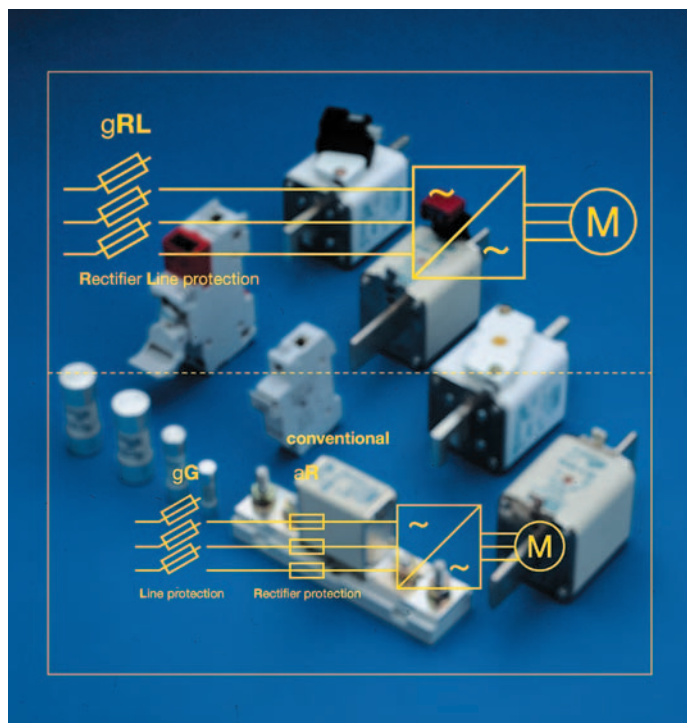


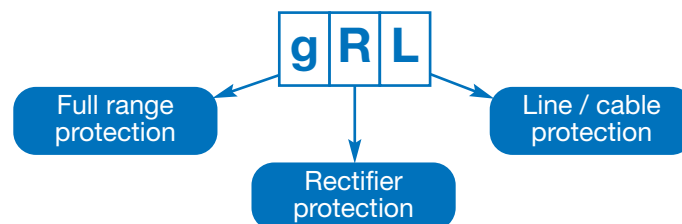
# Fuses for Semiconductor Protection

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.



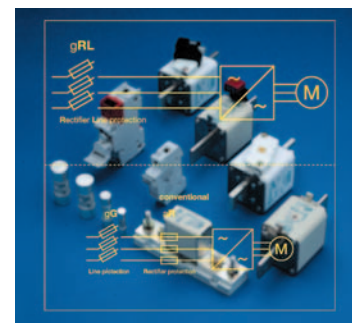
The gRL class line of fuses offers superior performance by the combination of two fuse classes (aR and gG) into one, gRL.

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             |

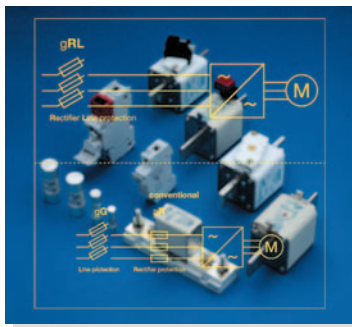
### Selection Guide Fuse-Base for Fuses with Knife Contacts

| 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

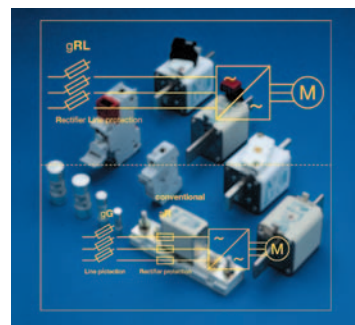
| Type      | Rated Voltage<br>[V] | Part No.  | Selector Guide<br>[Page] |
|-----------|----------------------|-----------|--------------------------|
| GL-switch | 250                  | 28 002 01 | URL 40                   |
| GL-switch | 250                  | 28 002 02 | URL 40                   |
| 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<br>Type    | Part No.     | Techn. Data<br>[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)

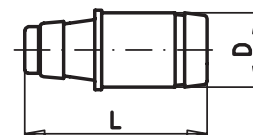

 Size  
**D01**

 Rated Voltage  
**AC 400 V**

 Standard  
**IEC 60269-4 / VDE 0636 part 40**

| Rated Current<br>[A] | Part No.     | UL Rec. | Weight<br>[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)

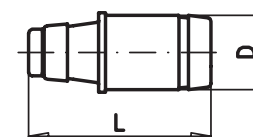
**L** 1.42" (36 mm)

 Size  
**D02**

 Rated Voltage  
**AC 400 V**

 Standard  
**IEC 60269-4 / VDE 0636 part 40**

| Rated Current<br>[A] | Part No.     | UL Rec. | Weight<br>[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)

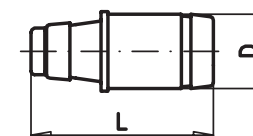
**L** 1.42" (36 mm)

 Size  
**D03**

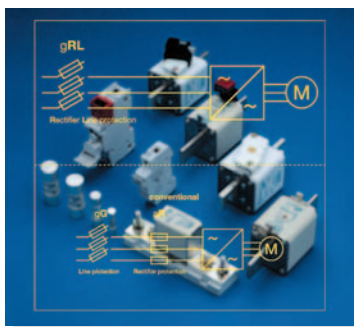
 Rated Voltage  
**AC 400 V**

 Standard  
**IEC 60269-4 / VDE 0636 part 40**

| Rated Current<br>[A] | Part No.     | UL Rec. | Weight<br>[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

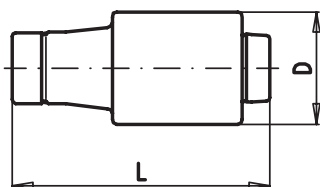
Type gRL(gS)

Size  
**DII**

Rated Voltage  
**AC 500 V**

Standard  
**IEC 60269-4 / VDE 0636 part 40**

| Rated Current<br>[A] | Part No.     | UL Rec. | Weight<br>[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)

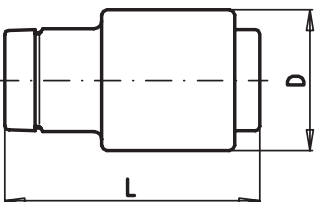
**L** 1.97" (50 mm)

Size  
**DIII**

Rated Voltage  
**AC 500 V**

Standard  
**IEC 60269-4 / VDE 0636 part 40**

| Rated Current<br>[A] | Part No.     | UL Rec. | Weight<br>[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   |

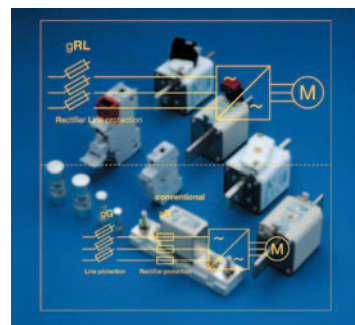


**D** 1.06" (27 mm)

**L** 1.97" (50 mm)

## Fuses for Semiconductor Protection

Type gRL(gS)

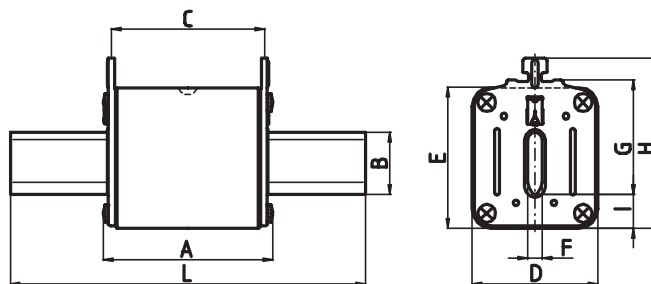

 Size  
**000**

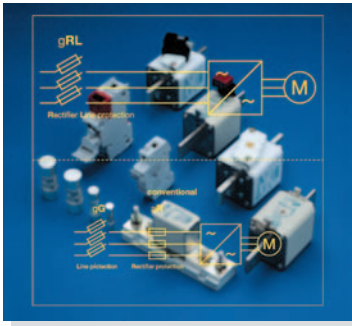
 Rated Voltage  
**AC 690/700 V**

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

| Rated Current<br>[A] | Part No.     | UL Rec. | Weight<br>[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    |

|                        |                        |
|------------------------|------------------------|
| <b>A<sub>max</sub></b> | <b>2.13"</b> (54 mm)   |
| <b>B</b>               | <b>0.60"</b> (15 mm)   |
| <b>C</b>               | <b>1.85"</b> (47 mm)   |
| <b>D</b>               | <b>0.80"</b> (20.5 mm) |
| <b>E</b>               | <b>1.60"</b> (40.5 mm) |
| <b>F</b>               | <b>0.24"</b> (6 mm)    |
| <b>G</b>               | <b>1.38"</b> (35 mm)   |
| <b>H</b>               | <b>2.05"</b> (52 mm)   |
| <b>I</b>               | <b>0.28"</b> (7 mm)    |
| <b>L</b>               | <b>3.07"</b> (78 mm)   |



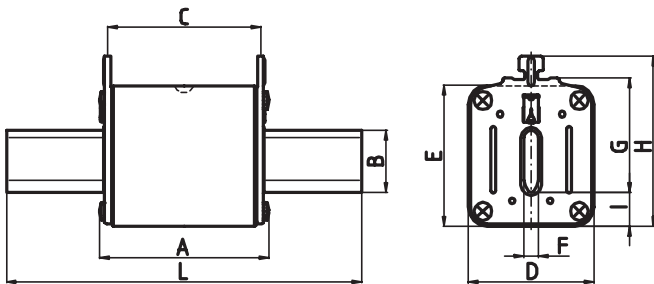


# Fuses for Semiconductor Protection

Type gRL(gS)

|           |                     |                                              |
|-----------|---------------------|----------------------------------------------|
| Size      | Rated Voltage       | Standard                                     |
| <b>00</b> | <b>AC 690/700 V</b> | <b>IEC 60269-4 / UL 248-13 / DIN 43620/1</b> |

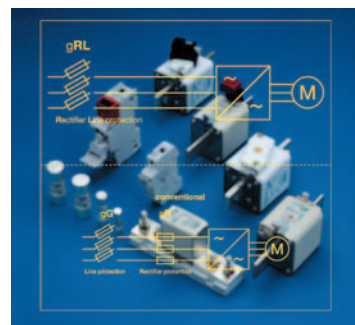
| Rated Current<br>[A] | Part No.      | UL Rec. | Weight<br>[kg/1] | Pack |
|----------------------|---------------|---------|------------------|------|
| 100                  | 20 209 34.100 | ✓       | 0.154            | 3    |
| 125                  | 20 209 34.125 | ✓       | 0.154            |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



|                  |                 |
|------------------|-----------------|
| A <sub>max</sub> | 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)

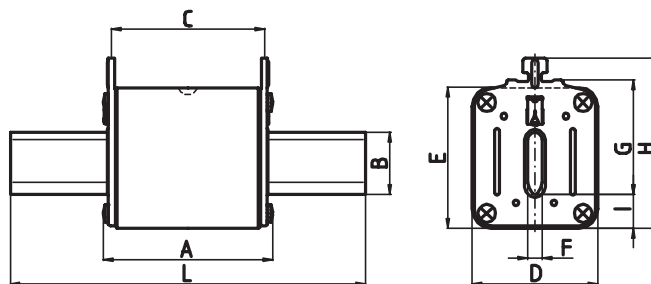

 Size  
**1**

 Rated Voltage  
**AC 690/700 V**

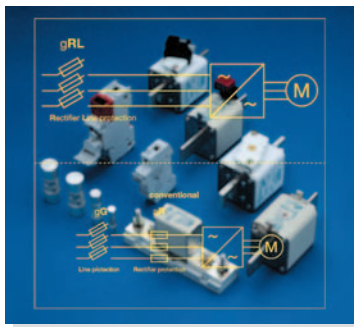
 Standard  
**IEC 60269-4 / UL 248-13 / DIN 43620/1**

| Rated Current<br>[A] | Part No.      | UL Rec. | Weight<br>[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 <sub>max</sub> | 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

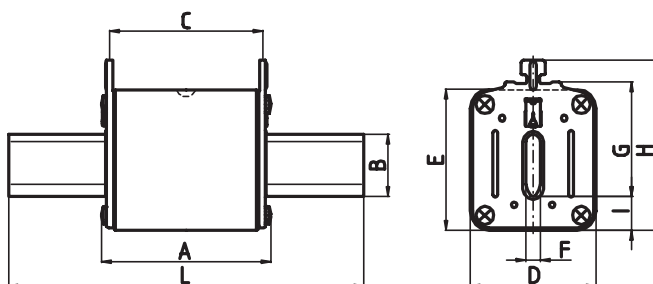
Type gRL(gS)

Size  
**2**

Rated Voltage  
**AC 690/700 V**

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

| Rated Current<br>[A] | Part No.      | UL Rec. | Weight<br>[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**

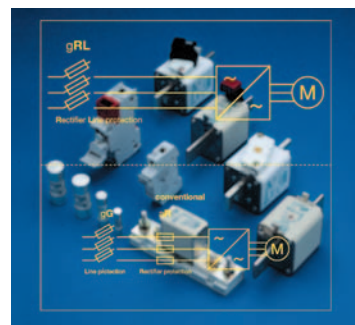
|                  |                 |
|------------------|-----------------|
| A <sub>max</sub> | 2.95" (75 mm)   |
| B                | 0.80" (20 mm)   |
| C                | 2.56" (65 mm)   |
| D                | 1.65" (42 mm)   |
| E                | 2.03" (51.5 mm) |
| F                | 0.24" (6 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 <sub>max</sub> | 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**

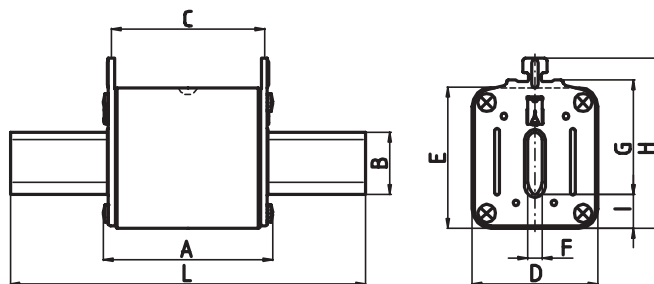
 Rated Voltage  
**AC 690/700 V**

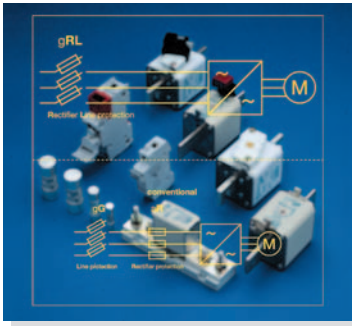
 Standard  
**IEC 60269-4 / UL 248-13 / DIN 43620/1**

| Rated Current<br>[A] | Part No.      | UL Rec. | Weight<br>[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**  
 $\geq 400 \text{ A}$ 

|                        |                       |                        |                        |
|------------------------|-----------------------|------------------------|------------------------|
| <b>A<sub>max</sub></b> | <b>2.95"</b> (75 mm)  | <b>A<sub>max</sub></b> | <b>2.95"</b> (75 mm)   |
| <b>B</b>               | <b>1.02"</b> (26 mm)  | <b>B</b>               | <b>1.26"</b> (32 mm)   |
| <b>C</b>               | <b>2.56"</b> (65 mm)  | <b>C</b>               | <b>2.56"</b> (65 mm)   |
| <b>D</b>               | <b>2.10"</b> (53 mm)  | <b>D</b>               | <b>2.56"</b> (65 mm)   |
| <b>E</b>               | <b>2.32"</b> (59 mm)  | <b>E</b>               | <b>2.90"</b> (73.5 mm) |
| <b>F</b>               | <b>0.24"</b> (6 mm)   | <b>F</b>               | <b>0.24"</b> (6 mm)    |
| <b>G</b>               | <b>2.36"</b> (60 mm)  | <b>G</b>               | <b>2.36"</b> (60 mm)   |
| <b>H</b>               | <b>3.27"</b> (83 mm)  | <b>H</b>               | <b>3.40"</b> (86 mm)   |
| <b>I</b>               | <b>0.55"</b> (14 mm)  | <b>I</b>               | <b>0.67"</b> (17 mm)   |
| <b>L</b>               | <b>5.90"</b> (150 mm) | <b>L</b>               | <b>5.90"</b> (150 mm)  |



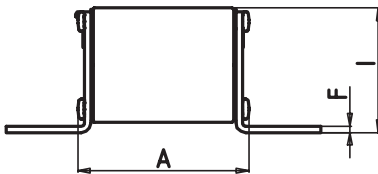
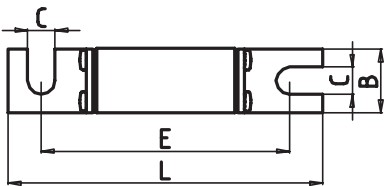


# Fuses for Semiconductor Protection

Type gRL(gS)

|            |                 |                                            |
|------------|-----------------|--------------------------------------------|
| Size       | Rated Voltage   | Standard                                   |
| <b>000</b> | <b>AC 690 V</b> | <b>IEC 60269-4 / UL 248-13 / DIN 43653</b> |

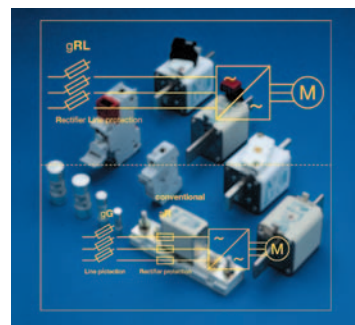
| Rated Current<br>[A] | Part No.     | UL Rec. | Weight<br>[kg/1] | Pack |
|----------------------|--------------|---------|------------------|------|
| 16                   | 20 282 34.16 | ✓       | 0.17             | 6    |
| 20                   | 20 282 34.20 | ✓       | 0.17             | 6    |
| 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 <sub>(max)</sub> | 3.94" (100 mm)  |

## Fuses for Semiconductor Protection

Type gRL(gS)

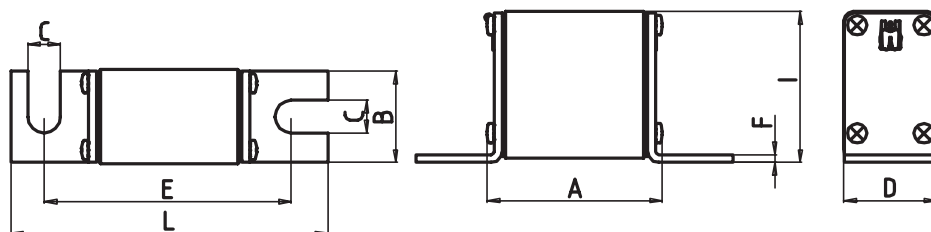

 Size  
**00**

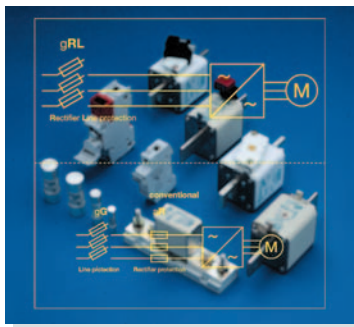
 Rated Voltage  
**AC 690 / 700 V**

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

| Rated Current<br>[A] | Part No.      | UL Rec. | Weight<br>[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    |

|                          |                        |
|--------------------------|------------------------|
| <b>A</b>                 | <b>2.17"</b> (55 mm)   |
| <b>B</b>                 | <b>1.13"</b> (28,8 mm) |
| <b>C</b>                 | <b>0.40"</b> (10,3 mm) |
| <b>D</b>                 | <b>1.16"</b> (29,5 mm) |
| <b>E</b>                 | <b>3.07"</b> (78 mm)   |
| <b>F</b>                 | <b>0.10"</b> (2,5 mm)  |
| <b>I</b>                 | <b>1.85"</b> (47 mm)   |
| <b>L<sub>(max)</sub></b> | <b>4.13"</b> (105 mm)  |





## Fuses for Semiconductor Protection

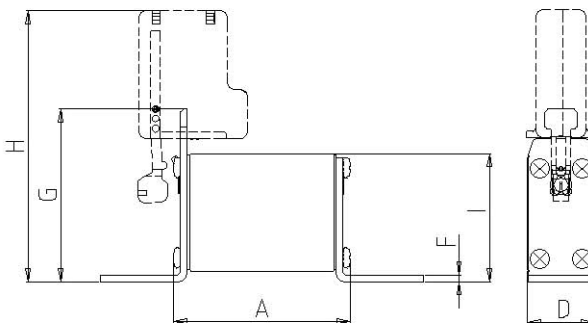
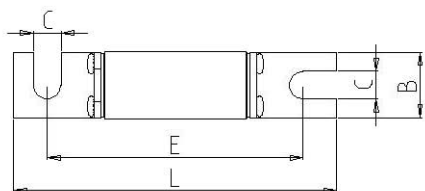
Type gRL(gS)

Size  
**000**

Rated Voltage  
**AC 690 / 700 V**

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

| Rated Current<br>[A] | Part No.     | UL Rec. | Weight<br>[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    |



|                          |                        |
|--------------------------|------------------------|
| <b>A</b>                 | <b>2.17" (55 mm)</b>   |
| <b>B</b>                 | <b>0.80" (20 mm)</b>   |
| <b>C</b>                 | <b>0.33" (8,5 mm)</b>  |
| <b>D</b>                 | <b>0.80" (20,4 mm)</b> |
| <b>E</b>                 | <b>3.07" (78 mm)</b>   |
| <b>F</b>                 | <b>0.08" (2 mm)</b>    |
| <b>G</b>                 | <b>2.10" (53 mm)</b>   |
| <b>H</b>                 | <b>3.30" (83 mm)</b>   |
| <b>I</b>                 | <b>1.54" (39 mm)</b>   |
| <b>L<sub>(max)</sub></b> | <b>3.94" (100 mm)</b>  |

## Fuses for Semiconductor Protection

Type gRL(gS)

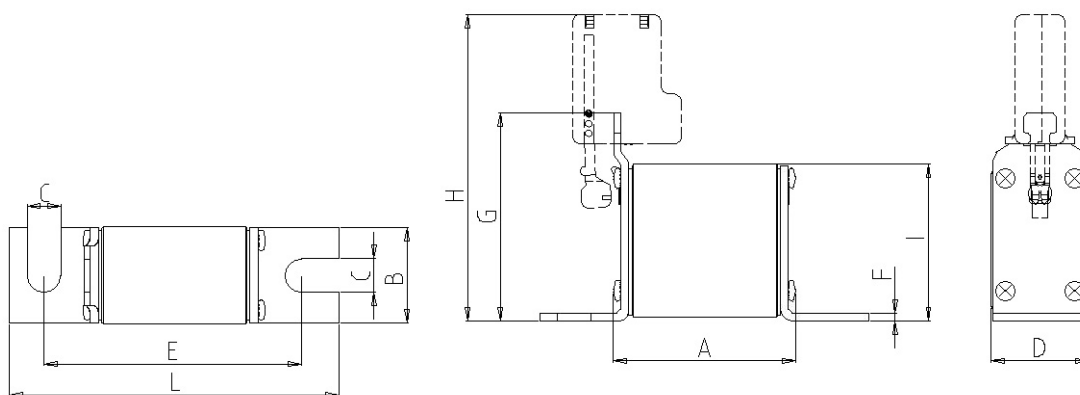

 Size  
**00**

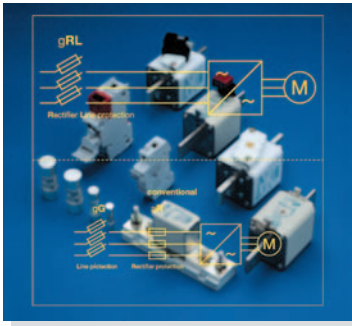
 Rated Voltage  
**AC 690 / 700 V**

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

| Rated Current<br>[A] | Part No.      | UL Rec. | Weight<br>[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    |

|                          |                        |
|--------------------------|------------------------|
| <b>A</b>                 | <b>2.17"</b> (55 mm)   |
| <b>B</b>                 | <b>1.13"</b> (28.8 mm) |
| <b>C</b>                 | <b>0.40"</b> (10.3 mm) |
| <b>D</b>                 | <b>1.16"</b> (29.5 mm) |
| <b>E</b>                 | <b>3.07"</b> (78 mm)   |
| <b>F</b>                 | <b>0.10"</b> (2.5 mm)  |
| <b>G</b>                 | <b>2.48"</b> (63 mm)   |
| <b>H</b>                 | <b>3.70"</b> (93 mm)   |
| <b>I</b>                 | <b>1.85"</b> (47 mm)   |
| <b>L<sub>(max)</sub></b> | <b>4.13"</b> (105 mm)  |





## Fuses for Semiconductor Protection

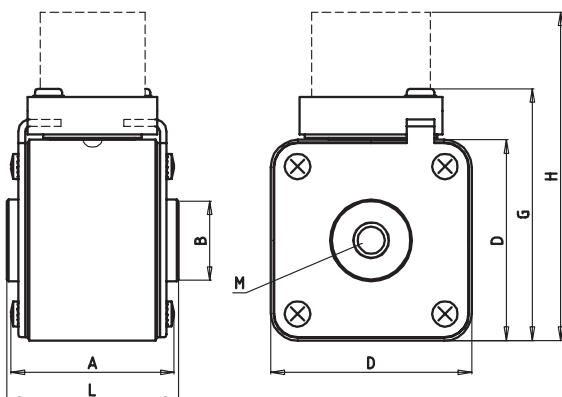
Type gRL(gS)

Size  
**SQB1**

Rated Voltage  
**AC 690 V**

Standard  
**IEC 60269-4 Metric Thread M 8**

| Rated Current<br>[A] | Part No.      | UL Rec. | Weight<br>[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    |  |



|          |                        |
|----------|------------------------|
| <b>A</b> | <b>1.87" (47.5 mm)</b> |
| <b>B</b> | <b>0.94" (24 mm)</b>   |
| <b>D</b> | <b>2.00" (51 mm)</b>   |
| <b>G</b> | <b>2.60" (66 mm)</b>   |
| <b>H</b> | <b>3.50" (89 mm)</b>   |
| <b>L</b> | <b>2.00" (51 mm)</b>   |
| <b>M</b> | <b>M8</b>              |

## Fuses for Semiconductor Protection

Type gRL(gS)

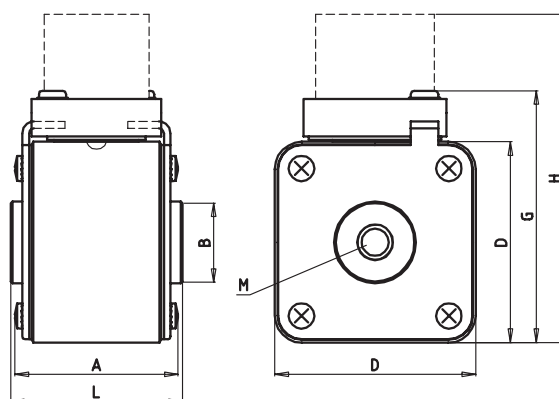

 Size  
**SQB2**

 Rated Voltage  
**AC 690 V**

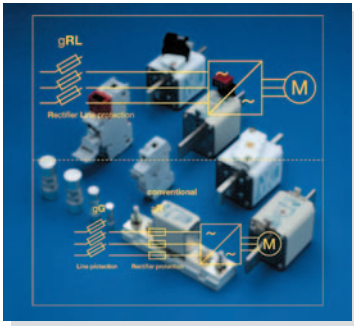
 Standard  
**IEC 60269-4 Metric Thread M 10**

| Rated Current<br>[A] | Part No.      | UL Rec. | Weight<br>[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    |

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







## Fuses for Semiconductor Protection

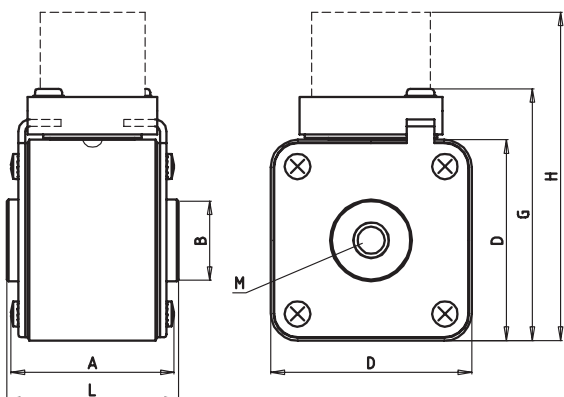
Type gRL(gS)

Size  
**SQB3**

Rated Voltage  
**AC 690 V**

Standard  
**IEC 60269-4 Metric Thread M 12**

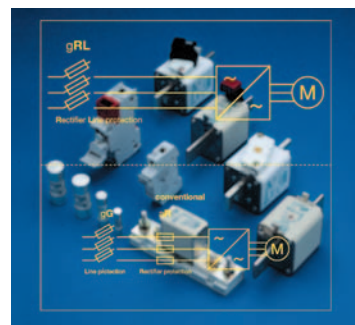
| Rated Current<br>[A] | Part No.      | UL Rec. | Weight<br>[kg/1] | Pack |  |
|----------------------|---------------|---------|------------------|------|--|
| 315                  | 20 254 34.315 |         | 0.88             | 3    |  |
| 400                  | 20 254 34.400 |         | 0.88             | 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    |  |



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

## Fuses for Semiconductor Protection

Type gRL(gS)

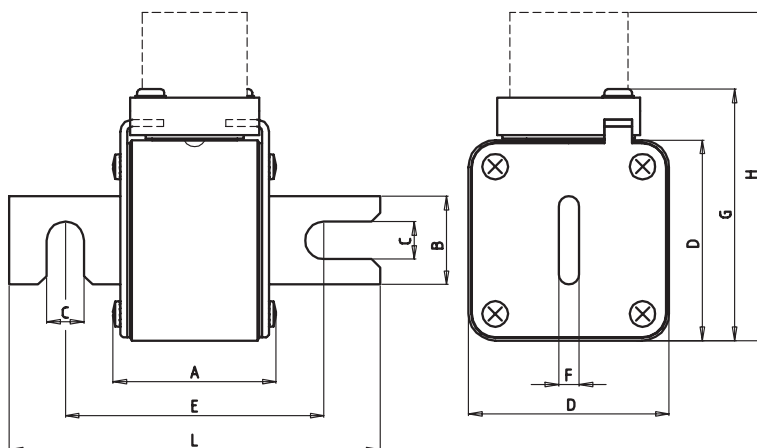

 Size  
**SQB1**

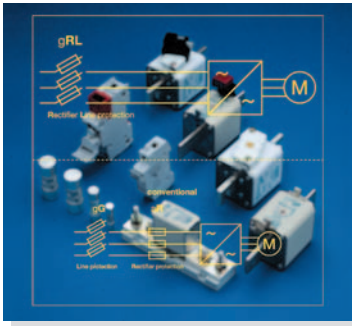
 Rated Voltage  
**AC 690 V**

 Standard  
**IEC 60269-4 DIN 43653**

| Rated Current<br>[A] | Part No.      | UL Rec. | Weight<br>[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    |

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





## Fuses for Semiconductor Protection

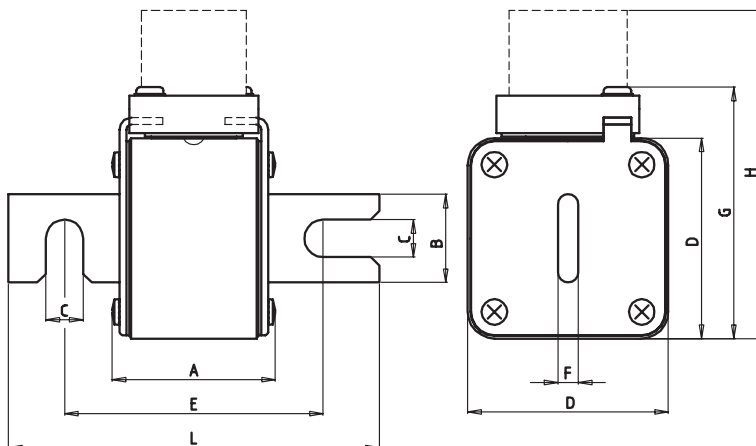
Type gRL(gS)

Size  
**SQB2**

Rated Voltage  
**AC 690 V**

Standard  
**IEC 60269-4 DIN 43653**

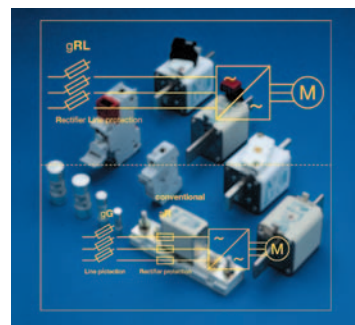
| Rated Current<br>[A] | Part No.      | UL Rec. | Weight<br>[kg/1] | Pack |
|----------------------|---------------|---------|------------------|------|
| 160                  | 20 274 34.160 |         | 0.65             | 3    |
| 200                  | 20 274 34.200 |         | 0.65             | 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    |



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

## Fuses for Semiconductor Protection

Type gRL(gS)

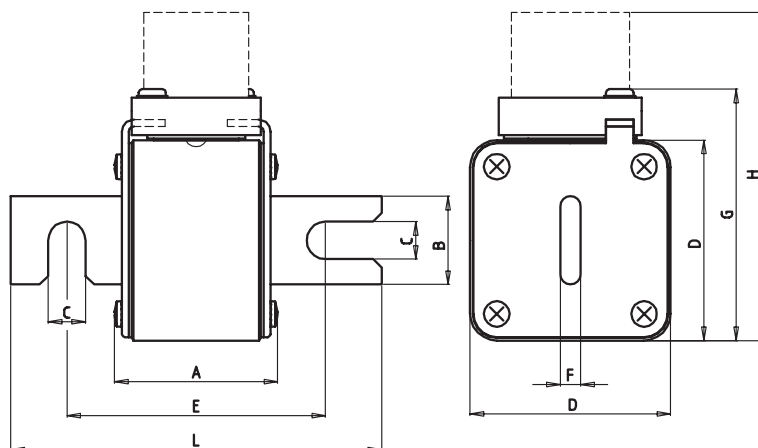

 Size  
**SQB3**

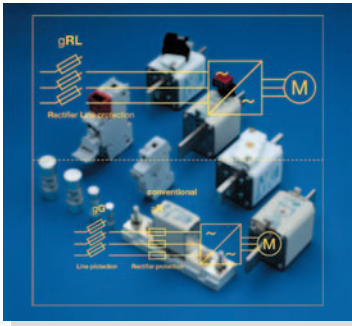
 Rated Voltage  
**AC 690 V**

 Standard  
**IEC 60269-4 DIN 43653**

| Rated Current<br>[A] | Part No.      | UL Rec. | Weight<br>[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    |

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





## Fuses for Semiconductor Protection

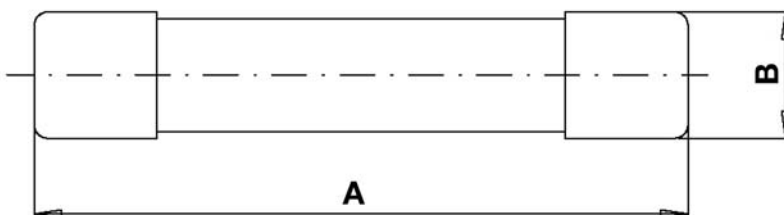
Type gRL(gS)

Size  
**6.3 x 32 mm**

Rated Voltage  
**AC 400 V**

Standard  
**IEC 60269-4 VDE 0636 part 40**

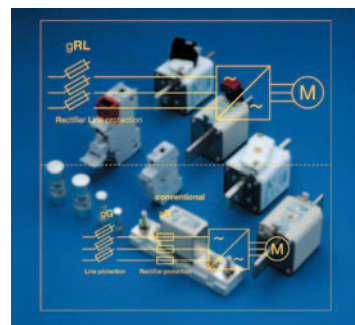
| Rated Current<br>[A] | Part No.       | UL Rec. | Weight<br>[kg/1] | Pack |  |
|----------------------|----------------|---------|------------------|------|--|
| 6.3                  | 70 065 84.6.3  | ✓       | 0.009            | 10   |  |
| 8                    | 70 065 84.8    | ✓       | 0.009            | 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)**

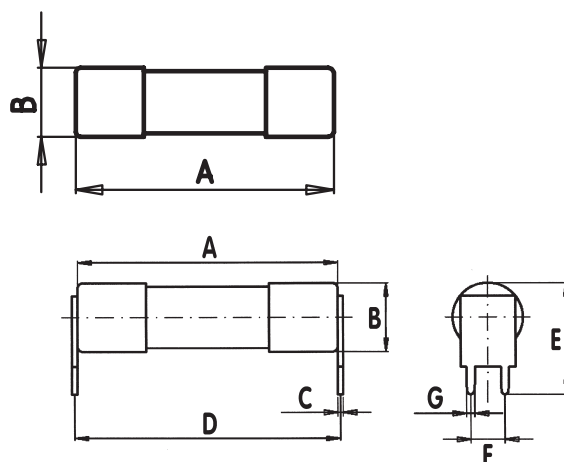
 Standard  
**IEC 60269-4 / UL 248-13**

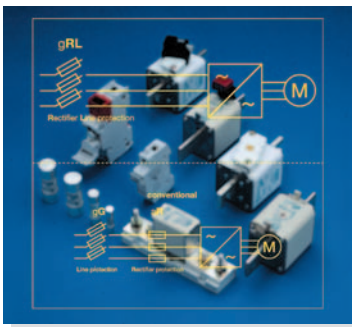
| Rated Current<br>[A] | Part No.     | Part No.<br>PCB Mounting | UL Rec. | Weight<br>[kg/1] | Pack |
|----------------------|--------------|--------------------------|---------|------------------|------|
| 6                    | 60 034 34.6  | 60 064 34.6              | ✓       | 0.9              | 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**

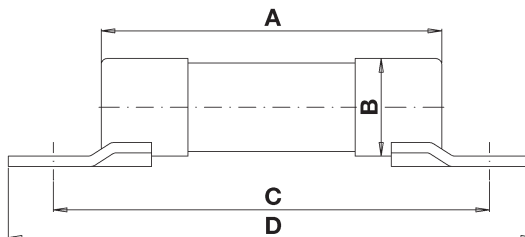
Standard  
**IEC 60269-4 / UL 248-13**

| Rated Current<br>[A] | Part No.<br>without Striker | Part No.<br>with Striker | Part No.<br>Fixing Center 63,5 mm | UL Rec. | Weight<br>[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. ...



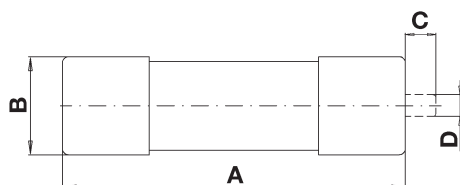
Part No. 50 129 34. ...



**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<sub>min</sub>** 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

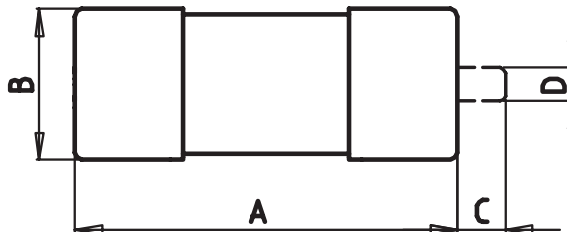
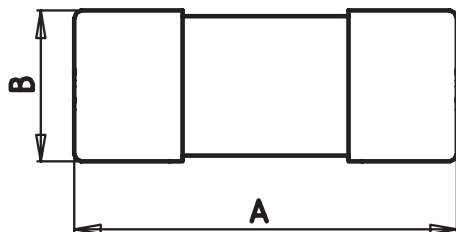
Type gRL(gS)


 Size  
**22 x 58 mm**

 Rated Voltage  
**AC 690 / 700 V**

 Standard  
**IEC 60269-4 / UL 248-13**

| Rated Current<br>[A] | Part No.<br>without Striker | Part No.<br>with Striker | UL Rec. | Weight<br>[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<sub>min</sub>** 0.28" (7 mm)

**D** 0.20" (4.9 mm)



Size  
**D01/D02/D03**

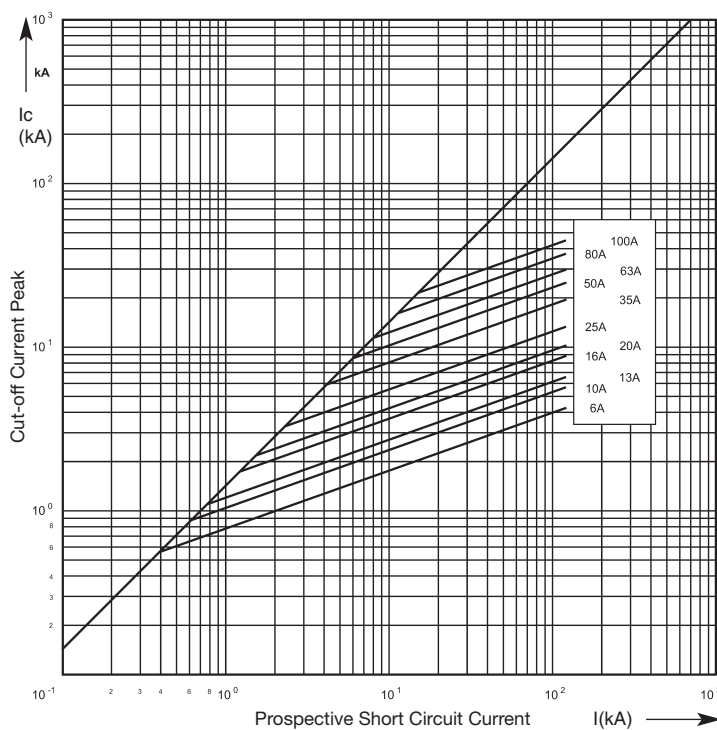
Rated Voltage  
**AC 400 V**

Operating Class  
**gRL(gS)**

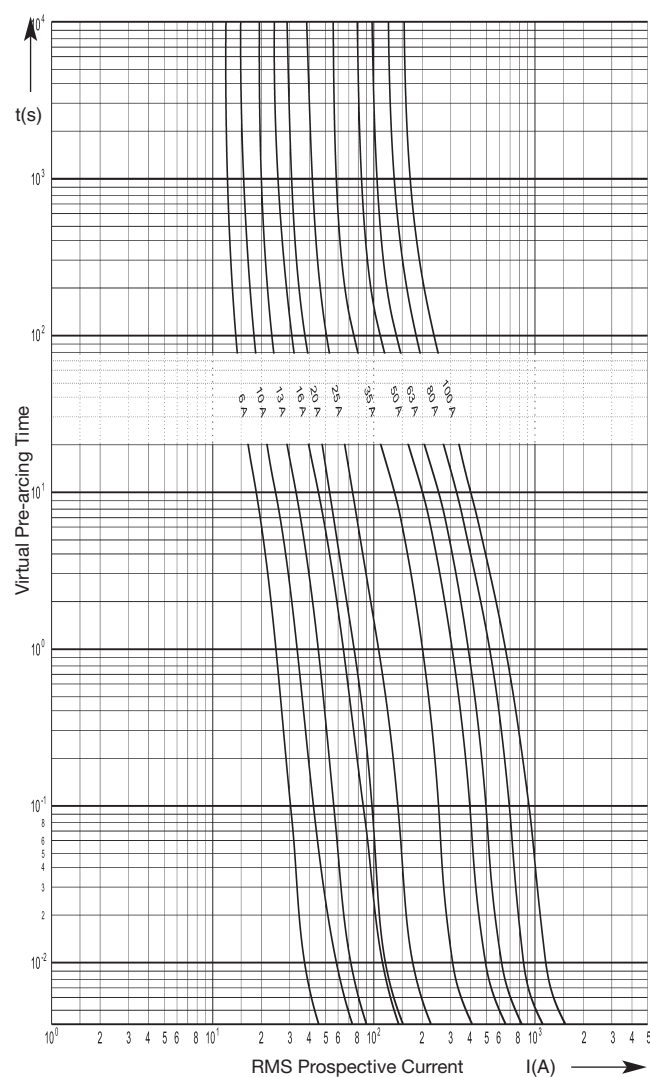
Rated Breaking Capacity  
**120 kA**

| Rated Current [A] | Part No.      | Power Loss [W] | Pre-arcing I <sup>2</sup> t-value [A <sup>2</sup> s] | Total I <sup>2</sup> t-value @ 400 V [A <sup>2</sup> 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**

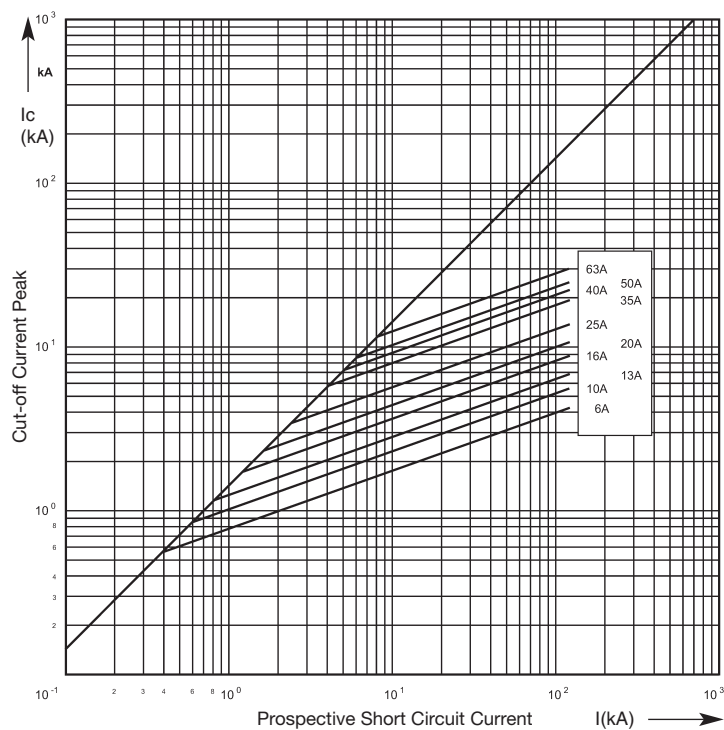
 Rated Voltage  
**AC 500 V**

 Operating Class  
**gRL(gS)**

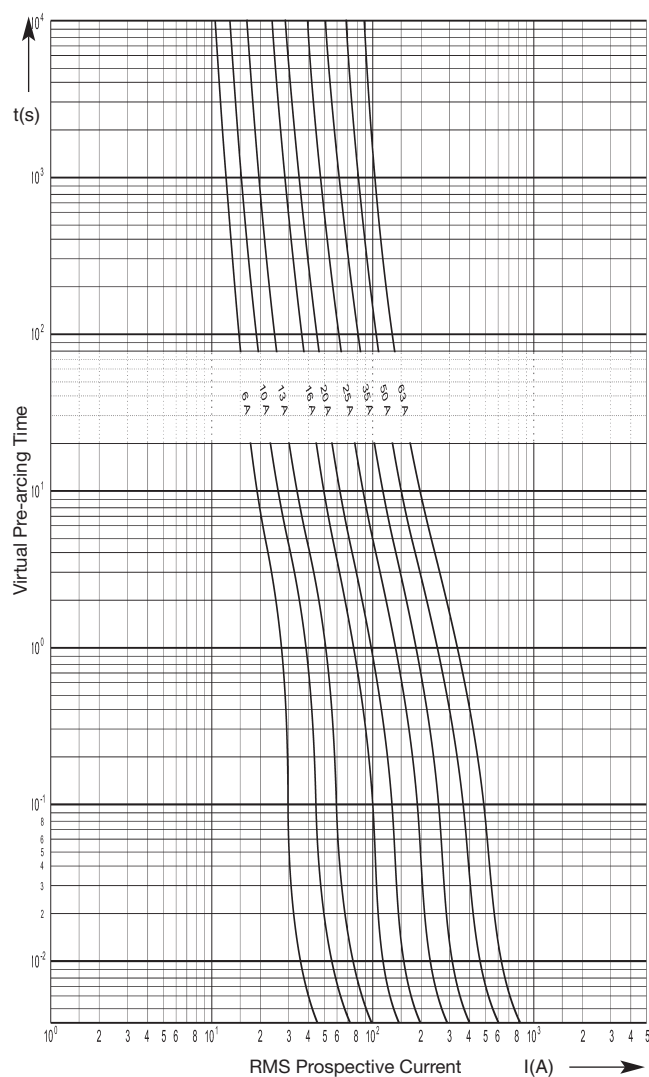
 Rated Breaking Capacity  
**120 kA**

| Rated Current [A] | Part No.     | Power Loss [W] | Pre-arcing I <sup>2</sup> t-value [A <sup>2</sup> s] | Total I <sup>2</sup> t-value @ 500 V [A <sup>2</sup> 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**

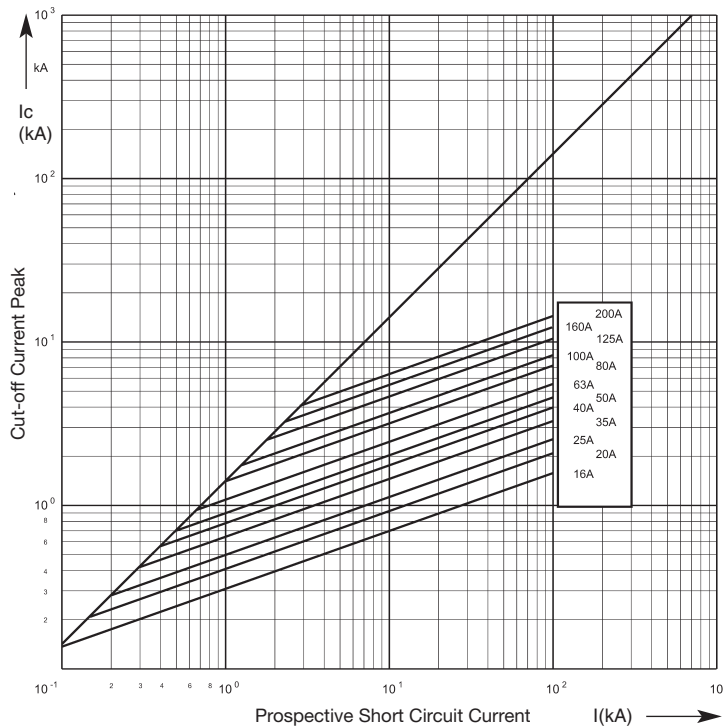
Rated Voltage  
**AC 690 / 700 V**

Operating Class  
**gRL(gS)**

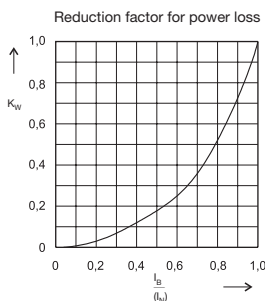
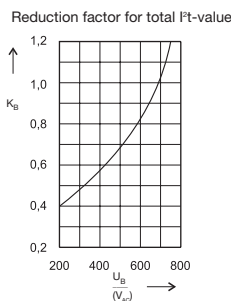
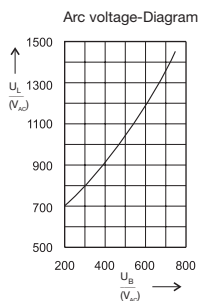
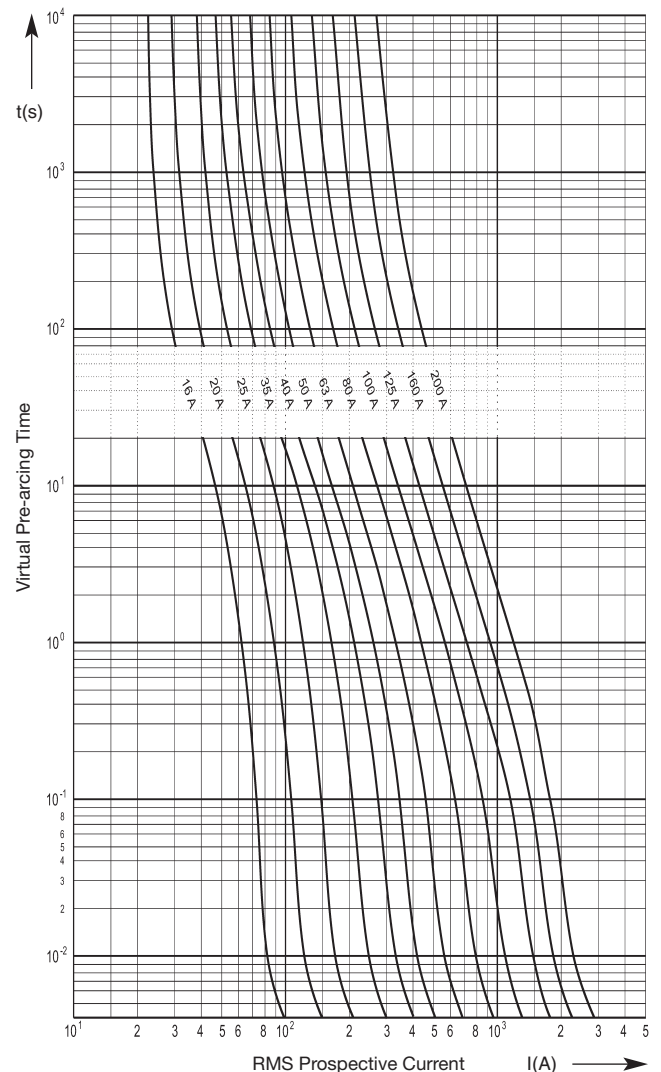
Rated Breaking Capacity  
**200 kA**

| Rated Current<br>[A] | Part No.<br>Knife Contacts<br>Fitting for GL-Switch | Part No.<br>Screw Contacts<br>Fitting for GL-Switch | Part No.<br>Screw Contacts<br>without Fitting | Power Loss<br>[W] | Pre-arcing<br>I <sup>2</sup> t-value<br>[A <sup>2</sup> s] | Total I <sup>2</sup> t-value<br>@ 690 V<br>[A <sup>2</sup> 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**

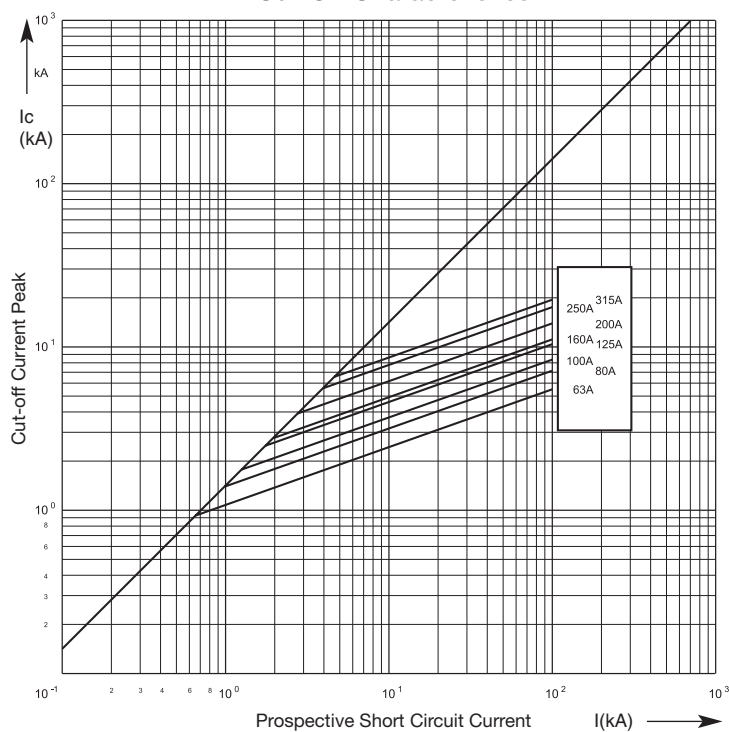
Rated Voltage  
**AC 690 / 700 V**

Operating Class  
**gRL(gS)**

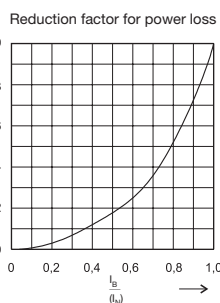
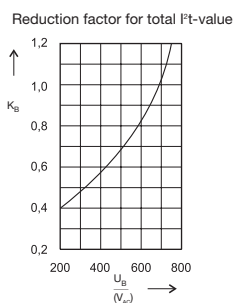
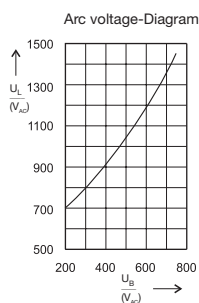
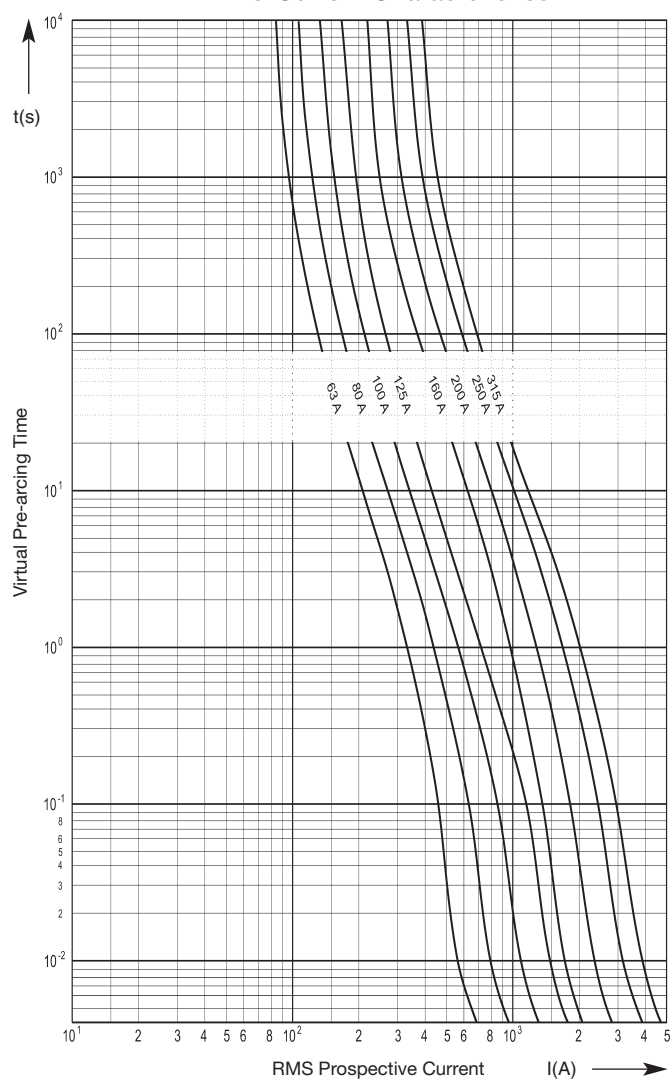
Rated Breaking Capacity  
**200 kA**

| 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 <sup>2</sup> t-value | Total I <sup>2</sup> t-value @ 690 V |
|---------------|-------------------------|---------------------------------------------------------------|----------------------------------------------|------------|-----------------------------------|--------------------------------------|
| [A]           |                         |                                                               |                                              | [W]        | [A <sup>2</sup> s]                | [A <sup>2</sup> 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**

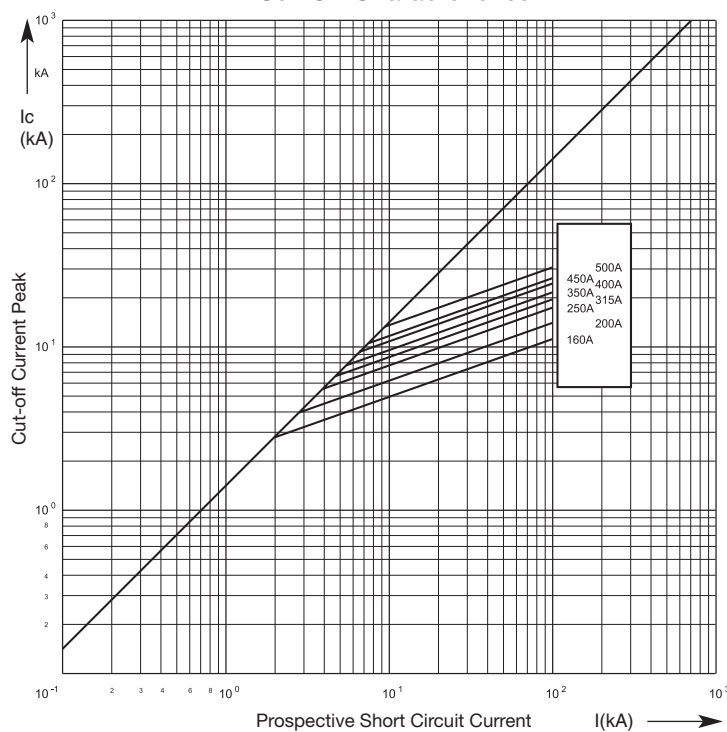
Rated Voltage  
**AC 690 / 700 V**

Operating Class  
**gR (gS)**

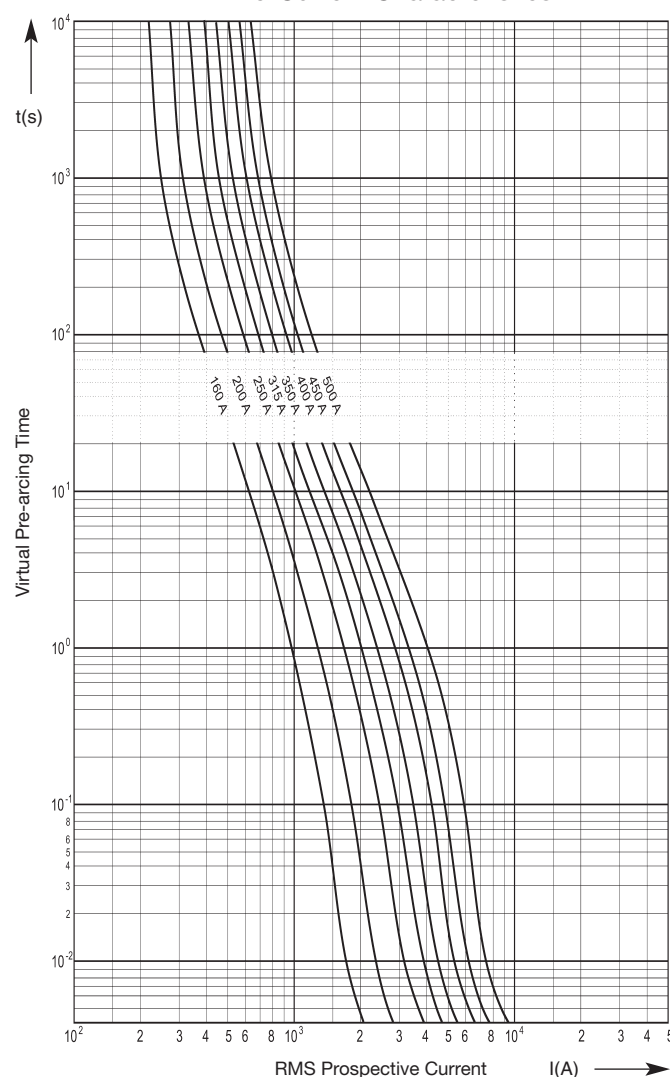
Rated Breaking Capacity  
**200 kA**

| Rated Current | Part No.<br>Knife Contacts | Part No.<br>Screw Contacts<br>Metric Thread M10<br>Fitting for B-Switch | Part No.<br>Screw contacts<br>Fitting for B-Switch | Power Loss | Pre-arcing<br>$I^2t$ -value | Total $I^2t$ -value<br>@ 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                        |

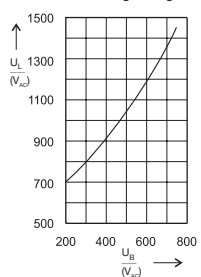
Cut-Off Characteristics



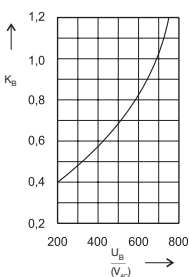
Time-Current Characteristics



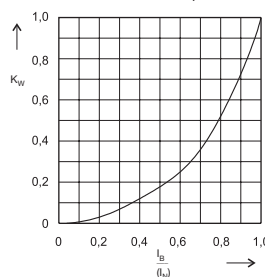
Arc voltage-Diagram



Reduction factor for total  $I^2t$ -value



Reduction factor for power loss



Size  
**SQB3**

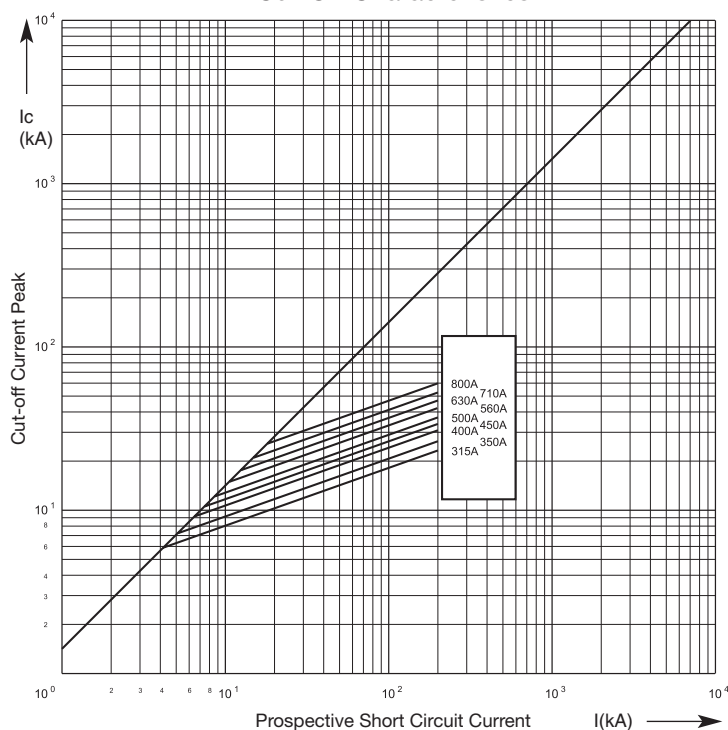
Rated Voltage  
**AC 690 / 700 V**

Operating Class  
**gRL(gS)**

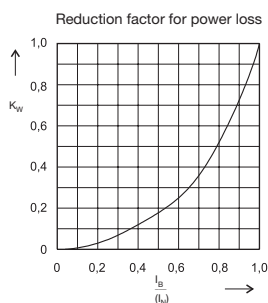
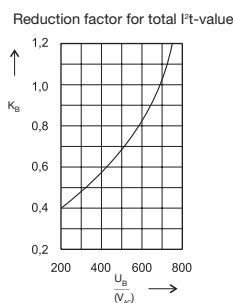
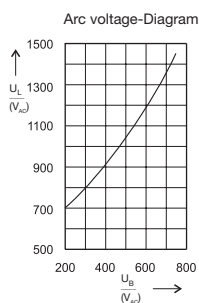
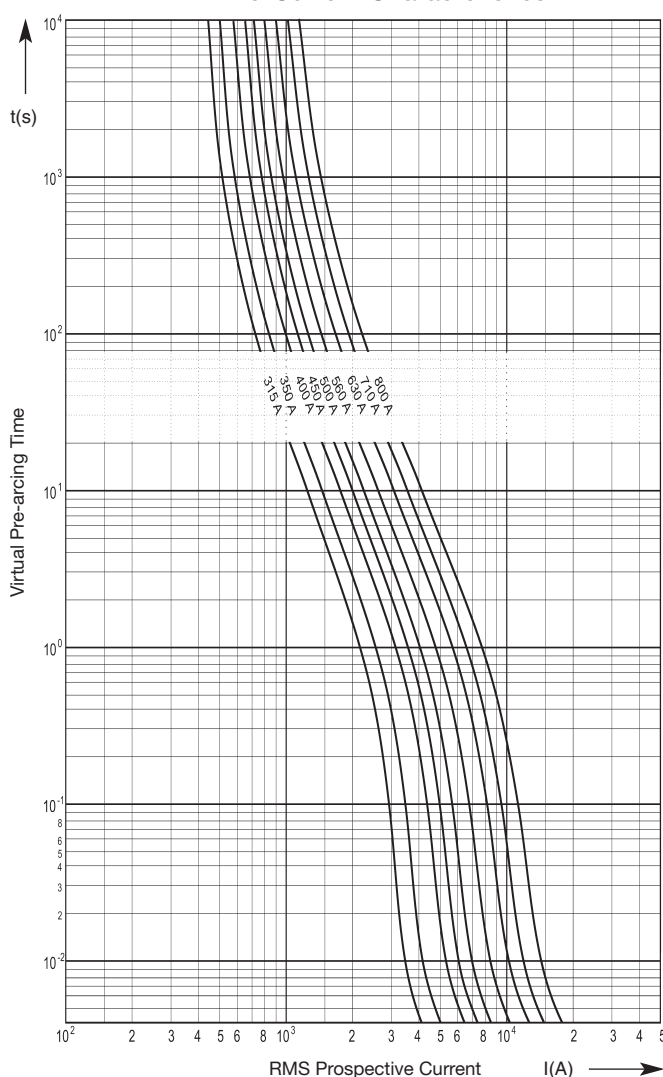
Rated Breaking Capacity  
**200 kA**

| 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 <sup>2</sup> t-value | Total I <sup>2</sup> t-value @ 690 V |
|---------------|-------------------------|----------------------------------------------------------------|----------------------------------------------|------------|-----------------------------------|--------------------------------------|
| [A]           |                         |                                                                |                                              | [W]        | [A <sup>2</sup> s]                | [A <sup>2</sup> 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**

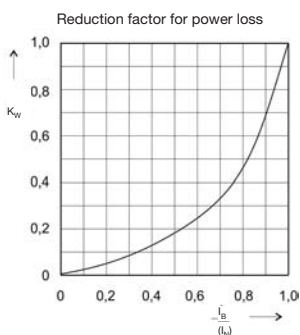
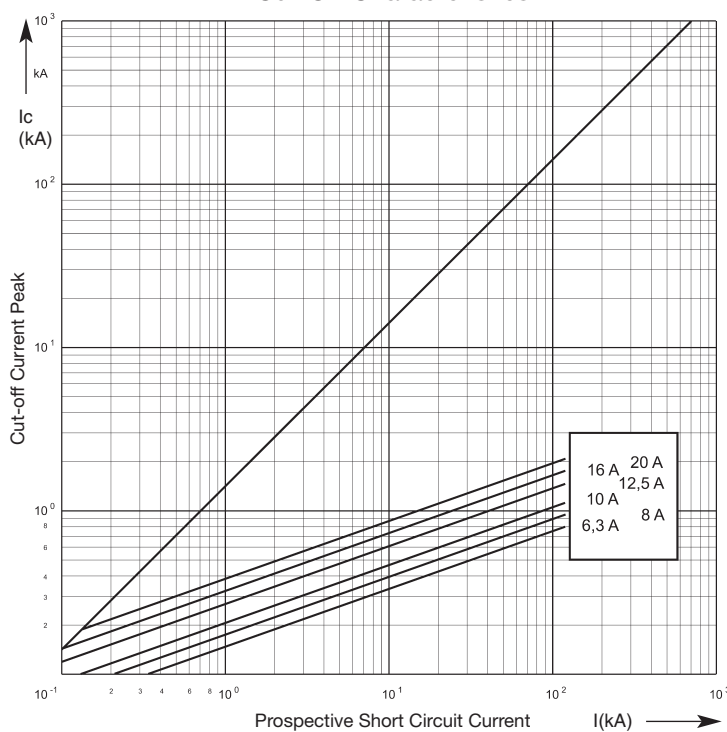
Rated Voltage  
**AC 400 V**

Operating Class  
**gRL(gS)**

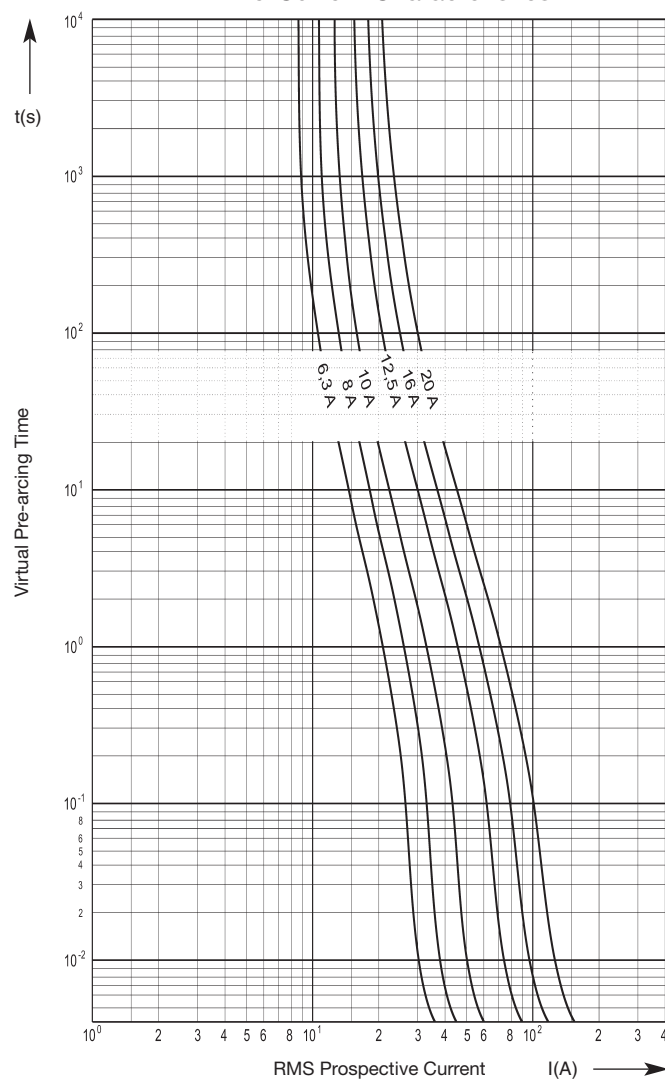
Rated Breaking Capacity  
**120 kA**

| Rated Current<br>[A] | Part No.       | Voltage Drop<br>[mV] | Power Loss<br>[W] | Pre-arcing<br>$I^2t$ -value<br>[A <sup>2</sup> s] | Total $I^2t$ -value<br>@ 500 V<br>[A <sup>2</sup> 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**

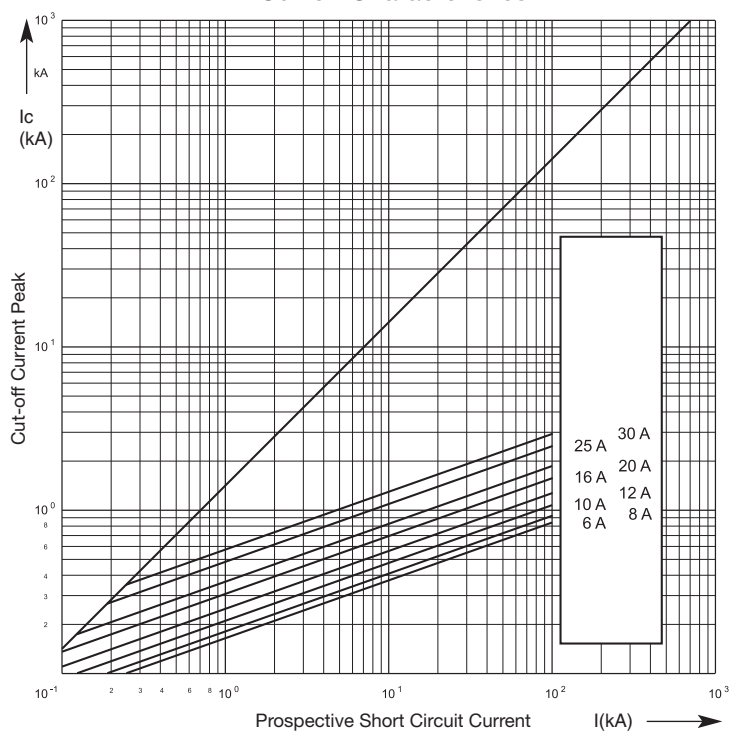
 Rated Voltage  
**AC 600 V**

 Operating Class  
**gRL(gS)**

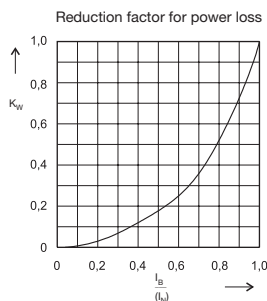
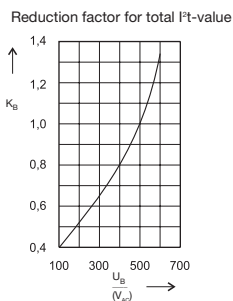
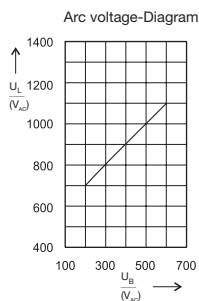
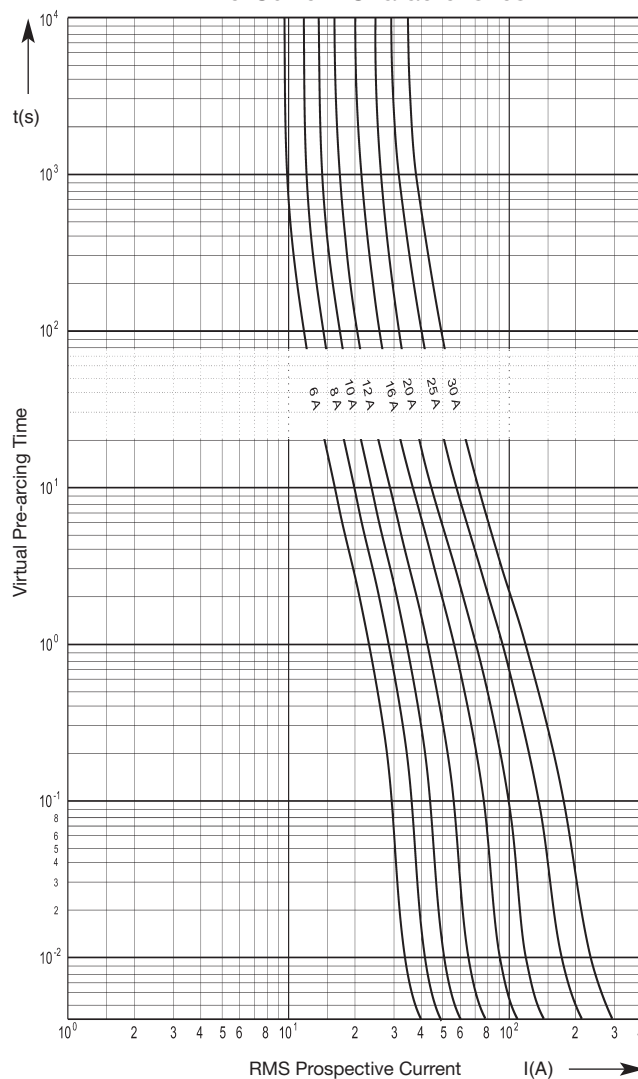
 Rated Breaking Capacity  
**200 kA**

| Rated Current [A] | Part No.     | Part No. PCB Mounting | Power Loss [W] | Pre-arcing I <sup>2</sup> t-value [A <sup>2</sup> s] | Total I <sup>2</sup> t-value @ 500 V [A <sup>2</sup> 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**

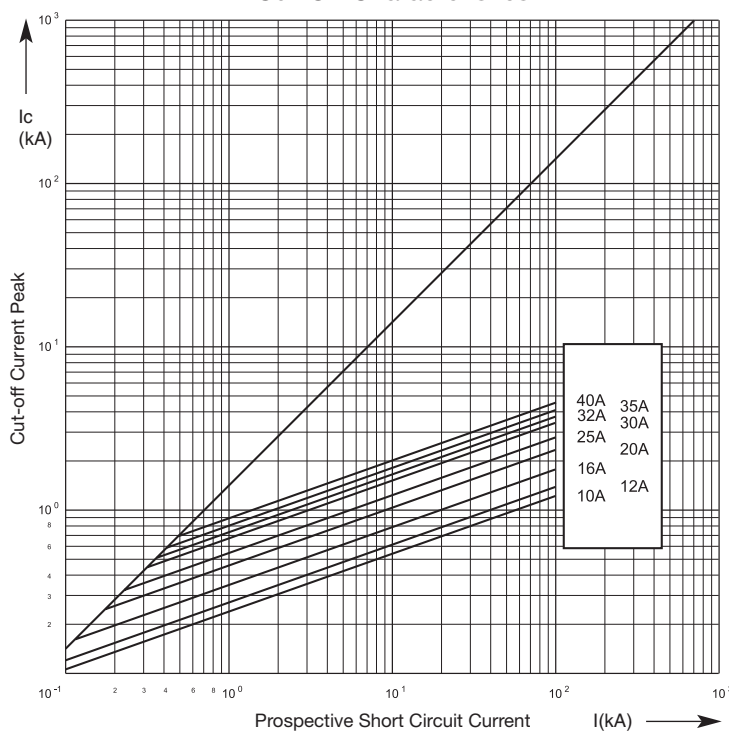
Rated Voltage  
**AC 690 V**

Operating Class  
**gRL(gS)**

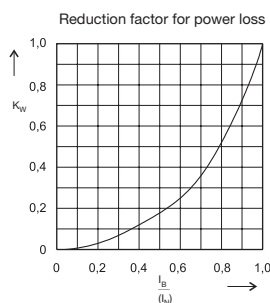
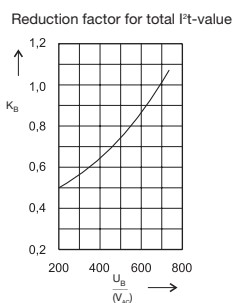
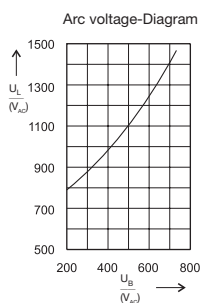
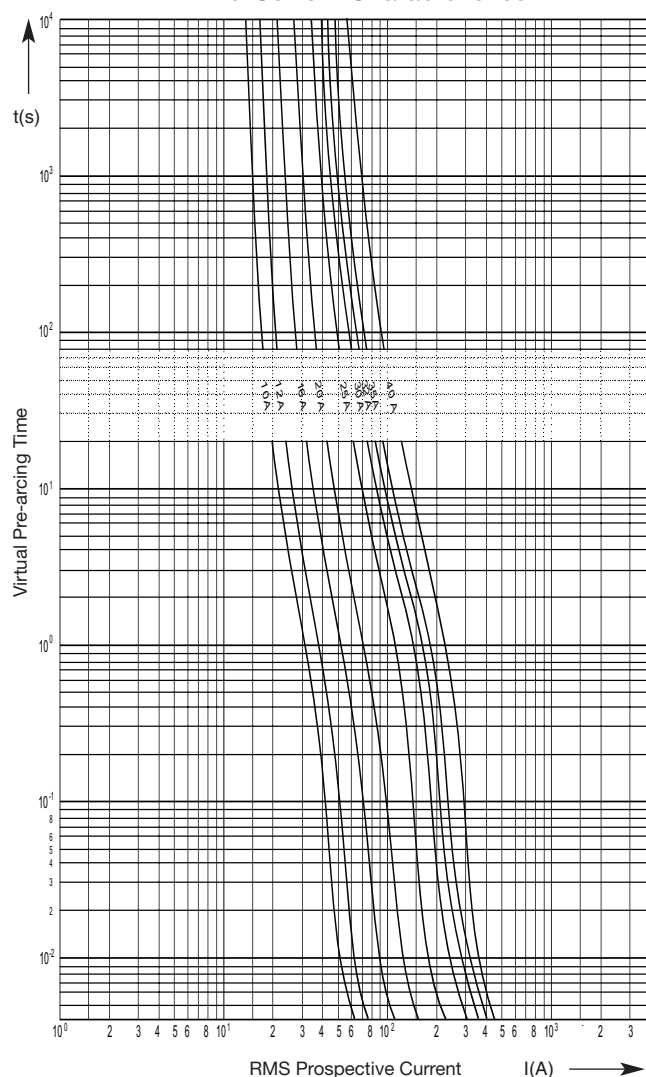
Rated Breaking Capacity  
**200 kA**

| Rated Current<br>[A] | Part No.<br>without Striker | Part No.<br>with Striker | Part No.<br>Fixing Center<br>63,5 mm | Power<br>Loss<br>[W] | Pre-arcing<br>I²t-value<br>[A²s] | Total I²t-value<br>@ 690 V<br>[A²s] |
|----------------------|-----------------------------|--------------------------|--------------------------------------|----------------------|----------------------------------|-------------------------------------|
| 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**

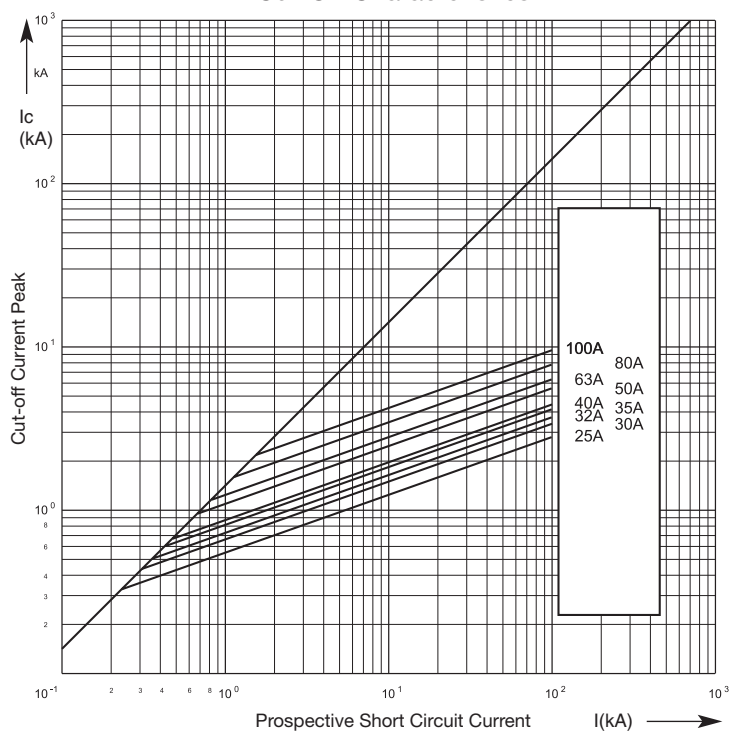
 Rated Voltage  
**AC 700 V**

 Operating Class  
**gRL(gS)**

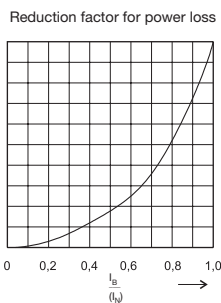
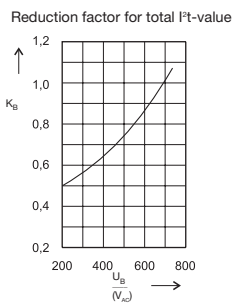
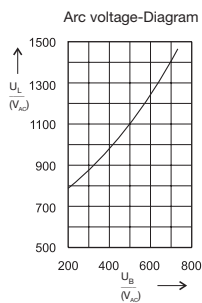
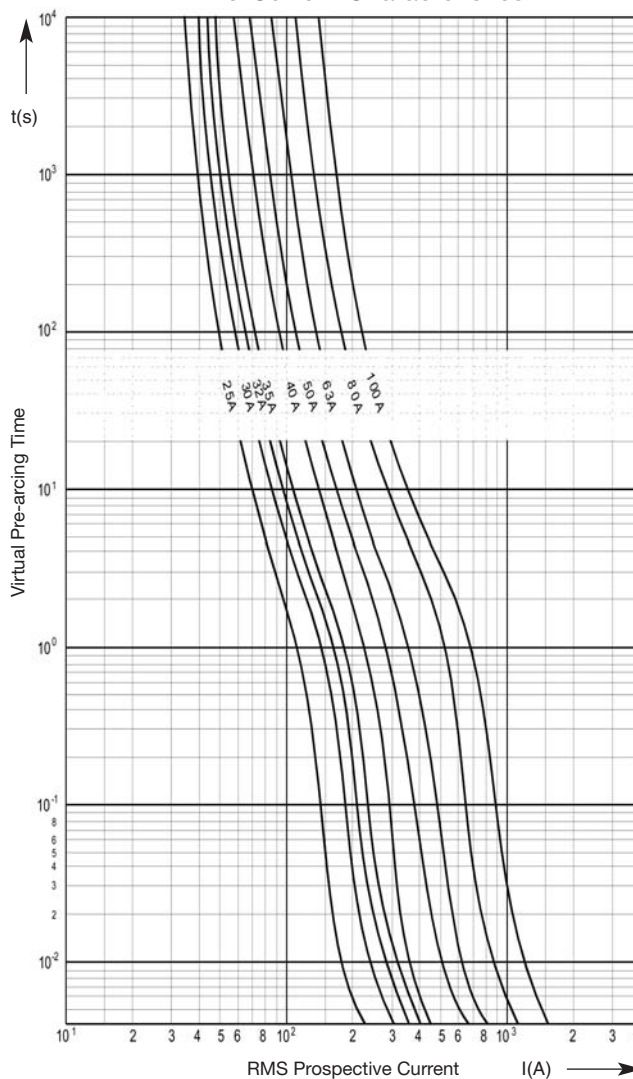
 Rated Breaking Capacity  
**200 kA**

| Rated Current [A] | Part No. without Striker | Part No. with Striker | Power Loss [W] | Pre-arcing I <sup>2</sup> t-value [A <sup>2</sup> s] | Total I <sup>2</sup> t-value @ 690 V [A <sup>2</sup> 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



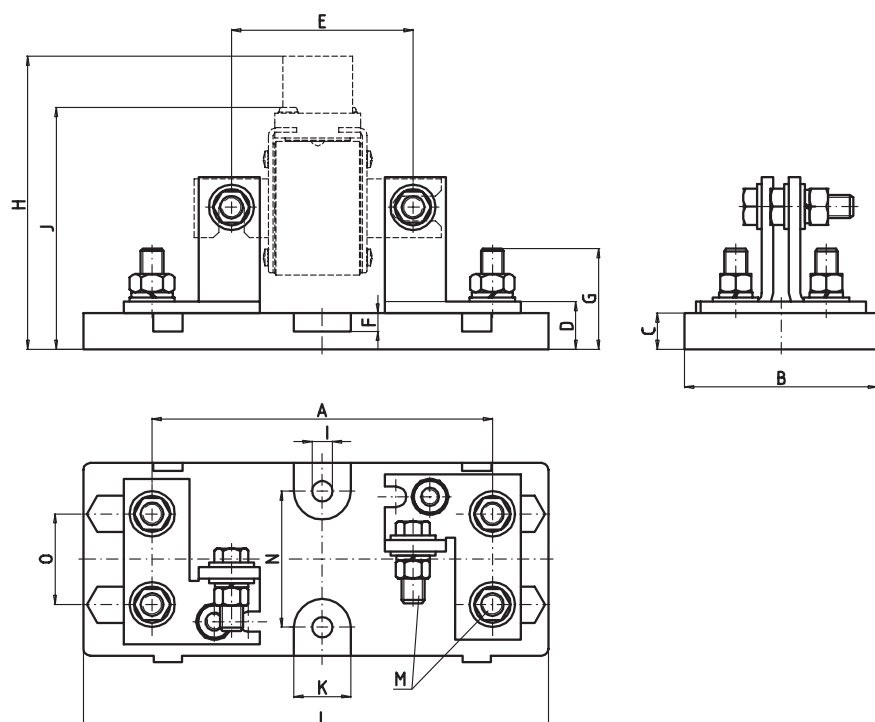
## Fuse Base for Fuses with Bolted Connections DIN Type

Size  
**SQB1, 2 and 3**

Rated Current  
**630 A**

Standard  
**DIN 43653**

| Rated Voltage<br>[V] | Part No.  | Fixing Center<br>[mm] | max.<br>Nut Torque<br>[Nm] | Rated<br>Power Acceptance<br>[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 <sub>(Size 1)</sub> | 5.12" (130 mm) |
| H <sub>(Size 2)</sub> | 5.40" (137 mm) |
| H <sub>(Size 3)</sub> | 5.40" (137 mm) |
| I                     | 0.35" (9 mm)   |
| J                     | 4.10" (104 mm) |
| J <sub>(Size 1)</sub> | 4.25" (108 mm) |
| J <sub>(Size 2)</sub> | 4.53" (115 mm) |
| J <sub>(Size 3)</sub> | 4.53" (115 mm) |
| K                     | 0.98" (25 mm)  |
| L <sub>(max)</sub>    | 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 <sub>(Size 1)</sub> | 5.12" (130 mm) |
| H <sub>(Size 2)</sub> | 5.40" (137 mm) |
| H <sub>(Size 3)</sub> | 5.40" (137 mm) |
| I                     | 0.35" (9 mm)   |
| J                     | 4.10" (104 mm) |
| J <sub>(Size 1)</sub> | 4.25" (108 mm) |
| J <sub>(Size 2)</sub> | 4.53" (115 mm) |
| J <sub>(Size 3)</sub> | 4.53" (115 mm) |
| K                     | 0.98" (25 mm)  |
| L <sub>(max)</sub>    | 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

 Size  
**SQB1, 2 and 3**

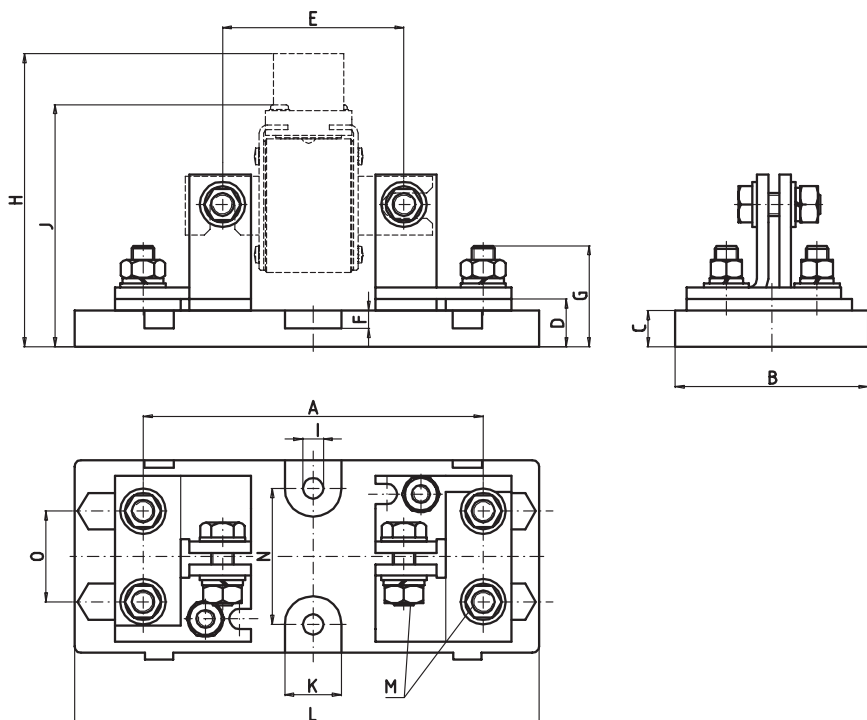
 Rated Current  
**1250 A**

 Standard  
**DIN 43653**

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

## Fixing Center 110 mm

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



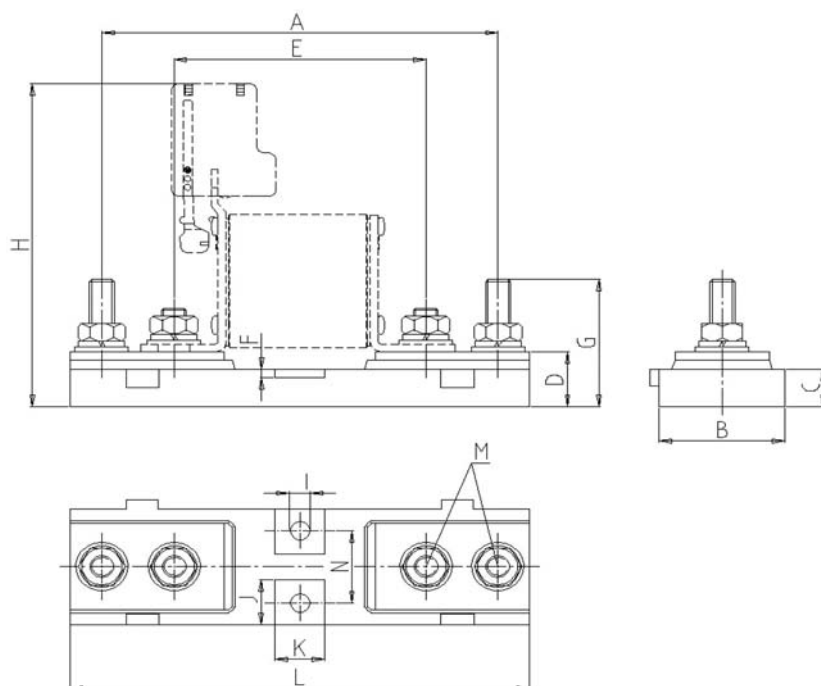
## Fixing Center 80 mm

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

**Fuse-Base 400 A**

Size  
**000 and 00**

Rated Voltage  
**AC 1000 V**

Standard  
**DIN 43653**


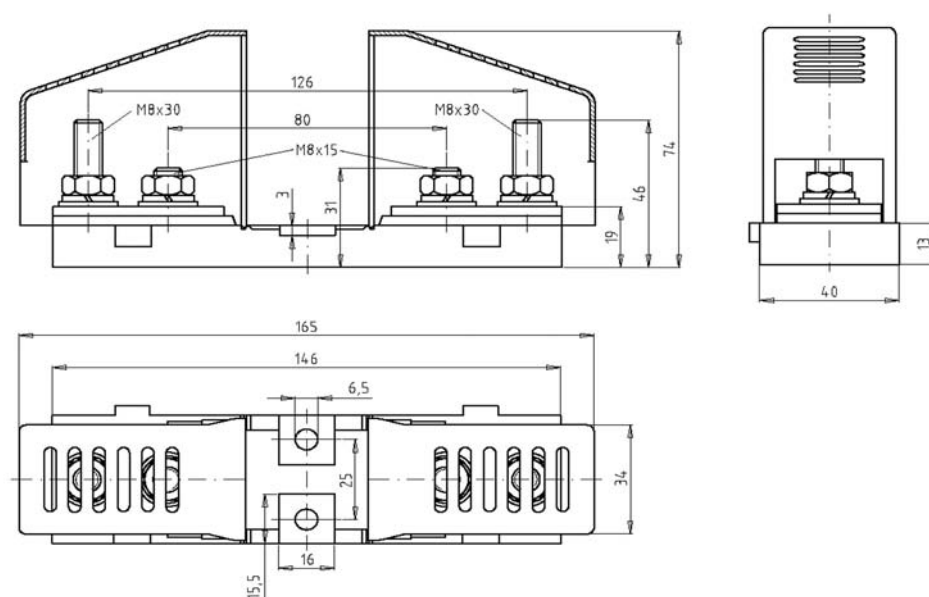
**1000 V**  
Part No. 21 189 01  
Rated Current: 400 A  
Rated Power Acceptance: 34 W  
Nut Torque: 12 Nm

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

**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**

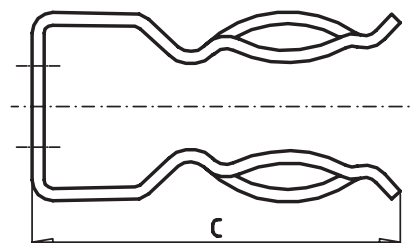
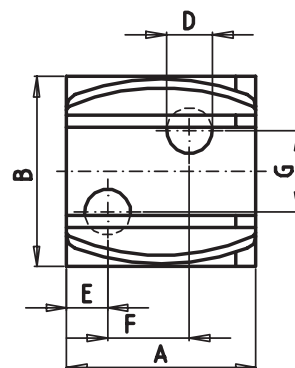
**A** 0.63" (16 mm)  
**B** 0.63" (16 mm)  
**C** 0.90" (23 mm)  
**D** 0.17" (4.2 mm)  
**E** 0.26" (6.5 mm)

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**

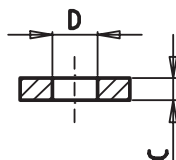
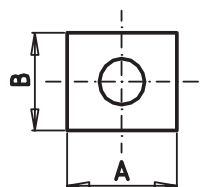
**A** 1.06" (27 mm)  
**B** 2.30" (58.4 mm)  
**C** 4.55" (115.6 mm)



## Clamping Plate

Part No.  
**63 017 01**

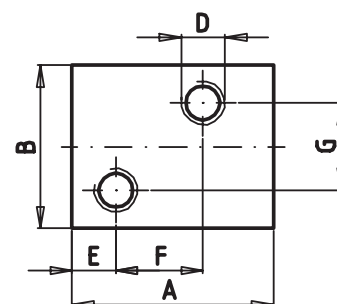
**A** 0.40" (10 mm)  
**B** 0.35" (9 mm)  
**C** 0.08" (2 mm)  
**D** 0.17" (4.2 mm)



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

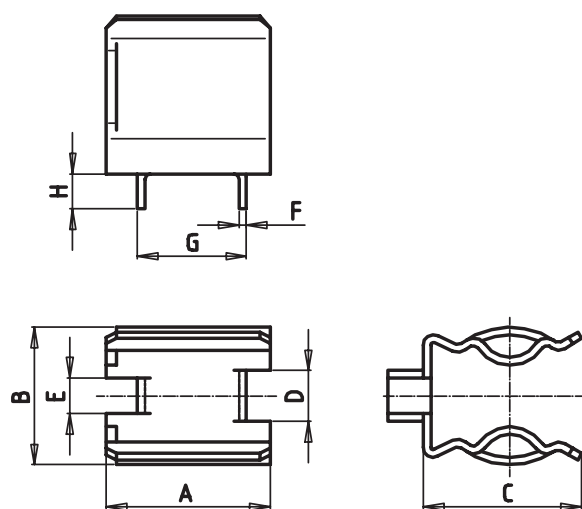
Part No.  
**63 002 01**

**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

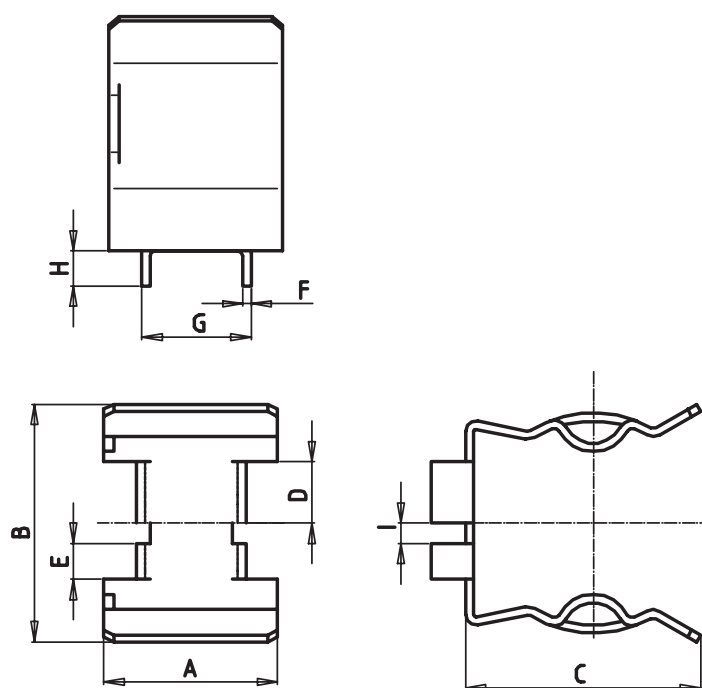
## Fuse-Clip PCB Mountable



Power Acceptance  
**6 W**  
**58 058 06**  
**Size 14**

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

## Fuse-Clip PCB Mountable



Power Acceptance  
**12 W**  
**58 060 06**  
**Size 22**

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

## 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<br>(20 2xx xx)  | NH00 DIN 80<br>(20 412 xx)  | 0.02        | 10   |
| 28 002 02 | NH000-4<br>(DIN 43620) | NH000 DIN 80<br>(20 558 xx) | 0.02        | 10   |

## Interrupting Rating

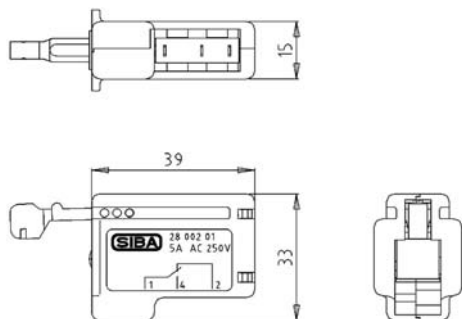
| AC 250 V      | AC 250 V    | DC 33 V       | DC 26 V          |
|---------------|-------------|---------------|------------------|
| ohmsch<br>5 A | ind.<br>3 A | ohmsch<br>3 A | L/R 10 ms<br>3 A |

## Terminals

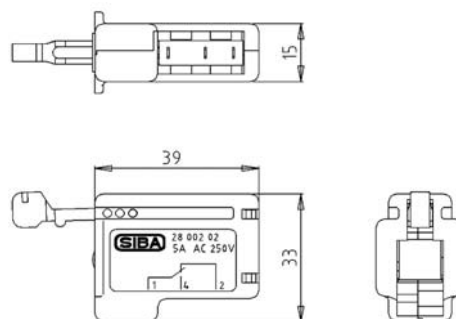
AMP 2,8 x 0,5 (IEC 760)

## Dimensions

Part No. 28 002 01 (Black Hammer)



Part No. 28 002 02 (Red Hammer)





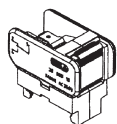
**B-switch**

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

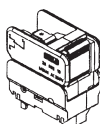
| Insulating Voltage up to [V] | Part No. Standard | Part No. Low Level | Change-Over Circuits | Weight [g] | Pack |
|------------------------------|-------------------|--------------------|----------------------|------------|------|
| 1 300                        | 28 003 10         | 28 004 10          | 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 <sub>ohmsch</sub> ]         | [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 |                        |                                |      |                   |     |

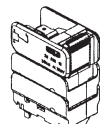
| Type      | Part No.  | Insulating Voltage [V] | Interrupting Rating            |      |           |     |
|-----------|-----------|------------------------|--------------------------------|------|-----------|-----|
|           |           |                        | min. Load Requirements AC / DC |      | max. Data |     |
|           |           |                        | [V <sub>ohmsch</sub> ]         | [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 |                        |                                |      |           |     |



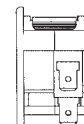
up to 1,300 V



up to 2,400 V



up to 5,000 V


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

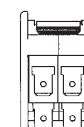
**Standard**
**Low Level**

 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

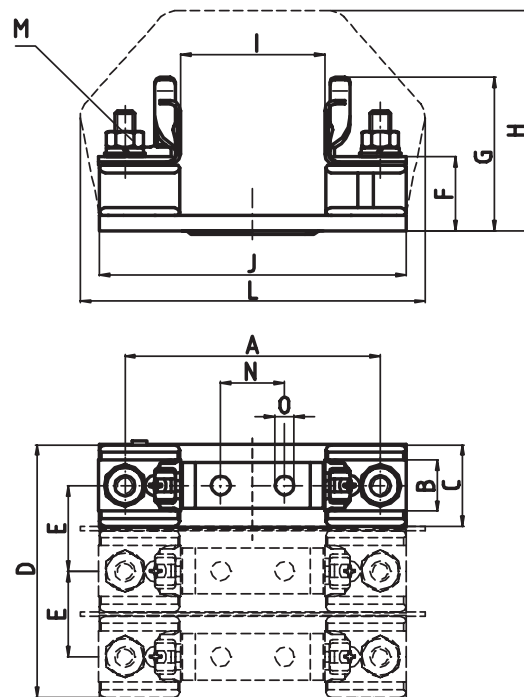
**Fuse-Base  
for Fuses with Knife Contacts**

 Size  
**00**

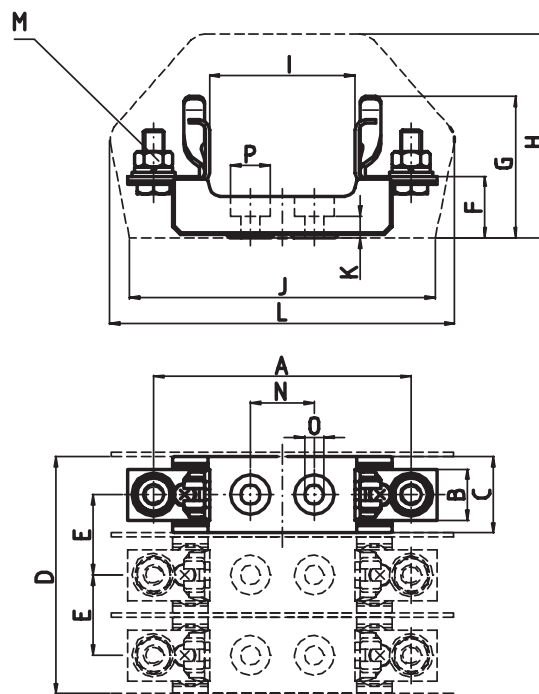
 Rated Voltage  
**AC 500/690 V**

 Standard  
**DIN 43620**
**Part No.**  
**21 001 01**

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


**Part No.**  
**21 001 10**

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

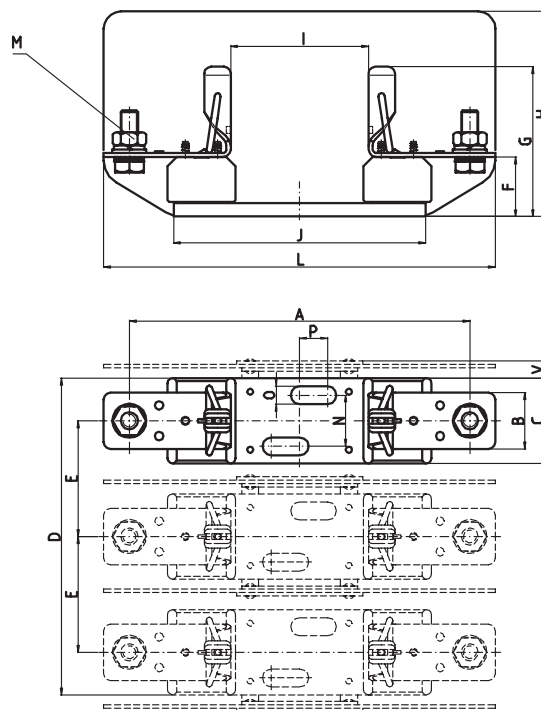


# Fuse-Base for Fuses with Knife Contacts

Size  
**1 - 3**

Rated Voltage  
**AC 500/690 V**

Standard  
**DIN 43620**



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

## ZS-Module for Fuses with Cylindrical Contact Caps

### Size 10 x 38

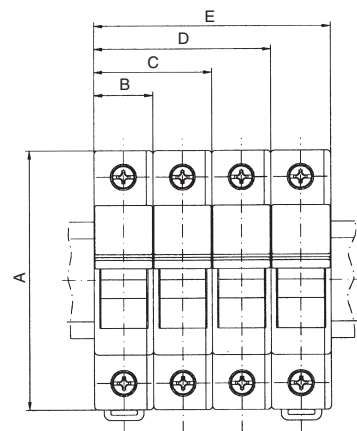
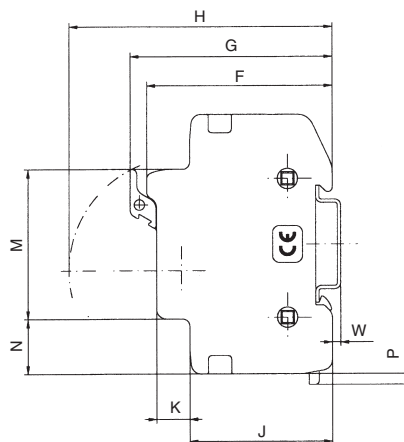
|                 |                            |                     |
|-----------------|----------------------------|---------------------|
| <b>Part No.</b> | 51 063 04.DC for 1000 V DC |                     |
|                 | 51 063 04                  | 51 063 04.L 1 pol.  |
|                 | 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**

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



### Size 14 x 51

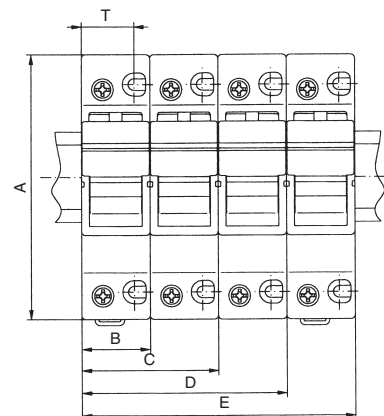
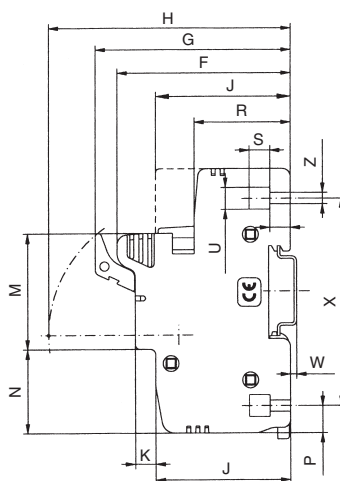
|                 |             |              |        |
|-----------------|-------------|--------------|--------|
| <b>Part No.</b> | 51 058 04   | 51 058 04.S  | 1 pol. |
|                 | 51 058 04.2 |              | 2 pol. |
|                 | 51 058 04.3 | 51 058 04.3S | 3 pol. |



S= Micro switch

Power Acceptance: **6 W**

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



### Size 22 x 58

|                 |             |              |        |
|-----------------|-------------|--------------|--------|
| <b>Part No.</b> | 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**

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

