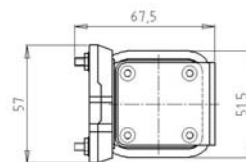
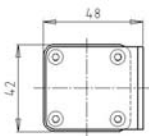
Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Weight [kg/1]	Pack
25	90 223 25.25	90 223 26.25	2.0	1
32	90 223 25.32	90 223 26.32	2.0	1
40	90 223 25.40	90 223 26.40	2.0	1
50	90 223 25.50	90 223 26.50	2.0	1
63	90 223 25.63	90 223 26.63	2.0	1
80	90 223 25.80	90 223 26.80	2.0	1
100	90 223 25.100	90 223 26.100	2.0	1
125	90 223 25.125	90 223 26.125	2.0	1

*) suitable for B-switch fitting

Dimensions

Part No. 90 223 25. ...

Part No. 90 223 26. ...*



Size SQB-DC0	Rated Voltage DC 900 V	Breaking Test Voltage DC 1200 V	Class aR	Rated Breaking Capacity 30 kA
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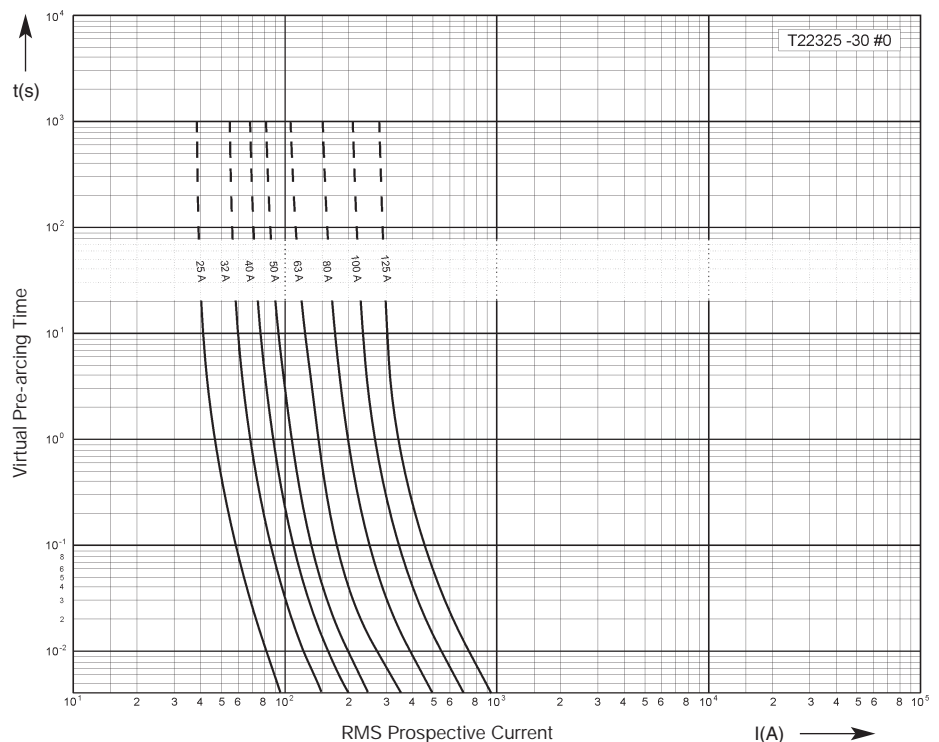
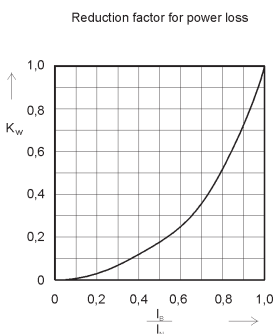
Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ DC 1200 V (L/R = 15 ms) [A ² s]
25	90 223 25.25	90 223 26.25	15	20	190
32	90 223 25.32	90 223 26.32	19	45	410
40	90 223 25.40	90 223 26.40	23	80	730
50	90 223 25.50	90 223 26.50	28	130	1 150
63	90 223 25.63	90 223 26.63	34	250	2 250
80	90 223 25.80	90 223 26.80	41	510	4 600
100	90 223 25.100	90 223 26.100	50	1 000	8 900
125	90 223 25.125	90 223 26.125	58	1 650	14 800

*) suitable for B-switch fitting

Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.55	1.25	0.6	0.8	1.5

Time-Current Characteristics





DC-Application / Traction Fuse

Size SQB-DC2	Rated Voltage DC 900 V	Breaking Test Voltage DC 1200 V	Class aR	Standard IEC 60 077-5/UIC 550
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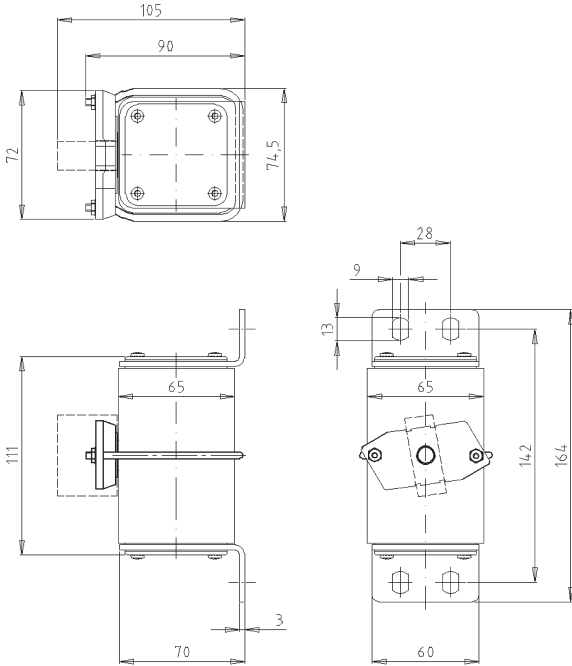
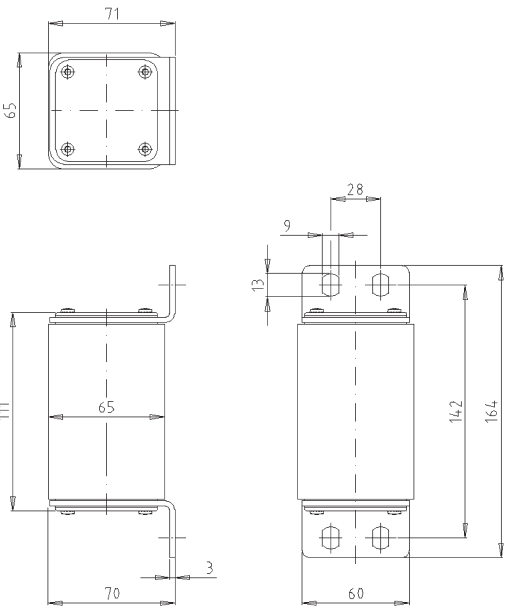
Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Weight [kg/1]	Pack
100	90 203 25.100	90 203 26.100	3.5	1
125	90 203 25.125	90 203 26.125	3.5	1
160	90 203 25.160	90 203 26.160	3.5	1
200	90 203 25.200	90 203 26.200	3.5	1
250	90 203 25.250	90 203 26.250	3.5	1
315	90 203 25.315	90 203 26.315	3.5	1
350	90 203 25.350	90 203 26.350	3.5	1
400	90 203 25.400	90 203 26.400	3.5	1

*) suitable for B-switch fitting

Dimensions

Part No. 90 203 25. ...

Part No. 90 203 26. ...*



Size SQB-DC2	Rated Voltage DC 900 V	Breaking Test Voltage DC 1200 V	Class aR	Rated Breaking Capacity 30 kA
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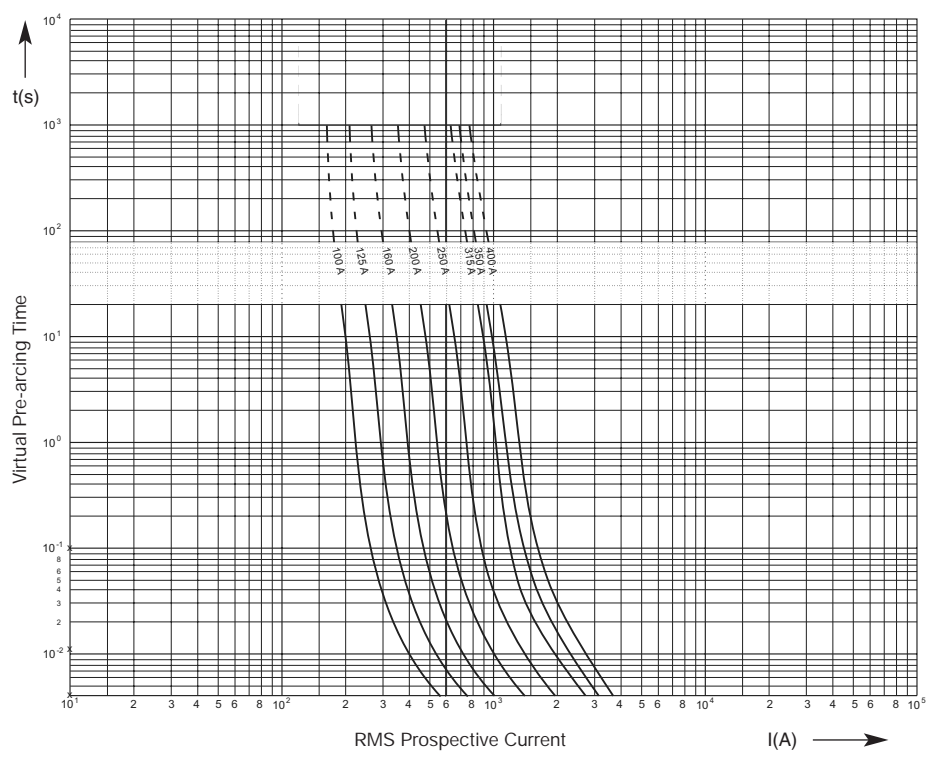
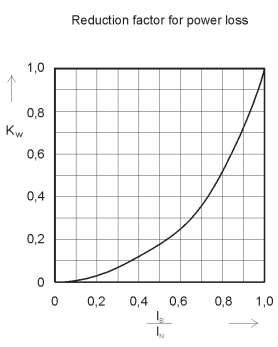
Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ DC 1200 V (L/R = 15 ms) [A ² s]
100	90 203 25.100	90 203 26.100	60	620	5 400
125	90 203 25.125	90 203 26.125	68	1 150	10 100
160	90 203 25.160	90 203 26.160	78	2 100	18 000
200	90 203 25.200	90 203 26.200	89	4 000	36 000
250	90 203 25.250	90 203 26.250	101	8 200	73 000
315	90 203 25.315	90 203 26.315	114	15 000	133 000
350	90 203 25.350	90 203 26.350	128	18 500	106 000
400	90 203 25.400	90 203 26.400	137	26 500	151 000

*) suitable for B-switch fitting

Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.55	1.25	0.6	0.8	1.5

Time-Current Characteristics





DC-Application / Traction Fuse

Size
20 x 127 mm

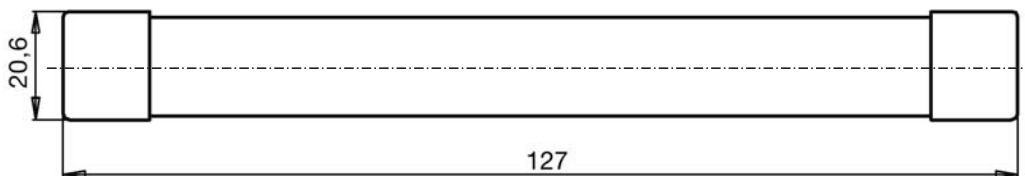
Rated Voltage
DC 1500 V

Class
gR / aR

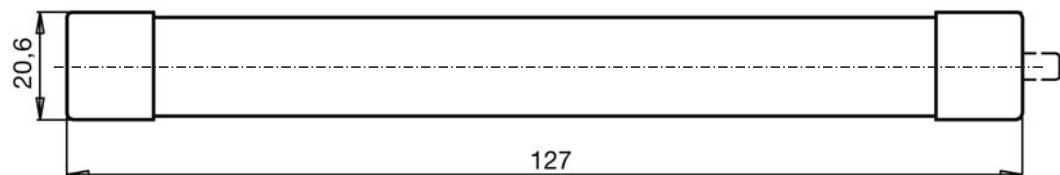
Rated Current [A]	Part No. without Striker	Part No. with Striker	Weight [kg/1]	Pack
2	90 081 10.2	-	0.1	12
3.15	90 081 10.3.15	-	0.1	12
6	-	90 081 10.6	0.1	12
8	-	90 081 10.8	0.1	12
10	-	90 081 10.10	0.1	12
12	-	90 081 10.12	0.1	12
16	-	90 081 10.16	0.1	12
20	-	90 081 10.20	0.1	12
25	-	90 081 10.25	0.1	12

Dimensions

Part No. 90 081 10. ... without striker



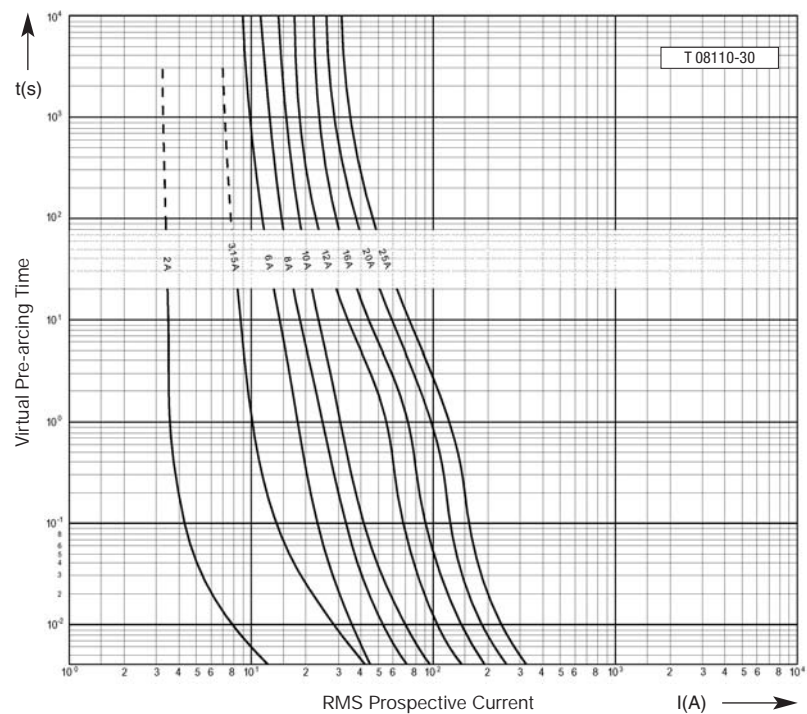
Part No. 90 081 10. ... with striker



Size 20 x 127 mm	Rated Voltage DC 1500 V	Class gR / aR	Rated Breaking Capacity 30 kA
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Rated Current [A]	Part No. without Striker	Part No. with Striker	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ AC 1000 V (L/R = 1 ms) [A ² s]
2	90 081 10.2	-	3.9	0.64	5
3.15	90 081 10.3.15	-	4.1	2.0	16
6	-	90 081 10.6	3.0	3.0	18
8	-	90 081 10.8	3.2	7.4	44
10	-	90 081 10.10	3.4	13.0	80
12	-	90 081 10.12	3.6	30.0	180
16	-	90 081 10.16	4.6	52.0	320
20	-	90 081 10.20	5.5	90.0	550
25	-	90 081 10.25	6.9	149.0	900

Time-Current Characteristics





DC-Application / Traction Fuse

Size
36 x 190 mm

Rated Voltage
DC 1500 V

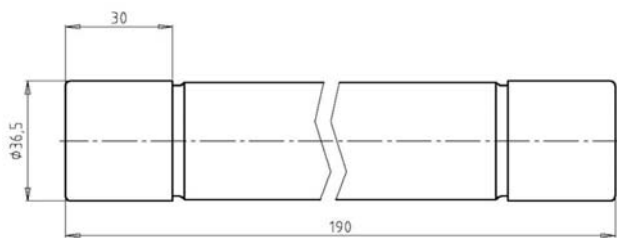
Class
gR

Standard
IEC 60077-5 / UIC 550

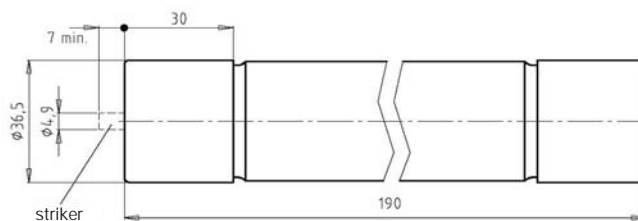
Rated Current [A]	Part No. without Striker	Part No. with Striker	Weight [kg/1]	Pack
20	90 094 10.20	90 095 10.20	1	1
25	90 094 10.25	90 095 10.25	1	1
32	90 094 10.32	90 095 10.32	1	1
40	90 094 10.40	90 095 10.40	1	1
50	90 094 10.50	90 095 10.50	1	1
63	90 094 10.63	90 095 10.63	1	1
80	90 094 10.80	90 095 10.80	1	1
100	90 094 10.100	90 095 10.100	1	1

Dimensions

Part No. 90 094 10. ...



Part No. 90 095 10. ...



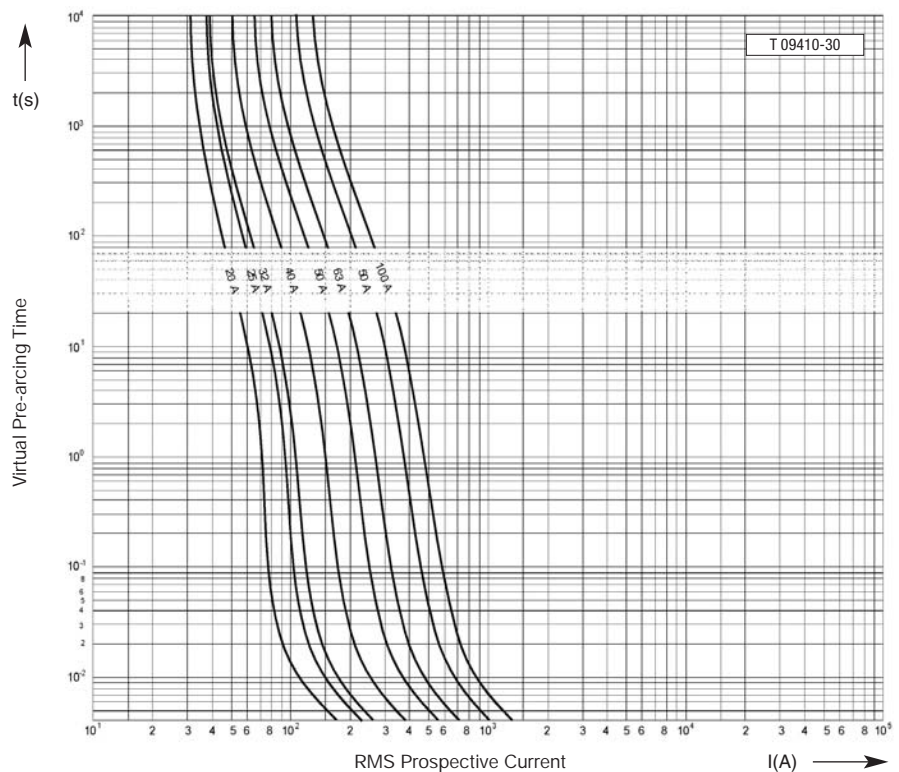
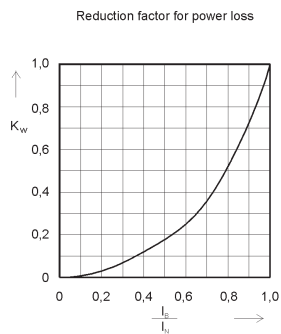
Size 36 x 190 mm	Rated Voltage DC 1500 V	Class gR	Rated Breaking Capacity 30 kA
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Rated Current [A]	Part No. without Striker	Part No. with Striker	Power Loss [W]	Pre-arcing I^2t -value [A ² s]	Total I^2t -value @ DC 1500 V (L/R 30 ms) [A ² s]
20	90 094 10.20	90 095 10.20	9	60	470
25	90 094 10.25	90 095 10.25	12	100	770
32	90 094 10.32	90 095 10.32	16	130	950
40	90 094 10.40	90 095 10.40	22	290	2 200
50	90 094 10.50	90 095 10.50	25	620	4 600
63	90 094 10.63	90 095 10.63	30	1 000	7 500
80	90 094 10.80	90 095 10.80	34	2 050	15 300
100	90 094 10.100	90 095 10.100	38	3 500	25 800

Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.6	1.25	0.6	0.8	1.5

Time-Current Characteristics





DC-Application / Traction Fuse

Size
SQB-DC0

Rated Voltage
DC 1700 V

Breaking Test Voltage
DC 2000 V

Class
aR

Standard
IEC 60 077-5 / UIC 550

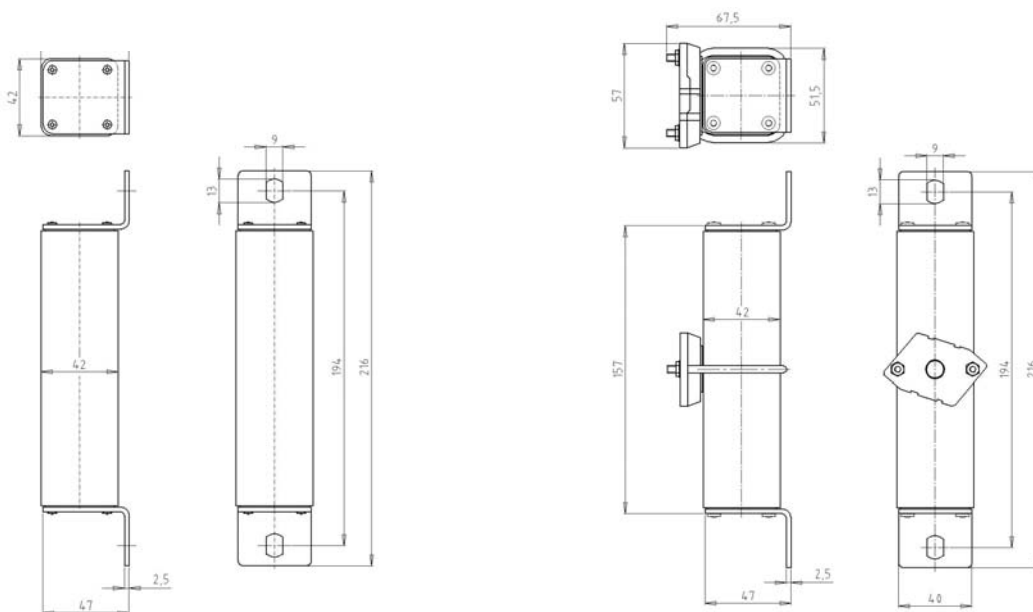
Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Weight [kg/1]	Pack
25	90 222 25.25	90 222 26.25	2.0	1
32	90 222 25.32	90 222 26.32	2.0	1
40	90 222 25.40	90 222 26.40	2.0	1
50	90 222 25.50	90 222 26.50	2.0	1
63	90 222 25.63	90 222 26.63	2.0	1
80	90 222 25.80	90 222 26.80	2.0	1
100	90 222 25.100	90 222 26.100	2.0	1
125	90 222 25.125	90 222 26.125	2.0	1
150	90 222 25.150	90 222 26.150	2.0	1

*) suitable for B-switch fitting

Dimensions

Part No. 90 222 25. ...

Part No. 90 222 26. ...*



Size SQB-DC0	Rated Voltage DC 1700 V	Breaking Test Voltage DC 2000 V	Class aR	Rated Breaking Capacity 30kA
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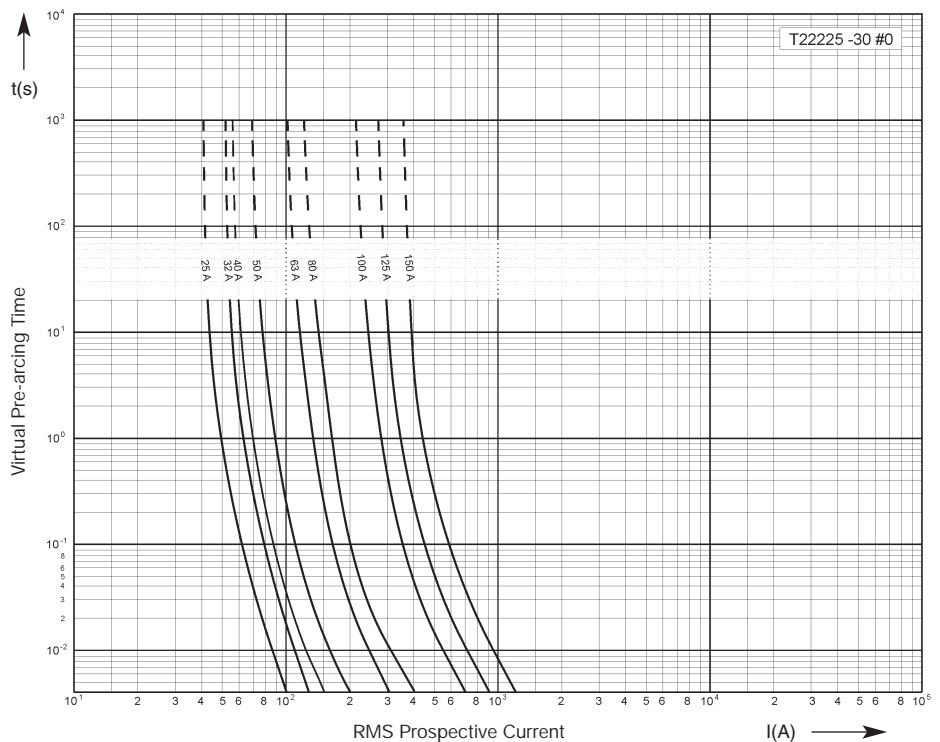
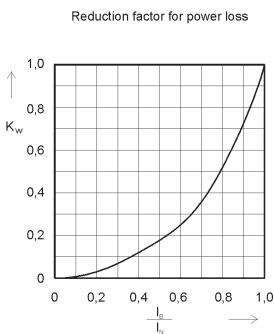
Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Power Loss [W]	Pre-arcing I^2t -value [A ² s]	Total I^2t -value @ DC 2000 V (L/R = 15 ms) [A ² s]
25	90 222 25.25	90 222 26.25	28	20	170
32	90 222 25.32	90 222 26.32	37	32	270
40	90 222 25.40	90 222 26.40	43	46	390
50	90 222 25.50	90 222 26.50	57	82	680
63	90 222 25.63	90 222 26.63	60	184	1 600
80	90 222 25.80	90 222 26.80	73	328	2 700
100	90 222 25.100	90 222 26.100	75	1 000	8 400
125	90 222 25.125	90 222 26.125	80	1 660	13 800
150	90 222 25.150	90 222 26.150	85	2 950	24 500

*) suitable for B-switch fitting

Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.55	1.25	0.6	0.8	1.5

Time-Current Characteristics





DC-Application / Traction Fuse

Size
SQB-DC2

Rated Voltage
DC 1700 V

Breaking Test Voltage
DC 2000 V

Class
aR

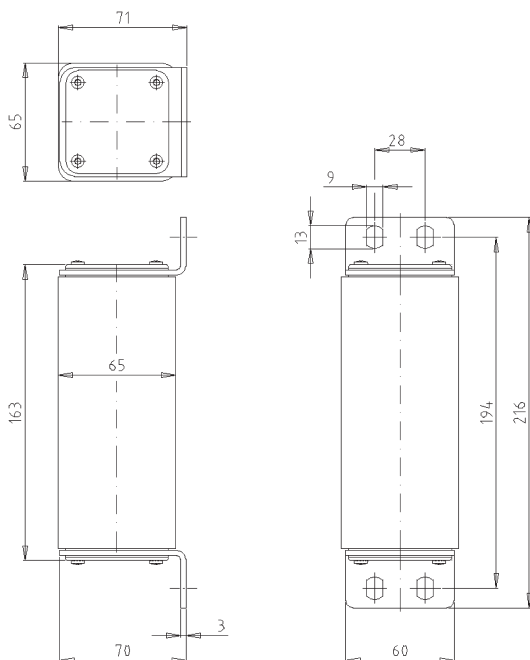
Standard
IEC 60 077-5 / UIC 550

Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Weight [kg/1]	Pack
125	90 202 25.125	90 202 26.125	2.0	1
160	90 202 25.160	90 202 26.160	2.0	1
200	90 202 25.200	90 202 26.200	2.0	1
250	90 202 25.250	90 202 26.250	2.0	1
315	90 202 25.315	90 202 26.315	2.0	1
350	90 202 25.350	90 202 26.315	2.0	1
400	90 202 25.400	90 202 26.315	2.0	1

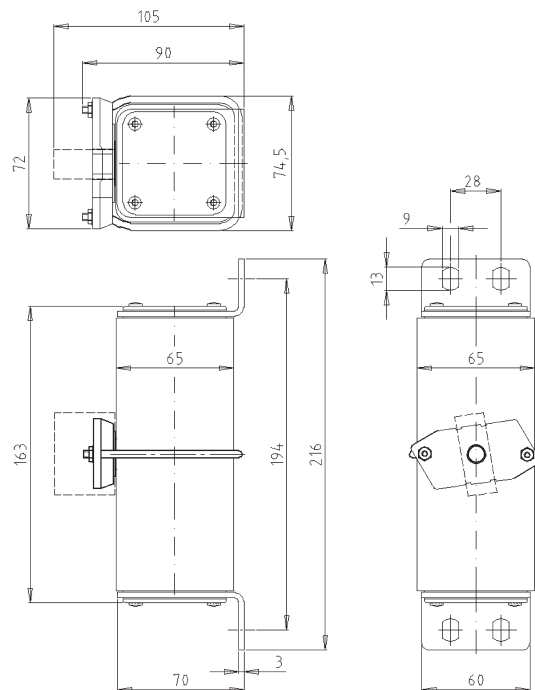
*) suitable for B-switch fitting

Dimensions

Part No. 90 202 25. ...



Part No. 90 202 26. ...*



Size SQB-DC2	Rated Voltage DC 1700 V	Breaking Test Voltage DC 2000 V	Class aR	Rated Breaking Capacity 30 kA
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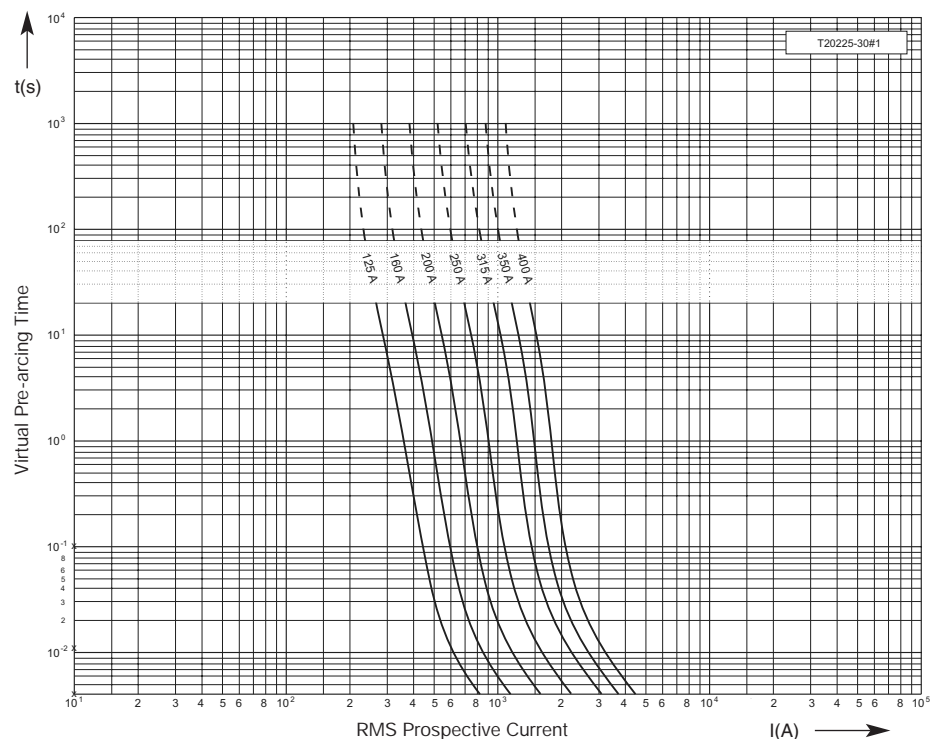
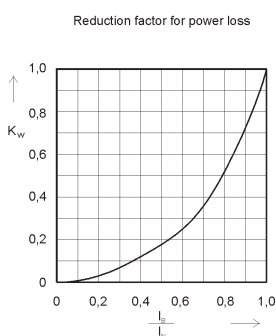
Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Power Loss [W]	Pre-arcing I^2t -value [A ² s]	Total I^2t -value @ DC 2000 V (L/R = 15 ms) [A ² s]
125	90 202 25.125	90 202 26.125	89	1 300	10 900
160	90 202 25.160	90 202 26.160	103	2 500	20 600
200	90 202 25.200	90 202 26.200	115	5 200	38 300
250	90 202 25.250	90 202 26.250	134	9 900	82 500
315	90 202 25.315	90 202 26.315	152	20 300	170 000
350	90 202 25.350	90 202 26.350	165	25 000	120 000
400	90 202 25.400	90 202 26.400	178	40 000	190 000

*) suitable for B-switch fitting

Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.55	1.25	0.6	0.8	1.5

Time-Current Characteristics





DC-Application / Traction Fuse

Size
SQB-DC0

Rated Voltage
DC 1800 V

Breaking Test Voltage
DC 2400 V

Class
aR

Standard
IEC 60 077-5 / UIC 550

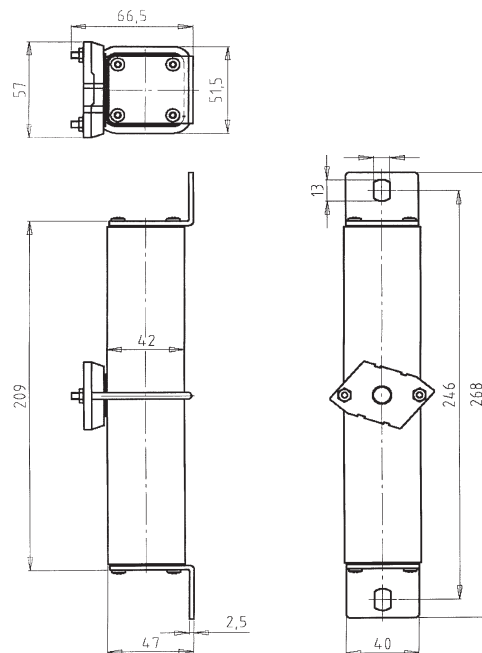
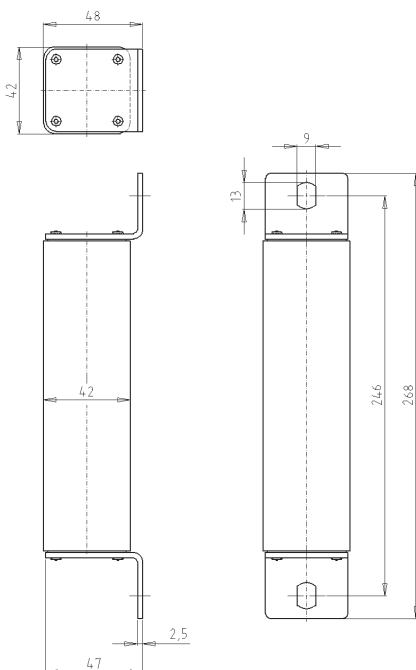
Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Weight [kg/1]	Pack
25	90 221 25.25	90 221 26.25	2.9	1
32	90 221 25.32	90 221 26.32	2.9	1
40	90 221 25.40	90 221 26.40	2.9	1
50	90 221 25.50	90 221 26.50	2.9	1
63	90 221 25.63	90 221 26.63	2.9	1
80	90 221 25.80	90 221 26.80	2.9	1
100	90 221 25.100	90 221 26.100	2.9	1
125	90 221 25.125	90 221 26.125	2.9	1
150	90 221 25.150	90 221 26.150	2.9	1

*) suitable for B-switch fitting

Dimensions

Part No. 90 221 25. ...

Part No. 90 221 26. ...*



Size SQB-DC0	Rated Voltage DC 1800 V	Breaking Test Voltage DC 2400 V	Class aR	Rated Breaking Capacity 30 kA
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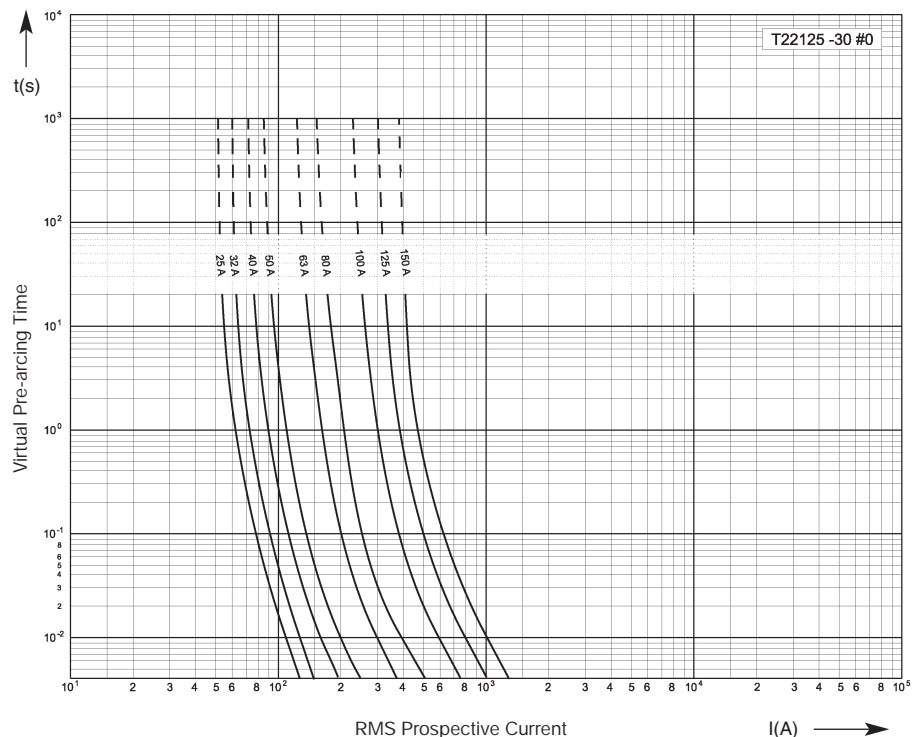
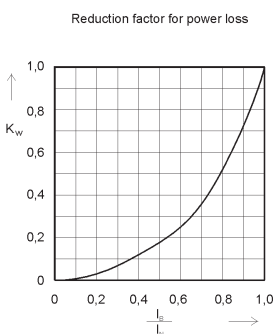
Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Power Loss [W]	Pre-arcing I^2t -value [A ² s]	Total I^2t -value @ DC 2400 V (L/R = 15 ms) [A ² s]
25	90 221 25.25	90 221 26.25	28	32	260
32	90 221 25.32	90 221 26.32	38	46	380
40	90 221 25.40	90 221 26.40	45	82	700
50	90 221 25.50	90 221 26.50	56	128	1 050
63	90 221 25.63	90 221 26.63	60	288	2 400
80	90 221 25.80	90 221 26.80	72	512	4 200
100	90 221 25.100	90 221 26.100	75	1 150	9 400
125	90 221 25.125	90 221 26.125	90	2 050	16 700
150	90 221 25.150	90 221 26.150	98	3 330	27 100

*) suitable for B-switch fitting

Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.55	1.25	0.6	0.8	1.5

Time-Current Characteristics





DC-Application / Traction Fuse

Size
SQB-DC2

Rated Voltage
DC 1800 V

Breaking Test Voltage
DC 2400 V

Class
aR

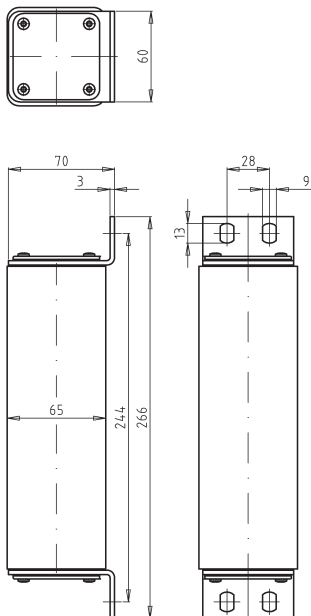
Standard
IEC 60 077-5 / UIC 550

Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Weight [kg/1]	Pack
100	90 201 25.100	90 201 26.100	3.54	1
125	90 201 25.125	90 201 26.125	3.54	1
160	90 201 25.160	90 201 26.160	3.54	1
200	90 201 25.200	90 201 26.200	3.54	1
250	90 201 25.250	90 201 26.250	3.54	1
315	90 201 25.315	90 201 26.315	3.54	1

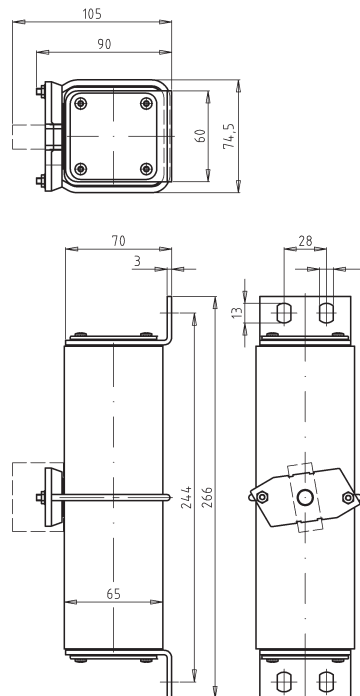
*) suitable for B-switch fitting

Dimensions

Part No. 90 201 25. ...



Part No. 90 201 26. ...*



Size SQB-DC2	Rated Voltage DC 1800 V	Breaking Test Voltage DC 2400 V	Class aR	Rated Breaking Capacity 30 kA
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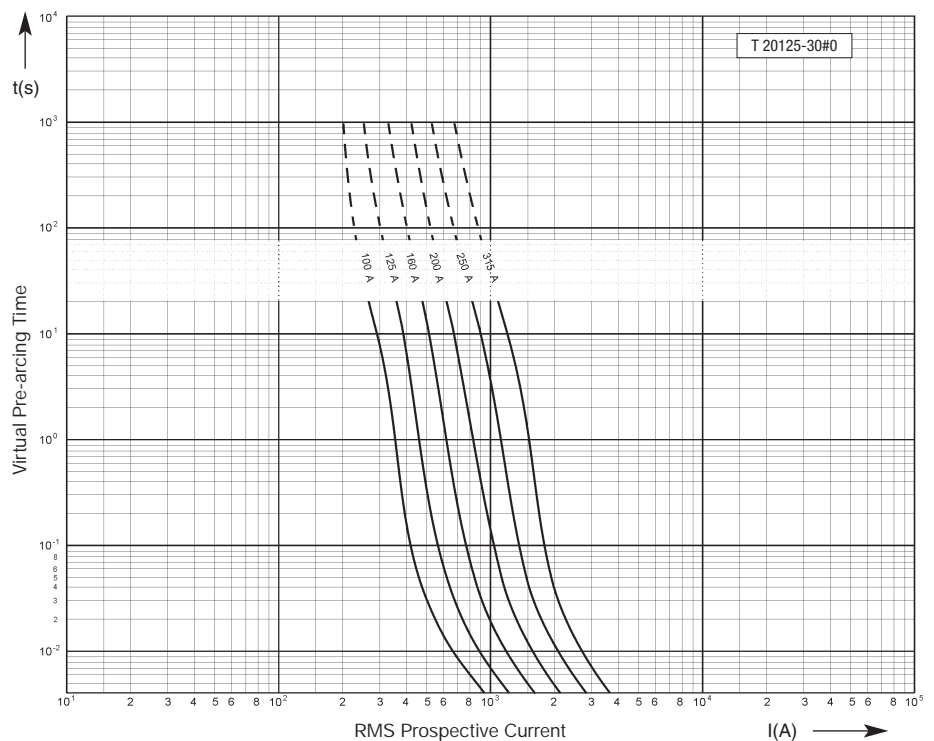
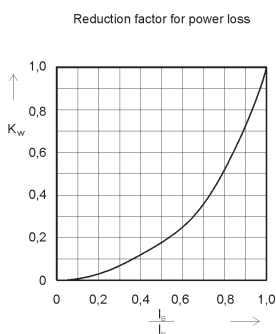
Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ DC 2400 V (L/R = 15 ms) [A ² s]
100	90 201 25.100	90 201 26.100	58	1 700	13 500
125	90 201 25.125	90 201 26.125	68	3 000	24 000
160	90 201 25.160	90 201 26.160	82	5 300	42 700
200	90 201 25.200	90 201 26.200	96	9 100	73 500
250	90 201 25.250	90 201 26.250	130	16 100	131 000
315	90 201 25.315	90 201 26.315	175	26 600	216 000

*) suitable for B-switch fitting

Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.55	1.25	0.6	0.8	1.5

Time-Current Characteristics





DC-Application / Traction Fuse

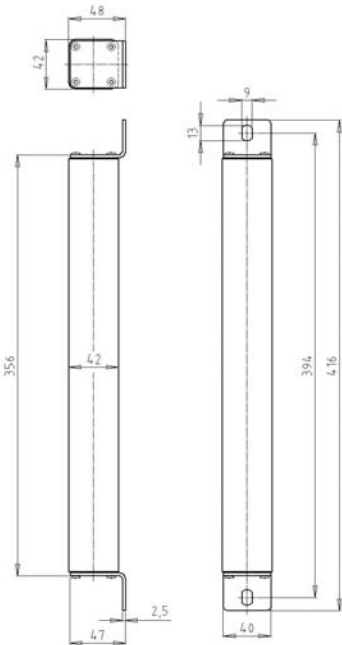
Size SQB-DC0	Rated Voltage DC 3600 V	Breaking Test Voltage DC 4200 V	Class aR	Standard IEC 60 077-5 / UIC 550
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Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Weight [kg/1]	Pack
40	90 220 25.40	90 220 26.40	1.78	1
50	90 220 25.50	90 220 26.50	1.78	1
63	90 220 25.63	90 220 26.63	1.78	1
80	90 220 25.80	90 220 26.80	1.78	1
100	90 220 25.100	90 220 26.100	1.78	1
125	90 220 25.125	90 220 26.125	1.78	1
150	90 220 25.150	90 220 26.150	1.78	1

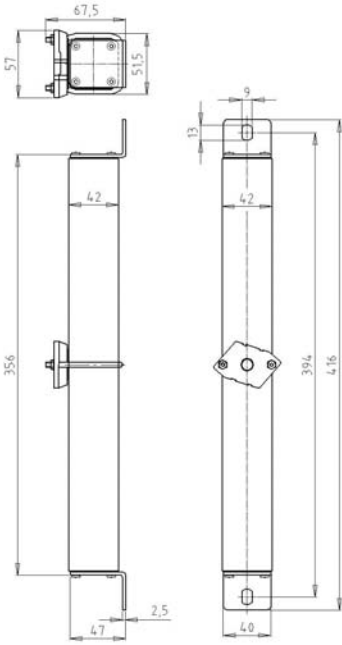
*) suitable for B-switch fitting

Dimensions

Part No. 90 220 25. ...



Part No. 90 220 26. ...*



Size SQB-DC0	Rated Voltage DC 3600 V	Breaking Test Voltage DC 4200 V	Class aR	Rated Breaking Capacity 30 kA
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Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Power Loss [W]	Pre-arcing I^2t -value [A ² s]	Total I^2t -value @ DC 4200 V (L/R = 15 ms) [A ² s]
40	90 220 25.40	90 220 26.40	91	82	640
50	90 220 25.50	90 220 26.50	99	184	1 400
63	90 220 25.63	90 220 26.63	105	328	2 600
80	90 220 25.80	90 220 26.80	117	740	5 700
100	90 220 25.100	90 220 26.100	121	1 300	10 200
125	90 220 25.125	90 220 26.125	142	2 500	19 200
150	90 220 25.150	90 220 26.150	153	4 000	31 200

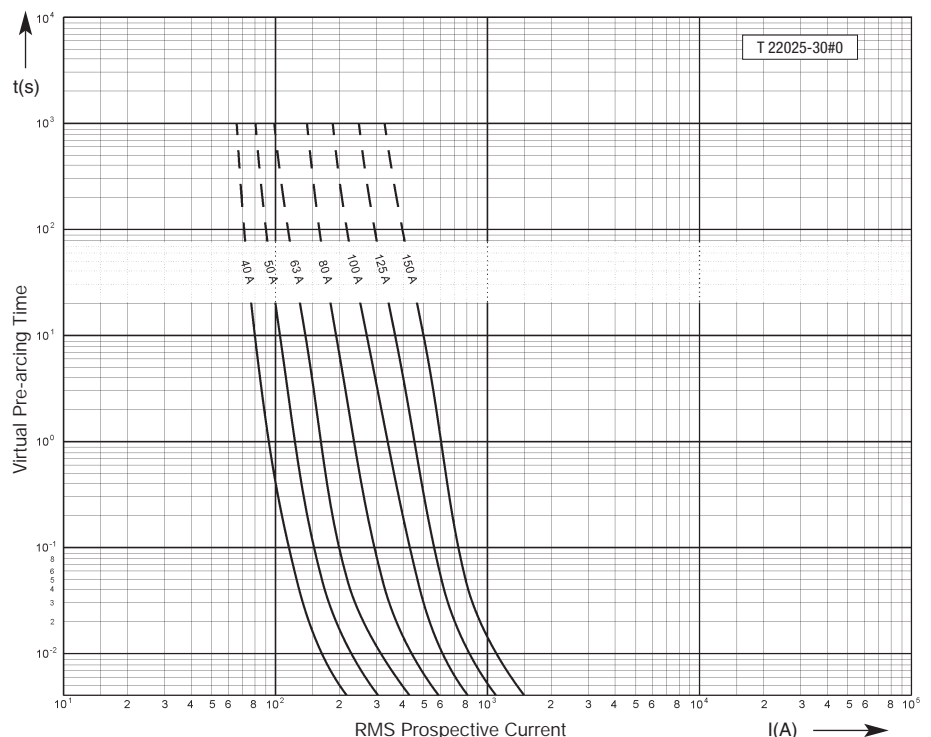
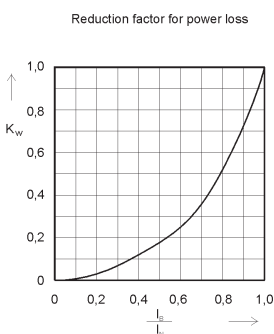
*) suitable for B-switch fitting

Coefficients for Heavy Duty Application AC Breaking Capacity

a	A2	B1	B2	Cf3	N
130	0.55	1.25	0.6	0.8	1.5

30 kA @ AC 4000 V

Time-Current Characteristics





DC-Application / Traction Fuse

Size SQB-DC2	Rated Voltage DC 3600 V	Breaking Test Voltage DC 4200 V	Class aR	Standard IEC 60 077-5 / UIC 550
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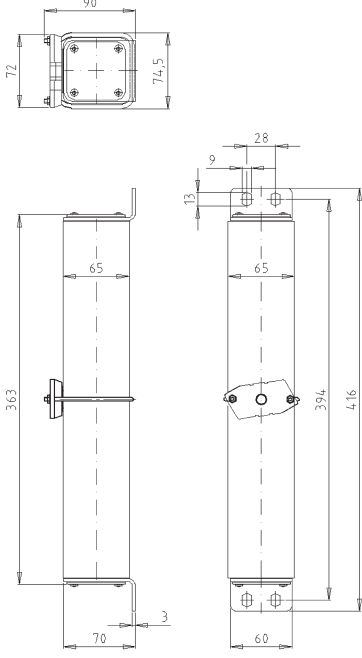
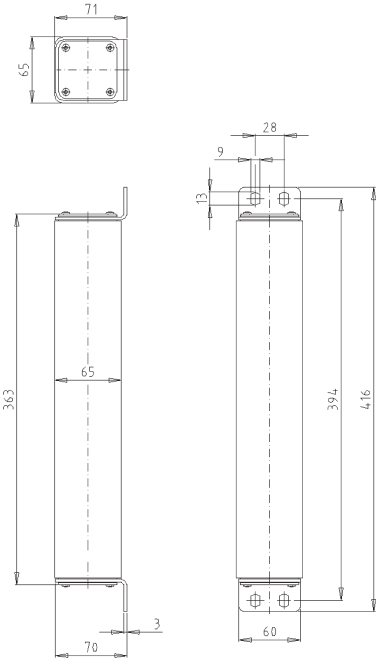
Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Weight [kg/1]	Pack
100	90 200 25.100	90 200 26.100	3.54	1
125	90 200 25.125	90 200 26.125	3.54	1
160	90 200 25.160	90 200 26.160	3.54	1
200	90 200 25.200	90 200 26.200	3.54	1
250	90 200 25.250	90 200 26.250	3.54	1
280	90 200 25.280	90 200 26.280	3.54	1
315	90 200 25.315	90 200 26.315	3.54	1

*) suitable for B-switch fitting

Dimensions

Part No. 90 200 25. ...

Part No. 90 200 26. ...*



Size SQB-DC2	Rated Voltage DC 3600 V	Breaking Test Voltage DC 4200 V	Class aR	Rated Breaking Capacity 30 kA
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Rated Current [A]	Part No. without MS-Adapter	Part No. with MS-Adapter*	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ DC 4200 V (L/R = 15 ms) [A ² s]
100	90 200 25.100	90 200 26.100	75	2 300	19 000
125	90 200 25.125	90 200 26.125	90	4 000	33 500
160	90 200 25.160	90 200 26.160	120	6 600	55 300
200	90 200 25.200	90 200 26.200	145	11 800	98 000
250	90 200 25.250	90 200 26.250	165	21 000	175 000
280	90 200 25.280	90 200 26.280	205	27 000	221 000
315	90 200 25.315	90 200 26.315	220	33 000	273 000

*) suitable for B-switch fitting

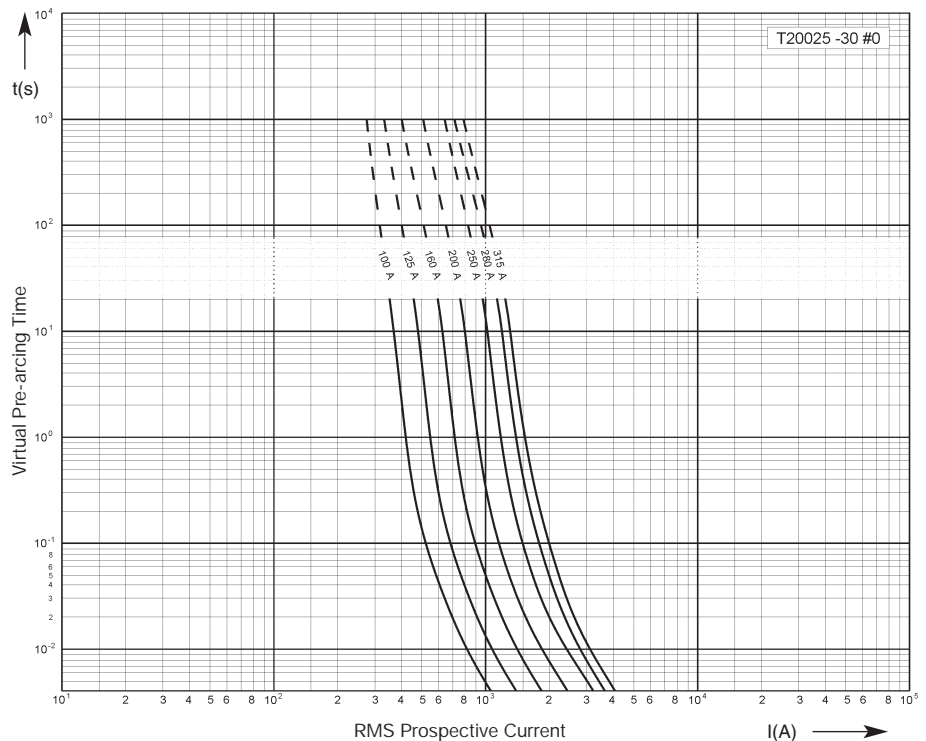
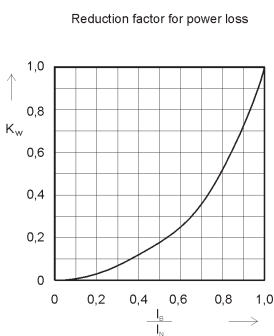
Coefficients for Heavy Duty Application

AC Breaking Capacity

a	A2	B1	B2	Cf3	N
130	0.55	1.25	0.6	0.8	1.5

30 kA @ AC 4000 V

Time-Current Characteristics





DC-Application / Traction Fuse

Size
40 x 254 mm

Rated Voltage
DC 3000 V

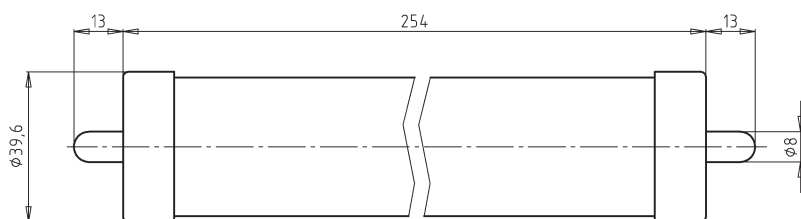
Class
aR

Standard
UIC 550 / IEC 60077-5

Rated Current [A]	Part No.	Weight [kg/1]	Pack
3.15	90 100 10.3.15	2.0	1
6.3	90 100 10.6.3	2.0	1
8	90 100 10.8	2.0	1
12.5	90 100 10.12.5	2.0	1
16	90 100 10.16	2.0	1
20	90 100 10.20	2.0	1

Dimensions

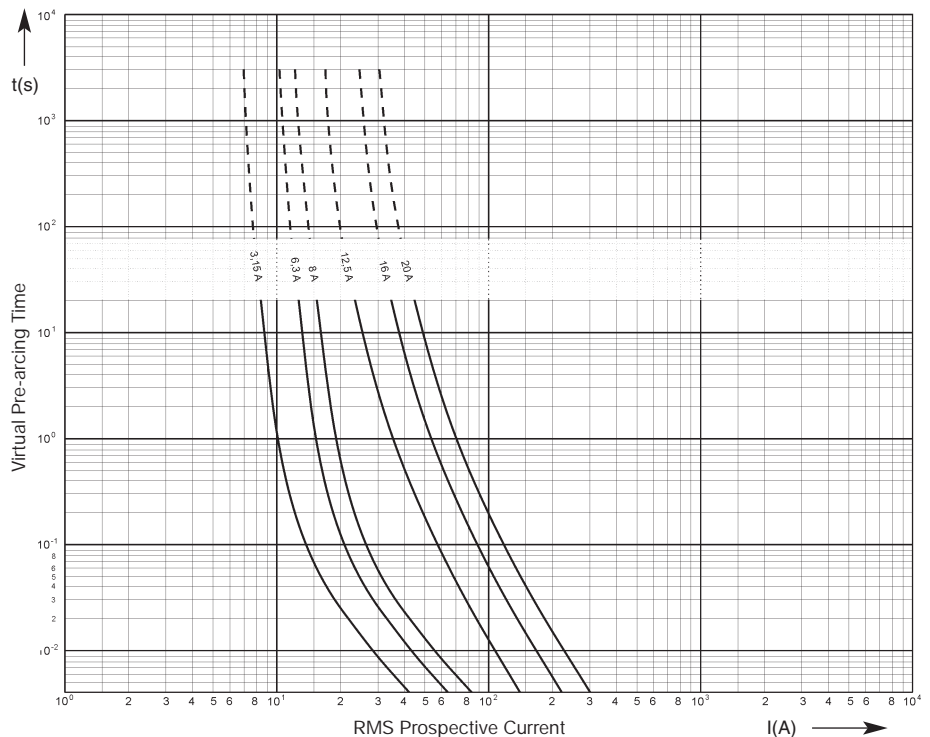
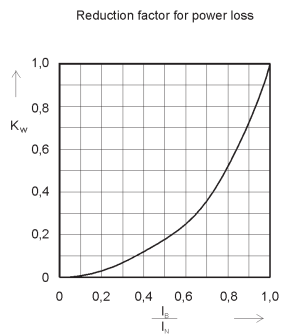
Part No. 90 100 10. ...



Size **40 x 254 mm** Rated Voltage **DC 3000 V** Class **aR**

Rated Current [A]	Part No.	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ DC 3000 V (L/R = 1 ms) [A ² s]
3.15	90 100 10.3.15	8	7	36
6.3	90 100 10.6.3	17	17	88
8	90 100 10.8	20	27	140
12.5	90 100 10.12.5	17	72	374
16	90 100 10.16	18	184	957
20	90 100 10.20	21	317	1 648

Time-Current Characteristics





DC-Application / Traction Fuse

Size
NH 3

Rated Voltage
AC 1000 V

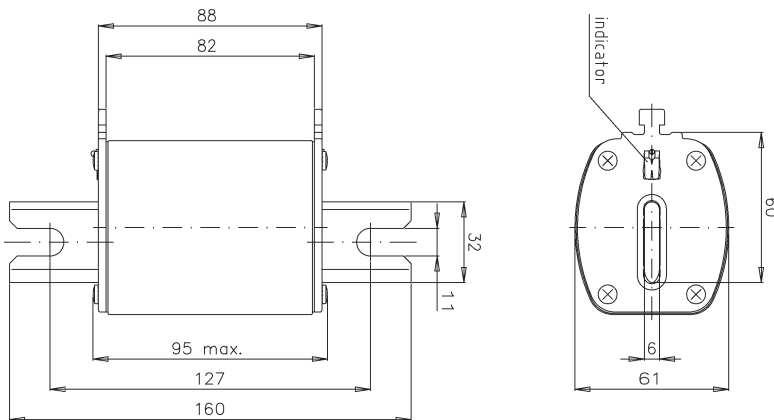
Class
aR

Standard
IEC 60269-4

Rated Current [A]	Part No.	Weight [kg/1]	Pack
100	20 407 04.100	1.01	1
125	20 407 04.125	1.01	1
160	20 407 04.160	1.01	1
200	20 407 04.200	1.01	1
250	20 407 04.250	1.01	1
315	20 407 04.315	1.01	1
355	20 407 04.355	1.01	1
400	20 407 04.400	1.01	1
450	20 407 04.450	1.01	1
500	20 407 04.500	1.01	1

Dimensions

Part No. 20 407 04. ...



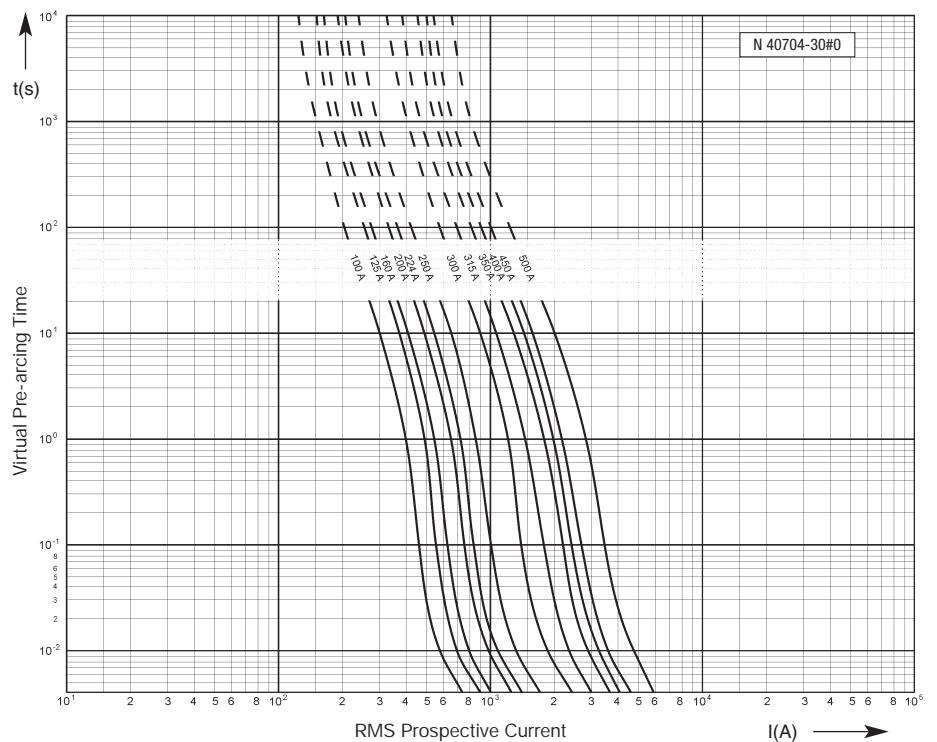
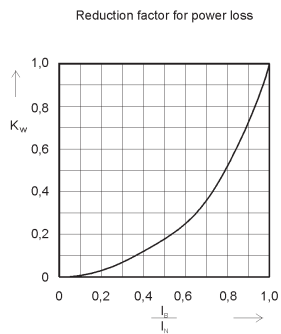
Size NH 3	Rated Voltage AC 1000 V	Class aR	Rated Breaking Capacity 100 kA
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Rated Current [A]	Part No.	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ AC 1000 V [A ² s]
100	20 407 04.100	28	2 100	5 800
125	20 407 04.125	34	2 900	8 900
160	20 407 04.160	36	4 100	12 800
200	20 407 04.200	41	5 600	18 000
224	20 407 04.224	45	6 700	21 500
250	20 407 04.250	49	10 000	31 000
315	20 407 04.315	73	34 000	97 000
355	20 407 04.355	77	51 000	152 000
400	20 407 04.400	79	60 000	180 000
450	20 407 04.450	82	74 000	220 000
500	20 407 04.500	87	125 000	370 000

Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.55	1.25	0.6	0.8	1.5

Time-Current Characteristics





DC-Application / Traction Fuse

Size
NH 3

Rated Voltage
AC 2000 V

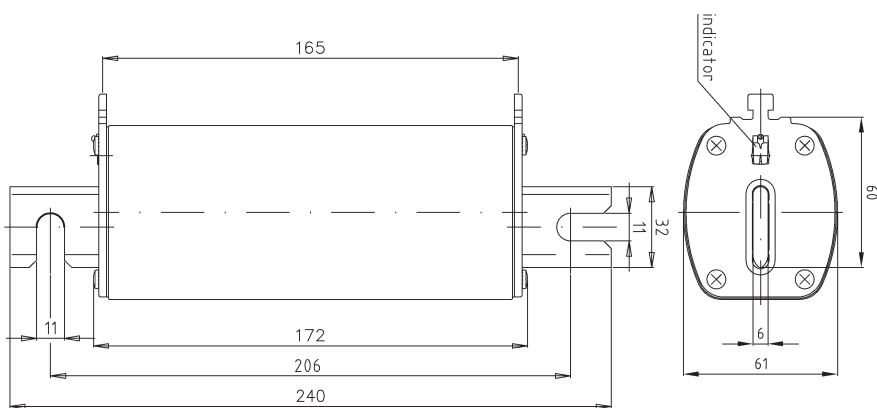
Class
aR

Standard
IEC 60269-4

Rated Current [A]	Part No.	Weight [kg/1]	Pack
200	20 404 04.200	1.7	1
224	20 404 04.224	1.7	1
250	20 404 04.250	1.7	1
300	20 404 04.300	1.7	1
315	20 404 04.315	1.7	1
355	20 404 04.355	1.7	1
400	20 404 04.400	1.7	1
450	20 404 04.450	1.7	1

Dimensions

Part No. 20 404 04. ...



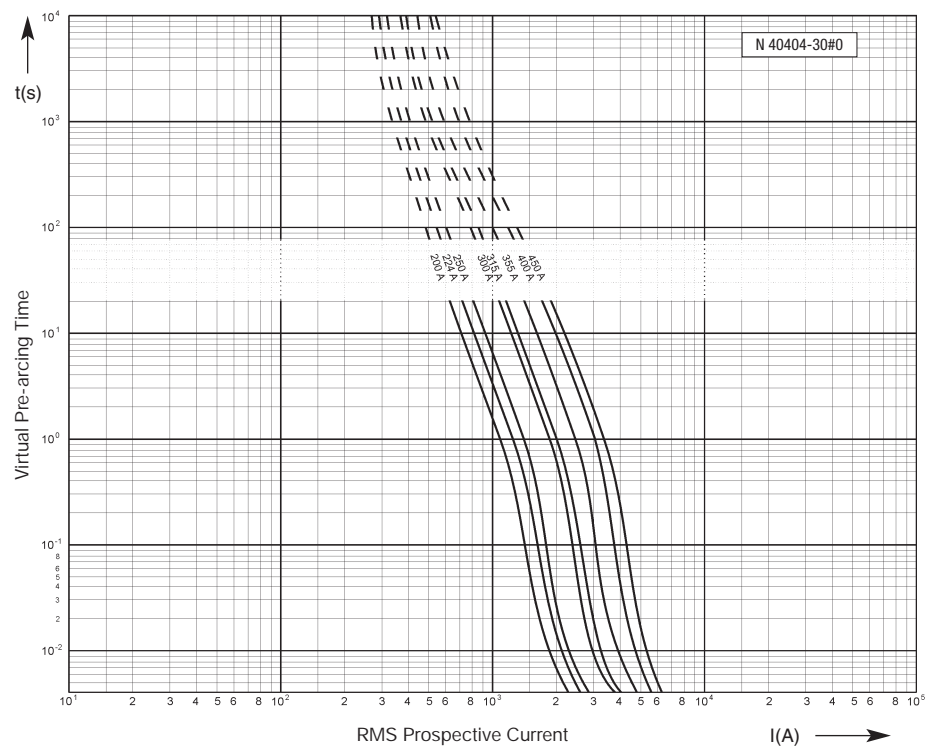
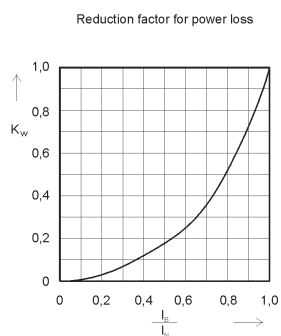
Size NH 3	Rated Voltage AC 2000 V	Class aR	Rated Breaking Capacity 100 kA
---------------------	-----------------------------------	--------------------	--

Rated Current [A]	Part No.	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ AC 2000 V [A ² s]
200	20 404 04.200	78	21 000	60 000
224	20 404 04.224	85	27 000	77 000
250	20 404 04.250	103	33 000	95 000
300	20 404 04.300	115	53 000	151 000
315	20 404 04.315	121	62 000	172 000
355	20 404 04.355	135	94 000	280 000
400	20 404 04.400	145	130 000	410 000
450	20 404 04.450	153	159 000	520 000

Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.65	1.25	0.65	0.8	1.5

Time-Current Characteristics





**DC-Link:
Fuse-Links for Low Inductance Applications**

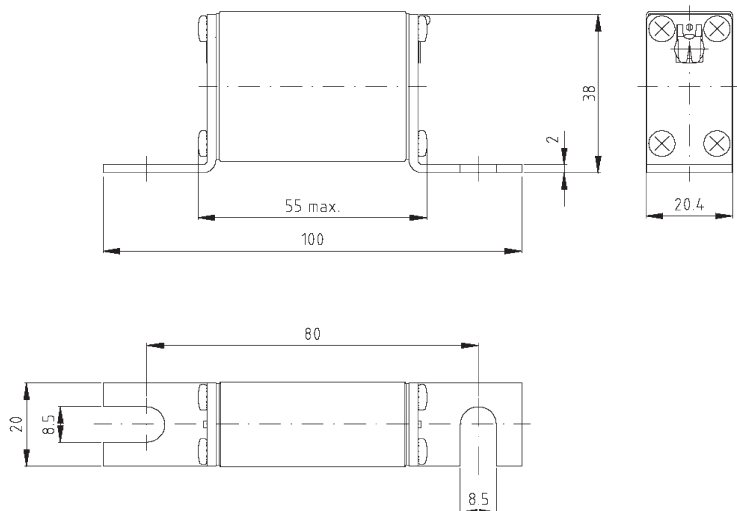
Size
000 DIN 80

Rated Voltage
DC 700 V

Class
aR

Rated Current [A]	Part No. with Indicator	Part No. without Indicator	UL rec.	Weight [kg/1]	Pack
35	20 292 20.35	20 292 21.35	✓	2.1	3
50	20 292 20.50	20 292 21.50	✓	2.1	3
63	20 292 20.63	20 292 21.63	✓	2.1	3
80	20 292 20.80	20 292 21.80	✓	2.1	3
100	20 292 20.100	20 292 21.100	✓	2.1	3
125	20 292 20.125	20 292 21.125	✓	2.1	3
160	20 292 20.160	20 292 21.160	✓	2.1	3
200	20 292 20.200	20 292 21.200	✓	2.1	3
250	20 292 20.250	20 292 21.250	✓	2.1	3
315	20 292 20.315	20 292 21.315	✓	2.1	3

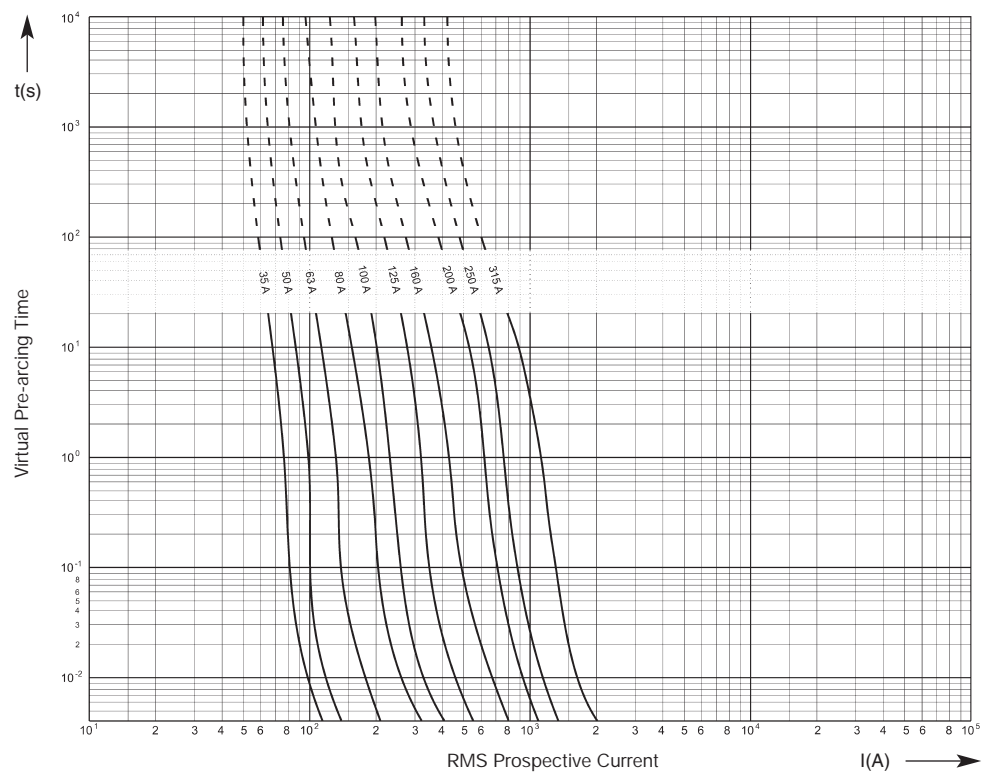
Dimensions



Size 000 DIN 80	Rated Voltage DC 700 V	Class aR	Rated Breaking Capacity 30 kA
---------------------------	----------------------------------	--------------------	---

Rated Current [A]	Part No. with Indicator	Part No. without Indicator	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @700 V (L/R = 1 ms) [A ² s]
35	20 292 20.35	20 292 21.35	14	26	135
50	20 292 20.50	20 292 21.50	17	104	530
63	20 292 20.63	20 292 21.63	20	140	690
80	20 292 20.80	20 292 21.80	23	330	1 650
100	20 292 20.100	20 292 21.100	26	930	4 300
125	20 292 20.125	20 292 21.125	30	1 400	6 400
160	20 292 20.160	20 292 21.160	35	1 950	8 000
200	20 292 20.200	20 292 21.200	40	3 740	16 000
250	20 292 20.250	20 292 21.250	45	5 580	22 900
315	20 292 20.315	20 292 21.315	51	12 300	46 000

Time-Current Characteristics





**DC-Link:
Fuse-Links for Low Inductance Applications**

Size
000

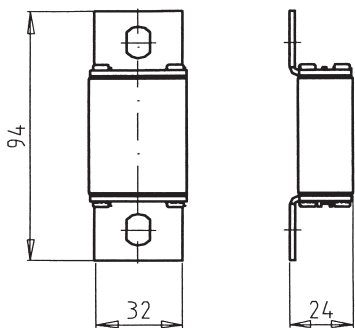
Rated Voltage
DC 700 V

Class
aR

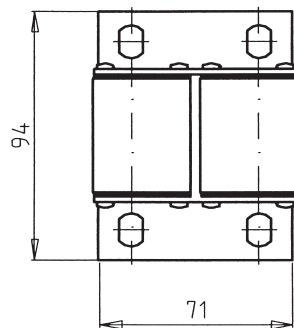
Rated Current [A]	Part No. Fixing Center 70 mm	Weight [kg/1]	Pack
200	20 581 21.200	1.7	6
250	20 581 21.250	1.7	6
315	20 581 21.315	1.7	6
400	20 582 21.400	3.5	3
500	20 582 21.500	3.5	3
630	20 582 21.630	3.5	3
750	20 583 21.750	5.3	1
900	20 583 21.900	5.3	1

Dimensions

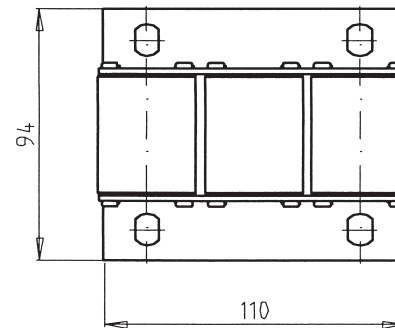
Part No. 20 581 21. ...



Part No. 20 582 21. ...



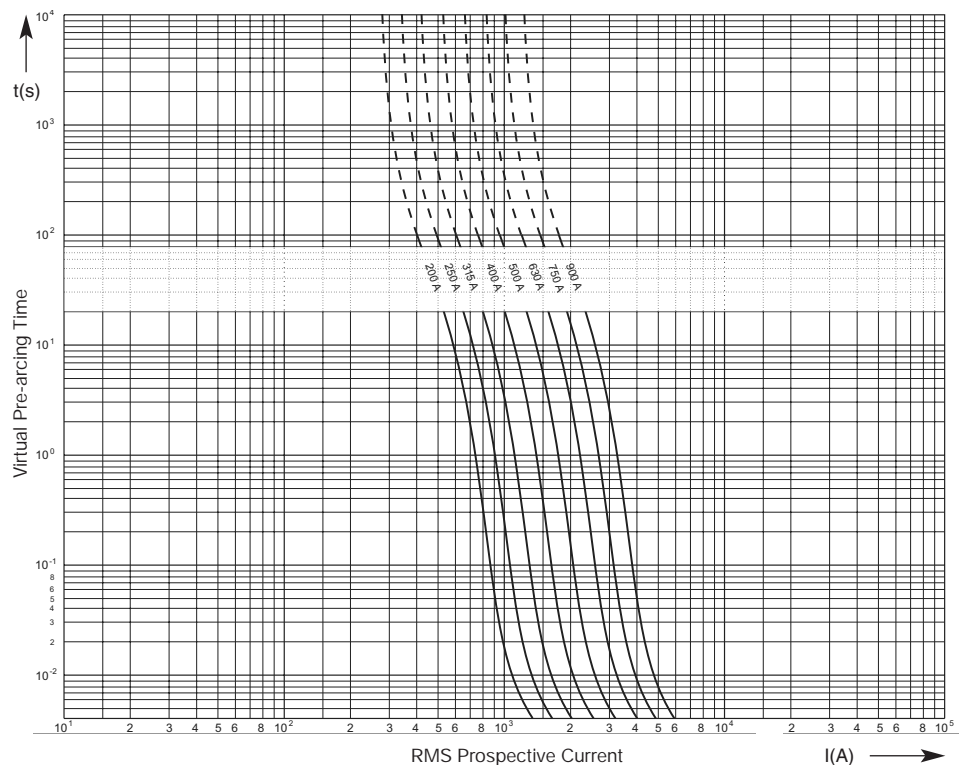
Part No. 20 583 21. ...



Size 000	Rated Voltage DC 700 V	Class aR	Rated Breaking Capacity 30 kA
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Rated Current [A]	Part No.	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @700 V (L/R = 1 ms) [A ² s]
200	20 581 21.200	40	3 800	14 000
250	20 581 21.250	45	6 300	23 000
315	20 581 21.315	51	12 300	46 000
400	20 582 21.400	84	15 200	56 000
500	20 582 21.500	95	25 200	92 000
630	20 582 21.630	110	49 200	184 000
750	20 583 21.750	144	56 700	207 000
900	20 583 21.900	165	111 000	414 000

Time-Current Characteristics





**DC-Link:
Fuse-Links for Low Inductance Applications**

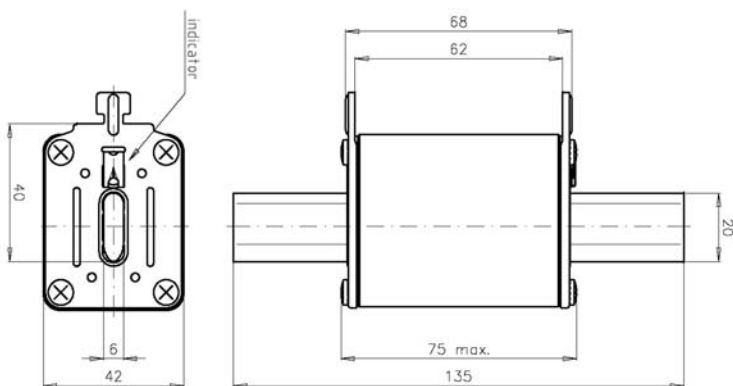
Size
NH 1

Rated Voltage
DC 750 V

Class
gR

Rated Current [A]	Part No. with Indicator	Weight [kg/1]	Pack
32	20 556 04.32	0.37	3
40	20 556 04.40	0.37	3
50	20 556 04.50	0.37	3
63	20 556 04.63	0.37	3
80	20 556 04.80	0.37	3
100	20 556 04.100	0.37	3
125	20 556 04.125	0.37	3
160	20 556 04.160	0.37	3

Dimensions



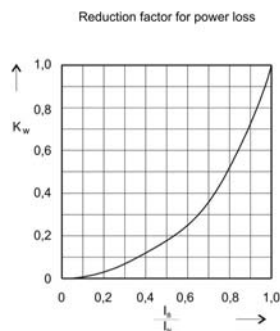
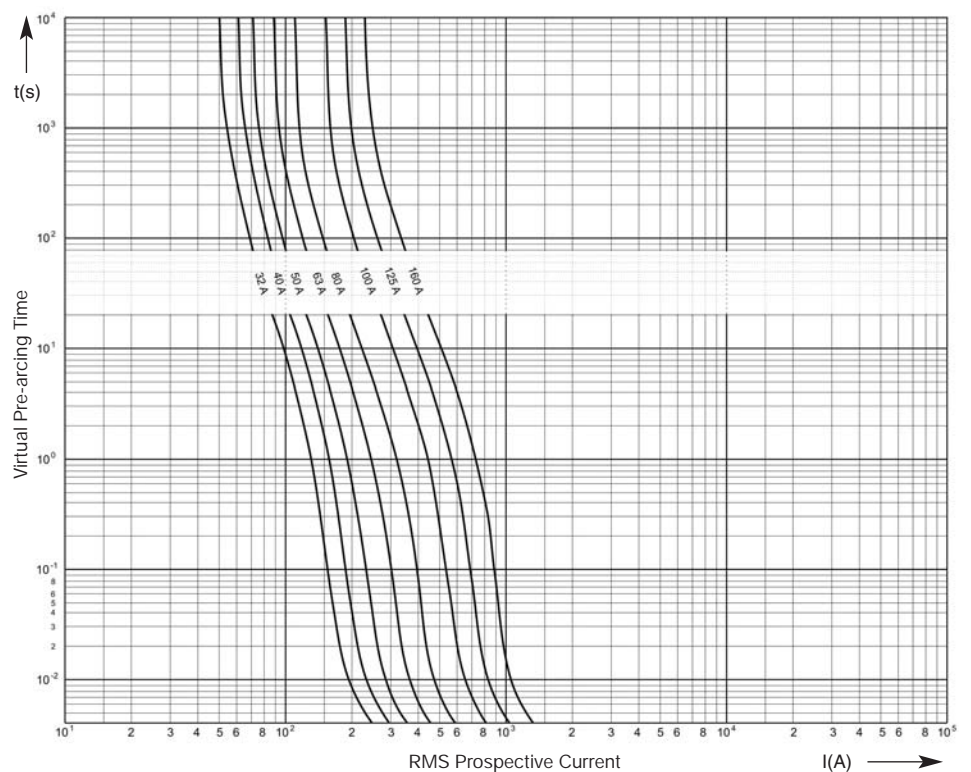
Size NH 1	Rated Voltage DC 750 V	Class gR	Rated Breaking Capacity 50 kA
---------------------	----------------------------------	--------------------	---

Rated Current [A]	Part No.	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @700 V (L/R = 1 ms) [A ² s]
32	20 556 04.32	5.9	100	800
40	20 556 04.40	7.1	180	1 400
50	20 556 04.50	8.6	290	2 200
63	20 556 04.63	10.0	410	3 200
80	20 556 04.80	12.0	740	5 700
100	20 556 04.100	15.0	1 300	10 000
125	20 556 04.125	19.0	2 500	19 000
160	20 556 04.160	23.0	3 700	29 000

Coefficients for Heavy Duty Application

a	A2	B1	B2	Cf3	N
130	0.6	1.25	0.6	0.8	1.5

Time-Current Characteristics





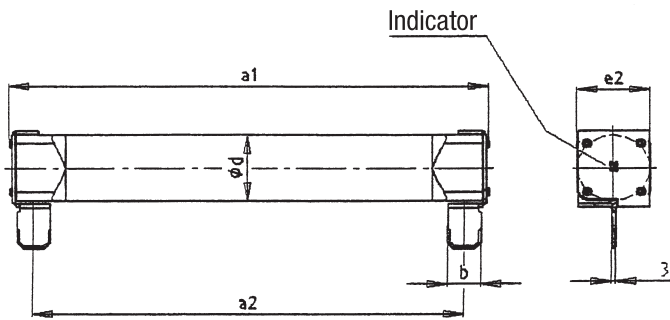
Fuse-Links for Use in the Power Supply on Passenger Coaches

Rated Voltage
AC 1000 V

Rated Current [A]	Part No.	German Rail Part-No.	Weight [kg/1]	Pack	Figure
7.5	90 037 06.7.5	440.37.01	0.46	1	1a
16	90 037 06.16	440.37.07	0.46	1	1a
20	90 037 06.20	440.37.02	0.46	1	1a
30	90 037 06.30	440.37.04	0.46	1	1a
35	90 037 06.35	440.37.05	0.46	1	1a
40	90 037 06.40	440.37.06	0.46	1	1a
50	90 035 06.50	440.37.09	0.74	1	1b
60	90 039 06.60	440.37.08	0.97	1	1c
70	90 087 06.70	-	1.80	1	2a
100	90 057 06.100	440.37.10	2.52	1	2b
125	90 057 06.125	-	2.52	1	2b

Dimensions

Fig. 1



a)

a1	150 mm
d	32 mm
e2	41 mm
a2	110 mm

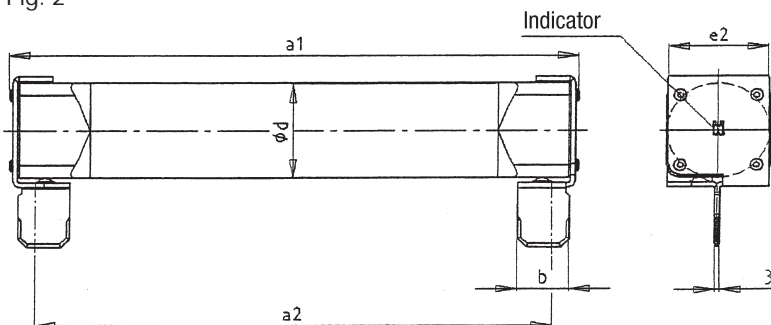
b)

a1	150 mm
d	43 mm
e2	50 mm
a2	110 mm

c)

a1	210 mm
d	43 mm
e2	50 mm
a2	150 mm

Fig. 2



a)

a1	201 mm
d	60 mm
e2	69 mm
a2	160 mm

b)

a1	340 mm
d	60 mm
e2	69 mm
a2	300 mm

Technical data upon request



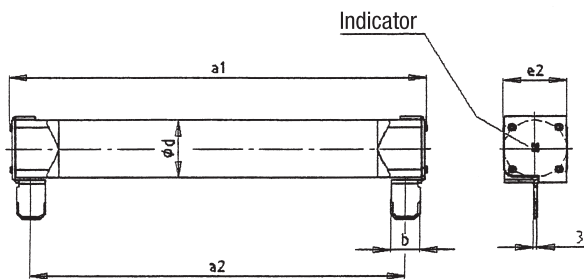
Fuse-Links for Use in the Power Supply on Passenger Coaches

Rated Voltage
DC 1500 V

Rated Current [A]	Part No.	German Rail Part No.	Weight [kg/1]	Pack	Figure
7.5	90 039 06.7.5	440.37.11	1.00	2	1
20	90 039 06.20	440.37.13	1.00	2	1
30	90 039 06.30	440.37.15	1.00	2	1
50	90 040 06.50	440.37.19	1.54	2	2

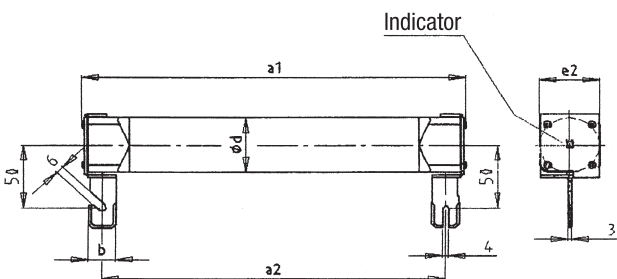
Dimensions

Fig. 1



a1	210 mm
d	43 mm
e2	50 mm
a2	170 mm

Fig. 2



a1	300 mm
d	43 mm
e2	50 mm
e2	250 mm

Technical data upon request



Fuse-Links for Use in the Power Supply on Passenger Coaches

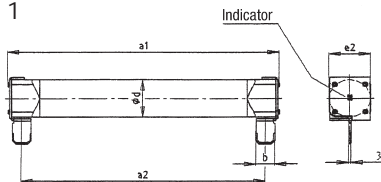
Rated Voltage
DC 3000 V

Rated Current [A]	Part No.	German Rail Part No.	Weight [kg/1]	Pack	Figure
10	90 034 06.10	440.37.34	2.80	2	1
20	90 034 06.20	-	2.80	2	1
30	90 034 06.30	440.37.36	2.80	2	1
50	90 034 06.50	440.37.38	2.80	2	1
10	90 042 06.10	440.37.33	1.38	1	2
50	90 042 06.50	440.37.39	1.38	1	2
10	90 057 06.10	-	2.52	1	3a
20	90 057 06.20	440.37.61	2.52	1	3a
30	90 057 06.30	440.37.62	2.52	1	3a
40	90 057 06.40	440.37.63	2.52	1	3a
50	90 057 06.50	440.37.64	2.52	1	3a
60	90 057 06.60	440.37.65	2.52	1	3a
70	90 057 06.70	440.37.66	2.52	1	3a
80	90 057 06.80	-	2.52	1	3a
13*	90 057 13.13	440.37.68	2.52	1	3b
13*	90 070 13.13	-	2.52	1	3b

* Rated voltage 4000 V for converter systems (technical data on request)

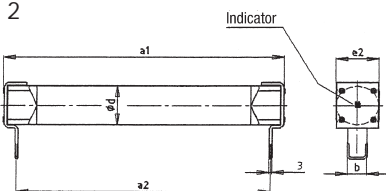
Dimensions

Fig. 1



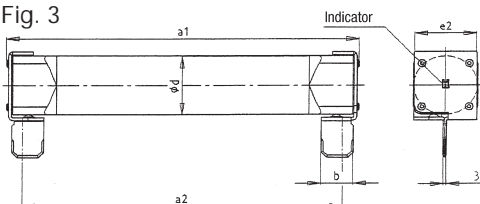
a1	300 mm
b	20 mm
d	43 mm
e2	50 mm

Fig. 2



a1	300 mm
b	20 mm
d	43 mm
e2	50 mm

Fig. 3



a)

a1	340 mm
b	30 mm
d	60 mm
e2	69 mm
a2	300 mm

b)

a1	340 mm
b	23 mm
d	60 mm
e2	69 mm
a2	300 mm

Technical data upon request



Fuse-Links for Use in the Power Supply on Passenger Coaches

Rated Voltage
AC 1000 V - DC 3000 V

Rated Current [A]	Rated Voltage [V]	Part No.	Weight [kg/1]	Pack	Figure
3	AC 1000	90 060 10.3	0.20	1	1a
6	AC 1000	90 060 10.6	0.20	1	1b
10	AC 1000	90 060 10.10	0.20	1	1c
2	AC 1500	90 062 10.2	0.22	1	1c
3	AC 1500	90 062 10.3	0.22	1	1a
2	DC 3000	90 061 10.2	0.71	1	2
3	DC 3000	90 061 10.3	0.71	1	2
4	DC 3000	90 061 10.4	0.71	1	2
6	DC 3000	90 061 10.6	0.71	1	2
12	DC 3000	90 061 10.12	0.71	1	2
16	DC 3000	90 061 10.16	0.71	1	2
20	DC 3000	90 061 10.20	0.71	1	2

Dimensions

Fig. 1

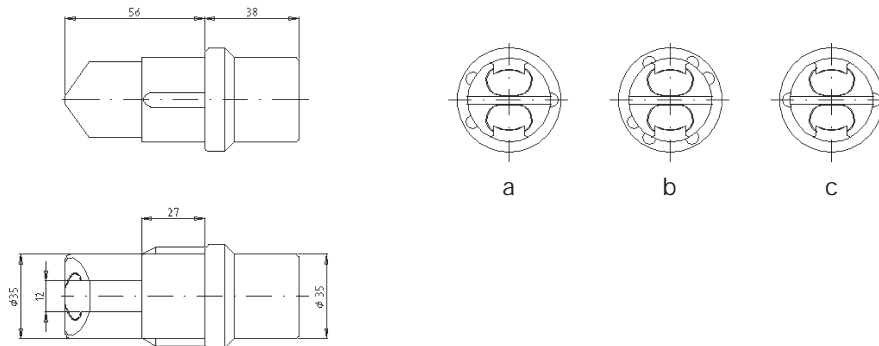
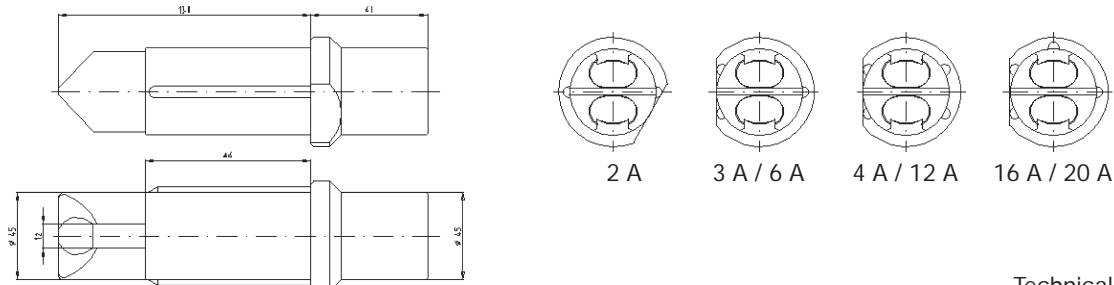


Fig. 2



Technical data upon request

Fuse-Clip

Screw Mountable

Power Acceptance
4 W
61 017 01.2
Size 10

A 0.50" (13 mm)
B 0.55" (14 mm)
C 0.70" (18 mm)
D 0.17" (4.2 mm)
E 0.20" (5 mm)

Power Acceptance
6 W
61 001 01.2
Size 14

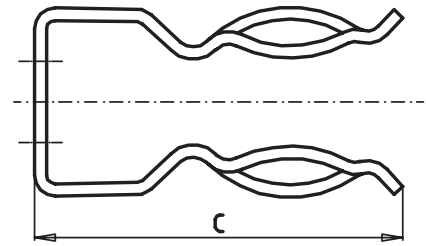
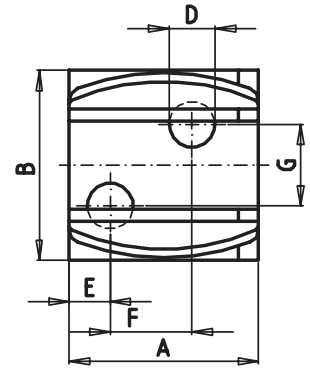
A 0.63" (16 mm)
B 0.63" (16 mm)
C 0.90" (23 mm)
D 0.17" (4.2 mm)
E 0.26" (6.5 mm)

Power Acceptance
12 W
61 002 01.3
Size 22

A 0.75" (19 mm)
B 1.06" (27 mm)
C 1.50" (38 mm)
D 0.18" (4.5 mm)
E 0.16" (4 mm)
F 0.30" (8 mm)
G 0.30" (8 mm)

Power Acceptance
12 W
61 004 01.3
Size 27

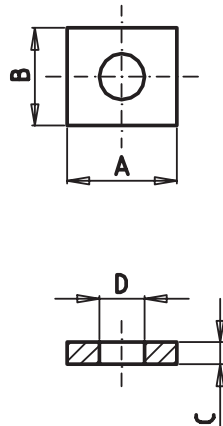
A 1.06" (27 mm)
B 2.30" (58.4 mm)
C 4.55" (115.6 mm)



Clamping Plate

Part No.
63 017 01

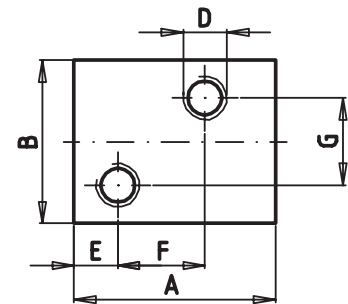
A 0.40" (10 mm)
B 0.35" (9 mm)
C 0.08" (2 mm)
D 0.17" (4.2 mm)



To be used with fuse clips 61 017 01.2
and 61 001 01.2

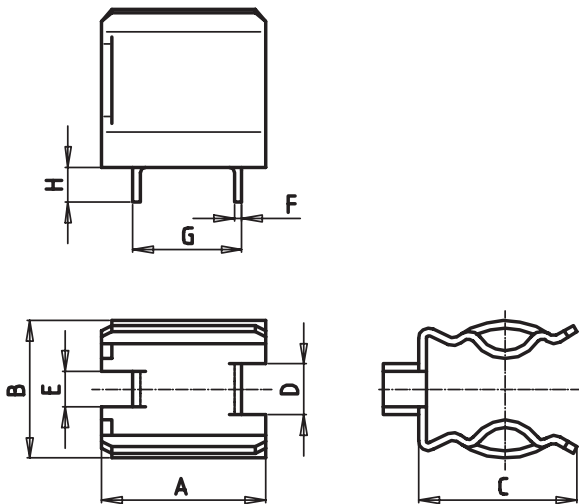
Part No.
63 002 01

A 0.73" (18.5 mm)
B 0.60" (15 mm)
C 0.12" (3 mm)
D M4
F 0.30" (8 mm)



To be used with fuse clips 61 002 01.3

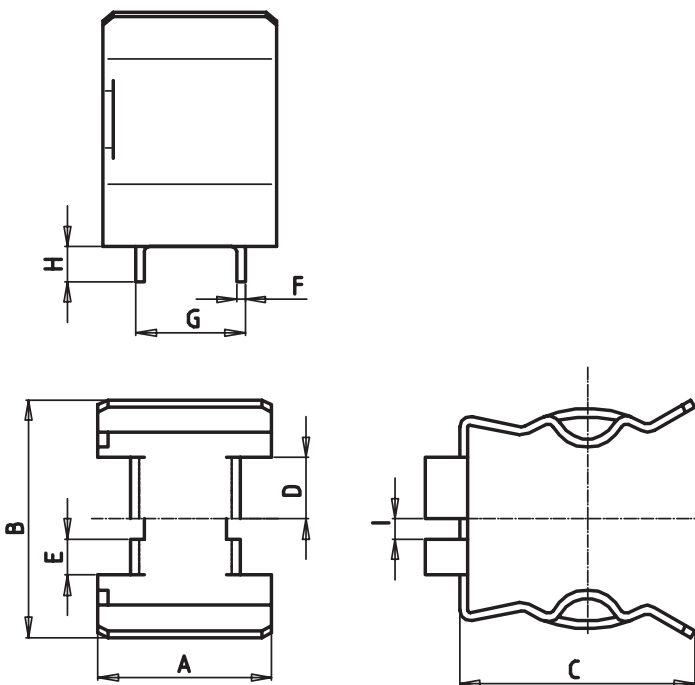
Fuse-Clip PCB Mountable



Power Acceptance
6 W
58 058 06
Size 14

A	0.63" (16 mm)
B	0.55" (14 mm)
C	0.60" (15.5 mm)
D	0.20" (5 mm)
E	0.14" (3.5 mm)
F	0.03" (0.75 mm)
G	0.42" (10.7 mm)
H	0.14" (3.5 mm)

Fuse-Clip PCB Mountable



Power Acceptance
12 W
58 060 06
Size 22

A	0.67" (17 mm)
B	0.87" (22 mm)
C	0.90" (23 mm)
D	0.24" (6 mm)
E	0.14" (3.5 mm)
F	0.03" (0.75 mm)
G	0.42" (10.7 mm)
H	0.14" (3.5 mm)



GL-Switch for Gripping Lug Mounting

GL-Switch

Rated Voltage
AC 250 V

For Fuse-links with Gripping Lugs

Article Number	use for		Weight [kg/1]	Pack
28 002 01	SQB1-3 (20 6XX XX und 20 7XX XX)	NH00 DIN 80 (20 412 XX)	0.02	10
28 002 02	NH000-4 (DIN 43620)	NH000 DIN 80 (20 558 XX)	0.02	10

Interrupting Rating

AC 250 V	AC 250 V	DC 33 V	DC 26 V
ohmsch 5 A	ind. 3 A	ohmsch 3 A	L/R 10 ms 3 A

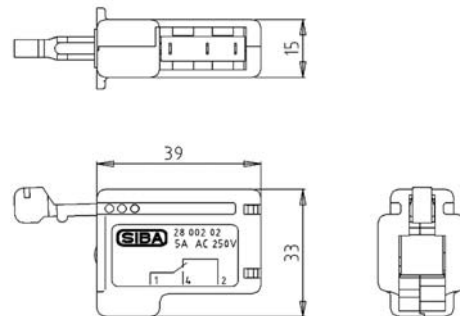
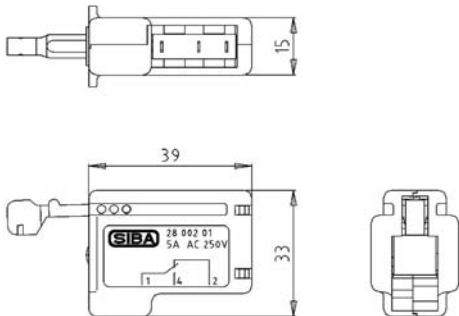
Terminals

AMP 2,8 x 0,5 (IEC 760)

Dimensions

Part No. 28 002 01 (Black Hammer)

Part No. 28 002 02 (Red Hammer)





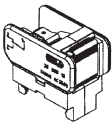
B-Switch for MS-Adapter Mounting

B-Switch Rated Voltage **AC 250 V** **For Fuse-links with Adapter / For Micro Switch Fitting**

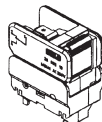
Insulating Voltage up to [V]	Part No. Standard	Part No. Low Level	Change-over Circuits	Weight [g]	Pack
1 300	28 003 10	28 004 10	1	25	10
1 300	28 003 20	28 004 20	2	32	10
2 400	28 003 11	28 004 11	1	25	10
2 400	28 003 21	28 004 21	2	32	10
5 000	28 003 12	28 004 12	1	25	10
5 000	28 003 22	28 004 22	2	32	10

Type	Part No.	Insulating Voltage [V]	Interrupting Rating			
			min. Load Requirements AC / DC		max. Data AC / DC	
			[V _{ohmsch}]	[mA]	[V]	[A]
standard	28 003 10	1 300	5	50	AC 250	12
	28 003 20					
	28 003 11	2 400	30	10	DC 35	10
	28 003 21					
	28 003 12	5 000	100	5	DC 35	10
28 003 22						

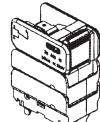
Type	Part No.	Insulating Voltage [V]	Interrupting Rating			
			min. Load Requirements AC / DC		max. Data	
			[V _{ohmsch}]	[mA]	[V]	[A]
low level	28 004 10	1,300	5	1	AC 250	10
	28 004 20					
	28 004 11	2,400	5	1	DC 35	1
	28 004 21					
	28 004 12	5,000	5	1	DC 35	1
	28 004 22					



up to 1,300 V



up to 2,400 V



up to 5,000 V



1 Change-over circuit
2 contact terminals
6,3 x 0,8 mm

Standard

Low Level

Standard

Low Level

Standard

Low Level

Part No.
28 003 10/20

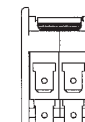
Part No.
28 004 10/20

Part No.
28 003 11/21

Part No.
28 004 11/21

Part No.
28 003 12/22

Part No.
28 004 12/22



2 Change-over circuit
2x2 contact terminals
6,3 x 0,8 mm

ZS-Modul

Rated Voltage
AC 690 V

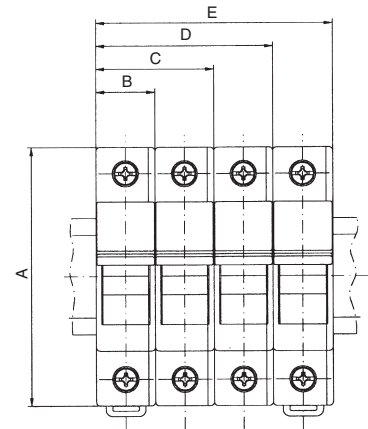
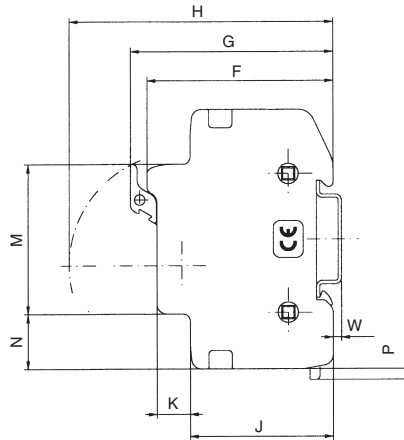
Size 10 x 38

Part No.	51 063 04.DC for 1000 V DC	
	51 063 04	51 063 04.L 1 pol.
	51 063 04.2	51 063 04.2L 2 pol.
	51 063 04.3	51 063 04.3L 3 pol.



L= Light Emitting Diode (LED) indicator
Power Acceptance: **4 W**

A	3.07" (78 mm)	H	3.13" (79.5 mm)
B	0.70" (17.8 mm)	J	1.69" (43 mm)
C	1.40" (35.6 mm)	K	0.40" (10 mm)
D	2.10" (53.4 mm)	M	1.77" (45 mm)
E	2.80" (71.2 mm)	N	0.65" (16.5 mm)
F	2.20" (56 mm)	P	0.13" (3.2 mm)
G	2.40" (61 mm)	W	0.10" (2.5 mm)



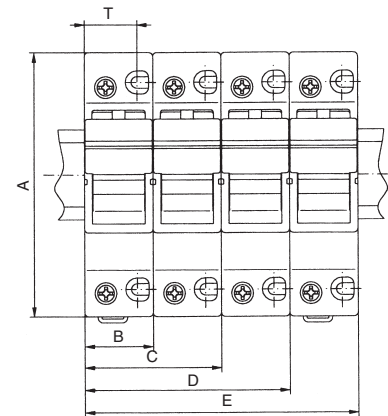
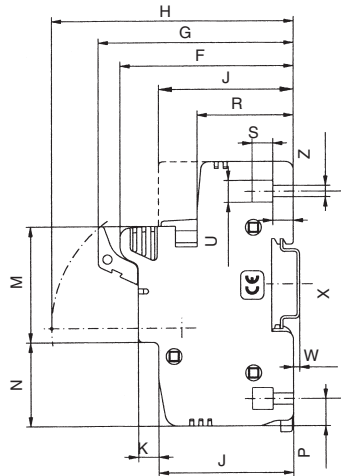
Size 14 x 51

Part No.	51 058 04	51 058 04.S	1 pol.
	51 058 04.2		2 pol.
	51 058 04.3	51 058 04.3S	3 pol.



S= Micro switch
Power Acceptance: **6 W**

A	4.04" (102.5 mm)	M	1.77" (45 mm)
B	1.04" (26.5 mm)	N	1.28" (32.5 mm)
C	2.10" (53 mm)	P	0.40" (10.5 mm)
D	3.13" (79.5 mm)	R	1.48" (37.5 mm)
E	4.17" (106 mm)	S	0.30" (8 mm)
F	2.66" (67.5 mm)	T	0.80" (20.5 mm)
G	3.00" (76 mm)	U Ø	0.33" (8.5 mm)
H	3.70" (94.2 mm)	W	0.1" (2.5 mm)
J	2.07" (52.5 mm)	X	3.17" (80.5 mm)
K	0.30" (8 mm)	Z Ø	0.17" (4.4 mm)



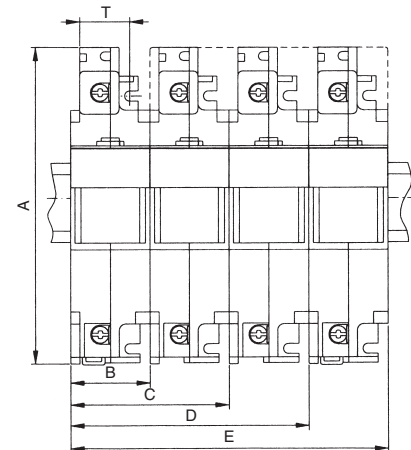
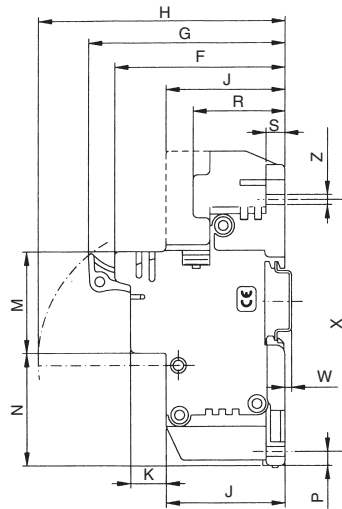
Size 22 x 58

Part No.	51 060 04	51 060 04.S	1 pol.
	51 060 04.2		2 pol.
	51 060 04.3	51 060 04.3S	3 pol.



S= Micro switch
Power Acceptance: **12 W**

A	5.50" (140 mm)	M	1.77" (45 mm)
B	1.40" (35.6 mm)	N	2.00" (50.5 mm)
C	2.80" (71.2 mm)	P	0.30" (7.5 mm)
D	4.20" (106.8 mm)	R	1.57" (40 mm)
E	5.60" (142.4 mm)	S	0.30" (8 mm)
F	2.97" (75.5 mm)	T	1.06" (27 mm)
G	3.44" (87.5 mm)	W	0.10" (2.5 mm)
H	4.35" (110.5 mm)	X	4.30" (109.5 mm)
J	2.10" (53 mm)	Z Ø	0.17" (4.4 mm)
K	0.63" (16 mm)		





Fuse-Holder For Fuse-Links with Cylindrical Contact Caps

Size 20 x 127 mm	Rated Voltage 1500 V	Standard IEC 60947: AC20B, DC20B; IEC 60269; IP 20
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Rated Current [A]	Part No.	Rated Power Acceptance [W]	Max. Connecting Cable [mm ²]	Max. Tightening Torque [Nm]	Weight [kg]	Pack
63	91 080 01	15	50	10	1	1

Dimensions

