

# Low Voltage Fuses

## AFaC and BaC types

### AFaC and BaC type current-limiting fuses

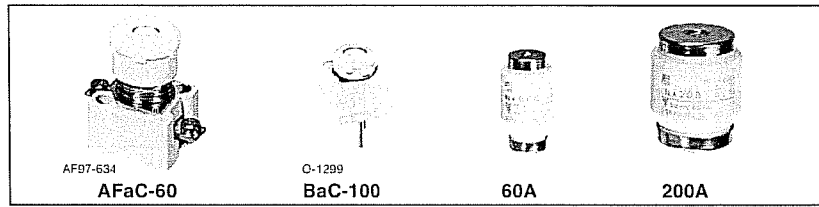
600V AC/DC, 3–400 Amps

#### ■ Description

The AFaC and BaC type have an excellent current-limiting performance with an interrupting capacity as high as 100kA at 600V AC/DC. They are suitable for power circuits and control circuit applications including general power cubicles, distribution equipment, motor starters, load centers and control centers. The fuse assembly comprises base, screw cap, fuse link and adapter ring. The universal surface mounting terminals are provided with screws while the rear connection type are supplied with stud bolts. The fuse link can easily and safely be replaced by simply removing a screw cap.

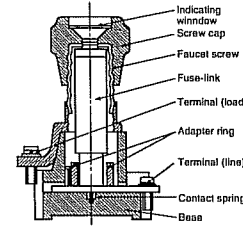
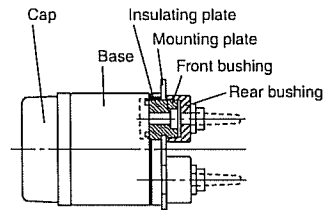
The diameter of the solid ferrule fuse link varies according to the rated current. The higher the rating, the greater the diameter.

As a safety feature the screw cap can only be tightened when the fuse link matches with the adapter ring located inside the base. This prevents the cap from being tightened even when fuse



Rear connection type

Surface connection type








Thickness of mounting plate: 3.2mm or less

link with larger ratings is inserted. The operating blown indication tip can be observed through the screw cap window. The tip color indicates the current rating – for instance, pink indicates 3A and red 10A. The tip is ejected to show that the fuse has blown. Both the base and the screw cap are made from a high class

porcelain insulating material to ensure trouble-free operation. The fuse can be replaced without isolating the circuit. Since the fuse link is housed in a highly reliable porcelain barrel it is strong mechanically and thermally with no danger of explosion or production of noxious gases when blown.

#### ■ Components of AFaC and BaC type

| Parts             |  |                    |  |  |  |  |                       |           |
|-------------------|---|--------------------|---|---|--|---|-----------------------|-----------|
| Rated current (A) | Fuse-link Type  | Color of indicator | Screw cap Type  | Base Surface connection Type  | Rear connection Type   | Adapter ring Type   | Color of adapter ring |           |
| 3                 | BLA003  | Pink               | Pa30  | AFa30   | Ba30   | R3  | Pink                  |           |
| 5                 | BLA005  | Brown              |   | R5  | Brown  |   |                       |           |
| 10                | BLA010  | Red                |   | R10   | Red  |   |                       |           |
| 15                | BLA015  | Gray               |   | R15   | Gray   |   |                       |           |
| 20                | BLA020  | Blue               |   | R20   | Blue   |   |                       |           |
| 30                | BLA030  | Violet             |   | —   | —  |   |                       |           |
| 40                | BLA040  | Black              | Pa60  | AFa60   | Ba60   | R40   | Black                 |           |
| 60                | BLA060  | Light red          | Pa100   | AFa100  | Ba100  | R75   | Silver                |           |
| 75                | BLA075  | Silver             |   | Pa200   | AFa200   | Ba200   | R125                  | Yellow    |
| 100               | BLA100  | Red                |   |   | AFa400   | Ba400   | R150                  | Light red |
| 125               | BLA125  | Yellow             | Pa400   | AFa400  | Ba400  | R250  | Green                 |           |
| 150               | BLA150  | Light red          |   |   |  | R300  | White                 |           |
| 200               | BLA200  | Blue               |   |   |  | —   | —                     |           |
| 250               | BLA250  | Green              |   |   |  | —   | —                     |           |
| 300               | BLA300  | White              |   |   |  |   |                       |           |
| 400               | BLA400  | Black              |   |   |  |   |                       |           |

#### Minimum ordering quantity

|             |                |          |                |                  |          |
|-------------|----------------|----------|----------------|------------------|----------|
| • Fuse-link | BLA003 to 030  | 100 pcs. | • Base         | AFa30 Ba30       | 100 pcs. |
|             | BLA 040, 060   | 20       |                | AFa60 Ba60       | 50       |
|             | BLA 075 to 200 | 10       |                | AFa100 Ba100     | 10       |
|             | BLA 250 to 400 | 5        |                | AFa200 Ba200     | 5        |
|             |                |          |                | AFa400 Ba400     | 1        |
| • Screw cap | Pa30           | 100 pcs. | • Adapter ring | R3 to 20, R75    | 100 pcs. |
|             | Pa60           | 50       |                | R40, R125 to 300 | 50       |
|             | Pa100          | 10       |                |                  |          |
|             | Pa200          | 5        |                |                  |          |
|             | Pa400          | 1        |                |                  |          |

### Specifications

| Fuse-link Type | Rated current (A) | Rated voltage | Interrupting capacity (kA) | Max. interrupting $I^2t$ (Amp <sup>2</sup> x sec.) |
|----------------|-------------------|---------------|----------------------------|--|
| BLA003         | 3                 | 600V AC<br>DC | 100                        | 28   |
| BLA005         | 5                 |               |                            | 110  |
| BLA010         | 10                |               |                            | 500  |
| BLA015         | 15                | 100           | 100                        | 750  |
| BLA020         | 20                |               |                            | $1.3 \times 10^3$                                  |
| BLA030         | 30                |               |                            | $5 \times 10^3$                                    |
| BLA040         | 40                | 100           | 100                        | $9.2 \times 10^3$                                  |
| BLA060         | 60                |               |                            | $27 \times 10^3$                                   |
| BLA075         | 75                | 100           | 100                        | $70 \times 10^3$                                   |
| BLA100         | 100               |               |                            | $100 \times 10^3$                                  |
| BLA125         | 125               | 50            | 50                         | $290 \times 10^3$                                  |
| BLA150         | 150               |               |                            | $390 \times 10^3$                                  |
| BLA200         | 200               |               |                            | $500 \times 10^3$                                  |
| BLA250         | 250               | 20            | 20                         | $1800 \times 10^3$                                 |
| BLA300         | 300               |               |                            | $2200 \times 10^3$                                 |
| BLA400         | 400               |               |                            | $3000 \times 10^3$                                 |

### Ordering information

Specify the following:  
1. Type number

Fuse-link  
**BLA 003**

Rated current  
Ex. 003 : 3 Amps  
075 : 75 Amps  
200 : 200 Amps

Fuse-link

Base  
**AFa 30**

Frame size  
30: For 3 to 30A  
60: For 40, 60A  
100: For 75, 100A  
200: For 125, 150, 200A  
400: For 250, 300, 400A

Connection  
AFa: Surface  
Ba : Rear

Screw cap  
**Pa 30**

Frame size  
30: For 3 to 30A  
60: For 40, 60A  
100: For 75, 100A  
200: For 125, 150, 200A  
400: For 250, 300, 400A

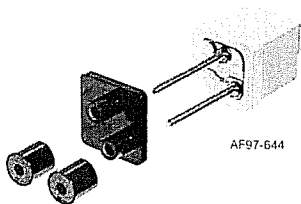
Screw cap

### Mounting on steel panel

To mount a rear connection base Ba on a steel panel, an insulating plate and some bushings are used. Kits for 30, 60, 100, 200 and 400A base are available. Please specify your base type when ordering.

Two front bushings are used with 100, 200 and 400A base only.

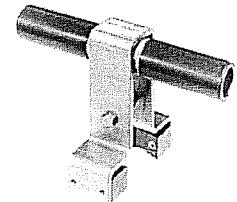
Example: Insulating plate and bushings for Ba30



### Tightening tool

It is recommended that fuses with ratings of over 100A be tightened with a special tool since there is the possibility of overheating if the screw cap is not adequately tightened. This exclusive use tool is sold separately.

| Type   | Screw cap type |
|--------|----------------|
| Pa100H | Pa100          |
| Pa200H | Pa200          |
| Pa400H | Pa400          |

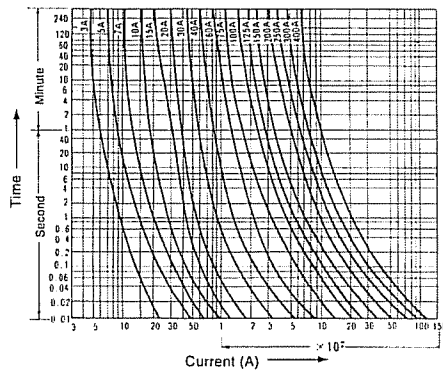


AF90-316

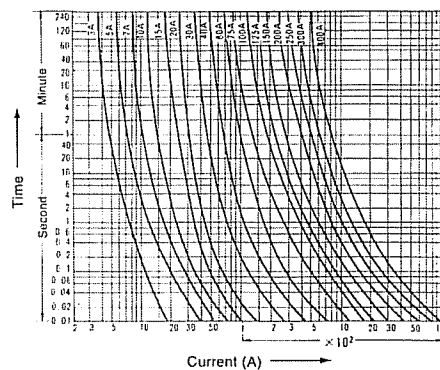
08

### Characteristic curves

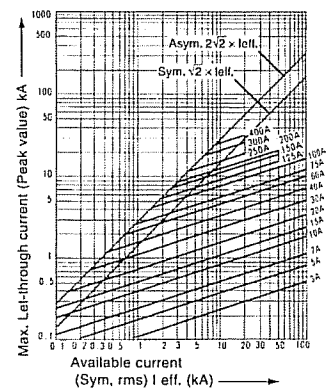
#### Melting time-current characteristic



#### Permissible time-current characteristic

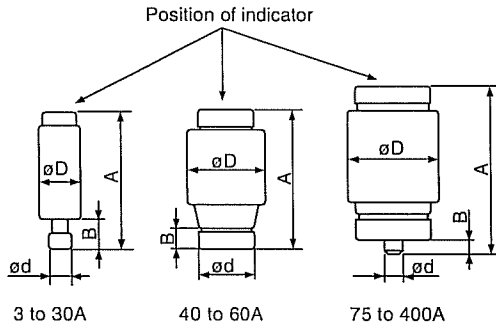


#### Current-limiting characteristic



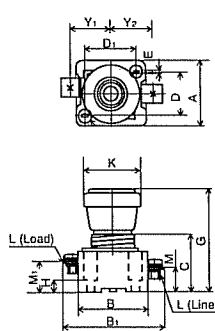
# Low Voltage Fuses AFaC and BaC types

- Dimensions, mm
- Fuse-link



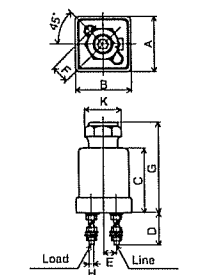
| Type   | Rated current (A) | A  | B   | øD | ød | Mass (g) |
|--------|-------------------|----|-----|----|----|----------|
| BLA003 | 3                 | 50 | 10  | 13 | 8  | 12       |
| BLA005 | 5                 | 50 | 10  | 13 | 8  | 12       |
| BLA010 | 10                | 50 | 10  | 13 | 8  | 12       |
| BLA015 | 15                | 50 | 10  | 13 | 10 | 12       |
| BLA020 | 20                | 50 | 10  | 13 | 10 | 12       |
| BLA030 | 30                | 50 | 10  | 13 | 14 | 12       |
| BLA040 | 40                | 50 | 10  | 27 | 16 | 47       |
| BLA060 | 60                | 50 | 10  | 27 | 20 | 62       |
| BLA075 | 75                | 63 | 5.4 | 34 | 5  | 120      |
| BLA100 | 100               | 63 | 5.4 | 34 | 8  | 120      |
| BLA125 | 125               | 63 | 5.4 | 47 | 5  | 215      |
| BLA150 | 150               | 63 | 5.4 | 47 | 8  | 215      |
| BLA200 | 200               | 63 | 5.4 | 47 | 10 | 215      |
| BLA250 | 250               | 63 | 5.4 | 61 | 5  | 380      |
| BLA300 | 300               | 63 | 5.4 | 61 | 8  | 380      |
| BLA400 | 400               | 63 | 5.4 | 61 | 10 | 380      |

- Base and cap
- Surface connection
- AFaC-3 to 200



| Type            | A  | B   | B1  | C    | D  | D1 | øE  | G    | H  | K  | L   | M    | M1   | Y1 | Y2   | Mass (g) |
|-----------------|----|-----|-----|------|----|----|-----|------|----|----|-----|------|------|----|------|----------|
| AFaC-3 to 30    | 34 | 42  | 55  | 46.5 | 24 | 22 | 5   | 78.5 | 10 | 32 | M5  | 18   | 24   | 22 | 22   | 100      |
| AFaC-40 to 60   | 52 | 59  | 82  | 51   | 34 | 38 | 5.5 | 88   | 10 | 47 | M6  | 21   | 26   | 33 | 33.5 | 290      |
| AFaC-75 to 100  | 67 | 87  | 125 | 71   | 40 | 64 | 7   | 118  | 28 | 72 | M8  | 27.5 | 29.5 | 50 | 50   | 950      |
| AFaC-125 to 200 | 77 | 107 | 150 | 73   | 51 | 82 | 7   | 120  | 28 | 87 | M10 | 34   | 35   | 60 | 59.5 | 1465     |

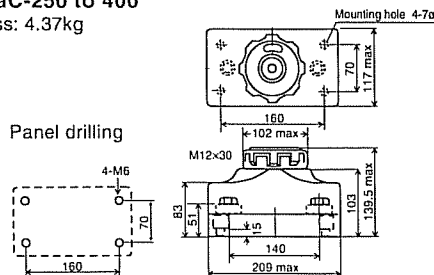
- Rear connection
- BaC-3 to 200



| Type           | A (max.) | B (max.) | C  | D  | E  | F    | G     | H   | K  | øL     | Mass (g) |
|----------------|----------|----------|----|----|----|------|-------|-----|----|--------|----------|
| BaC-3 to 30    | 47       | 47       | 52 | 62 | 10 | 14   | 78.5  | M5  | 32 | 6(14)  | 220      |
| BaC-40 to 60   | 66       | 66       | 54 | 65 | 18 | 22.5 | 87.5  | M6  | 47 | 7(14)  | 470      |
| BaC-75 to 100  | 85.5     | 85.5     | 71 | 70 | 22 | 30   | 112.5 | M8  | 72 | 9(25)  | 1200     |
| BaC-125 to 200 | 112      | 112      | 78 | 75 | 28 | 39   | 120   | M10 | 87 | 11(25) | 2115     |

( ): In the case the steel plate is used.

- Surface connection
- AFaC-250 to 400
- Mass: 4.37kg



- Rear connection
- BaC-250 to 400
- Mass: 4.76kg

