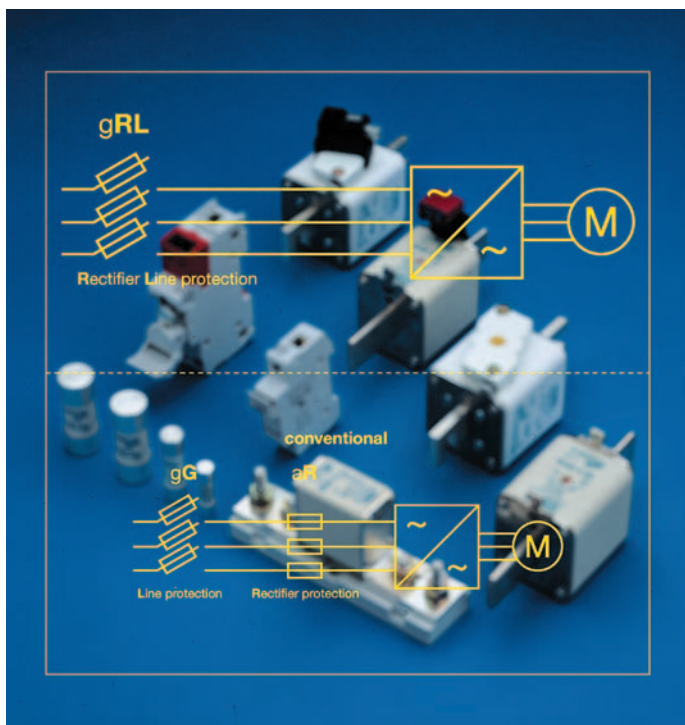


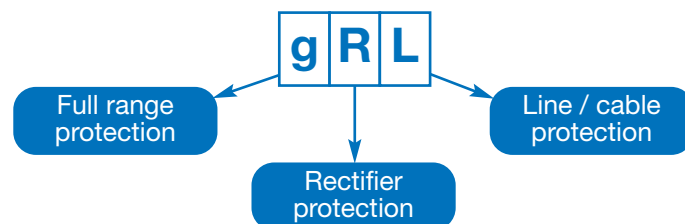
Fuses for Semiconductor Protection

Class gRL(gS)



Fuse type gRL offers:

- Semiconductor protection against short circuit faults via their Ultra Rapid “gR” characteristic.
- Cable protection against overload via their “gG” characteristic.



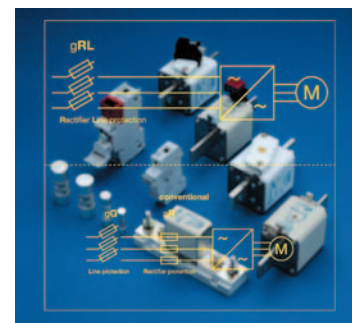
The gRL class line of fuses offers superior performance by the combination of two fuse classes (aR and gG) into one, gRL.

Type gRL fuses provide protection for power electronic equipment and cables with low power losses and low I^2t -values simultaneously.

- Knife blade contact fuses
Voltage rating: AC 690 V
Current rating: 16-630 A
Standard: DIN 43620
- Fuses with bolted contacts
Voltage rating: AC 690 V
Current rating: 16-800 A
Standard: DIN 43653
- Cylindrical fuses
Voltage rating: AC 500-690 V
Current rating: 6-100 A

Features / Benefits

- ▶ High current limitation
- ▶ Low power losses
- ▶ Semiconductor protection against short circuit faults
- ▶ Cable protection against overload current
- ▶ Low I^2t -values
- ▶ High interrupting rating up to 200 kA
- ▶ Compliance with the following standards: IEC 60269-1 / -2-1 and -4 · DIN 43620-1 · DIN 43653
- ▶ Class gRL follows the requirements of the new standardized class gS
- ▶ Recognition



Fuses for Semiconductor Protection

Type gRL(gS)

Selection Guide

Size	Rated Voltage [V]	Contact Type	Indicator Type	Part No.	Selector Guide [Page]	Techn. Data [Page]
D01	400			10 027 34	URL 4	URL 25
D02	400			10 028 34	URL 4	URL 25
D03	400			10 029 34	URL 4	URL 25
DII	500			10 005 34	URL 5	URL 26
DIII	500			10 007 34	URL 5	URL 26
NH 000	690	knife contacts	combi indicator	20 477 34	URL 6	URL 27
NH 00	690	knife contacts	combi indicator	20 209 34	URL 7	URL 27
NH 1	690	knife contacts	combi indicator	20 211 34	URL 8	URL 28
NH 2	690	knife contacts	combi indicator	20 212 34	URL 9	URL 29
NH 3	690	knife contacts	combi indicator	20 213 34	URL 10	URL 30
NH 000	690	DIN 80	top indicator	20 282 34	URL 11	URL 27
NH 000	690	DIN 80	with micro switch fitting	20 558 34	URL 13	URL 27
NH 00	690	DIN 80	top indicator	20 189 34	URL 12	URL 27
NH 00	690	DIN 80	with micro switch fitting	20 412 34	URL 14	URL 27
SQB1	690	M 8	with micro switch fitting	20 252 34	URL 15	URL 28
SQB2	690	M 10	with micro switch fitting	20 253 34	URL 16	URL 29
SQB3	690	M 12	with micro switch fitting	20 254 34	URL 17	URL 30
SQB1	690	DIN 110	with micro switch fitting	20 271 34	URL 18	URL 28
SQB2	690	DIN 110	with micro switch fitting	20 274 34	URL 19	URL 29
SQB3	690	DIN 110	with micro switch fitting	20 277 34	URL 20	URL 30
6.3 x 32	400			70 065 84	URL 21	URL 31
10 x 38	600	cyl. contact caps		60 034 34	URL 22	URL 32
10 x 38	600	PCB mounting		60 064 34	URL 22	URL 32
14 x 51	690	cyl. contact caps		50 124 34	URL 23	URL 33
14 x 51	690	cyl. contact caps	with striker	50 126 34	URL 23	URL 33
14 x 51	690	cyl. contact caps		50 129 34	URL 23	URL 33
22 x 58	690	cyl. contact caps		50 140 34	URL 24	URL 34
22 x 58	690	cyl. contact caps	with striker	50 142 34	URL 24	URL 34

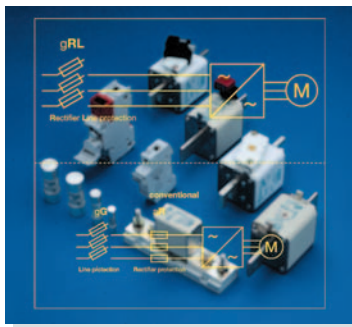
Selection Guide Fuse-Base for Fuses with Knife Contacts

Rated Voltage [V]	Size	Part No.	Techn. Data [Page]
690	00	21 001 01	URL 42
690	00	21 001 10	URL 42
690	1	21 003 01	URL 43
690	2	21 004 01	URL 43
690	3	21 005 01	URL 43

Selection Guide Fuse-Base for Fuses with Screwcontacts

Rated Voltage [V]	Fixing Center [mm]	Rated Current [A]	Part No.	Techn. Data [Page]
900	80	630	21 313 01	URL 35
1400	110	630	21 323 01	URL 35
900	80	1250	21 313 02	URL 36
1400	110	1250	21 323 02	URL 36
1000	80	400	21 189 01	URL 37
1000	80	400	21 189 08	URL 37

with covers



Fuses for Semiconductor Protection

Type gRL(gS)

Selection Guide Fuse-Clips

Size	Part. No.	Page	Type	Size	Part. No.	Page	Type
10 mm	61 017 01.2	38		14 mm	58 058 06	39	PCB
14 mm	61 001 01.2	38	screw	22 mm	58 060 06	39	mountable
22 mm	61 002 01.3	38	mountable				
27 mm	61 004 01.3	38					

Selection Guide Micro Switch

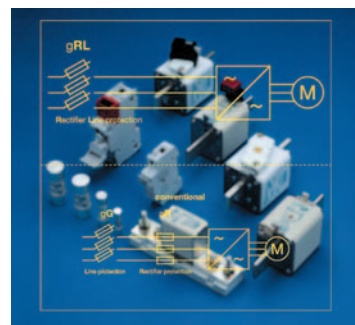
Type	Rated Voltage [V]	Part No.	Selector Guide [Page]
GL-switch	250	28 002 01	URL 40
GL-switch	250	28 002 02	URL 40
B-switch	250	28 003 10	URL 41
B-switch	250	28 003 11	URL 41
B-switch	250	28 003 12	URL 41
B-switch	250	28 003 20	URL 41
B-switch	250	28 003 21	URL 41
B-switch	250	28 003 22	URL 41
B-switch	250	28 004 10	URL 41
B-switch	250	28 004 11	URL 41
B-switch	250	28 004 12	URL 41
B-switch	250	28 004 20	URL 41
B-switch	250	28 004 21	URL 41
B-switch	250	28 004 22	URL 41

Selection Guide ZS-Modules for Fuses with Cylindrical Contact Caps

Size	Indicator Type	Part No.	Techn. Data [Page]
10 x 38	1 pole	51 063 04	URL 44
10 x 38	2 pole	51 063 04.2	URL 44
10 x 38	3 pole	51 063 04.3	URL 44
10 x 38	1 pole LED indicator	51 063 04.L	URL 44
10 x 38	2 pole LED indicator	51 063 04.2L	URL 44
10 x 38	3 pole LED indicator	51 063 04.3L	URL 44
14 x 51	1 pole	51 058 04	URL 44
14 x 51	2 pole	51 058 04.2	URL 44
14 x 51	3 pole	51 058 04.3	URL 44
14 x 51	1 pole microswitch	51 058 04.S	URL 44
14 x 51	3 pole microswitch	51 058 04.3S	URL 44
22 x 58	1 pole	51 060 04	URL 44
22 x 58	2 pole	51 060 04.2	URL 44
22 x 58	3 pole	51 060 04.3	URL 44
22 x 58	1 pole microswitch	51 060 04.S	URL 44
22 x 58	3 pole microswitch	51 060 04.3S	URL 44

Fuses for Semiconductor Protection

Type gRL(gS)

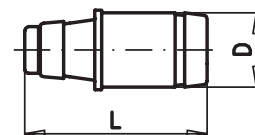

 Size
D01

 Rated Voltage
AC 400 V

 Standard
IEC 60269-4 / VDE 0636 part 40

Rated Current [A]	Part No.	UL Rec.	Weight [kg/1]	Pack
6	10 027 34.6		0.006	50
10	10 027 34.10		0.006	50
13	10 027 34.13		0.006	50
16	10 027 34.16		0.006	50

D 0.43" (11 mm)

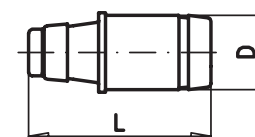
L 1.42" (36 mm)

 Size
D02

 Rated Voltage
AC 400 V

 Standard
IEC 60269-4 / VDE 0636 part 40

Rated Current [A]	Part No.	UL Rec.	Weight [kg/1]	Pack
20	10 028 34.20		0.014	50
25	10 028 34.25		0.014	50
35	10 028 34.35		0.014	50
50	10 028 34.50		0.014	50
63	10 028 34.63		0.014	50

D 0.60" (15,3 mm)

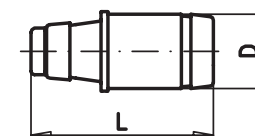
L 1.42" (36 mm)

 Size
D03

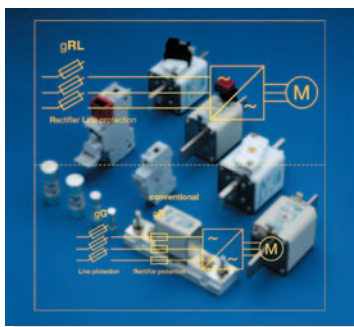
 Rated Voltage
AC 400 V

 Standard
IEC 60269-4 / VDE 0636 part 40

Rated Current [A]	Part No.	UL Rec.	Weight [kg/1]	Pack
80	10 029 34.20		0.042	10
100	10 029 34.25		0.042	10

D 0.90" (22.5 mm)

L 1.70" (43 mm)




Fuses for Semiconductor Protection

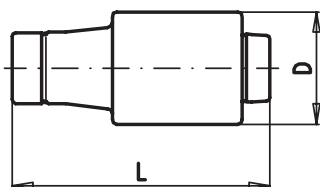
Type gRL(gS)

Size
DII

Rated Voltage
AC 500 V

Standard
IEC 60269-4 / VDE 0636 part 40

Rated Current [A]	Part No.	UL Rec.	Weight [kg/1]	Pack
6	10 005 34.6		0.031	25
10	10 005 34.10		0.031	25
13	10 005 34.13		0.031	25
16	10 005 34.16		0.031	25
20	10 005 34.20		0.031	25
25	10 005 34.25		0.031	25



D 0.87" (22 mm)

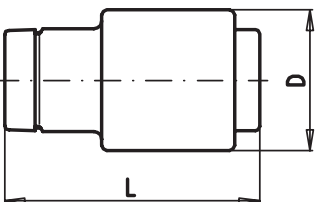
L 1.97" (50 mm)

Size
DIII

Rated Voltage
AC 500 V

Standard
IEC 60269-4 / VDE 0636 part 40

Rated Current [A]	Part No.	UL Rec.	Weight [kg/1]	Pack
35	10 007 34.35		0.053	25
50	10 007 34.50		0.053	25
63	10 007 34.63		0.053	25

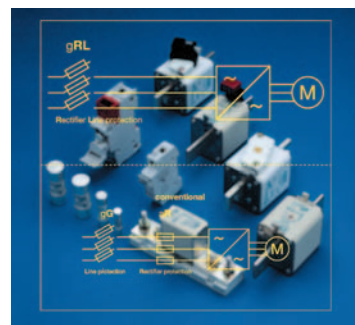


D 1.06" (27 mm)

L 1.97" (50 mm)

Fuses for Semiconductor Protection

Type gRL(gS)

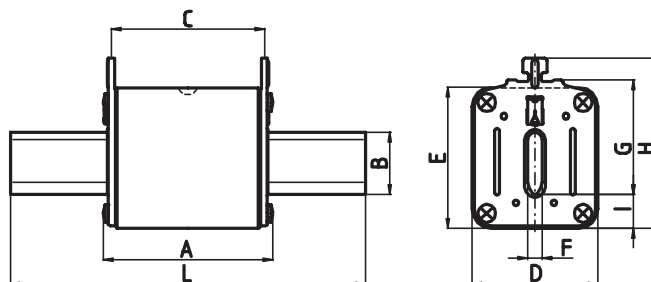

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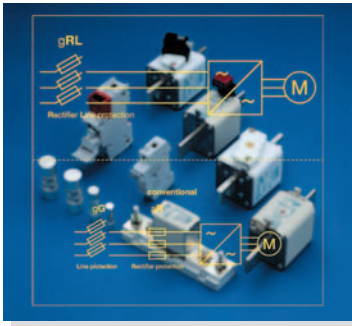
 Rated Voltage
AC 690/700 V

 Standard
IEC 60269-4 / UL 248-13 / DIN 43620/1

Rated Current [A]	Part No.	UL Rec.	Weight [kg/1]	Pack
16	20 477 34.16	✓	0.11	3
20	20 477 34.20	✓	0.11	3
25	20 477 34.25	✓	0.11	3
32	20 477 34.32	✓	0.11	3
40	20 477 34.40	✓	0.11	3
50	20 477 34.50	✓	0.11	3
80	20 477 34.80	✓	0.11	3

A_{max}	2.13" (54 mm)
B	0.60" (15 mm)
C	1.85" (47 mm)
D	0.80" (20.5 mm)
E	1.60" (40.5 mm)
F	0.24" (6 mm)
G	1.38" (35 mm)
H	2.05" (52 mm)
I	0.28" (7 mm)
L	3.07" (78 mm)





Fuses for Semiconductor Protection

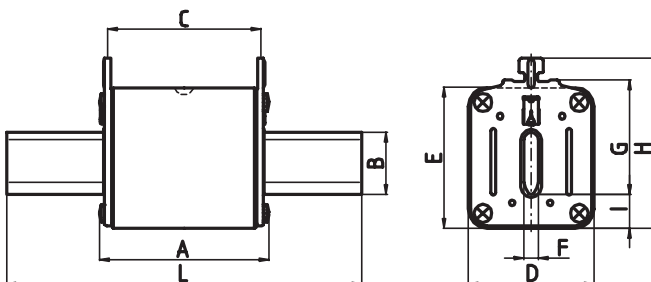
Type gRL(gS)

Size
00

Rated Voltage
AC 690/700 V

Standard
IEC 60269-4 / UL 248-13 / DIN 43620/1

Rated Current [A]	Part No.	UL Rec.	Weight [kg/1]	Pack
100	20 209 34.100	✓	0.154	3
125	20 209 34.125	✓	0.154	3
160	20 209 34.160	✓	0.154	3
200	20 209 34.200	✓	0.154	3



A_{max}	2.13" (54 mm)
B	0.59" (15 mm)
C	1.85" (47 mm)
D	1.16" (29.5 mm)
E	1.80" (46 mm)
F	0.24" (6 mm)
G	1.38" (35 mm)
H	2.28" (58 mm)
I	0.50" (13 mm)
L	3.07" (78 mm)

Fuses for Semiconductor Protection

Type gRL(gS)

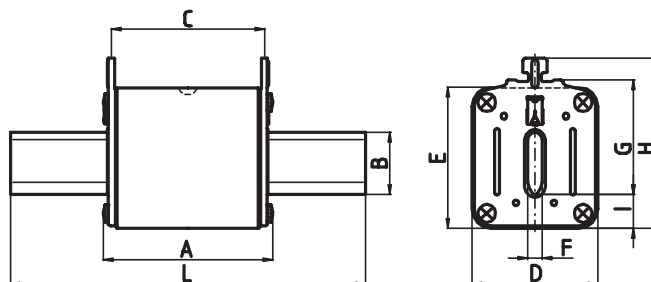

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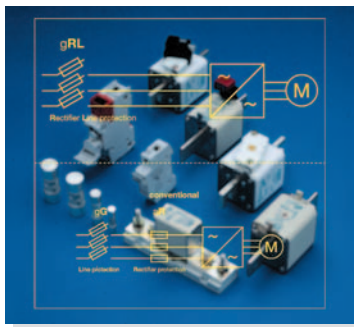
 Rated Voltage
AC 690/700 V

 Standard
IEC 60269-4 / UL 248-13 / DIN 43620/1

Rated Current [A]	Part No.	UL Rec.	Weight [kg/1]	Pack
63	20 211 34.63	✓	0.37	3
80	20 211 34.80	✓	0.37	3
100	20 211 34.100	✓	0.37	3
125	20 211 34.125	✓	0.37	3
160	20 211 34.160	✓	0.37	3
200	20 211 34.200	✓	0.37	3
250	20 211 34.250	✓	0.37	3
315	20 211 34.315	✓	0.37	3

A _{max}	2.95" (75 mm)
B	0.80" (20 mm)
C	2.56" (65 mm)
D	1.65" (42 mm)
E	2.03" (51.5 mm)
F	0.24" (6 mm)
G	1.57" (40 mm)
H	2.52" (64 mm)
I	0.55" (14 mm)
L	5.30" (135 mm)





Fuses for Semiconductor Protection

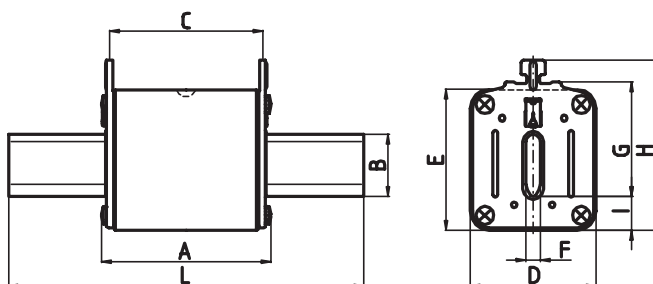
Type gRL(gS)

Size
2

Rated Voltage
AC 690/700 V

Standard
IEC 60269-4 / UL 248-13 / DIN 43620/1

Rated Current [A]	Part No.	UL Rec.	Weight [kg/1]	Pack
160	20 212 34.160	✓	0.37	3
200	20 212 34.200	✓	0.37	3
250	20 212 34.250	✓	0.37	3
315	20 212 34.315	✓	0.65	3
400	20 212 34.400	✓	0.65	3
450	20 212 34.450	✓	0.65	3
500	20 212 34.500	✓	0.65	3



**20 212 34
≤ 250 A**

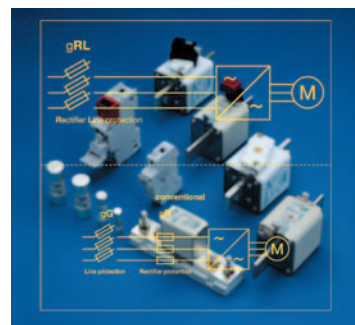
A _{max}	2.95" (75 mm)
B	0.80" (20 mm)
C	2.56" (65 mm)
D	1.65" (42 mm)
E	2.03" (51.5 mm)
F	0.24" (6 mm)
G	1.90" (48 mm)
H	2.83" (72 mm)
I	0.55" (14 mm)
L	5.90" (150 mm)

**20 212 34
≥ 315 A**

A _{max}	2.95" (75 mm)
B	1.02" (26 mm)
C	2.56" (65 mm)
D	2.10" (53 mm)
E	2.32" (59 mm)
F	0.24" (6 mm)
G	1.90" (48 mm)
H	2.83" (72 mm)
I	0.55" (14 mm)
L	5.90" (150 mm)

Fuses for Semiconductor Protection

Type gRL(gS)


 Size
3

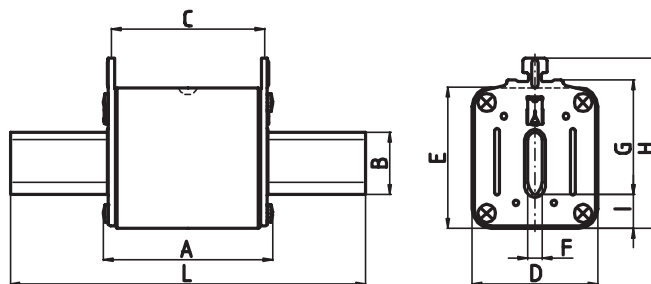
 Rated Voltage
AC 690/700 V

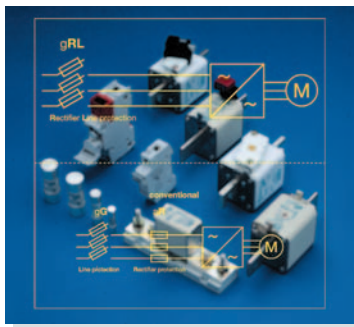
 Standard
IEC 60269-4 / UL 248-13 / DIN 43620/1

Rated Current [A]	Part No.	UL Rec.	Weight [kg/1]	Pack
315	20 213 34.315		0.65	3
400	20 213 34.400		0.88	3
500	20 213 34.500		0.88	3
630	20 213 34.630		0.88	3

20 213 34
 $\leq 315 \text{ A}$
20 213 34
 $\geq 400 \text{ A}$

A_{max}	2.95" (75 mm)	A_{max}	2.95" (75 mm)
B	1.02" (26 mm)	B	1.26" (32 mm)
C	2.56" (65 mm)	C	2.56" (65 mm)
D	2.10" (53 mm)	D	2.56" (65 mm)
E	2.32" (59 mm)	E	2.90" (73.5 mm)
F	0.24" (6 mm)	F	0.24" (6 mm)
G	2.36" (60 mm)	G	2.36" (60 mm)
H	3.27" (83 mm)	H	3.40" (86 mm)
I	0.55" (14 mm)	I	0.67" (17 mm)
L	5.90" (150 mm)	L	5.90" (150 mm)





Fuses for Semiconductor Protection

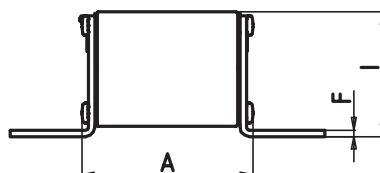
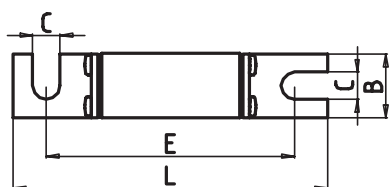
Type gRL(gS)

Size
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Rated Voltage
AC 690 V

Standard
IEC 60269-4 / UL 248-13 / DIN 43653

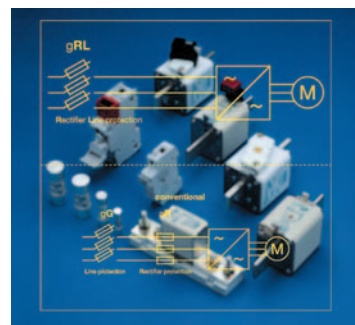
Rated Current [A]	Part No.	UL Rec.	Weight [kg/1]	Pack	
16	20 282 34.16	✓	0.17	6	
20	20 282 34.20	✓	0.17	6	
25	20 282 34.25	✓	0.17	6	
32	20 282 34.32	✓	0.17	6	
40	20 282 34.40	✓	0.17	6	
50	20 282 34.50	✓	0.17	6	
63	20 282 34.63	✓	0.17	6	
80	20 282 34.80	✓	0.17	6	



A	2.17" (55 mm)
B	0.80" (20 mm)
C	0.33" (8.5 mm)
D	0.80" (20.4 mm)
E	3.07" (78 mm)
F	0.08" (2 mm)
I	1.54" (39 mm)
L_(max)	3.94" (100 mm)

Fuses for Semiconductor Protection

Type gRL(gS)

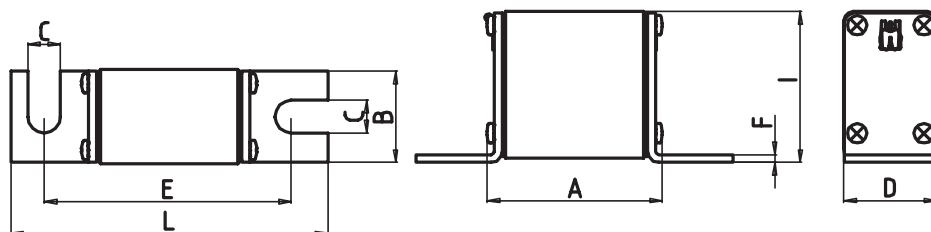

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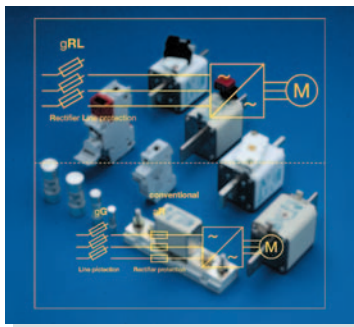
 Rated Voltage
AC 690 / 700 V

 Standard
IEC 60269-4 / UL 248-13 / DIN 43653

Rated Current [A]	Part No.	UL Rec.	Weight [kg/1]	Pack
100	20 189 34.100	✓	0.19	3
125	20 189 34.125	✓	0.19	3
160	20 189 34.160	✓	0.19	3
200	20 189 34.200	✓	0.19	3

A	2.17" (55 mm)
B	1.13" (28,8 mm)
C	0.40" (10,3 mm)
D	1.16" (29,5 mm)
E	3.07" (78 mm)
F	0.10" (2,5 mm)
I	1.85" (47 mm)
L_(max)	4.13" (105 mm)





Fuses for Semiconductor Protection

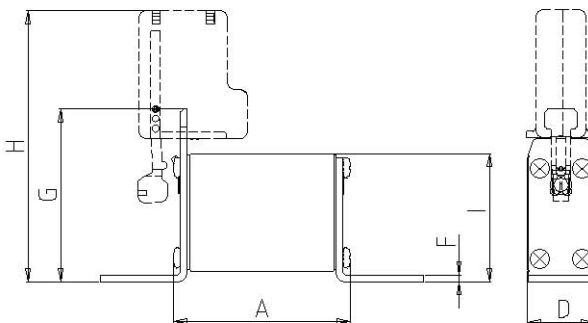
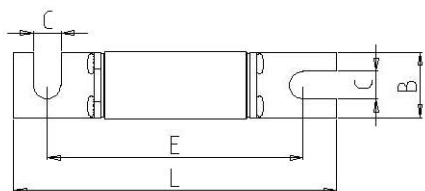
Type gRL(gS)

Size
000

Rated Voltage
AC 690 / 700 V

Standard
IEC 60269-4 / UL 248-13 / DIN 43653

Rated Current [A]	Part No.	UL Rec.	Weight [kg/1]	Pack
16	20 558 34.16	✓	0.18	6
20	20 558 34.20	✓	0.18	6
25	20 558 34.25	✓	0.18	6
32	20 558 34.32	✓	0.18	6
40	20 558 34.40	✓	0.18	6
50	20 558 34.50	✓	0.18	6
63	20 558 34.63	✓	0.18	6
80	20 558 34.80	✓	0.18	6



A	2.17" (55 mm)
B	0.80" (20 mm)
C	0.33" (8,5 mm)
D	0.80" (20,4 mm)
E	3.07" (78 mm)
F	0.08" (2 mm)
G	2.10" (53 mm)
H	3.30" (83 mm)
I	1.54" (39 mm)
L_(max)	3.94" (100 mm)

Fuses for Semiconductor Protection

Type gRL(gS)

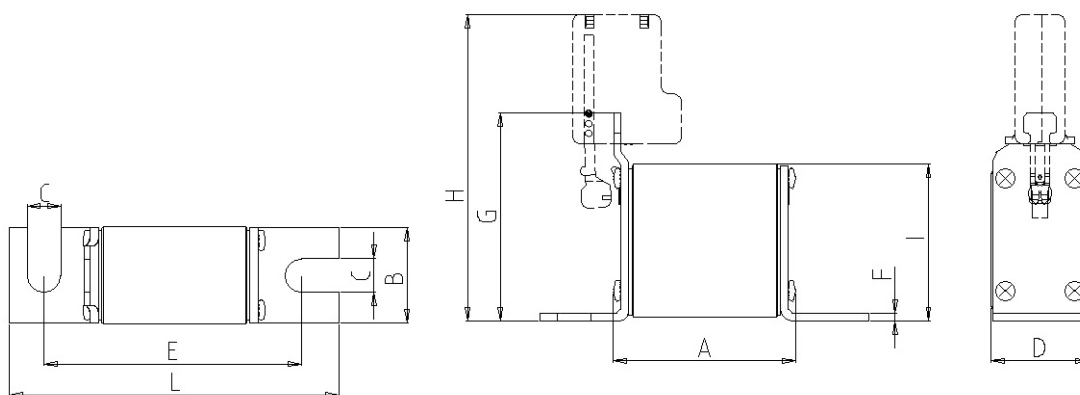

 Size
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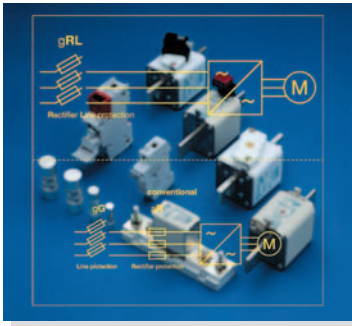
 Rated Voltage
AC 690 / 700 V

 Standard
IEC 60269-4 / UL 248-13 / DIN 43653

Rated Current [A]	Part No.	UL Rec.	Weight [kg/1]	Pack
100	20 412 34.100	✓	0.21	3
125	20 412 34.125	✓	0.21	3
160	20 412 34.160	✓	0.21	3
200	20 412 34.200	✓	0.21	3

A	2.17" (55 mm)
B	1.13" (28.8 mm)
C	0.40" (10.3 mm)
D	1.16" (29.5 mm)
E	3.07" (78 mm)
F	0.10" (2.5 mm)
G	2.48" (63 mm)
H	3.70" (93 mm)
I	1.85" (47 mm)
L_(max)	4.13" (105 mm)





Fuses for Semiconductor Protection

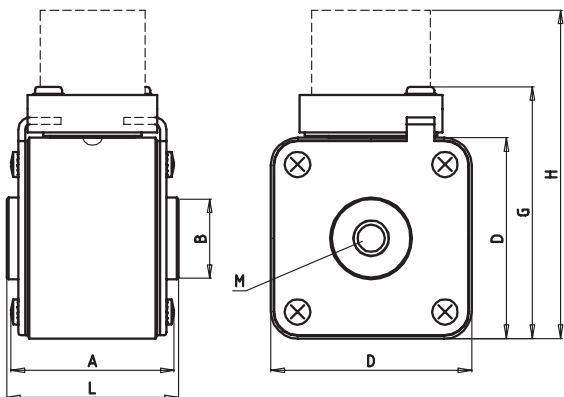
Type gRL(gS)

Size
SQB1

Rated Voltage
AC 690 V

Standard
IEC 60269-4 Metric Thread M 8

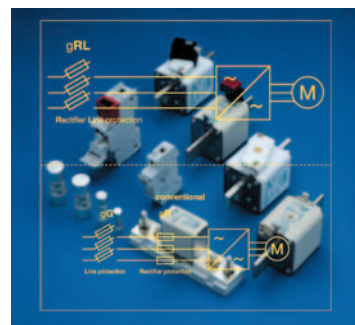
Rated Current [A]	Part No.	UL Rec.	Weight [kg/1]	Pack	
63	20 252 34.63		0.24	3	
80	20 252 34.80		0.27	3	
100	20 252 34.100		0.27	3	
125	20 252 34.125		0.27	3	
160	20 252 34.160		0.27	3	
200	20 252 34.200		0.27	3	
250	20 252 34.250		0.37	3	
315	20 252 34.315		0.37	3	



A	1.87" (47.5 mm)
B	0.94" (24 mm)
D	2.00" (51 mm)
G	2.60" (66 mm)
H	3.50" (89 mm)
L	2.00" (51 mm)
M	M8

Fuses for Semiconductor Protection

Type gRL(gS)

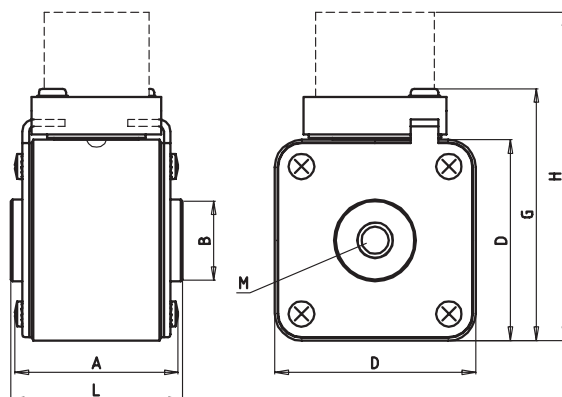

 Size
SQB2

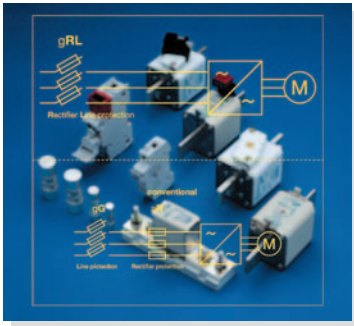
 Rated Voltage
AC 690 V

 Standard
IEC 60269-4 Metric Thread M 10

Rated Current [A]	Part No.	UL Rec.	Weight [kg/1]	Pack
160	20 253 34.160		0.65	3
200	20 253 34.200		0.65	3
250	20 253 34.250		0.65	3
315	20 253 34.315		0.65	3
400	20 253 34.400		0.65	3
450	20 253 34.450		0.65	3
500	20 253 34.500		0.65	3

A	1.87" (47.5 mm)
B	0.94" (24 mm)
D	2.36" (60 mm)
G	2.95" (75 mm)
H	3.86" (98 mm)
L	2.00" (51 mm)
M	M10



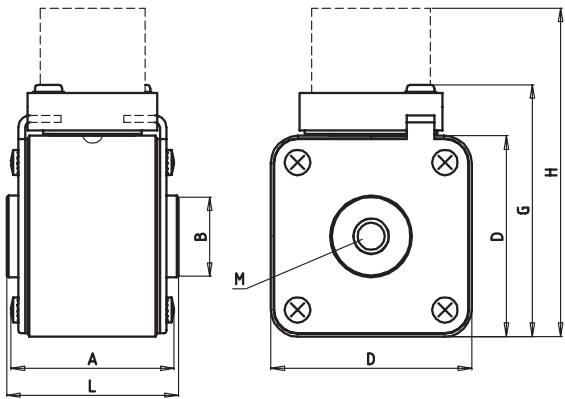


Fuses for Semiconductor Protection

Type gRL(gS)

Size SQB3	Rated Voltage AC 690 V	Standard IEC 60269-4 Metric Thread M 12
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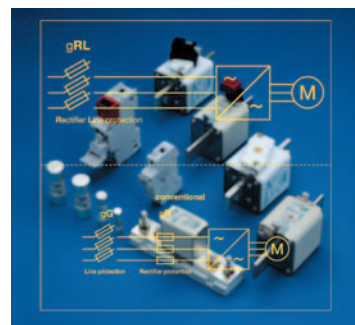
Rated Current [A]	Part No.	UL Rec.	Weight [kg/1]	Pack	
315	20 254 34.315		0.88	3	
400	20 254 34.400		0.88	3	
500	20 254 34.500		0.88	3	
630	20 254 34.630		0.88	3	
710	20 254 34.710		0.88	3	
800	20 254 34.800		0.88	3	



A	1.93" (49 mm)
B	1.10" (28 mm)
D	2.87" (73 mm)
G	3.46" (88 mm)
H	4.37" (111 mm)
L	2.00" (51 mm)
M	M12

Fuses for Semiconductor Protection

Type gRL(gS)

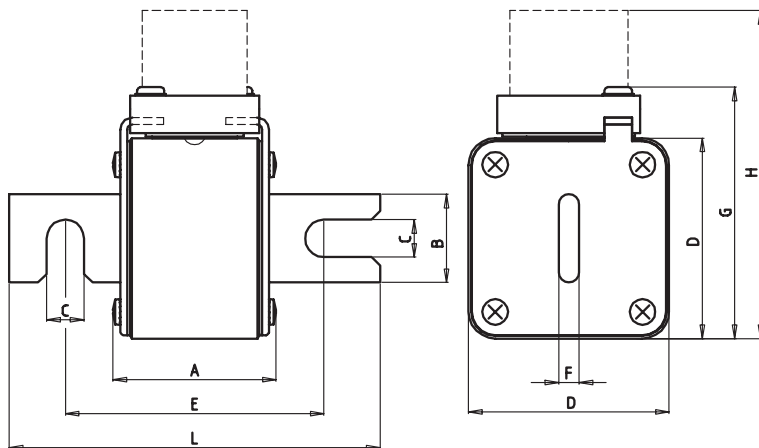

 Size
SQB1

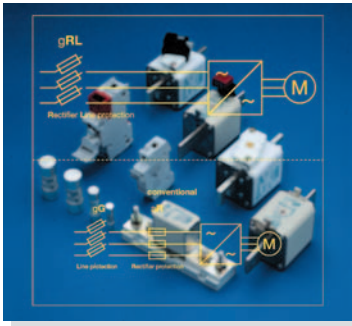
 Rated Voltage
AC 690 V

 Standard
IEC 60269-4 DIN 43653

Rated Current [A]	Part No.	UL Rec.	Weight [kg/1]	Pack
63	20 271 34.63		0.24	3
80	20 271 34.80		0.27	3
100	20 271 34.100		0.27	3
125	20 271 34.125		0.27	3
160	20 271 34.160		0.27	3
200	20 271 34.200		0.37	3
250	20 271 34.250		0.37	3
315	20 271 34.315		0.37	3

A	1.87" (47.5 mm)
B	1.02" (26 mm)
C	0.43" (11 mm)
D	2.00" (51 mm)
E	4.17" (106 mm)
F	0.24" (6 mm)
G	2.60" (66 mm)
H	3.50" (89 mm)
L	5.28" (134 mm)



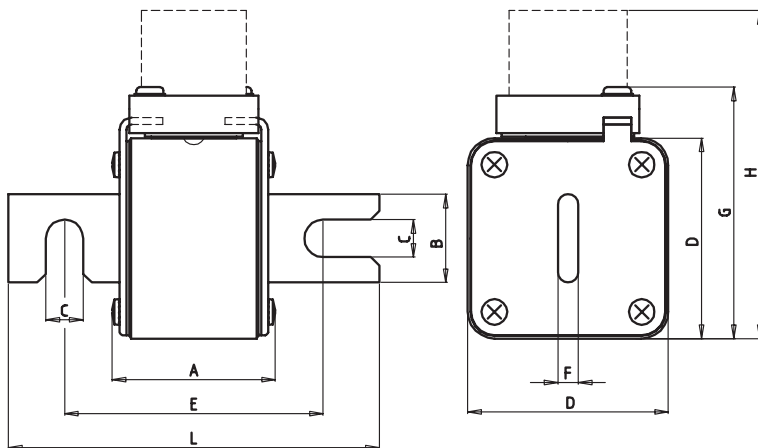


Fuses for Semiconductor Protection

Type gRL(gS)

Size SQB2	Rated Voltage AC 690 V	Standard IEC 60269-4 DIN 43653
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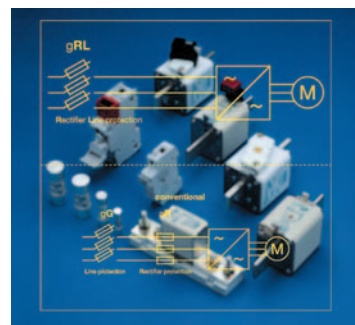
Rated Current [A]	Part No.	UL Rec.	Weight [kg/1]	Pack
160	20 274 34.160		0.65	3
200	20 274 34.200		0.65	3
250	20 274 34.250		0.65	3
315	20 274 34.315		0.65	3
400	20 274 34.400		0.65	3
450	20 274 34.450		0.65	3
500	20 274 34.500		0.65	3



A	1.87" (47.5 mm)
B	1.02" (26 mm)
C	0.43" (11 mm)
D	2.36" (60 mm)
E	4.17" (106 mm)
F	0.24" (6 mm)
G	2.95" (75 mm)
H	3.86" (98 mm)
L	5.28" (134 mm)

Fuses for Semiconductor Protection

Type gRL(gS)

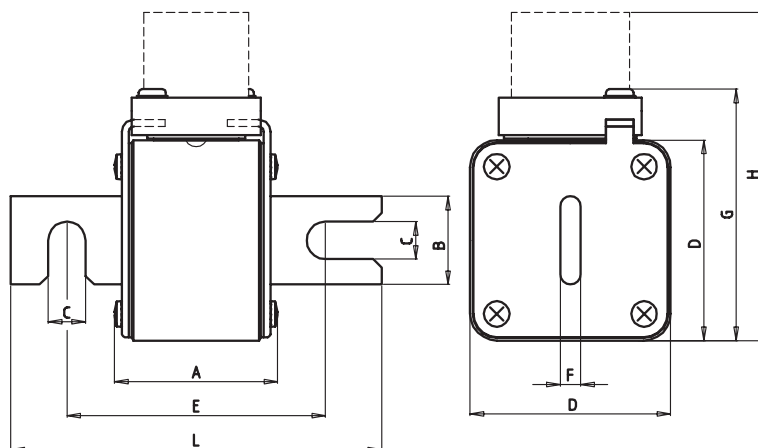

 Size
SQB3

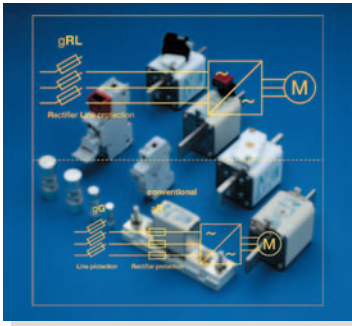
 Rated Voltage
AC 690 V

 Standard
IEC 60269-4 DIN 43653

Rated Current [A]	Part No.	UL Rec.	Weight [kg/1]	Pack
315	20 277 34.315		0.88	3
400	20 277 34.400		0.88	3
500	20 277 34.500		0.88	3
630	20 277 34.630		0.88	3
710	20 277 34.710		0.88	3
800	20 277 34.800		0.88	3

A	1.93" (49 mm)
B	1.38" (35 mm)
C	0.43" (11 mm)
D	2.87" (73 mm)
E	4.17" (106 mm)
F	0.24" (6 mm)
G	3.46" (88 mm)
H	4.37" (111 mm)
L	5.28" (134 mm)



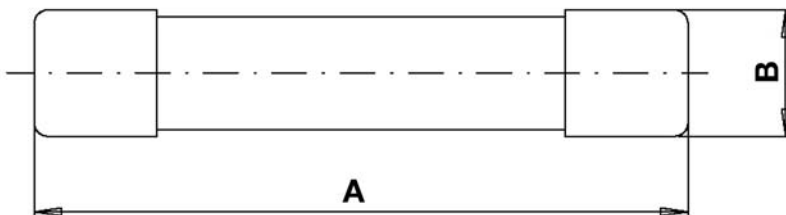


Fuses for Semiconductor Protection

Type gRL(gS)

Size	Rated Voltage	Standard
6.3 x 32 mm	AC 400 V	IEC 60269-4 VDE 0636 part 40

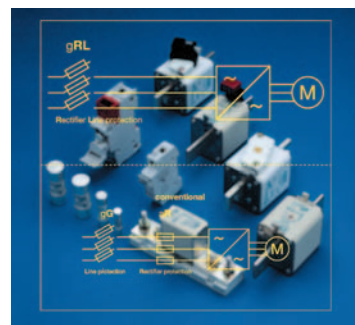
Rated Current [A]	Part No.	UL Rec.	Weight [kg/1]	Pack
6.3	70 065 84.6.3	✓	0.009	10
8	70 065 84.8	✓	0.009	10
10	70 065 84.10	✓	0.009	10
12.5	70 065 84.12.5	✓	0.009	10
16	70 065 84.16	✓	0.009	10
20	70 065 84.20	✓	0.009	10



A	1.26" (32 mm)
B	0.25" (6.35 mm)

Fuses for Semiconductor Protection

Type gRL(gS)


 Size
10 x 38 mm

 Rated Voltage
AC 500 V (IEC) · AC 600 V (UL)

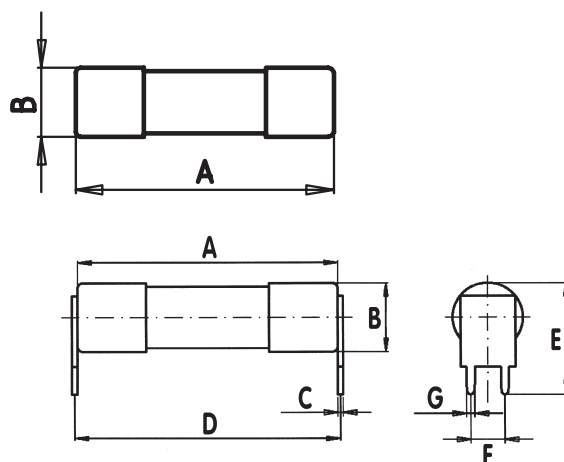
 Standard
IEC 60269-4 / UL 248-13

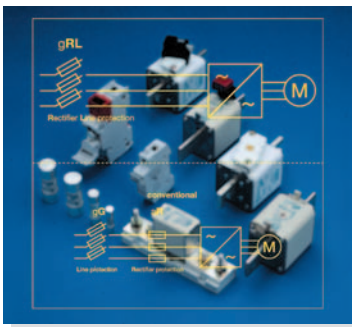
Rated Current [A]	Part No.	Part No. PCB Mounting	UL Rec.	Weight [kg/1]	Pack
6	60 034 34.6	60 064 34.6	✓	0.9	10
8	60 034 34.8	60 064 34.8	✓	0.9	10
10	60 034 34.10	60 064 34.10	✓	0.9	10
12	60 034 34.12	60 064 34.12	✓	0.9	10
16	60 034 34.16	60 064 34.16	✓	0.9	10
20	60 034 34.20	60 064 34.20	✓	0.9	10
25	60 034 34.25	60 064 34.25	✓	0.9	10
30	60 034 34.30	60 064 34.30	✓	0.9	10

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

PCB Mounting

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





Fuses for Semiconductor Protection

Type gRL(gS)

Size
14 x 51 mm

Rated Voltage
AC 690 / 700 V

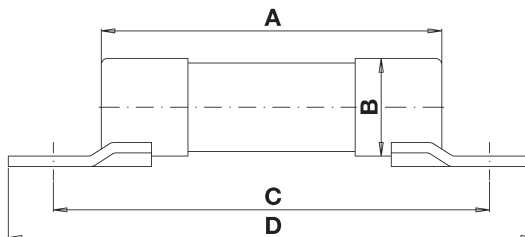
Standard
IEC 60269-4 / UL 248-13

Rated Current [A]	Part No. without Striker	Part No. with Striker	Part No. Fixing Center 63,5 mm	UL Rec.	Weight [kg/1]	Pack
10	50 124 34.10	50 126 34.10	50 129 34.10	✓	0.022	10
12	50 124 34.12	50 126 34.12	50 129 34.12	✓	0.022	10
16	50 124 34.16	50 126 34.16	50 129 34.16	✓	0.022	10
20	50 124 34.20	50 126 34.20	50 129 34.20	✓	0.022	10
25	50 124 34.25	50 126 34.25	50 129 34.25	✓	0.022	10
30	50 124 34.30	50 126 34.30	50 129 34.30	✓	0.022	10
32	50 124 34.32	50 126 34.32	50 129 34.32	✓	0.022	10
35	50 124 34.35	50 126 34.35	50 129 34.35	✓	0.022	10
40	50 124 34.40	50 126 34.40	50 129 34.40	✓	0.022	10

Part No. 50 124 34. ...



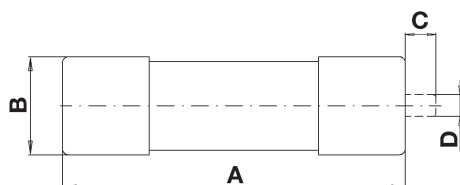
Part No. 50 129 34. ...



Without Striker

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

Part No. 50 126 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)

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)

Fuses for Semiconductor Protection

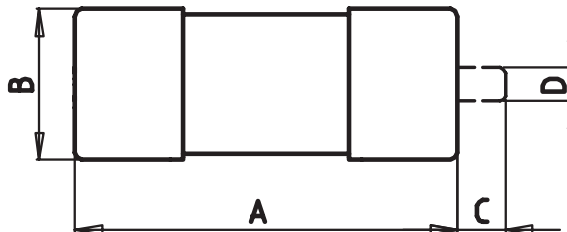
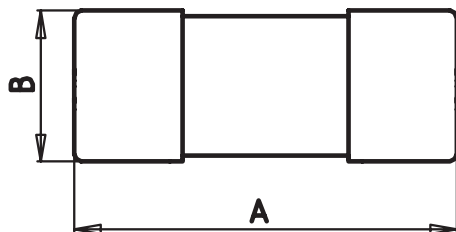
Type gRL(gS)


 Size
22 x 58 mm

 Rated Voltage
AC 690 / 700 V

 Standard
IEC 60269-4 / UL 248-13

Rated Current [A]	Part No. without Striker	Part No. with Striker	UL Rec.	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	
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	



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
D01/D02/D03

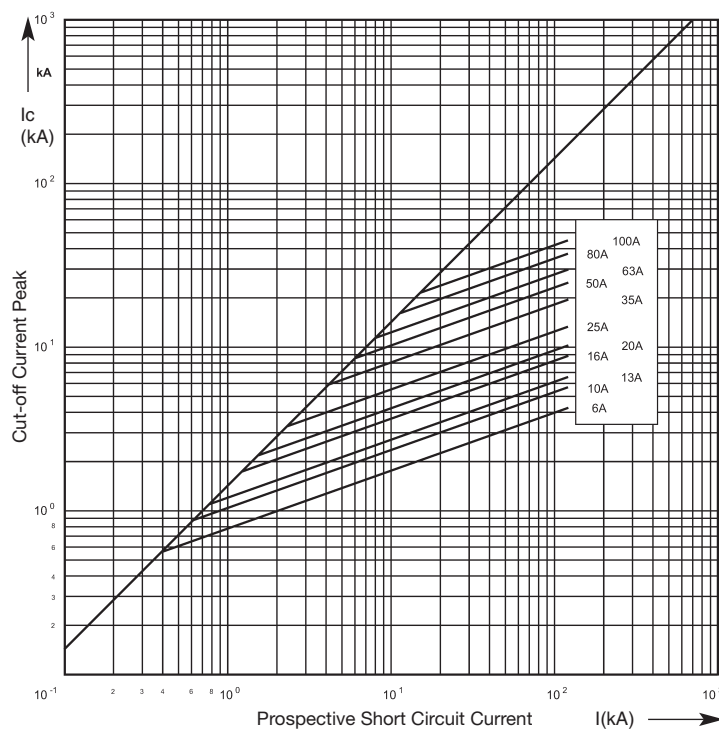
Rated Voltage
AC 400 V

Operating Class
gRL(gS)

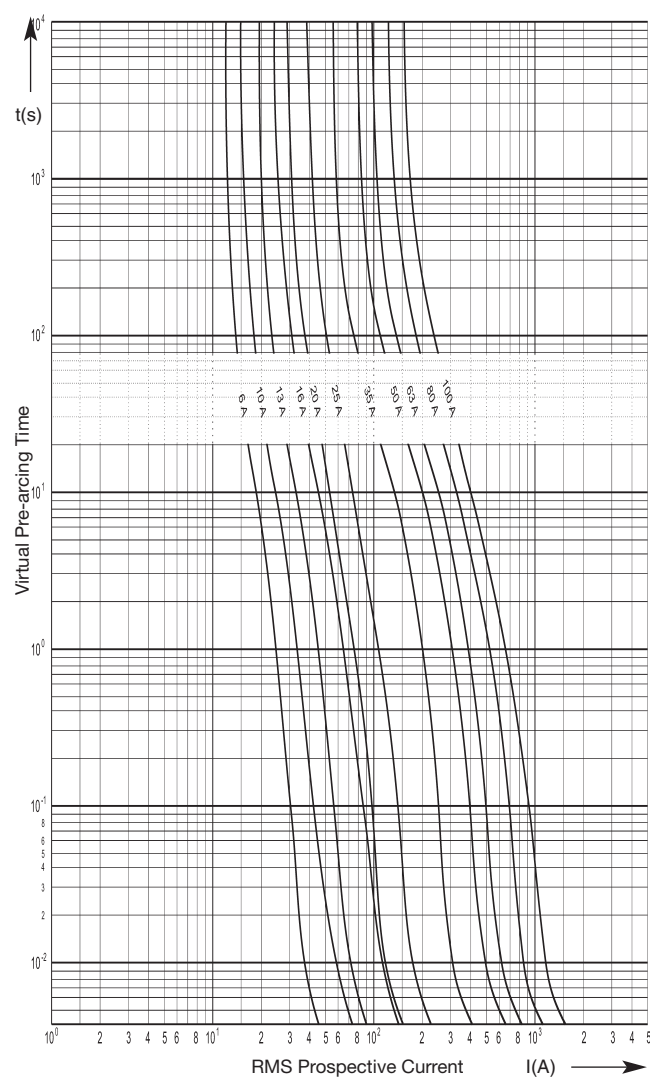
Rated Breaking Capacity
120 kA

Rated Current [A]	Part No.	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ 400 V [A ² s]
6	10 027 34.6	0.7	3.0	60
10	10 027 34.10	1.3	7.4	150
13	10 027 34.13	1.7	12.0	240
16	10 027 34.16	1.9	30.0	600
20	10 028 34.20	1.7	46.0	700
25	10 028 34.25	2.1	104.0	1 600
35	10 028 34.35	2.9	330.0	5 000
50	10 028 34.50	3.9	740.0	11 000
63	10 028 34.63	5.1	1 310.0	19 700
80	10 029 34.80	5.5	2 500.0	37 500
100	10 029 34.100	6.5	4 600.0	79 000

Cut-Off Characteristics



Time-Current Characteristics



Size
DII/DIII

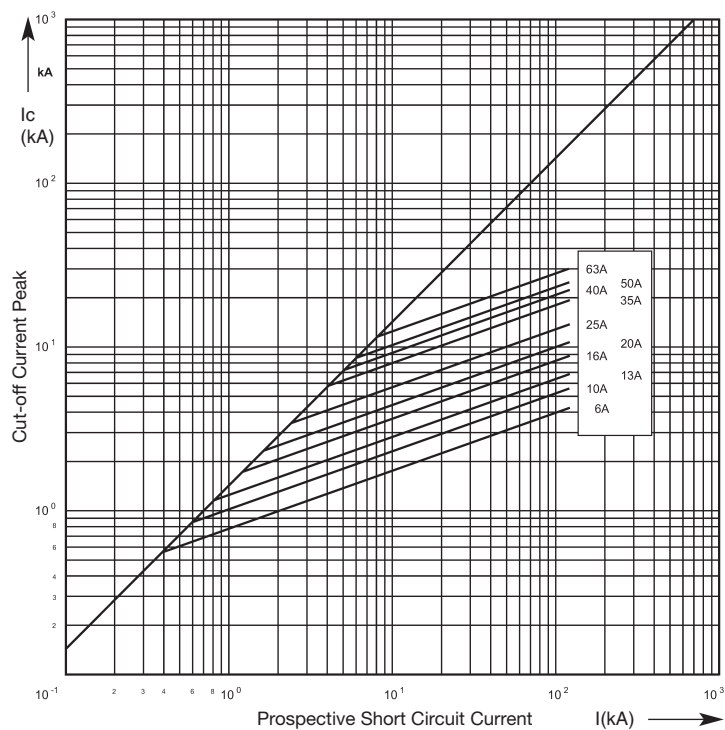
 Rated Voltage
AC 500 V

 Operating Class
gRL(gS)

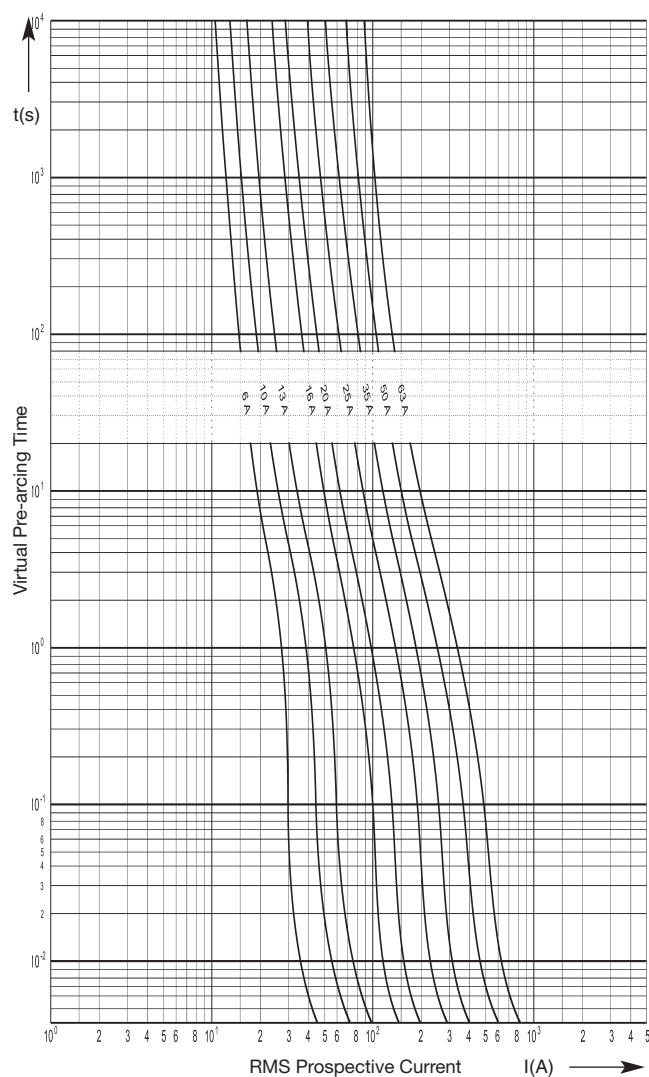
 Rated Breaking Capacity
120 kA

Rated Current [A]	Part No.	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ 500 V [A ² s]	
6	10 005 34.6	0.8	3.0	60	
10	10 005 34.10	1.6	7.4	150	
13	10 005 34.13	2.4	13.0	260	
16	10 005 34.16	2.4	30.0	600	
20	10 005 34.20	2.9	52.0	1 040	
25	10 005 34.25	2.9	120.0	2 400	
35	10 007 34.35	4.0	330.0	3 300	
50	10 007 34.50	6.0	740.0	7 400	
63	10 007 34.63	7.0	1 300.0	13 000	

Cut-Off Characteristics



Time-Current Characteristics



Size
000/00

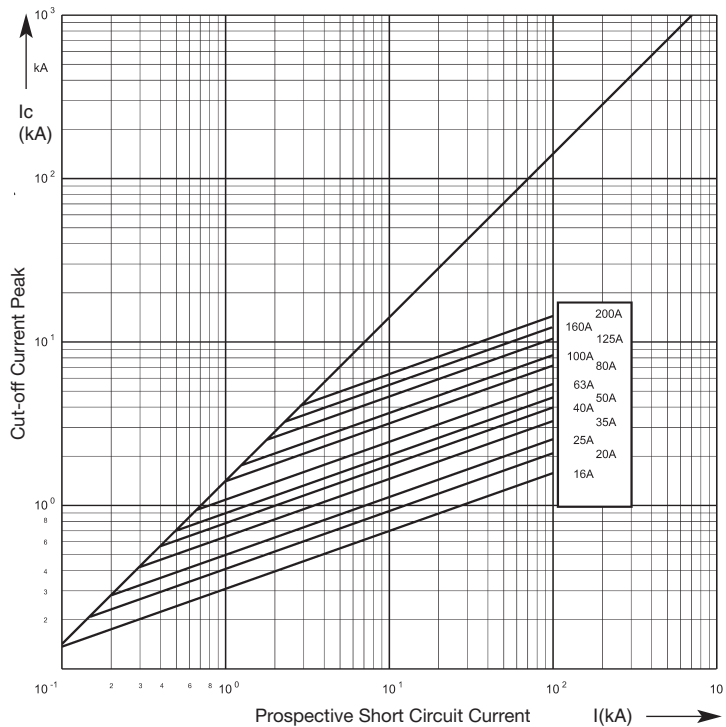
Rated Voltage
AC 690 / 700 V

Operating Class
gRL(gS)

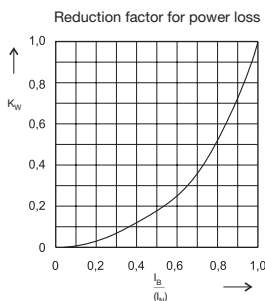
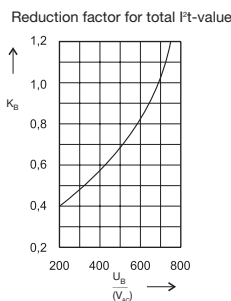
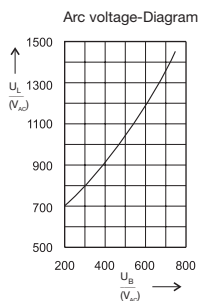
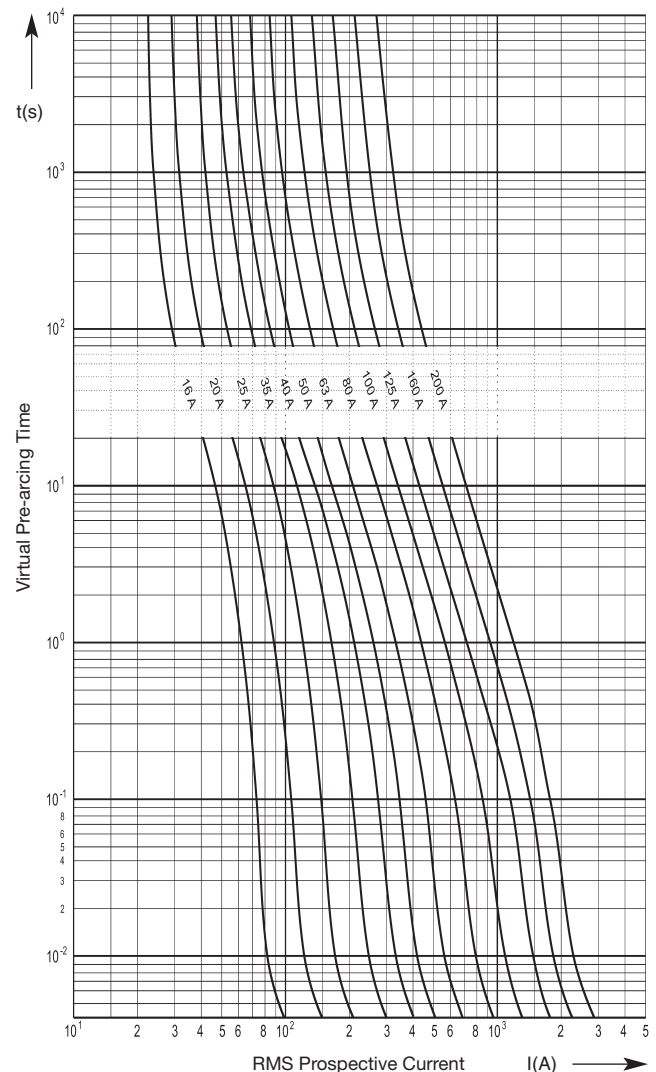
Rated Breaking Capacity
200 kA

Rated Current [A]	Part No. Knife Contacts Fitting for GL-Switch	Part No. Screw Contacts Fitting for GL-Switch	Part No. Screw Contacts without Fitting	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ 690 V [A ² s]
16	20 477 34.16	20 558 34.16	20 282 34.16	3.2	18	180
20	20 477 34.20	20 558 34.20	20 282 34.20	3.6	41	410
25	20 477 34.25	20 558 34.25	20 282 34.25	4.2	74	740
35	20 477 34.35	20 558 34.35	20 282 34.35	5.2	170	1 700
40	20 477 34.40	20 558 34.40	20 282 34.40	5.6	300	3 000
50	20 477 34.50	20 558 34.50	20 282 34.50	6.5	460	4 600
63	20 477 34.63	20 558 34.63	20 282 34.63	7.6	840	8 400
80	20 477 34.80	20 558 34.80	20 282 34.80	8.8	1 800	18 000
100	20 209 34.100	20 412 34.100	20 189 34.100	10.5	3 000	30 000
125	20 209 34.125	20 412 34.125	20 189 34.125	12.0	6 000	60 000
160	20 209 34.160	20 412 34.160	20 189 34.160	17.0	1 400	80 000
200	20 209 34.200	20 412 34.200	20 189 34.200	21.0	16 000	110 000

Cut-Off Characteristics



Time-Current Characteristics



Size
SQB1

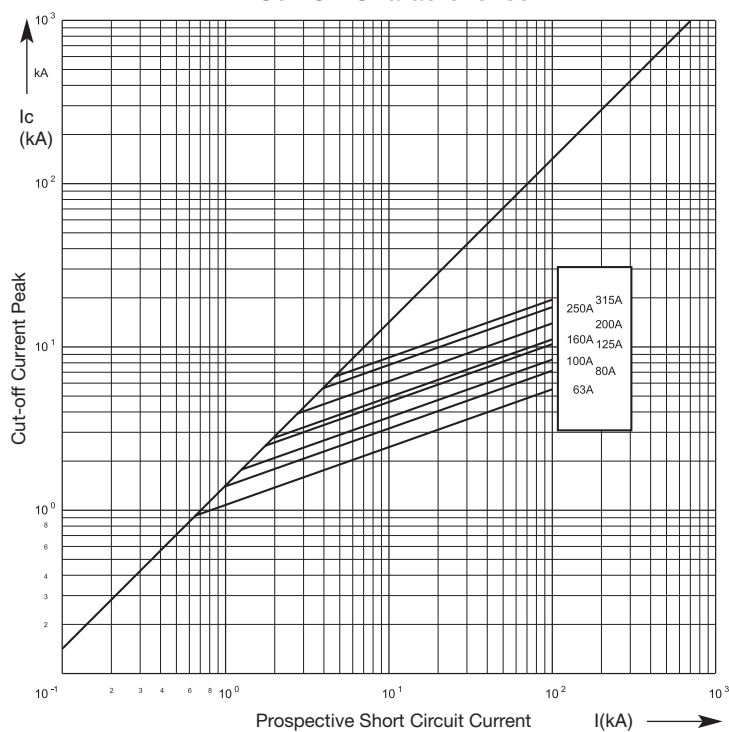
Rated Voltage
AC 690 / 700 V

Operating Class
gRL(gS)

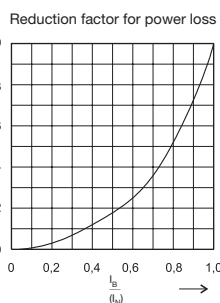
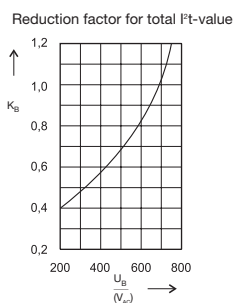
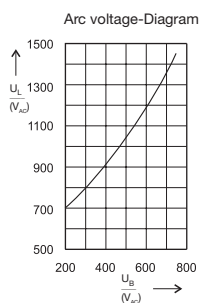
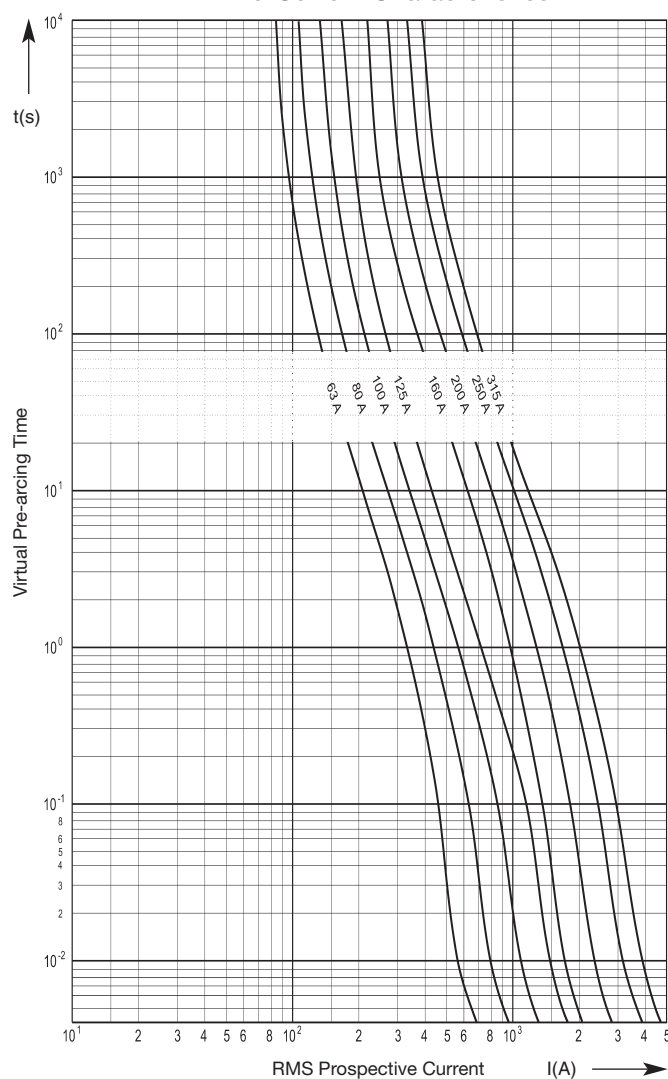
Rated Breaking Capacity
200 kA

Rated Current	Part No. Knife Contacts	Part No. Screw Contacts Metric Thread M8 Fitting for B-Switch	Part No. Screw contacts Fitting for B-Switch	Power Loss	Pre-arcing I ² t-value	Total I ² t-value @ 690 V
[A]				[W]	[A ² s]	[A ² s]
63	20 211 34.63	20 252 34.63	20 271 34.63	8.0	840	5,300
80	20 211 34.80	20 252 34.80	20 271 34.80	9.5	1 800	11 300
100	20 211 34.100	20 252 34.100	20 271 34.100	12.0	3 000	19 000
125	20 211 34.125	20 252 34.125	20 271 34.125	12.6	6 000	38 000
160	20 211 34.160	20 252 34.160	20 271 34.160	23.0	7 400	47 000
200	20 211 34.200	20 252 34.200	20 271 34.200	27.0	15 000	95 000
250	20 211 34.250	20 252 34.250	20 271 34.250	33.0	30 000	190 000
315	20 211 34.315	20 252 34.315	20 271 34.315	44.0	43 000	271 000

Cut-Off Characteristics



Time-Current Characteristics



Size
SQB2

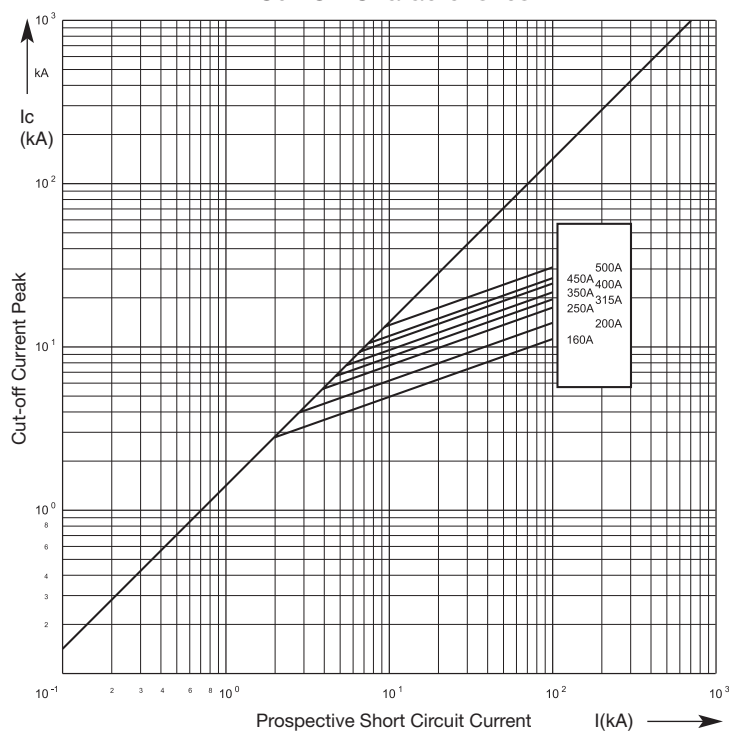
Rated Voltage
AC 690 / 700 V

Operating Class
gR (gS)

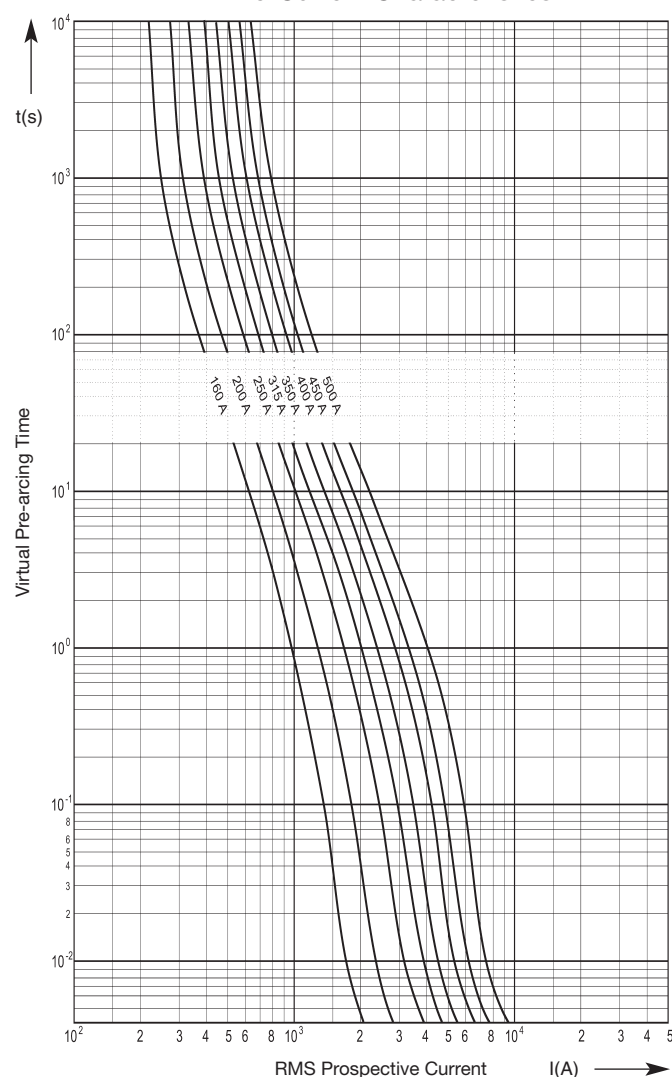
Rated Breaking Capacity
200 kA

Rated Current	Part No. Knife Contacts	Part No. Screw Contacts Metric Thread M10 Fitting for B-Switch	Part No. Screw contacts Fitting for B-Switch	Power Loss	Pre-arcing I^2t -value	Total I^2t -value @ 690 V
[A]				[W]	[A²s]	[A²s]
160	20 212 34.160	20 253 34.160	20 274 34.160	23	7 400	47 000
200	20 212 34.200	20 253 34.200	20 274 34.200	27	15 000	95 000
250	20 212 34.250	20 253 34.250	20 274 34.250	30	30 000	190 000
315	20 212 34.315	20 253 34.315	20 274 34.315	40	43 000	271 000
350	20 212 34.350	20 253 34.350	20 274 34.350	43	58 000	310 000
400	20 212 34.400	20 253 34.400	20 274 34.400	48	85 000	442 000
450	20 212 34.450	20 253 34.450	20 274 34.450	50	107 000	560 000
500	20 212 34.500	20 253 34.500	20 274 34.500	63	170 000	880 000

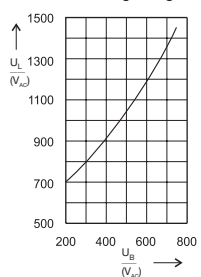
Cut-Off Characteristics



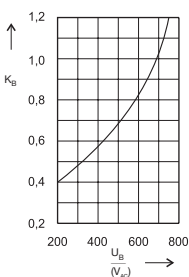
Time-Current Characteristics



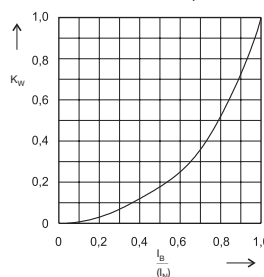
Arc voltage-Diagram



Reduction factor for total I^2t -value



Reduction factor for power loss



Size
SQB3

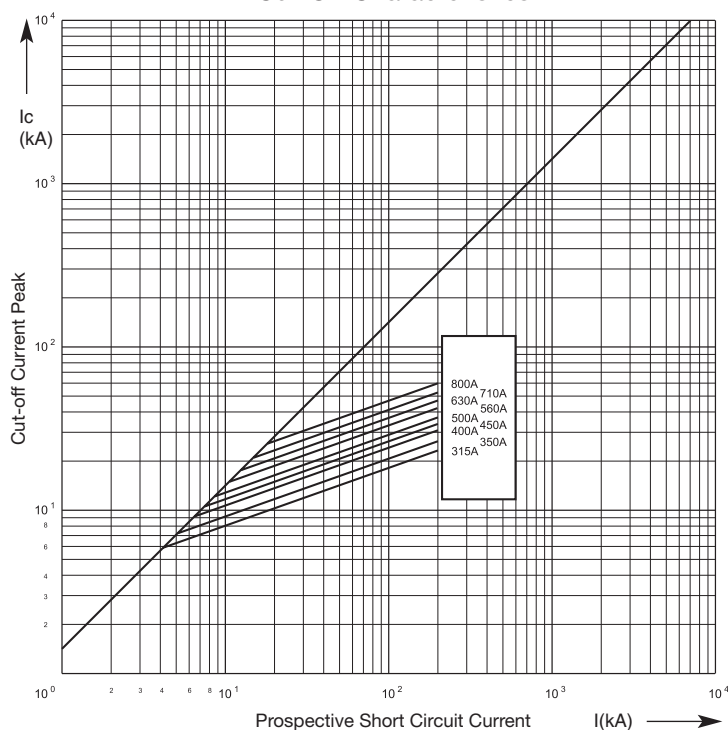
Rated Voltage
AC 690 / 700 V

Operating Class
gRL(gS)

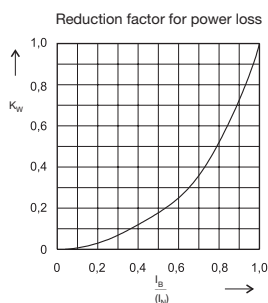
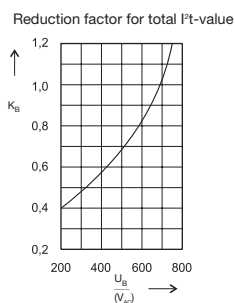
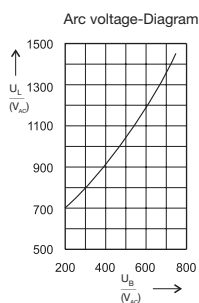
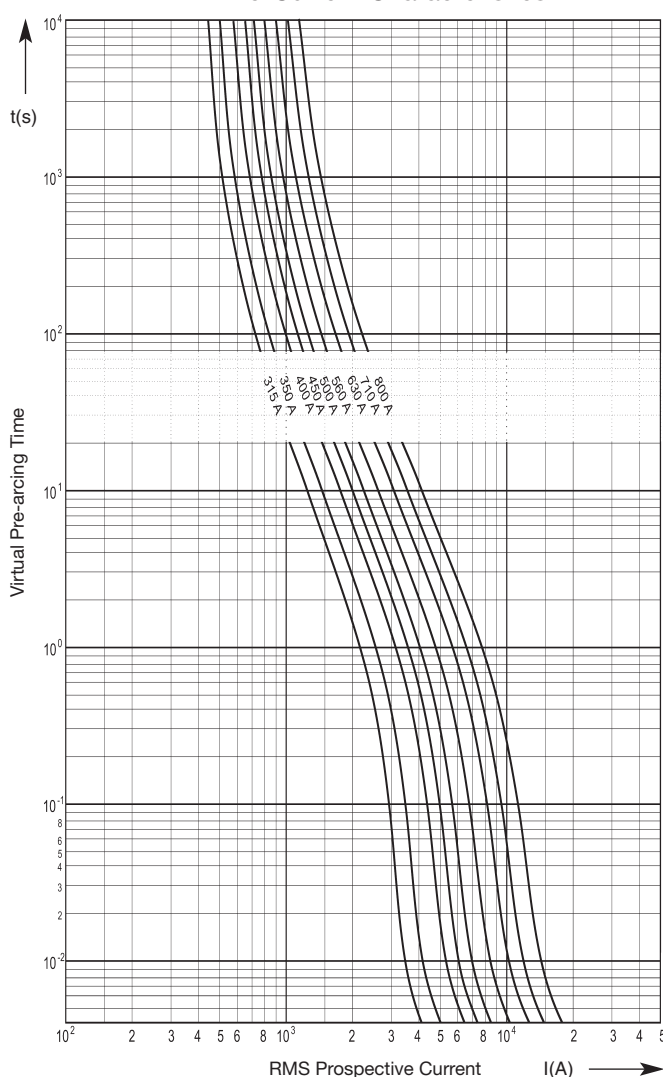
Rated Breaking Capacity
200 kA

Rated Current	Part No. Knife Contacts	Part No. Screw Contacts Metric Thread M12 Fitting for B-Switch	Part No. Screw contacts Fitting for B-Switch	Power Loss	Pre-arcing I ² t-value	Total I ² t-value @ 690 V
[A]				[W]	[A ² s]	[A ² s]
315	20 213 34.315	20 254 34.315	20 277 34.315	38	43 000	271 000
350	20 213 34.350	20 254 34.350	20 277 34.350	42	58 000	310 000
400	20 213 34.400	20 254 34.400	20 277 34.400	46	85 000	442 000
450	20 213 34.450	20 254 34.450	20 277 34.450	48	107 000	560 000
500	20 213 34.500	20 254 34.500	20 277 34.500	55	170 000	880 000
560	20 213 34.560	20 254 34.560	20 277 34.560	58	190 000	1 100 000
630	20 213 34.630	20 254 34.630	20 277 34.630	64	280 000	1 400 000
710		20 254 34.710	20 277 34.710	69	420 000	1 900 000
800		20 254 34.800	20 277 34.800	74	620 000	2 500 000

Cut-Off Characteristics



Time-Current Characteristics



Size
6.3 x 32 mm

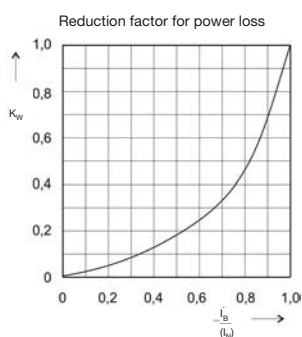
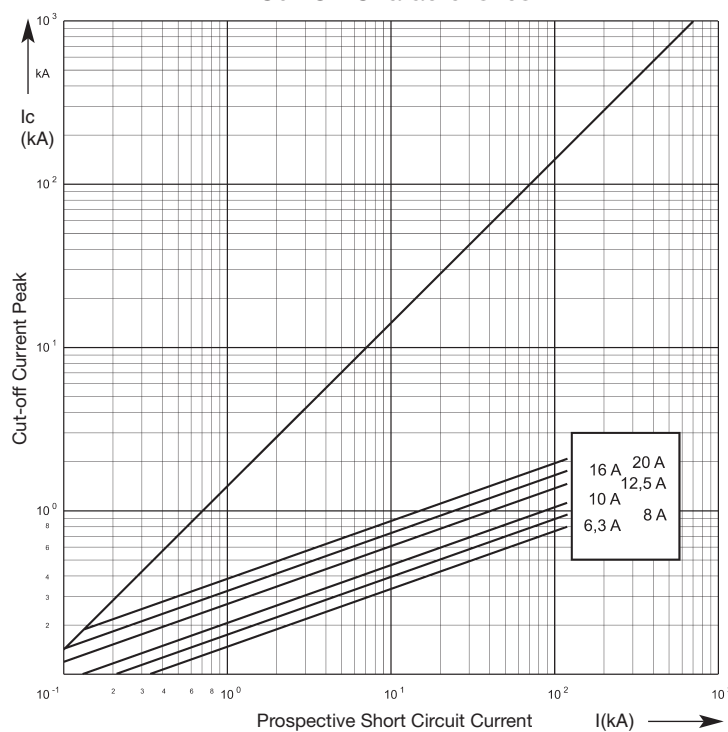
Rated Voltage
AC 400 V

Operating Class
gRL(gS)

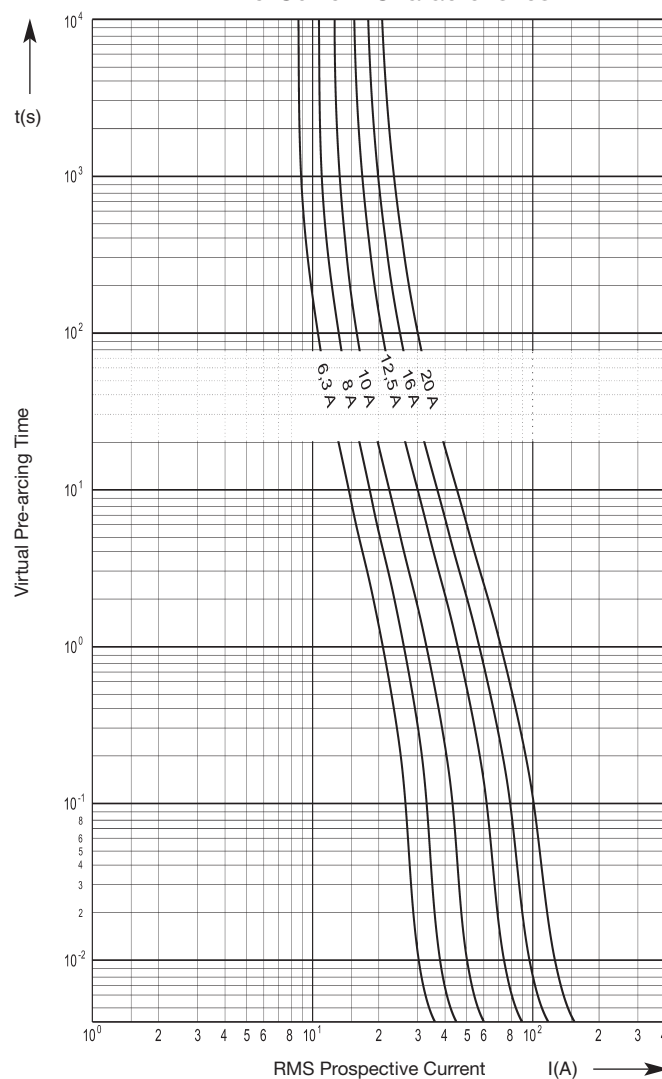
Rated Breaking Capacity
120 kA

Rated Current [A]	Part No.	Voltage Drop [mV]	Power Loss [W]	Pre-arcing I^2t -value [A ² s]	Total I^2t -value @ 500 V [A ² s]	
6.3	70 065 84.6.3	190	1.2	1.8	11	
8	70 065 84.8	190	1.5	3.0	18	
10	70 065 84.10	180	1.8	5.1	31	
12.5	70 065 84.12.5	150	1.9	12.0	69	
16	70 065 84.16	150	2.3	20.0	120	
20	70 065 84	160	3.2	35.0	210	

Cut-Off Characteristics



Time-Current Characteristics



Size
10 x 38 mm

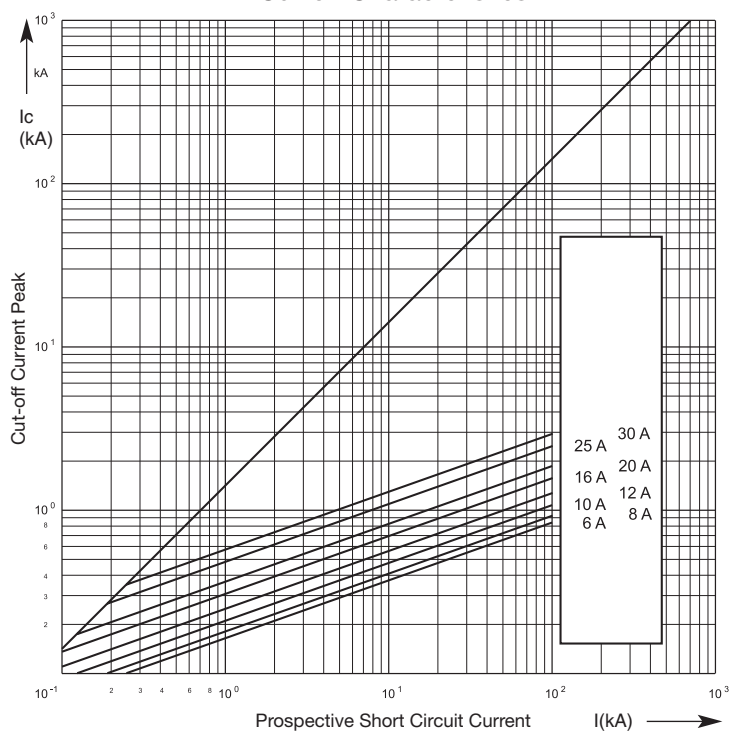
 Rated Voltage
AC 600 V

 Operating Class
gRL(gS)

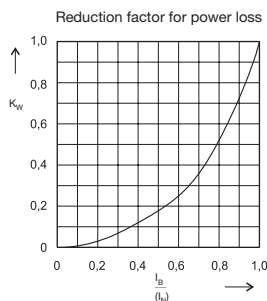
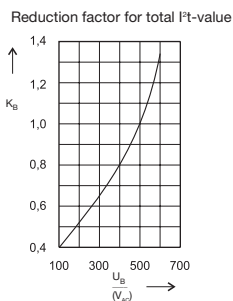
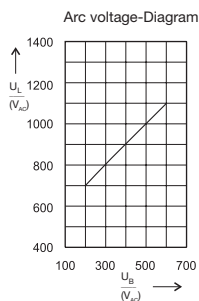
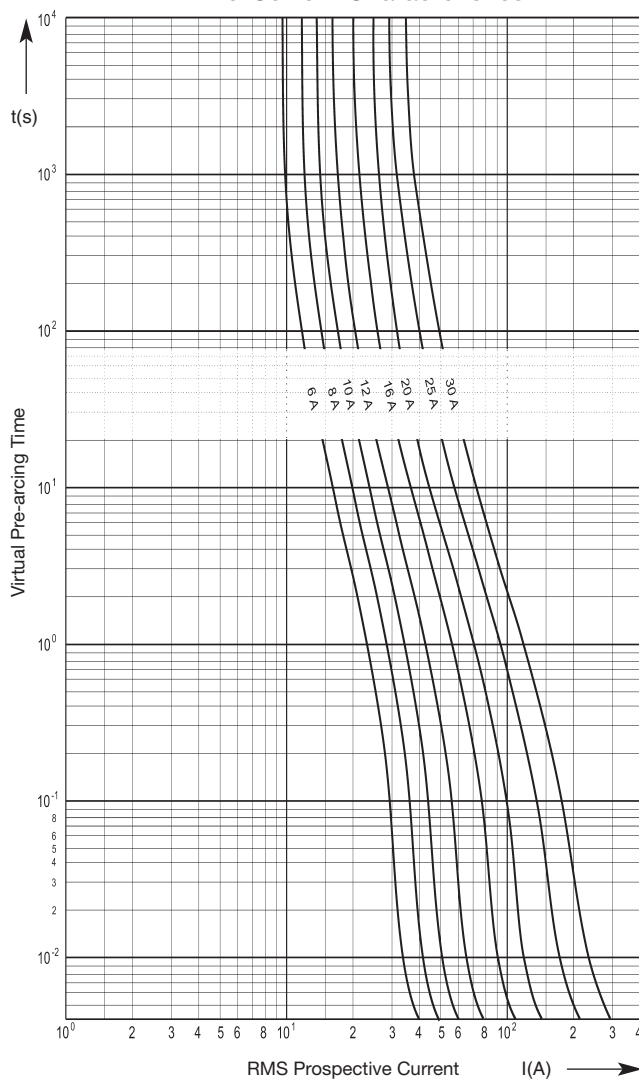
 Rated Breaking Capacity
200 kA

Rated Current [A]	Part No.	Part No. PCB Mounting	Power Loss [W]	Pre-arcing I ² t-value [A ² s]	Total I ² t-value @ 500 V [A ² s]	
6	60 034 34.6	60 064 34.6	1.0	2.5	20	
8	60 034 34.8	60 064 34.8	1.3	3.3	36	
10	60 034 34.10	60 064 34.10	1.6	5.1	41	
12	60 034 34.12	60 064 34.12	1.9	8.7	69	
16	60 034 34.16	60 064 34.16	2.4	17.0	130	
20	60 034 34.20	60 064 34.20	3.5	29.0	240	
25	60 034 34.25	60 064 34.25	3.8	66.0	530	
30	60 034 34.30	60 064 34.30	4.3	120.0	950	

Cut-off Characteristics



Time-Current Characteristics



Size
14 x 51 mm

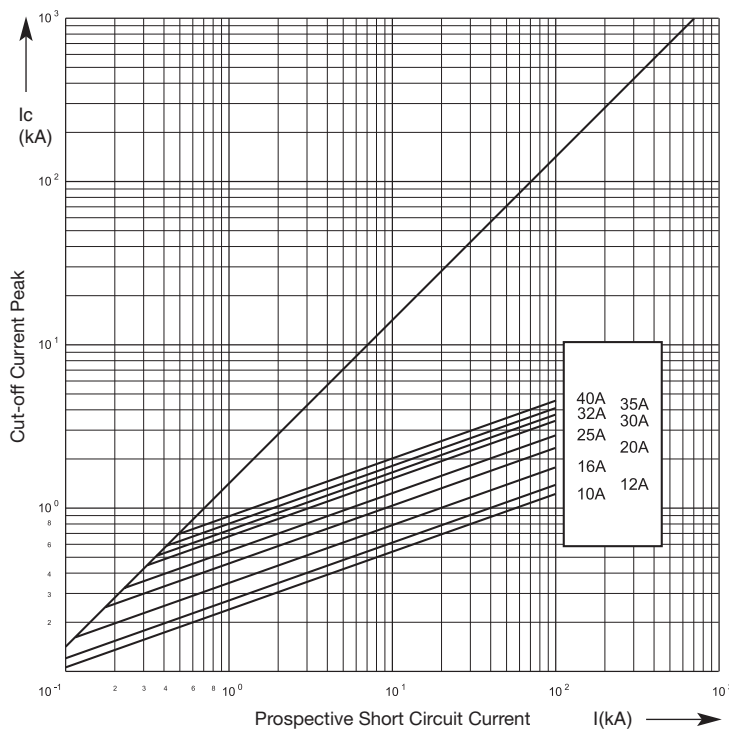
Rated Voltage
AC 690 V

Operating Class
gRL(gS)

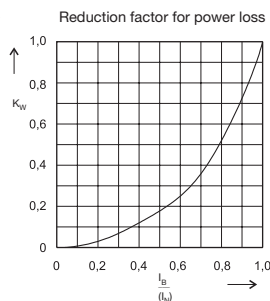
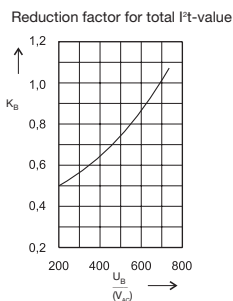
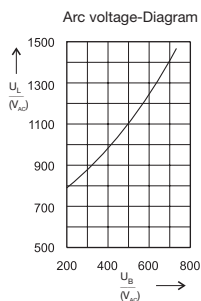
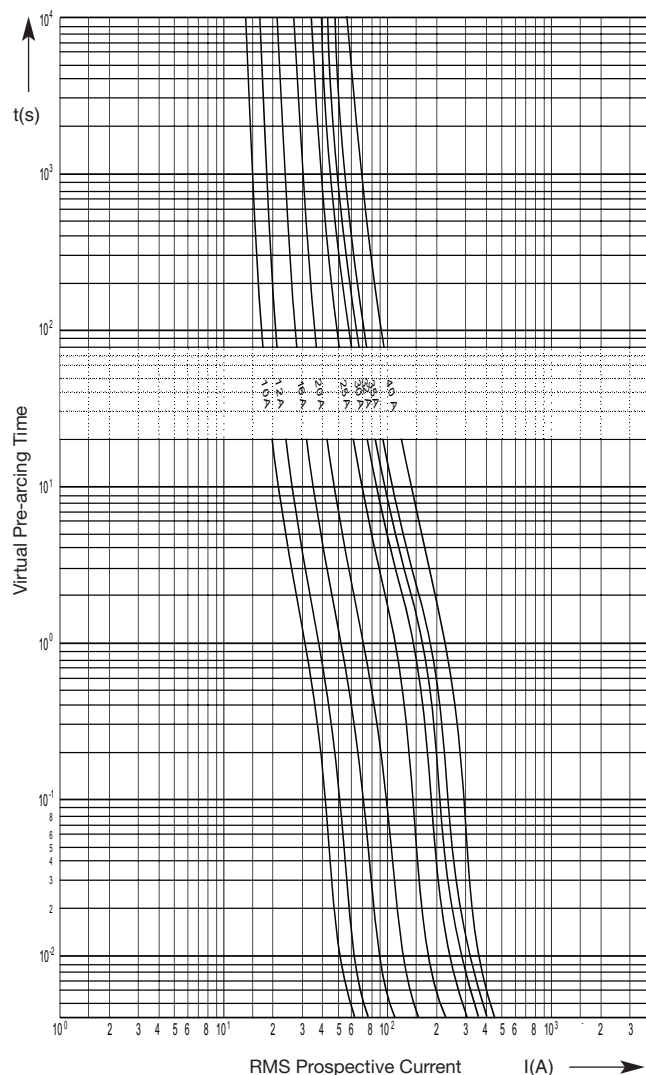
Rated Breaking Capacity
200 kA

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 @ 690 V [A ² s]
10	50 124 34.10	50 126 34.10	50 129 34.10	1.9	8	60
12	50 124 34.12	50 126 34.12	50 129 34.12	2.3	12	90
16	50 124 34.16	50 126 34.16	50 129 34.16	2.8	25	190
20	50 124 34.20	50 126 34.20	50 129 34.20	3.0	46	340
25	50 124 34.25	50 126 34.25	50 129 34.15	3.2	100	740
30	50 124 34.30	50 126 34.30	50 129 34.30	3.8	190	1 400
32	50 124 34.32	50 126 34.32	50 129 34.32	4.0	250	1 900
35	50 124 34.35	50 126 34.35	50 129 34.35	4.2	370	2 800
40	50 124 34.40	50 126 34.40	50 129 34.40	4.4	420	3 100

Cut-Off Characteristics



Time-Current Characteristics



Size
22 x 58 mm

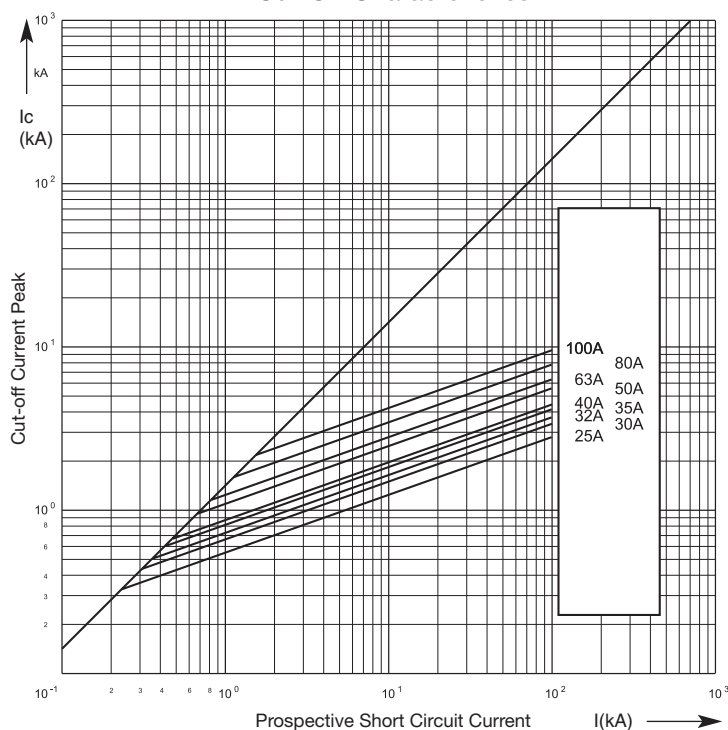
Rated Voltage
AC 700 V

Operating Class
gRL(gS)

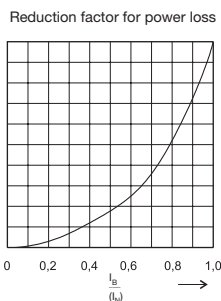
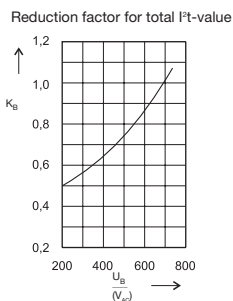
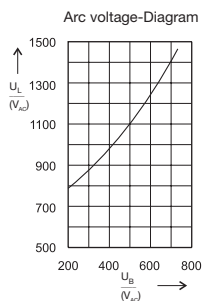
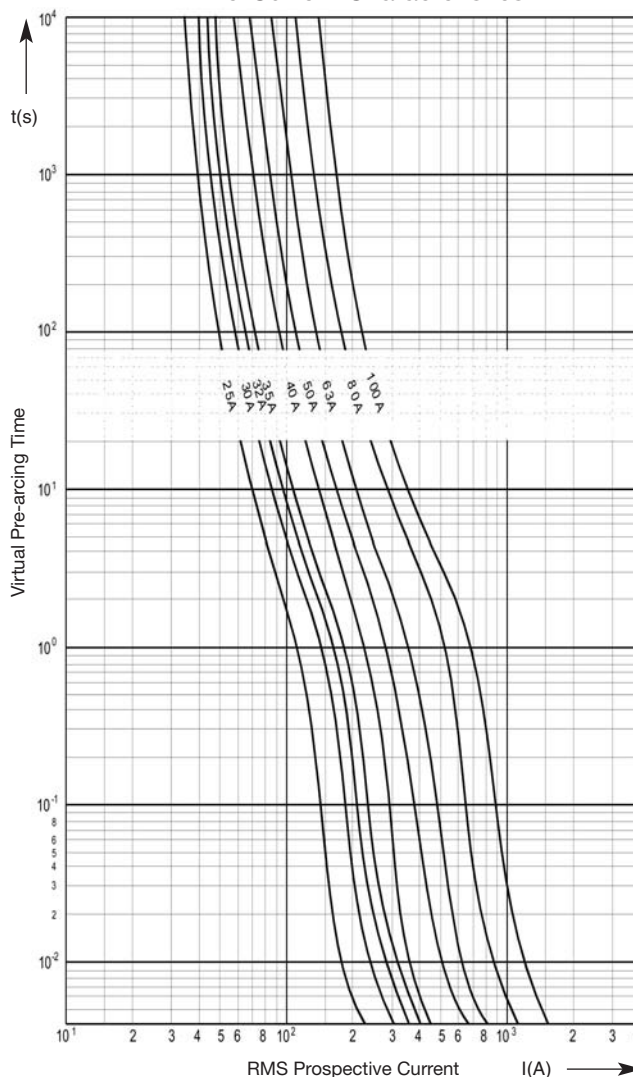
Rated Breaking Capacity
200 kA

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 @ 690 V [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	3 000
40	50 140 34.40	50 142 34.40	5.2	420	3 400
50	50 140 34.50	50 142 34.50	5.4	870	7 000
63	50 140 34.63	50 142 34.63	6.8	1 300	10 500
80	50 140 34.80	50 142 34.80	7.5	2 500	20 000
100	50 140 34.100	50 142 34.100	7.7	4 600	37 000

Cut-Off Characteristics



Time-Current Characteristics



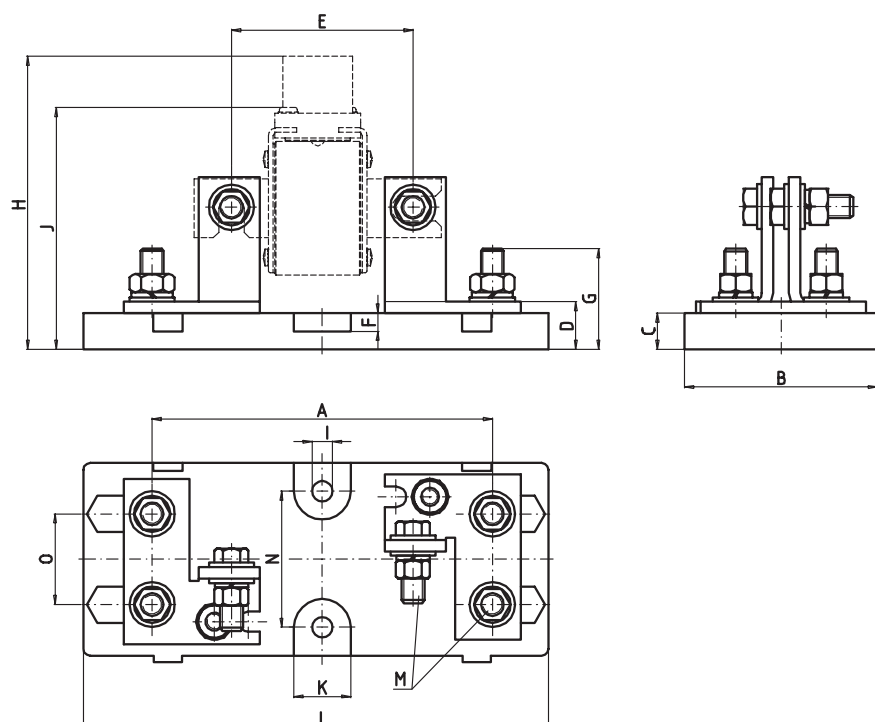
Fuse Base for Fuses with Bolted Connections DIN Type

Size
SQB1, 2 and 3

Rated Current
630 A

Standard
DIN 43653

Rated Voltage [V]	Part No.	Fixing Center [mm]	max. Nut Torque [Nm]	Rated Power Acceptance [W]	
900	21 313 01	80	48	60	
1 400	21 323 01	110	48	60	



Fixing Center 80 mm

A	5.90" (150 mm)
B	3.35" (85 mm)
C	0.63" (16 mm)
D	0.83" (21 mm)
E	3.15" (80 mm)
F	0.30" (8 mm)
G	1.80" (46 mm)
H	5.00" (127 mm)
H _(Size 1)	5.12" (130 mm)
H _(Size 2)	5.40" (137 mm)
H _(Size 3)	5.40" (137 mm)
I	0.35" (9 mm)
J _(Size 1)	4.10" (104 mm)
J _(Size 2)	4.25" (108 mm)
J _(Size 3)	4.53" (115 mm)
K	0.98" (25 mm)
L _(max)	8.07" (205 mm)
M	M 10
N	2.36" (60 mm)
O	1.57" (40 mm)

Fixing Center 110 mm

A	7.10" (180 mm)
B	3.35" (85 mm)
C	0.63" (16 mm)
D	0.83" (21 mm)
E	4.33" (110 mm)
F	0.30" (8 mm)
G	1.80" (46 mm)
H	5.00" (127 mm)
H _(Size 1)	5.12" (130 mm)
H _(Size 2)	5.40" (137 mm)
H _(Size 3)	5.40" (137 mm)
I	0.35" (9 mm)
J _(Size 1)	4.10" (104 mm)
J _(Size 2)	4.25" (108 mm)
J _(Size 3)	4.53" (115 mm)
K	0.98" (25 mm)
L _(max)	8.07" (205 mm)
M	M 10
N	2.36" (60 mm)
O	1.57" (40 mm)

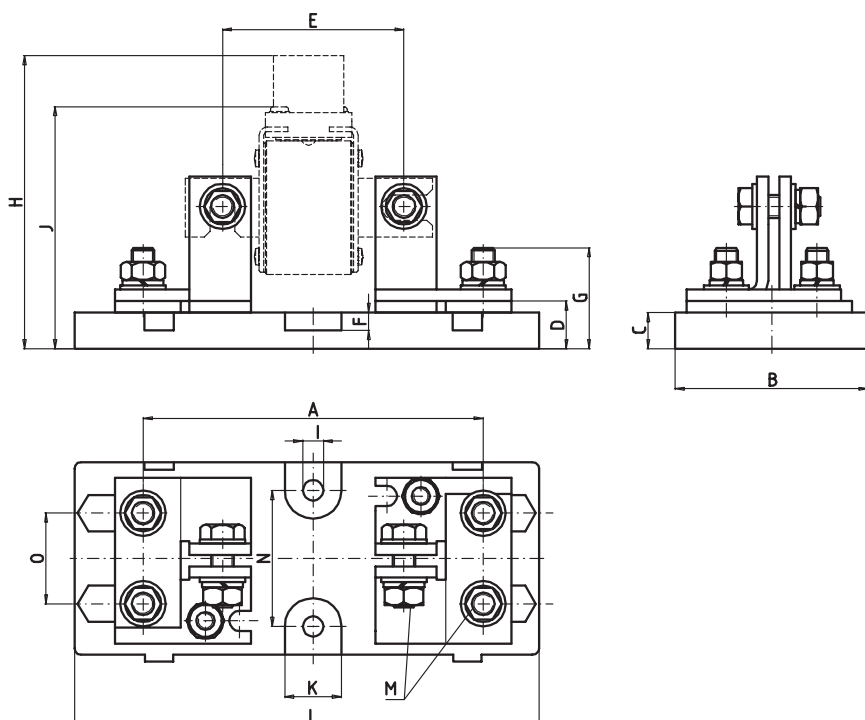
Fuse Base

for Fuses with Bolted Connections DIN Type **SQB1, 2 and 3** **1250 A** **DIN 43653**

Rated Voltage [V]	Part No.	Fixing Center [mm]	max. Nut Torque [Nm]	Rated Power Acceptance [W]	
900	21 313 02	80	48	110	
1 400	21 323 02	110	48	110	

Fixing Center 110 mm

A	7.10" (180 mm)
B	3.35" (85 mm)
C	0.63" (16 mm)
D	0.83" (21 mm)
E	4.33" (110 mm)
F	0.30" (8 mm)
G	1.81" (46 mm)
H _(Size 1)	5.00" (127 mm)
H _(Size 2)	5.12" (130 mm)
H _(Size 3)	5.40" (137 mm)
I	0.35" (9 mm)
J _(Size 1)	4.10" (104 mm)
J _(Size 2)	4.25" (108 mm)
J _(Size 3)	4.53" (115 mm)
K	0.98" (25 mm)
L _(max)	8.07" (205 mm)
M	M 10
N	2.36" (60 mm)
O	1.57" (40 mm)



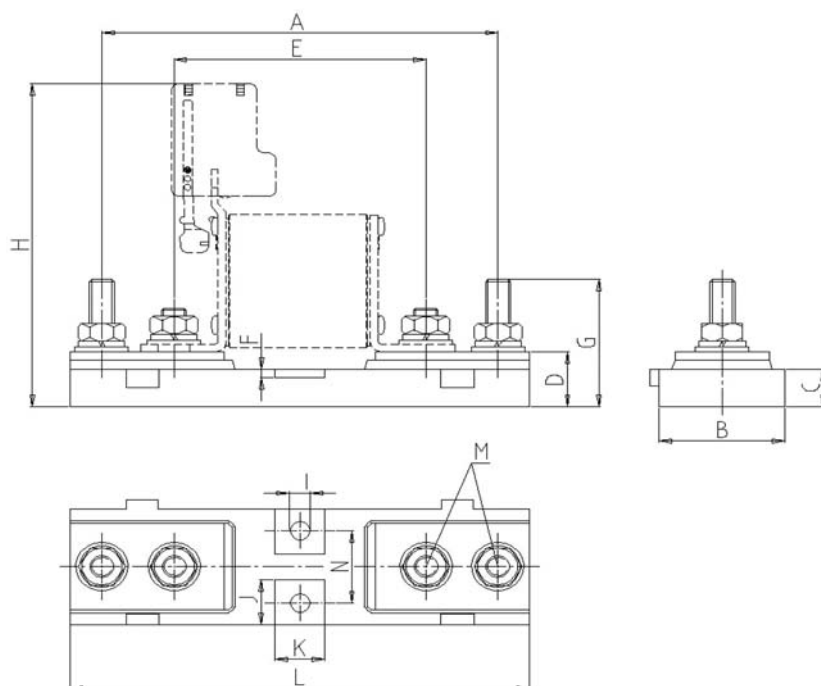
Fixing Center 80 mm

A	5.90" (150 mm)
B	3.35" (85 mm)
C	0.63" (16 mm)
D	0.83" (21 mm)
E	3.15" (80 mm)
F	0.30" (8 mm)
G	1.81" (46 mm)
H _(Size 1)	5.00" (127 mm)
H _(Size 2)	5.12" (130 mm)
H _(Size 3)	5.40" (137 mm)
I	0.35" (9 mm)
J _(Size 1)	4.10" (104 mm)
J _(Size 2)	4.25" (108 mm)
J _(Size 3)	4.53" (115 mm)
K	0.98" (25 mm)
L _(max)	8.07" (205 mm)
M	M 10
N	2.36" (60 mm)
O	1.57" (40 mm)

Fuse-Base 400 A

Size
000 and 00

Rated Voltage
AC 1000 V

Standard
DIN 43653


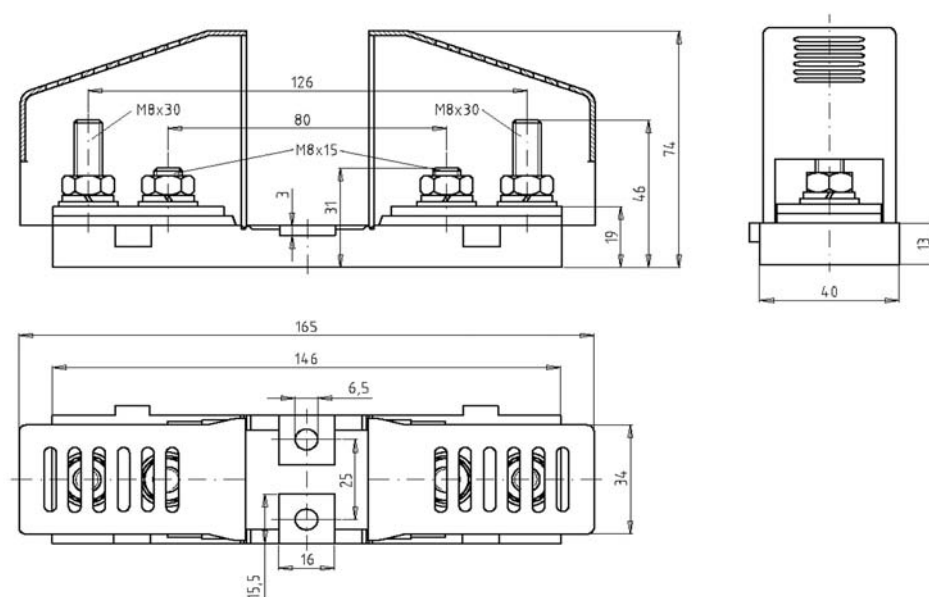
1000 V
Part No. 21 189 01
Rated Current: 400 A
Rated Power Acceptance: 34 W
Nut Torque: 12 Nm

A	4.96" (126 mm)
B	1.57" (40 mm)
C	0.50" (13 mm)
D	0.75" (19 mm)
E	3.15" (80 mm)
F	0.12" (3 mm)
G	1.73" (44 mm)
H	4.40" (112 mm)
I	0.26" (6,5 mm)
J	0.60" (15,5 mm)
K	0.63" (16 mm)
L_(max)	5.75" (146 mm)
M	M 8
N	0.98" (25 mm)

Fuse-Base 400 A

Size
000 and 00

Rated Voltage
AC 1000 V

Standard
DIN 43653


1000 V
Part No. 21 189 08
Rated Current: 400 A
Rated Power Acceptance: 34 W
Nut Torque: 12 Nm

with covers

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

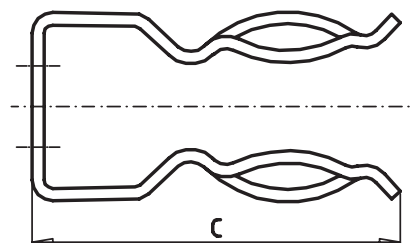
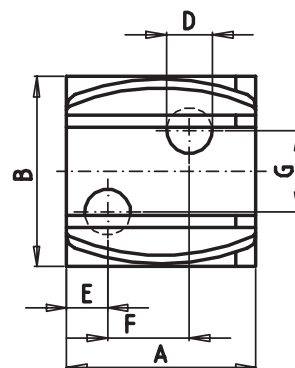
A 0.63" (16 mm)
B 0.63" (16 mm)
C 0.90" (23 mm)
D 0.17" (4.2 mm)
E 0.26" (6.5 mm)

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

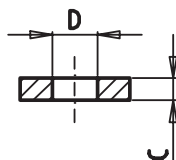
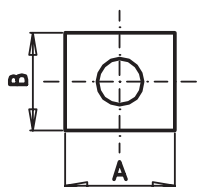
A 1.06" (27 mm)
B 2.30" (58.4 mm)
C 4.55" (115.6 mm)



Clamping Plate

Part No.
63 017 01

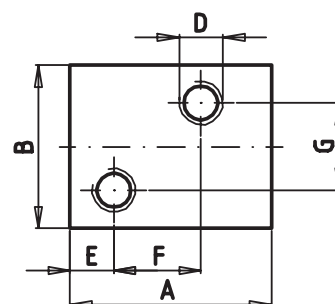
A 0.40" (10 mm)
B 0.35" (9 mm)
C 0.08" (2 mm)
D 0.17" (4.2 mm)



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

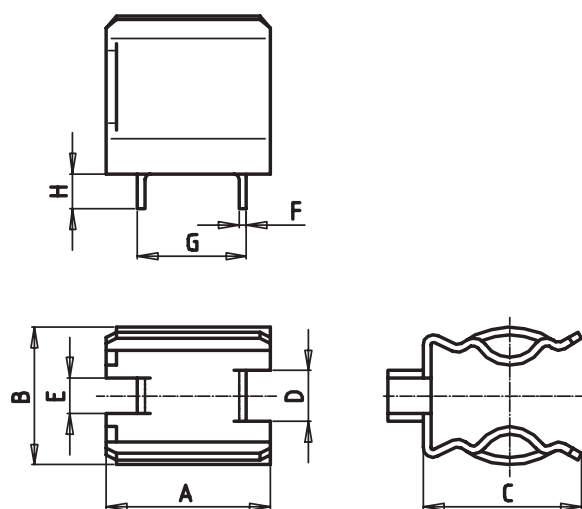
Part No.
63 002 01

A 0.73" (18.5 mm)
B 0.60" (15 mm)
C 0.12" (3 mm)
D M4
E 0.16" (4 mm)
F 0.30" (8 mm)
G 0.30" (8 mm)



To be used with fuse clips 61 002 01.3

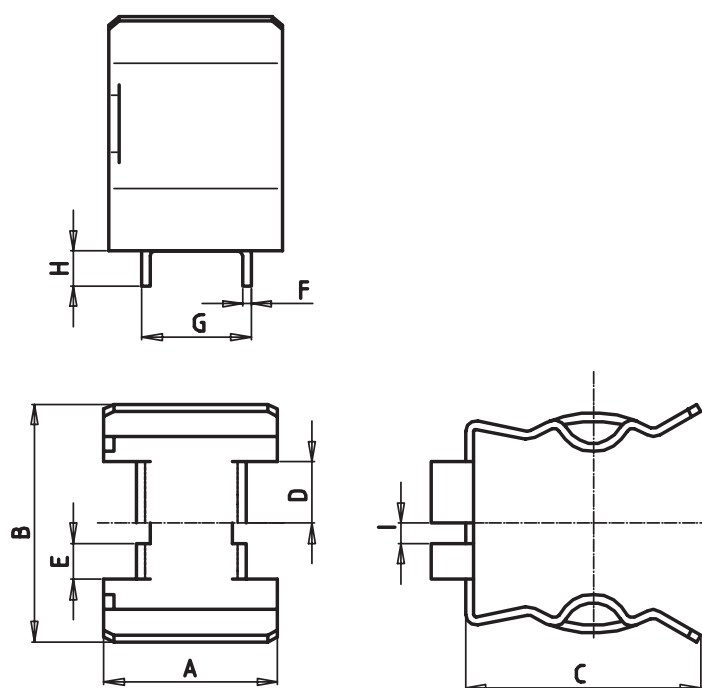
Fuse-Clip PCB Mountable



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
 Rated Current
5 A
For Fuses with Topindicator and Fitting for Micro Switch

Part No.	Use for		Weight [kg]	Pack
28 002 01	SQB1-3 (20 2xx 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

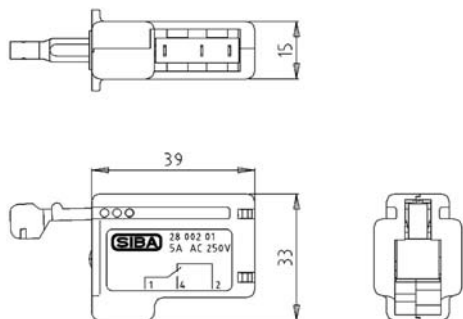
AC 250 V	AC 250 V	DC 33 V	DC 26 V
ohmsch	ind.	ohmsch	L/R 10 ms
5 A	3 A	3 A	3 A

Terminals

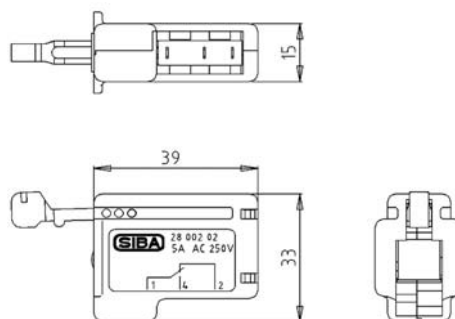
AMP 2,8 x 0,5 (IEC 760)

Dimensions

Part No. 28 002 01 (Black Hammer)



Part No. 28 002 02 (Red Hammer)



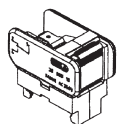
B-switch

 Rated Current
10 A
For Fuse-Links with Adapter for Micro Switch Fitting

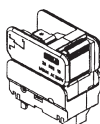
Insulating Voltage up to [V]	Part No. Standard	Part No. Low Level	Change-Over Circuits	Weight [g]	Pack
1 300	28 003 10	28 004 10	1	25	10
1 300	28 003 20	28 004 20	2	32	10
2 400	28 003 11	28 004 11	1	25	10
2 400	28 003 21	28 004 21	2	32	10
5 000	28 003 12	28 004 12	1	25	10
5 000	28 003 22	28 004 22	2	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	250	12
	28 003 20					
	28 003 11	2 400	30	10		
	28 003 21					
	28 003 12	5 000	100	5	35	10
	28 003 22					

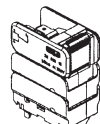
Type	Part No.	Insulating Voltage [V]	Interrupting Rating			
			min. Load Requirements AC / DC		max. Data	
			[V _{ohmsch}]	[mA]	[V]	[A]
low level	28 004 10	1 300			AC 250	10
	28 004 20					
	28 004 11	2 400	5	1		
	28 004 21					
	28 004 12	5 000			DC 35	1
	28 004 22					



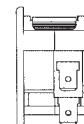
up to 1,300 V



up to 2,400 V



up to 5,000 V


 1 Change-over circuit
2 contact terminals
6.3 x 0.8 mm

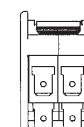
Standard
Low Level

 Part No.
28 003 10/20 Part No.
28 004 10/20

Standard
Low Level

 Part No.
28 003 11/21 Part No.
28 004 11/21

Standard
Low Level

 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

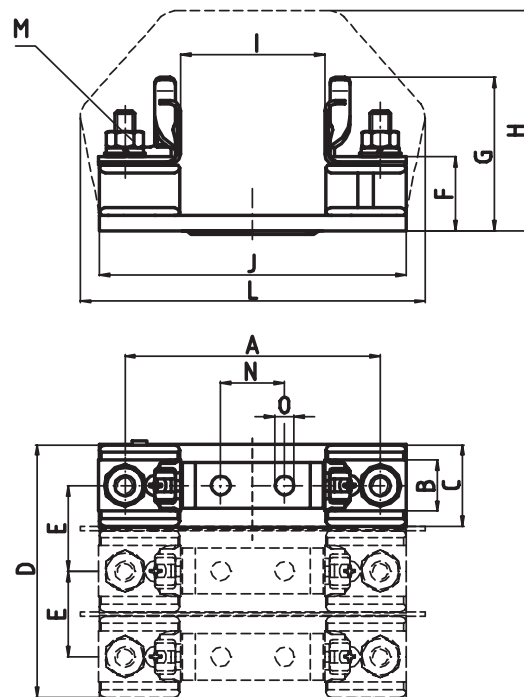
**Fuse-Base
for Fuses with Knife Contacts**

 Size
00

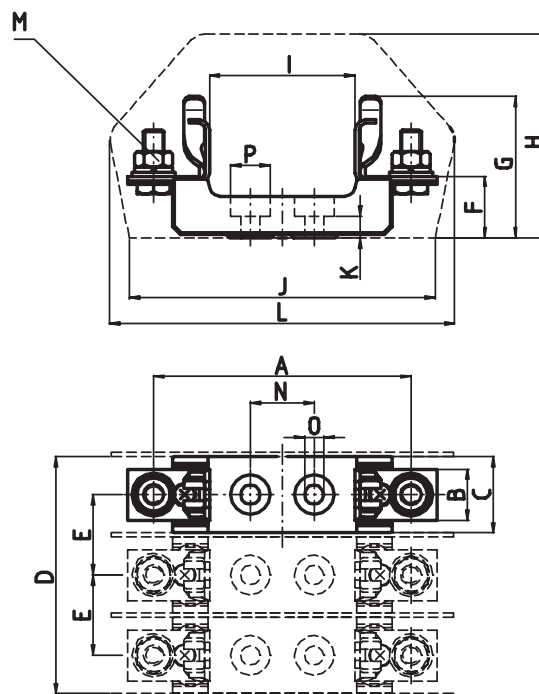
 Rated Voltage
AC 500/690 V

 Standard
DIN 43620
Part No.
21 001 01

A	3.94" (100 mm)
B	0.80" (20 mm)
C	1.26" (32 mm)
D	3.90" (99 mm)
E	1.32" (33.5 mm)
F	1.14" (29 mm)
G	2.32" (59 mm)
H	3.40" (86 mm)
I	2.24" (57 mm)
J	4.72" (120 mm)
L	5.30" (135 mm)
M	M 8
N	0.98" (25 mm)
O	0.30" (7.5 mm)


Part No.
21 001 10

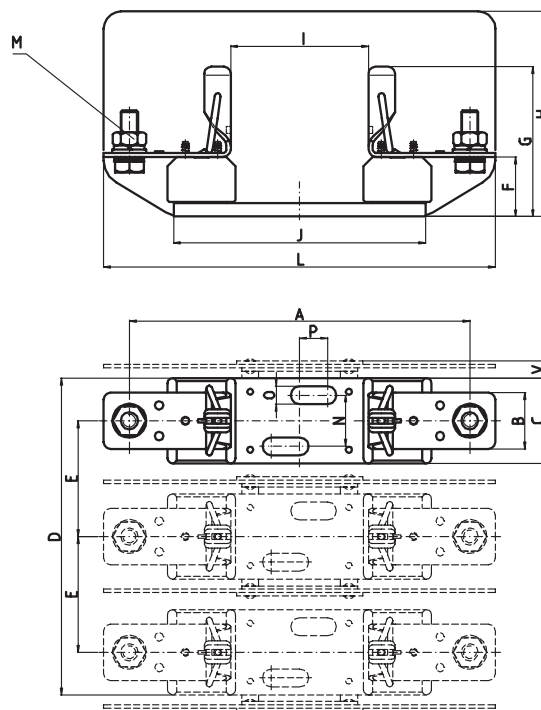
A	3.94" (100 mm)
B	0.80" (20 mm)
C	1.18" (30 mm)
D	3.66" (93 mm)
E	1.24" (31.5 mm)
F	0.94" (24 mm)
G	2.20" (56 mm)
H	3.15" (80 mm)
I	2.24" (57 mm)
J	4.72" (120 mm)
K	0.34" (8.7 mm)
L	5.30" (135 mm)
M	M 8
N	0.98" (25 mm)
O	0.30" (7.5 mm)
P	0.60" (15.5 mm)



Fuse-Base for Fuses with Knife Contacts

 Size
1 - 3

 Rated Voltage
AC 500/690 V

 Standard
DIN 43620


Size 1	Size 2	Size 3
Power Acceptance 32 W	Power Acceptance 45 W	Power Acceptance 60 W
Part No. 21 003 01	Part No. 21 004 01	Part No. 21 005 01
A 6.90" (175 mm)	A 7.87" (200 mm)	A 8.27" (210 mm)
B 1.30" (33 mm)	B 1.30" (33 mm)	B 1.30" (33 mm)
C 1.97" (50 mm)	C 1.97" (50 mm)	C 2.17" (55 mm)
D 7.00" (178 mm)	D 7.32" (186 mm)	D 8.86" (225 mm)
E 2.52" (64 mm)	E 2.68" (68 mm)	E 3.35" (85 mm)
F 1.38" (35 mm)	F 1.38" (35 mm)	F 1.38" (35 mm)
G 3.30" (84 mm)	G 3.58" (91 mm)	G 3.78" (96 mm)
H 4.20" (107 mm)	H 4.72" (120 mm)	H 5.00" (127 mm)
I 3.15" (80 mm)	I 3.15" (80 mm)	I 3.15" (80 mm)
J 5.83" (148 mm)	J 5.83" (148 mm)	J 5.83" (148 mm)
L 7.78" (200 mm)	L 9.06" (230 mm)	L 9.84" (250 mm)
M M 10	M M 10	M M 10
N 1.18" (30 mm)	N 1.18" (30 mm)	N 1.18" (30 mm)
O 0.40" (10 mm)	O 0.40" (10 mm)	O 0.40" (10 mm)
P 0.65" (16.5 mm)	P 0.65" (16.5 mm)	P 0.65" (16.5 mm)
V 0.40" (10 mm)	V 0.40" (10 mm)	V 0.40" (10 mm)

ZS-Module for Fuses with Cylindrical Contact Caps

Size 10 x 38

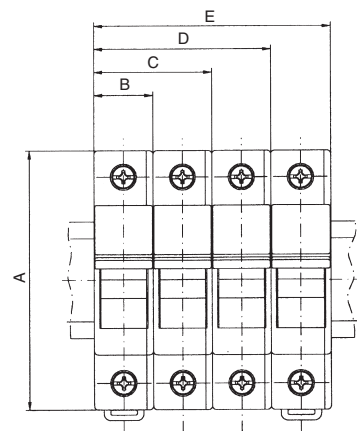
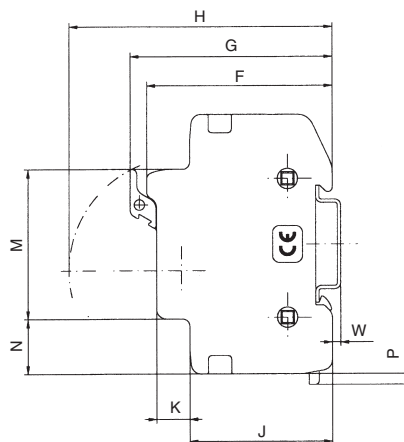
Part No.	51 063 04.DC for 1000 V DC	
	51 063 04	51 063 04.L 1 pol.
	51 063 04.2	51 063 04.2L 2 pol.
	51 063 04.3	51 063 04.3L 3 pol.



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

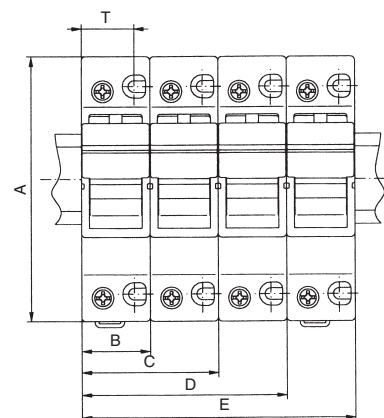
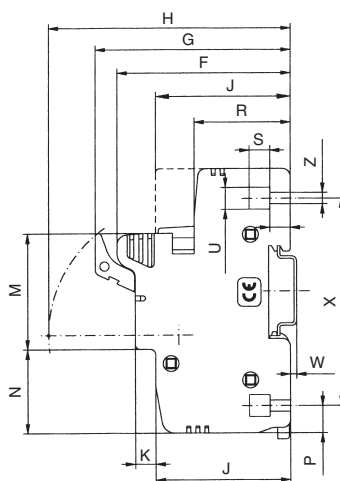
Part No.	51 058 04	51 058 04.S	1 pol.
	51 058 04.2		2 pol.
	51 058 04.3	51 058 04.3S	3 pol.



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)		

