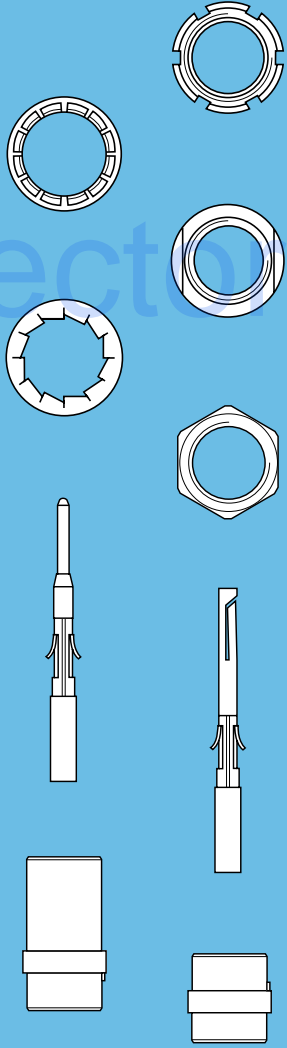
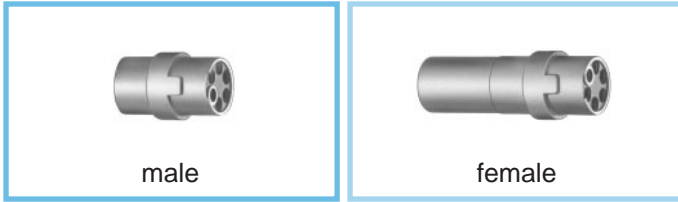


Datasheet.Directory



**SPARE PARTS**

# Spare parts



## FGG-EGG Insulators for crimp contacts

|                  | Type          | Insulator part number |                |
|------------------|---------------|-----------------------|----------------|
|                  |               | Male contact          | Female contact |
| <b>00</b>        | 302           | FGG.00.302.YL         | EGG.00.402.YL  |
|                  | 303           | FGG.00.303.YL         | EGG.00.403.YL  |
|                  | 304           | FGG.00.304.YL         | EGG.00.404.YL  |
| <b>0B<br/>0K</b> | 302           | FGG.0B.302.YL         | EGG.0B.402.YL  |
|                  | 303           | FGG.0B.303.YL         | EGG.0B.403.YL  |
|                  | 304           | FGG.0B.304.YL         | EGG.0B.404.YL  |
|                  | 305           | FGG.0B.305.YL         | EGG.0B.405.YL  |
|                  | 306           | FGG.0B.306.YL         | –              |
|                  | 307           | FGG.0B.307.YL         | –              |
|                  | 309           | FGG.0B.309.YL         | –              |
| <b>1B<br/>1K</b> | 302           | FGG.1B.302.YL         | EGG.1B.402.YL  |
|                  | 303           | FGG.1B.303.YL         | EGG.1B.403.YL  |
|                  | 304           | FGG.1B.304.YL         | EGG.1B.404.YL  |
|                  | 305           | FGG.1B.305.YL         | EGG.1B.405.YL  |
|                  | 306           | FGG.1B.306.YL         | EGG.1B.406.YL  |
|                  | 307           | FGG.1B.307.YL         | EGG.1B.407.YL  |
|                  | 308           | FGG.1B.308.YL         | EGG.1B.408.YL  |
|                  | 310           | FGG.1B.310.YL         | –              |
|                  | 314           | FGG.1B.314.YL         | –              |
|                  | 316           | FGG.1B.316.YL         | –              |
| <b>2B<br/>2K</b> | 302           | FGG.2B.302.YL         | EGG.2B.402.YL  |
|                  | 303           | FGG.2B.303.YL         | EGG.2B.403.YL  |
|                  | 304           | FGG.2B.304.YL         | EGG.2B.404.YL  |
|                  | 305           | FGG.2B.305.YL         | EGG.2B.405.YL  |
|                  | 306           | FGG.2B.306.YL         | EGG.2B.406.YL  |
|                  | 307           | FGG.2B.307.YL         | EGG.2B.407.YL  |
|                  | 308           | FGG.2B.308.YL         | EGG.2B.408.YL  |
|                  | 310           | FGG.2B.310.YL         | EGG.2B.410.YL  |
|                  | 312           | FGG.2B.312.YL         | EGG.2B.412.YL  |
|                  | 314           | FGG.2B.314.YL         | EGG.2B.414.YL  |
|                  | 316           | FGG.2B.316.YL         | EGG.2B.416.YL  |
|                  | 318           | FGG.2B.318.YL         | EGG.2B.418.YL  |
| 319              | FGG.2B.319.YL | EGG.2B.419.YL         |                |
| <b>3B<br/>3K</b> | 302           | FGG.3B.302.YL         | EGG.3B.402.YL  |
|                  | 303           | FGG.3B.303.YL         | EGG.3B.403.YL  |
|                  | 304           | FGG.3B.304.YL         | EGG.3B.404.YL  |
|                  | 305           | FGG.3B.305.YL         | EGG.3B.405.YL  |
|                  | 306           | FGG.3B.306.YL         | EGG.3B.406.YL  |
|                  | 307           | FGG.3B.307.YL         | EGG.3B.407.YL  |

|                  | Type             | Insulator part number |                |
|------------------|------------------|-----------------------|----------------|
|                  |                  | Male contact          | Female contact |
| <b>3B<br/>3K</b> | 308              | FGG.3B.308.YL         | EGG.3B.408.YL  |
|                  | 309              | FGG.3B.309.ML         | EGG.3B.409.ML  |
|                  | 310              | FGG.3B.310.YL         | EGG.3B.410.YL  |
|                  | 312              | FGG.3B.312.YL         | EGG.3B.412.YL  |
|                  | 314              | FGG.3B.314.YL         | EGG.3B.414.YL  |
|                  | 316              | FGG.3B.316.YL         | EGG.3B.416.YL  |
|                  | 318              | FGG.3B.318.YL         | EGG.3B.418.YL  |
|                  | 320              | FGG.3B.320.YL         | EGG.3B.420.YL  |
|                  | 322              | FGG.3B.322.YL         | EGG.3B.422.YL  |
|                  | 324              | FGG.3B.324.YL         | EGG.3B.424.YL  |
|                  | 326              | FGG.3B.326.YL         | EGG.3B.426.YL  |
|                  | 330              | FGG.3B.330.YL         | EGG.3B.430.YL  |
|                  | <b>4B<br/>4K</b> | 304                   | FGG.4B.304.YL  |
| 306              |                  | FGG.4B.306.YL         | EGG.4B.406.YL  |
| 307              |                  | FGG.4B.307.YL         | EGG.4B.407.YL  |
| 310              |                  | FGG.4B.310.YL         | EGG.4B.410.YL  |
| 312              |                  | FGG.4B.312.YL         | EGG.4B.412.YL  |
| 316              |                  | FGG.4B.316.YL         | EGG.4B.416.YL  |
| 320              |                  | FGG.4B.320.YL         | EGG.4B.420.YL  |
| 324              |                  | FGG.4B.324.YL         | EGG.4B.424.YL  |
| 330              |                  | FGG.4B.330.YL         | EGG.4B.430.YL  |
| 340              |                  | FGG.4B.340.YL         | EGG.4B.440.YL  |
| 348              | FGG.4B.348.YL    | EGG.4B.448.YL         |                |
| <b>5B<br/>5K</b> | 304              | FGG.5B.304.ML         | EGG.5B.404.ML  |
|                  | 310              | FGG.5B.310.YL         | EGG.5B.410.YL  |
|                  | 314              | FGG.5B.314.YL         | EGG.5B.414.YL  |
|                  | 316              | FGG.5B.316.YL         | EGG.5B.416.YL  |
|                  | 320              | FGG.5B.320.YL         | EGG.5B.420.YL  |
|                  | 330              | FGG.5B.330.YL         | EGG.5B.430.YL  |
|                  | 340              | FGG.5B.340.YL         | EGG.5B.440.YL  |
|                  | 348              | FGG.5B.348.YL         | EGG.5B.448.YL  |
|                  | 350              | FGG.5B.350.ML         | EGG.5B.450.ML  |
|                  | 354              | FGG.5B.354.YL         | EGG.5B.454.YL  |
|                  | 364              | FGG.5B.364.YL         | EGG.5B.464.YL  |

**Note:** each insulator can be used both for crimp contacts of normal shape (fig. 1) or with reduced solder cups (fig. 2) as shown on page 131.

## FGG-EGG Crimp contacts

Fig. 1

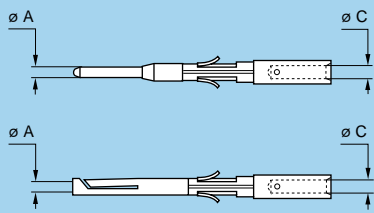
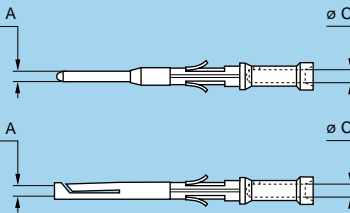
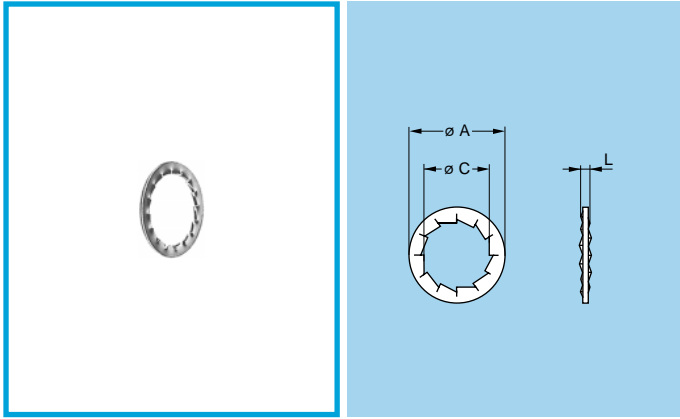


Fig. 2



|                  | Types            | ø A (mm) | ø C (mm) | Contact part number |                |
|------------------|------------------|----------|----------|---------------------|----------------|
|                  |                  |          |          | Male                | Female         |
| <b>00</b>        | 302              | 0.5      | 0.45     | FGG.00.554.ZZC      | EGG.00.654.ZZM |
|                  | 303              | 0.5      | 0.45     | FGG.00.554.ZZC      | EGG.00.654.ZZM |
|                  | 304              | 0.5      | 0.45     | FGG.00.554.ZZC      | EGG.00.654.ZZM |
| <b>0B<br/>0K</b> | 302/303          | 0.9      | 1.10     | FGG.0B.560.ZZC      | EGG.0B.660.ZZM |
|                  | 304/305          | 0.7      | 0.80     | FGG.0B.555.ZZC      | EGG.0B.655.ZZM |
|                  | 306/307/309      | 0.5      | 0.45     | FGG.0B.554.ZZC      | —              |
| <b>0S</b>        | 302              | 0.9      | 1.10     | FGG.0B.560.ZZC      | EGG.0B.660.ZZM |
|                  | 304              | 0.7      | 0.80     | FGG.0B.555.ZZC      | EGG.0B.655.ZZM |
| <b>1B<br/>1K</b> | 302/303          | 1.3      | 1.40     | FGG.1B.565.ZZC      | EGG.1B.665.ZZM |
|                  | 304/305          | 0.9      | 1.10     | FGG.1B.560.ZZC      | EGG.1B.660.ZZM |
|                  | 306/307/308      | 0.7      | 0.80     | FGG.1B.555.ZZC      | EGG.1B.655.ZZM |
| <b>1S</b>        | 310/314/316      | 0.5      | 0.45     | FGG.1B.554.ZZC      | —              |
|                  | 302              | 1.3      | 1.40     | FGG.1B.565.ZZC      | EGG.1B.665.ZZM |
|                  | 304              | 0.9      | 1.10     | FGG.1B.560.ZZC      | EGG.1B.660.ZZM |
| <b>2B<br/>2K</b> | 302              | 2.0      | 2.40     | FGG.2B.575.ZZC      | EGG.2B.675.ZZM |
|                  | 303              | 1.6      | 1.90     | FGG.2B.570.ZZC      | EGG.2B.670.ZZM |
|                  | 304/305          | 1.3      | 1.40     | FGG.2B.565.ZZC      | EGG.2B.665.ZZM |
|                  | 306/307          | 1.3      | 1.40     | FGG.2B.565.ZZC      | EGG.2B.665.ZZM |
|                  | 308/310          | 0.9      | 1.10     | FGG.2B.560.ZZC      | EGG.2B.660.ZZM |
|                  | 312/314/316      | 0.7      | 0.80     | FGG.2B.555.ZZC      | EGG.2B.655.ZZM |
|                  | 318/319          | 0.7      | 0.80     | FGG.2B.555.ZZC      | EGG.2B.655.ZZM |
| <b>2S</b>        | 306              | 1.3      | 1.40     | FGG.2B.565.ZZC      | EGG.2B.665.ZZM |
| <b>3B<br/>3K</b> | 302              | 3.0      | 2.90     | FGG.3B.580.ZZC      | EGG.3B.680.ZZM |
|                  | 303/304/309      | 2.0      | 2.40     | FGG.3B.575.ZZC      | EGG.3B.675.ZZM |
|                  | 305/306/307      | 1.6      | 1.90     | FGG.3B.570.ZZC      | EGG.3B.670.ZZM |
|                  | 308/309/310      | 1.3      | 1.40     | FGG.3B.565.ZZC      | EGG.3B.665.ZZM |
|                  | 312/314          | 0.9      | 1.10     | FGG.3B.560.ZZC      | EGG.3B.660.ZZM |
|                  | 316/318          | 0.9      | 1.10     | FGG.3B.560.ZZC      | EGG.3B.660.ZZM |
|                  | 320/322/324      | 0.7      | 0.80     | FGG.3B.555.ZZC      | EGG.3B.655.ZZM |
|                  | 326/330          | 0.7      | 0.80     | FGG.3B.555.ZZC      | EGG.3B.655.ZZM |
|                  | <b>4B<br/>4K</b> | 304      | 3.0      | 2.90                | FGG.4B.580.ZZC |
| 306/307          |                  | 2.0      | 2.40     | FGG.4B.575.ZZC      | EGG.4B.675.ZZM |
| 310              |                  | 1.6      | 1.90     | FGG.4B.570.ZZC      | EGG.4B.670.ZZM |
| 312              |                  | 1.3      | 1.40     | FGG.4B.565.ZZC      | EGG.4B.665.ZZM |
| 316/320          |                  | 0.9      | 1.10     | FGG.4B.560.ZZC      | EGG.4B.660.ZZM |
| 324/330          |                  | 0.9      | 1.10     | FGG.4B.560.ZZC      | EGG.4B.660.ZZM |
| 340/348          |                  | 0.7      | 0.80     | FGG.4B.555.ZZC      | EGG.4B.655.ZZM |
| <b>5B<br/>5K</b> | 304              | 4.0      | 4.00     | FGG.5B.582.ZZC      | EGG.5B.682.ZZM |
|                  | 310              | 3.0      | 2.90     | FGG.5B.580.ZZC      | EGG.5B.680.ZZM |
|                  | 314/316          | 2.0      | 2.40     | FGG.5B.575.ZZC      | EGG.5B.675.ZZM |
|                  | 320              | 1.6      | 1.90     | FGG.5B.570.ZZC      | EGG.5B.670.ZZM |
|                  | 330/340/348      | 1.3      | 1.40     | FGG.5B.565.ZZC      | EGG.5B.665.ZZM |
|                  | 350/354/364      | 0.9      | 1.10     | FGG.5B.560.ZZC      | EGG.5B.660.ZZM |

|                  | Types            | ø A (mm) | ø C (mm) | Contact part number |                |
|------------------|------------------|----------|----------|---------------------|----------------|
|                  |                  |          |          | Male                | Female         |
| <b>0B<br/>0K</b> | 302/303          | 0.9      | 0.80     | FGG.0B.561.ZZC      | EGG.0B.661.ZZM |
|                  | 302/303          | 0.9      | 0.45     | FGG.0B.562.ZZC      | EGG.0B.662.ZZM |
|                  | 304/305          | 0.7      | 0.45     | FGG.0B.556.ZZC      | EGG.0B.656.ZZM |
| <b>0S</b>        | 302              | 0.9      | 0.80     | FGG.0B.561.ZZC      | EGG.0B.661.ZZM |
|                  | 302              | 0.9      | 0.45     | FGG.0B.562.ZZC      | EGG.0B.662.ZZM |
|                  | 304              | 0.7      | 0.45     | FGG.0B.556.ZZC      | EGG.0B.656.ZZM |
| <b>1B<br/>1K</b> | 302/303          | 1.3      | 1.10     | FGG.1B.566.ZZC      | EGG.1B.666.ZZM |
|                  | 304/305          | 0.9      | 0.80     | FGG.1B.561.ZZC      | EGG.1B.661.ZZM |
|                  | 306/307/308      | 0.7      | 0.45     | FGG.1B.556.ZZC      | EGG.1B.656.ZZM |
| <b>1S</b>        | 302              | 1.3      | 1.10     | FGG.1B.566.ZZC      | EGG.1B.666.ZZM |
|                  | 304              | 0.9      | 0.80     | FGG.1B.561.ZZC      | EGG.1B.661.ZZM |
| <b>2B<br/>2K</b> | 302              | 2.0      | 1.90     | FGG.2B.576.ZZC      | EGG.2B.676.ZZM |
|                  | 303              | 1.6      | 1.40     | FGG.2B.571.ZZC      | EGG.2B.671.ZZM |
|                  | 304/305          | 1.3      | 1.10     | FGG.2B.566.ZZC      | EGG.2B.666.ZZM |
|                  | 306/307          | 1.3      | 1.10     | FGG.2B.566.ZZC      | EGG.2B.666.ZZM |
|                  | 304/305          | 1.3      | 0.80     | FGG.2B.567.ZZC      | EGG.2B.667.ZZM |
|                  | 306/307          | 1.3      | 0.80     | FGG.2B.567.ZZC      | EGG.2B.667.ZZM |
|                  | 308/310          | 0.9      | 0.80     | FGG.2B.561.ZZC      | EGG.2B.661.ZZM |
|                  | 308/310          | 0.9      | 0.45     | FGG.2B.562.ZZC      | EGG.2B.662.ZZM |
|                  | 312/314/316      | 0.7      | 0.45     | FGG.2B.556.ZZC      | EGG.2B.656.ZZM |
|                  | 318/319          | 0.7      | 0.45     | FGG.2B.556.ZZC      | EGG.2B.656.ZZM |
| <b>2S</b>        | 306              | 1.3      | 1.10     | FGG.2B.566.ZZC      | EGG.2B.666.ZZM |
|                  | 306              | 1.3      | 0.80     | FGG.2B.567.ZZC      | EGG.2B.667.ZZM |
| <b>3B<br/>3K</b> | 303/304/309      | 2.0      | 1.90     | FGG.3B.576.ZZC      | EGG.3B.676.ZZM |
|                  | 305/306/307      | 1.6      | 1.40     | FGG.3B.571.ZZC      | EGG.3B.671.ZZM |
|                  | 308/309/310      | 1.3      | 1.10     | FGG.3B.566.ZZC      | EGG.3B.666.ZZM |
|                  | 312/314          | 0.9      | 0.80     | FGG.3B.561.ZZC      | EGG.3B.661.ZZM |
|                  | 316/318          | 0.9      | 0.80     | FGG.3B.561.ZZC      | EGG.3B.661.ZZM |
|                  | 320/322/324      | 0.7      | 0.45     | FGG.3B.556.ZZC      | EGG.3B.656.ZZM |
|                  | 326/330          | 0.7      | 0.45     | FGG.3B.556.ZZC      | EGG.3B.656.ZZM |
|                  | <b>4B<br/>4K</b> | 306/307  | 2.0      | 1.90                | FGG.4B.576.ZZC |
| 310              |                  | 1.6      | 1.40     | FGG.4B.571.ZZC      | EGG.4B.671.ZZM |
| 312              |                  | 1.3      | 1.10     | FGG.4B.566.ZZC      | EGG.4B.666.ZZM |
| 316/320          |                  | 0.9      | 0.80     | FGG.4B.561.ZZC      | EGG.4B.661.ZZM |
| 324/330          |                  | 0.9      | 0.80     | FGG.4B.561.ZZC      | EGG.4B.661.ZZM |
| 340/348          |                  | 0.7      | 0.45     | FGG.4B.556.ZZC      | EGG.4B.656.ZZM |
| <b>5B<br/>5K</b> | 314/316          | 2.0      | 1.90     | FGG.5B.576.ZZC      | EGG.5B.676.ZZM |
|                  | 320              | 1.6      | 1.40     | FGG.5B.571.ZZC      | EGG.5B.671.ZZM |
|                  | 330/340/348      | 1.3      | 0.80     | FGG.5B.567.ZZC      | EGG.5B.667.ZZM |
|                  | 350/354/364      | 0.9      | 0.80     | FGG.5B.561.ZZC      | EGG.5B.661.ZZM |

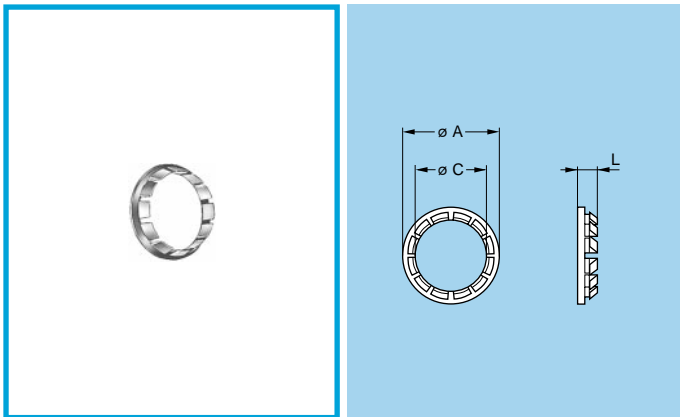


- Material: Nickel-plated bronze (3  $\mu\text{m}$ )

## GBA Locking washers

| Part number   | Series         | Dimensions (mm) |      |     |
|---------------|----------------|-----------------|------|-----|
|               |                | A               | C    | L   |
| GBA.00.250.FN | 00             | 9.5             | 7.1  | 1.0 |
| GBA.0S.250.FN | 0S-0B          | 12.5            | 9.1  | 1.0 |
| GBA.1S.250.FN | 1S-1B<br>1D    | 16.0            | 12.1 | 1.0 |
| GBA.1E.250.FN | 1E-1K          | 21.8            | 16.1 | 1.2 |
| GBA.2S.250.FN | 2S-2B<br>2C-2G | 19.5            | 15.1 | 1.2 |
| GBA.3S.250.FN | 3S-3B          | 25.0            | 18.1 | 1.4 |
| GBA.4S.250.FN | 4S-4B          | 32.0            | 25.1 | 1.4 |

**Note:** to order this accessory separately, use the above part numbers.

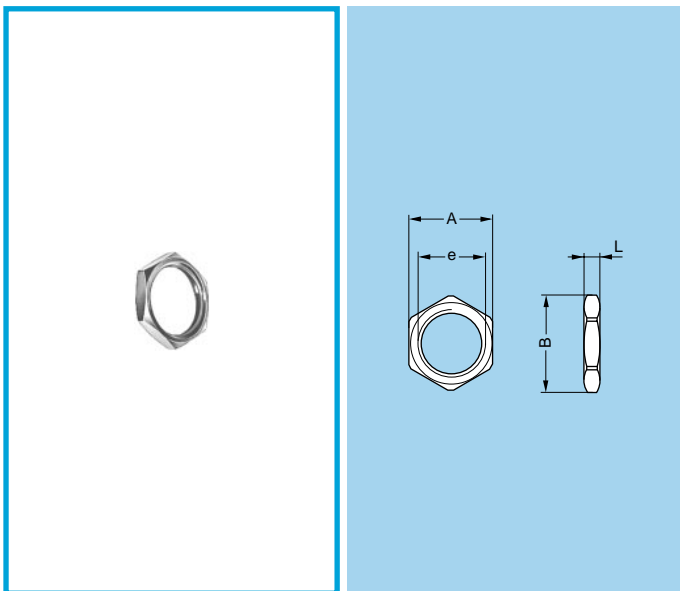


- Material: Nickel-plated brass (3  $\mu\text{m}$ )

## GBB Tapered washers

| Part number   | Series         | Dimensions (mm) |      |     |
|---------------|----------------|-----------------|------|-----|
|               |                | A               | C    | L   |
| GBB.00.250.LN | 00             | 9               | 7.1  | 2.0 |
| GBB.0S.250.LN | 0S-0B          | 11              | 9.1  | 2.5 |
| GBB.1S.250.LN | 1S-1B          | 15              | 12.1 | 3.5 |
| GBB.2S.250.LN | 2S-2B<br>2C-2G | 18              | 15.1 | 4.0 |
| GBB.3S.250.LN | 3S-3B          | 22              | 18.1 | 4.5 |
| GBB.4S.250.LN | 4S-4B          | 28              | 25.2 | 5.0 |
| GBB.5S.250.LN | 5S-5B          | 40              | 35.2 | 7.5 |

**Note:** sockets of series 5B and 5S are always supplied with a tapered washer. To order this accessory separately, use the above part numbers.

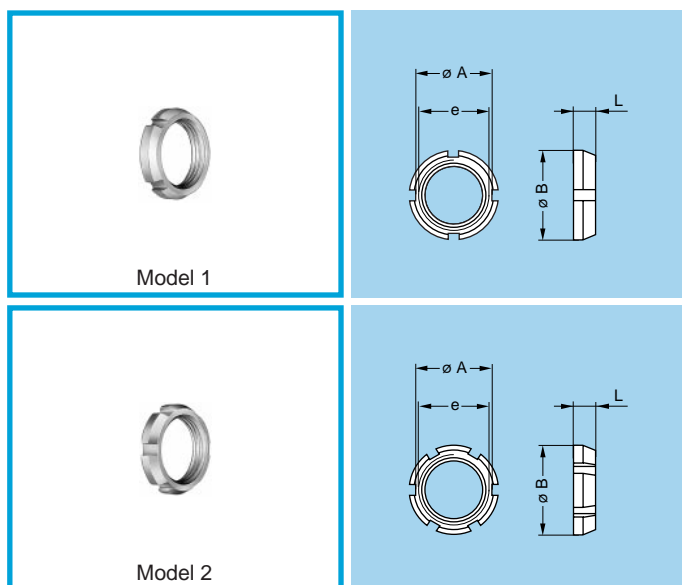


- Material:
  - Nickel-plated brass (3  $\mu\text{m}$ )
  - Natural anodized aluminium alloy
  - Stainless steel

## GEA Hexagonal nuts

| Part number   | Series            | Dimensions (mm) |      |            |     |
|---------------|-------------------|-----------------|------|------------|-----|
|               |                   | A               | B    | e          | L   |
| GEA.00.240.LN | 00                | 9               | 10.2 | M7 x 0.50  | 2.0 |
| GEA.0S.240.LN | 0S-0B             | 11              | 12.4 | M9 x 0.60  | 2.0 |
| GEA.0S.241.LN | 0S-0B             | 12              | 13.8 | M10 x 0.75 | 2.5 |
| GEA.0E.240.LN | 0E-0K-0L<br>1S-1B | 17              | 19.2 | M14 x 1.00 | 2.5 |
| GEA.1S.240.LN | 1S-1B-1D          | 14              | 15.8 | M12 x 1.00 | 2.5 |
| GEA.1E.240.LN | 1E-1K-1L<br>2S-2B | 19              | 21.5 | M16 x 1.00 | 3.0 |
| GEA.2S.240.LN | 2S-2B             | 17              | 19.2 | M15 x 1.00 | 2.7 |
| GEA.2E.240.LN | 2E-2K-2L          | 24              | 27.0 | M20 x 1.00 | 4.0 |
| GEA.3S.240.LN | 3S-3B             | 22              | 25.0 | M18 x 1.00 | 3.0 |
| GEA.3E.240.LN | 3E-3K             | 30              | 34.0 | M24 x 1.00 | 5.0 |
| GEA.4S.240.LN | 4S-4B             | 30              | 34.0 | M25 x 1.00 | 5.0 |
| GEA.4E.240.LN | 4E-4K             | 36              | 40.5 | M30 x 1.00 | 7.0 |

**Note:** to order this part separately, use the above part numbers. The last letters «LN» of the part number refer to the nut material and treatment. If a nut in aluminium alloy or stainless steel is desired, replace the last letters of the part number by «PT» or «AZ» respectively.

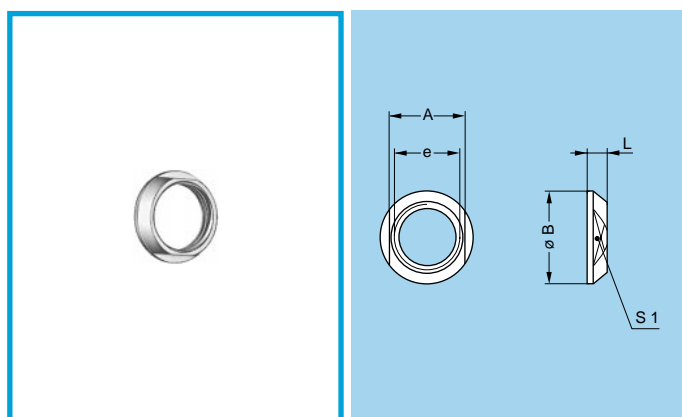


### GEG Notched nut

| Part number   | Model | Dimensions (mm) |    |           |     |
|---------------|-------|-----------------|----|-----------|-----|
|               |       | A               | B  | e         | L   |
| GEG.00.240.LC | 1     | 8.6             | 10 | M7 x 0.5  | 2.5 |
| GEG.0S.240.LC | 1     | 10.5            | 12 | M9 x 0.6  | 2.5 |
| GEG.0E.240.LC | 1     | 15.8            | 18 | M14 x 1.0 | 3.5 |
| GEG.1S.240.LC | 1     | 14.0            | 16 | M12 x 1.0 | 3.5 |
| GEG.1E.240.LC | 2     | 17.5            | 20 | M16 x 1.0 | 3.5 |
| GEG.1S.242.LC | 1     | 12.1            | 14 | M11 x 0.5 | 3.5 |
| GEG.2S.240.LC | 2     | 17.5            | 20 | M15 x 1.0 | 3.5 |
| GEG.2S.241.LC | 2     | 20.5            | 24 | M19 x 1.0 | 3.5 |
| GEG.2E.240.LC | 2     | 22.5            | 25 | M20 x 1.0 | 3.5 |

● Material: Chrome-plated brass (Ni 3  $\mu$ m + Cr 0.3  $\mu$ m)

**Note:** 00, 0B, 0S, 1B, 1S, 2B and 2S series fixed and free sockets for back panel mounting are always delivered with this notched nut. To order this accessory separately, use the above part numbers.

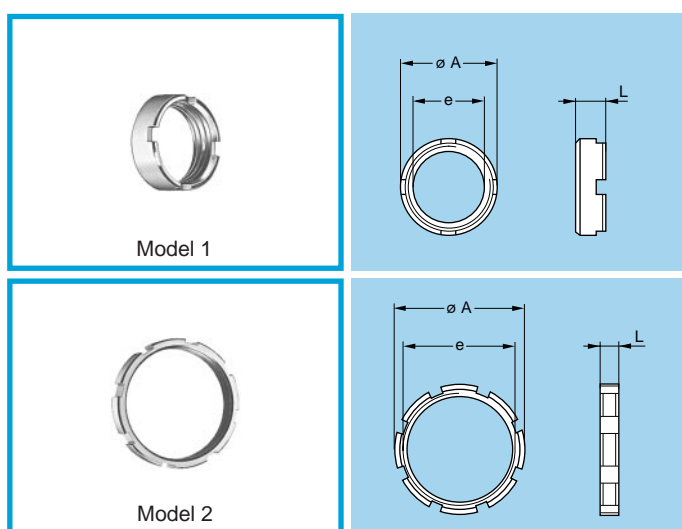


### GEC Conical nuts

| Part number   | Dimensions (mm) |      |           |     |    |
|---------------|-----------------|------|-----------|-----|----|
|               | A               | B    | e         | L   | S1 |
| GEC.00.240.LC | 8               | 10.0 | M7 x 0.5  | 2.5 | 8  |
| GEC.0S.240.LC | 10              | 12.0 | M9 x 0.6  | 2.5 | 10 |
| GEC.0E.240.LC | 16              | 18.0 | M14 x 1.0 | 3.0 | 16 |
| GEC.1S.240.LC | 13              | 16.0 | M12 x 1.0 | 3.2 | 13 |
| GEC.1S.241.LC | 17              | 20.0 | M16 x 1.0 | 4.0 | 17 |
| GEC.1S.242.LC | 12              | 14.0 | M11 x 0.5 | 3.2 | 12 |
| GEC.2S.240.LC | 17              | 20.0 | M15 x 1.0 | 3.8 | 17 |
| GEC.2S.241.LC | 20              | 24.0 | M19 x 1.0 | 5.8 | 20 |
| GEC.2E.240.LC | 22              | 25.0 | M20 x 1.0 | 5.0 | 22 |
| GEC.3S.240.LC | 20              | 24.0 | M18 x 1.0 | 4.5 | 20 |
| GEC.3E.240.LC | 27              | 30.0 | M24 x 1.0 | 4.5 | 27 |
| GEC.4S.240.LC | 27              | 30.0 | M25 x 1.0 | 4.5 | 27 |
| GEC.4K.241.LC | 32              | 35.5 | M30 x 1.0 | 5.0 | 32 |
| GEC.5S.240.LC | 37              | 41.0 | M35 x 1.0 | 5.0 | 37 |

● Material: Chrome-plated brass (Ni 3  $\mu$ m + Cr 0.3  $\mu$ m)

**Note:** 3B, 3K, 3S, 3E, 4B, 4K, 4S, 4E, 5B, 5K, 5S, 5E, 6S and 6E series fixed and free sockets for back panel mounting are always delivered with a conical nut. To order this accessory separately, use the part numbers in the adjacent table.



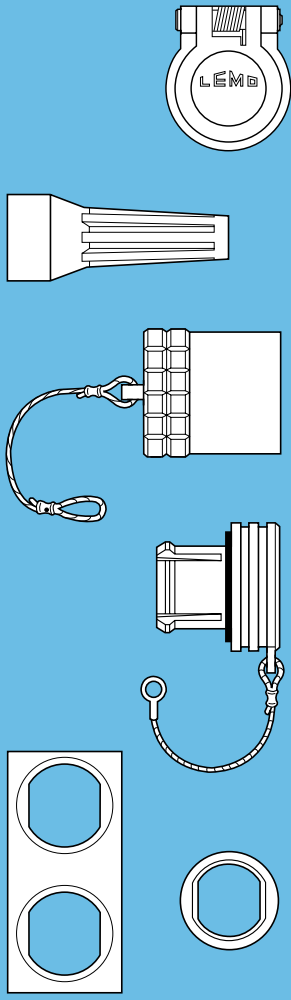
### GEB Round nuts

| Part number   | Model | Dimensions (mm) |            |     |
|---------------|-------|-----------------|------------|-----|
|               |       | A               | e          | L   |
| GEB.00.240.LN | 1     | 9.0             | M7 x 0.50  | 4.0 |
| GEB.0S.240.LN | 1     | 11.0            | M9 x 0.60  | 4.0 |
| GEB.0E.240.LN | 1     | 18.0            | M14 x 1.00 | 5.0 |
| GEB.1S.240.LN | 1     | 14.0            | M12 x 1.00 | 5.0 |
| GEB.1E.240.LN | 1     | 20.0            | M16 x 1.00 | 5.0 |
| GEB.2S.240.LN | 1     | 18.0            | M15 x 1.00 | 5.5 |
| GEB.2B.240.LN | 2     | 17.5            | M15 x 0.75 | 2.5 |
| GEB.3S.240.LN | 1     | 22.0            | M18 x 1.00 | 5.5 |
| GEB.4S.240.LN | 1     | 28.0            | M25 x 1.00 | 6.0 |
| GEB.5S.240.LN | 2     | 40.0            | M35 x 1.00 | 8.0 |
| GEB.5E.240.LN | 2     | 54.0            | M45 x 1.50 | 8.0 |
| GEB.6S.241.LN | 2     | 54.0            | M48 x 1.50 | 8.0 |
| GEB.6E.240.LN | 2     | 65.0            | M55 x 2.00 | 9.0 |

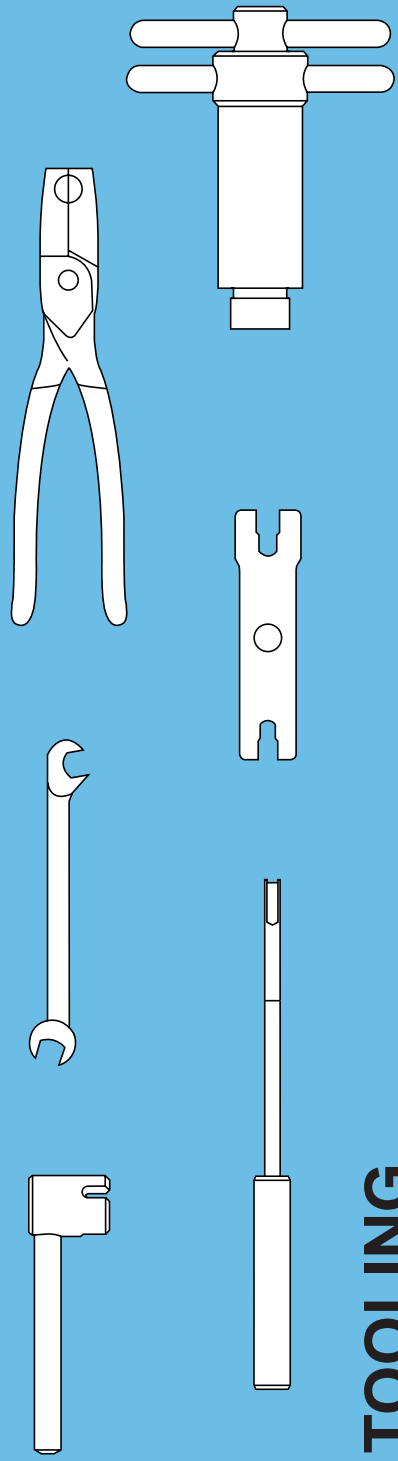
● Material: Nickel-plated brass (3  $\mu$ m)

**Note:** 5B, 5K, 5S, 5E, 6S and 6E series sockets are always supplied with model 2 round nuts. To order this accessory separately, use the part numbers in the adjacent table.



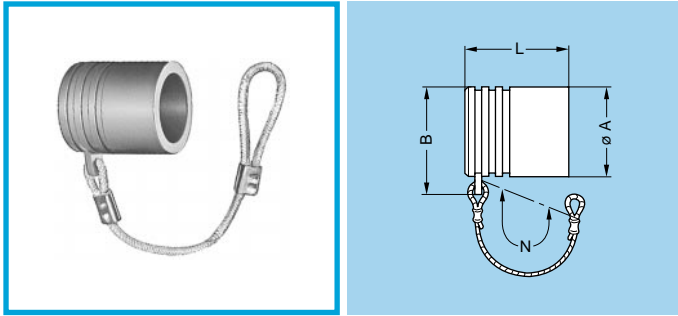


## ACCESSORIES

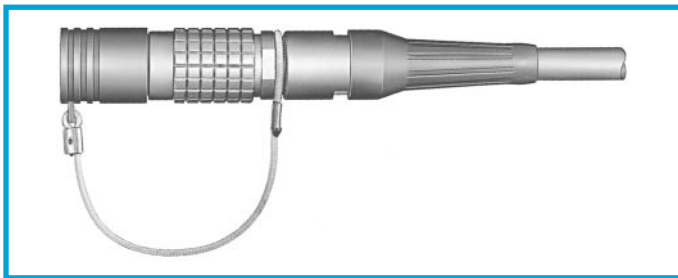


## TOOLING

# Accessories



- Body material: Polyoxymethylene (POM) grey (or black)
- Cord material: Polyamide 6, grey (or black)
- Gasket material: Silicone rubber
- Maximum operating temperature: 100°C
- Watertightness: IP61 according to IEC 60529



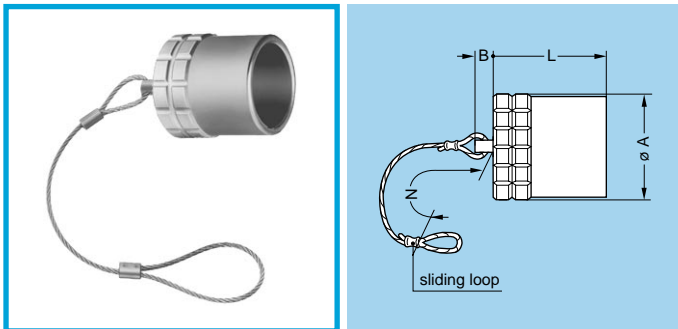
## BFG Plug caps

| Part number     | Series      | Dimensions (mm) |      |      |    |
|-----------------|-------------|-----------------|------|------|----|
|                 |             | A               | B    | L    | N  |
| BFG.00.100.PCSG | 00          | 7.5             | 9.8  | 10.0 | 60 |
| BFG.0B.100.PCSG | 0S-0B       | 9.5             | 12.0 | 12.2 | 85 |
| BFG.1B.100.PCSG | 1S-1B<br>1D | 12.0            | 15.0 | 13.8 | 85 |
| BFG.2B.100.PCSG | 2S-2B       | 15.0            | 18.0 | 15.0 | 85 |
| BFG.3B.100.PCSG | 3S-3B       | 18.5            | 22.0 | 18.5 | 95 |

**Note:** this cap is available only with an alignment key (G). Upon request this cap can be supplied in black and the last letter «G» of the part number should be replaced with «N».

## Fitting the cord

Slide the plug into the loop of the cord.  
Place the loop into the groove in front of the collet nut and tighten the loop.

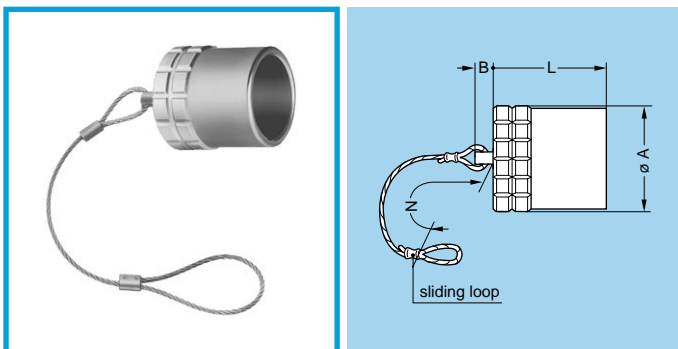


- Body material: Nickel-plated brass (Ni 3µm)
- Lanyard material: Stainless steel
- Crimp ferrule material: Nickel-plated brass + polyolefin
- O-ring material: Silicone rubber or FPM
- Maximum operating temperature: 135°C
- Watertightness: IP68 according to IEC 60529 for E series

## BFA Plug caps

| Part number    | Series | Dimensions (mm) |    |      |     |
|----------------|--------|-----------------|----|------|-----|
|                |        | A               | B  | L    | N   |
| BFA.0E.100.NAS | 0E     | 14.0            | 6  | 12.5 | 85  |
| BFA.1E.100.NAS | 1E     | 16.0            | 6  | 15.5 | 85  |
| BFA.2E.100.NAS | 2E     | 19.5            | 6  | 17.5 | 85  |
| BFA.3E.100.NAS | 3E     | 23.0            | 6  | 22.0 | 120 |
| BFA.4E.100.NAS | 4E     | 29.0            | 10 | 22.5 | 120 |
| BFA.4S.100.NAS | 4S     | 25.0            | 10 | 22.2 | 120 |
| BFA.5E.100.NAS | 5E     | 44.0            | 10 | 27.0 | 150 |
| BFA.5S.100.NAS | 5S     | 36.0            | 10 | 30.2 | 150 |
| BFA.6S.100.NAS | 6S     | 46.0            | 10 | 33.0 | 150 |

**Note:** the last letter «S» of the part number stands for the material of the O-ring (silicone rubber). O-ring's made from FPM are also available; if required, replace the letter «S» by «V».



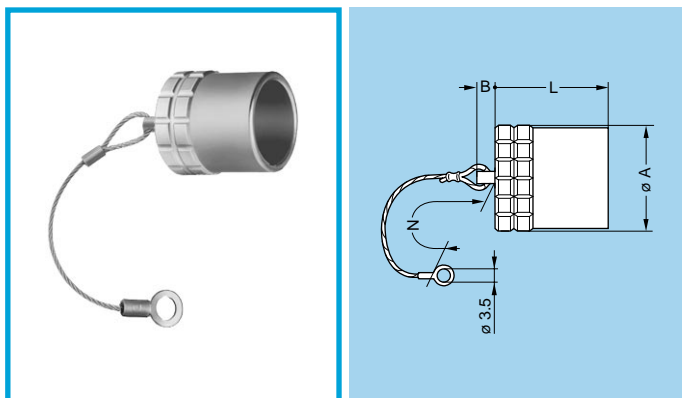
- Body material: Nickel-plated brass (Ni 3µm)
- Lanyard material: Stainless steel
- Crimp ferrule material: Nickel-plated brass + polyolefin
- O-ring material: Silicone rubber or FPM
- Maximum operating temperature: 135°C
- Watertightness: IP68 according to IEC 60529 for E and K series

## BFG Plug caps with key (G)

| Part number    | Series | Dimensions (mm) |    |      |     |
|----------------|--------|-----------------|----|------|-----|
|                |        | A               | B  | L    | N   |
| BFG.0K.100.NAS | 0K-0L  | 14.0            | 6  | 12.5 | 85  |
| BFG.1K.100.NAS | 1K-1L  | 16.0            | 6  | 15.5 | 85  |
| BFG.2K.100.NAS | 2K-2L  | 19.5            | 6  | 17.5 | 85  |
| BFG.3K.100.NAS | 3K     | 23.0            | 6  | 22.0 | 120 |
| BFG.4B.100.NAS | 4B     | 25.0            | 10 | 20.2 | 120 |
| BFG.4K.100.NAS | 4K     | 29.0            | 10 | 22.5 | 120 |
| BFG.5B.100.NAS | 5B     | 36.0            | 10 | 27.2 | 150 |
| BFG.5K.100.NAS | 5K     | 44.0            | 10 | 27.0 | 150 |
| BFG.6E.100.NAS | 6E     | 54.0            | 10 | 31.0 | 150 |

**Note:** this cap is available only with an alignment key (G). The last letter «S» of the part number stands for the material of the O-ring (silicone rubber). O-ring's made from FPM are also available; if required, replace the letter «S» by «V».



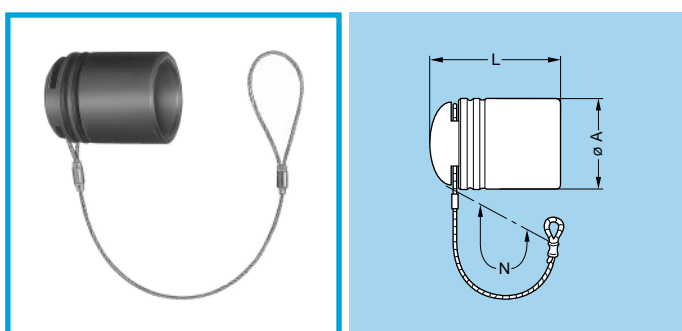


- Body material: Nickel-plated brass (Ni 3µm)
- Lanyard material: Stainless steel
- Crimp ferrule material: Nickel-plated brass + polyolefin
- O-ring material: Silicone rubber or FPM
- Maximum operating temperature: 135°C
- Watertightness: IP68 according to IEC 60529 for E and K series

### BHG Plug caps, nut fixing or flange

| Part number    | Series | Dimensions (mm) |    |      |     |
|----------------|--------|-----------------|----|------|-----|
|                |        | A               | B  | L    | N   |
| BHG.0K.100.NAS | 0K-0L  | 14.0            | 6  | 12.5 | 85  |
| BHG.1K.100.NAS | 1K-1L  | 16.0            | 6  | 15.5 | 85  |
| BHG.2K.100.NAS | 2K-2L  | 19.5            | 6  | 17.5 | 85  |
| BHG.3K.100.NAS | 3K     | 23.0            | 6  | 22.0 | 120 |
| BHG.4B.100.NAS | 4B     | 25.0            | 10 | 20.2 | 120 |
| BHG.4K.100.NAS | 4K     | 29.0            | 10 | 22.5 | 120 |
| BHG.5B.100.NAS | 5B     | 36.0            | 10 | 27.2 | 150 |
| BHG.5K.100.NAS | 5K     | 44.0            | 10 | 27.0 | 150 |
| BHG.6E.100.NAS | 6E     | 54.0            | 10 | 31.0 | 150 |

**Note:** this cap is available only with an alignment key (G). The last letter «S» of the part number stands for the material of the O-ring (silicone rubber). O-ring's made from FPM are also available; if required, replace the letter «S» by «V».

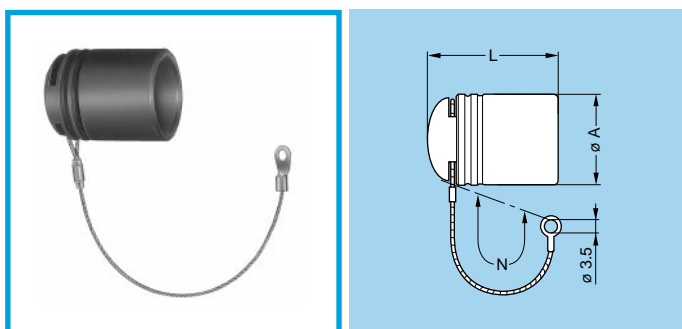


### BFG Plug cap

| Part number    | Series | Dimensions (mm) |    |     |
|----------------|--------|-----------------|----|-----|
|                |        | A               | L  | N   |
| BFG.3K.100.EAN | 3K     | 24              | 30 | 155 |

- Material: black EPDM
- Lanyard material: Stainless steel
- Crimp ferrule material: Nickel-plated brass + polyolefin

**Note:** These caps are suitable for use with any alignment key configuration.

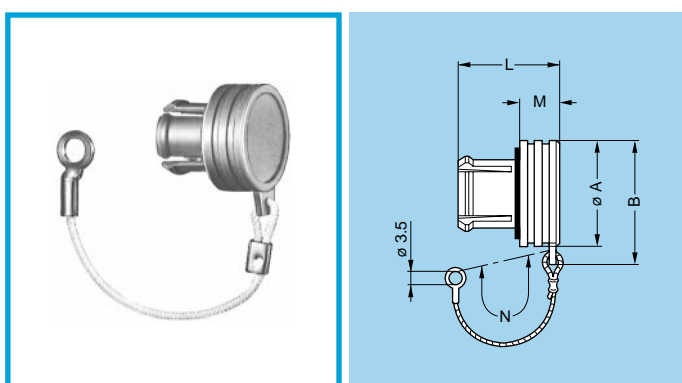


### BHA Plug cap

| Part number    | Series | Dimensions (mm) |    |     |
|----------------|--------|-----------------|----|-----|
|                |        | A               | L  | N   |
| BHA.3K.100.EAN | 3K     | 24              | 30 | 120 |

- Material: black EPDM
- Lanyard material: Stainless steel
- Crimp ferrule material: Nickel-plated brass + polyolefin

**Note:** These caps are suitable for use with any alignment key configuration.

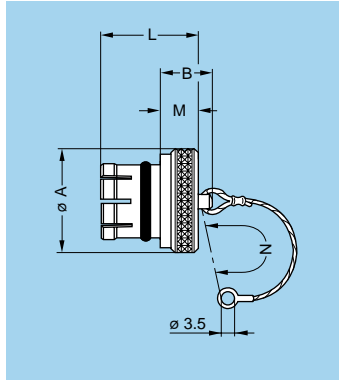


- Body material: Polyoxymethylene (POM) grey (or black)
- Cord material: Polyamide 6, grey (or black)
- Gasket material: Silicone rubber
- Maximum operating temperature: 100°C
- Watertightness: IP61 according to IEC 60529

### BRA Blanking caps for fixed sockets and free straight sockets

| Part number     | Series         | Dimensions (mm) |      |      |     |    |
|-----------------|----------------|-----------------|------|------|-----|----|
|                 |                | A               | B    | L    | M   | N  |
| BRA.00.200.PCSG | 00             | 7.5             | 9.8  | 9.0  | 3.5 | 60 |
| BRA.0B.200.PCSG | 0S-0B          | 10.0            | 12.5 | 11.0 | 4.8 | 60 |
| BRA.1B.200.PCSG | 1S-1B<br>1D    | 14.0            | 17.0 | 13.5 | 5.6 | 60 |
| BRA.2B.200.PCSG | 2S-2B<br>2C-2G | 18.0            | 21.0 | 14.5 | 6.0 | 60 |
| BRA.3B.200.PCSG | 3S-3B          | 22.0            | 25.5 | 17.0 | 7.0 | 60 |

**Note:** these caps are suitable for use with any alignment key configuration. On request this cap can be supplied in black. If so, replace the last letter «G» of the part number by «N».

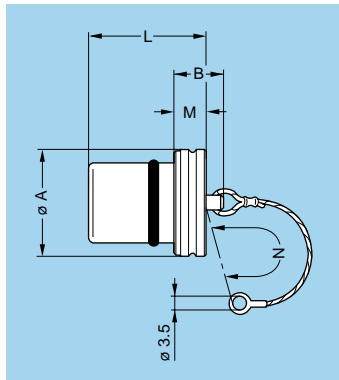


- Body material: Nickel-plated brass (Ni 3 μm)
- Lanyard material: Stainless steel
- Crimp ferrule material: Nickel-plated brass + polyolefin
- O-ring material: Silicone rubber or FPM
- Maximum operating temperature: 135°C
- Watertightness: IP61 according to IEC 60529 for S series

### BRE Blanking caps for fixed and free sockets

| Part number    | Series      | Dimensions (mm) |      |      |      |     |
|----------------|-------------|-----------------|------|------|------|-----|
|                |             | A               | B    | L    | M    | N   |
| BRE.00.200.NAS | 00          | 8               | 7.5  | 8.8  | 3.5  | 60  |
| BRE.0S.200.NAS | 0S-0B       | 10              | 9.5  | 10.5 | 4.5  | 85  |
| BRE.1S.200.NAS | 1S-1B<br>1D | 14              | 11.0 | 12.5 | 5.0  | 85  |
| BRE.2S.200.NAS | 2S-2B       | 18              | 12.0 | 14.0 | 6.0  | 85  |
| BRE.3S.200.NAS | 3S-3B       | 22              | 14.0 | 18.0 | 8.0  | 120 |
| BRE.4S.200.NAS | 4S-4B       | 28              | 20.0 | 23.0 | 10.0 | 120 |
| BRE.5S.200.NAS | 5S-5B       | 40              | 22.0 | 30.0 | 12.0 | 150 |
| BRE.6S.200.NAS | 6S          | 54              | 22.0 | 30.0 | 12.0 | 150 |
| BRE.6E.200.NAS | 6E          | 57              | 24.0 | 31.5 | 14.0 | 150 |

**Note:** these caps are suitable for use with any alignment key configuration. The last letter «S» of the part number stands for the O-ring material (silicone rubber). O-ring's made from FPM are also available; if required, replace the letter «S» by «V».

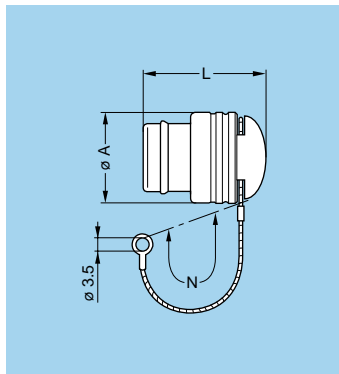


- Body material: Nickel-plated brass (Ni 3 μm)
- Lanyard material: Stainless steel
- Crimp ferrule material: Nickel-plated brass + polyolefin
- O-ring material: Silicone rubber or FPM
- Maximum operating temperature: 135°C
- Watertightness: IP68 according to IEC 60529

### BRE Blanking caps for fixed and free sockets

| Part number    | Series   | Dimensions (mm) |    |      |    |     |
|----------------|----------|-----------------|----|------|----|-----|
|                |          | A               | B  | L    | M  | N   |
| BRE.0K.200.NAS | 0K-0E-0L | 15.0            | 10 | 15.0 | 4  | 85  |
| BRE.1K.200.NAS | 1K-1E-1L | 17.0            | 12 | 20.0 | 6  | 85  |
| BRE.2K.200.NAS | 2K-2E-2L | 20.5            | 14 | 24.0 | 8  | 85  |
| BRE.3K.200.NAS | 3K-3E    | 24.0            | 14 | 28.0 | 8  | 120 |
| BRE.4K.200.NAS | 4K-4E    | 30.0            | 20 | 30.5 | 10 | 120 |
| BRE.5K.200.NAS | 5K-5E    | 44.0            | 22 | 37.0 | 12 | 150 |

**Note:** these caps are suitable for use with any alignment key configuration. The last letter «S» of the part number stands for the O-ring material (silicone rubber). O-ring's made from FPM are also available; if required, replace the letter «S» by «V».

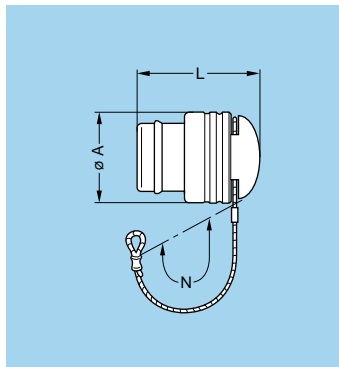


### BRA Blanking caps for free sockets

| Part number    | Series | Dimensions (mm) |    |     |
|----------------|--------|-----------------|----|-----|
|                |        | A               | L  | N   |
| BRA.3K.200.EAN | 3K     | 24              | 26 | 120 |

- Material: black EPDM
- Lanyard material: Stainless steel
- Crimp ferrule material: Nickel-plated brass + polyolefin

**Note:** These caps are suitable for use with any alignment key configuration.

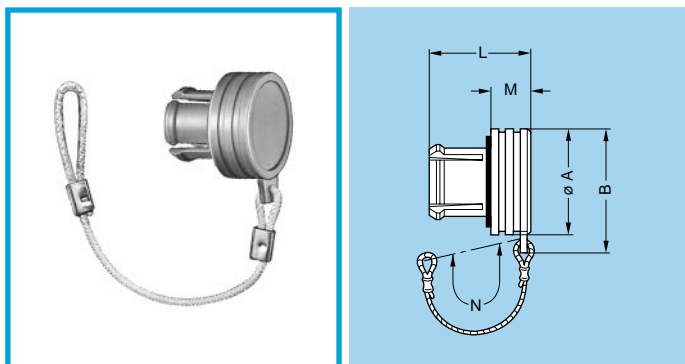


### BRF Blanking caps for free sockets

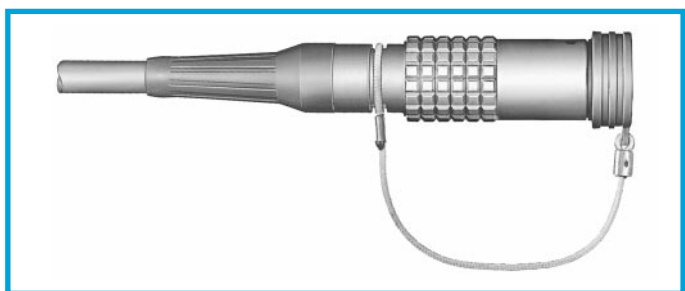
| Part number    | Series | Dimensions (mm) |    |     |
|----------------|--------|-----------------|----|-----|
|                |        | A               | L  | N   |
| BRF.3K.200.EAN | 3K     | 24              | 26 | 155 |

- Material: black EPDM
- Lanyard material: Stainless steel
- Crimp ferrule material: Nickel-plated brass + polyolefin

**Note:** These caps are suitable for use with any alignment key configuration.



- Body material: Polyoxymethylene (POM) grey (or black)
- Cord material: Polyamide 6, grey (or black)
- Gasket material: Silicone rubber
- Maximum operating temperature: 100°C
- Watertightness: IP61 according to IEC 60529



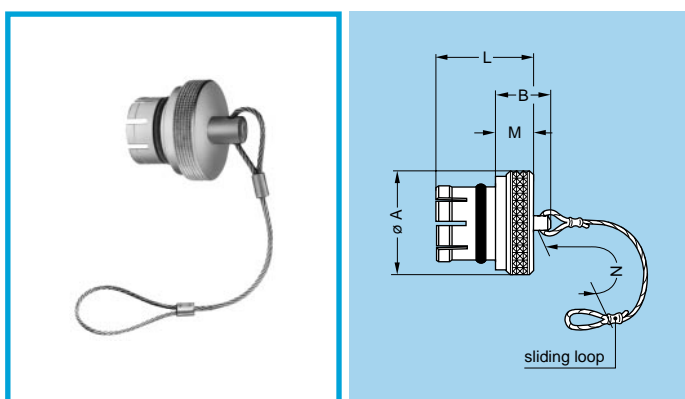
### BRD Blanking caps for free sockets

| Part number     | Series      | Dimensions (mm) |      |      |     |    |
|-----------------|-------------|-----------------|------|------|-----|----|
|                 |             | A               | B    | L    | M   | N  |
| BRD.00.200.PCSG | 00          | 7.5             | 9.8  | 9.0  | 3.5 | 85 |
| BRD.0B.200.PCSG | 0S-0B       | 10.0            | 12.5 | 11.0 | 4.8 | 85 |
| BRD.1B.200.PCSG | 1S-1B<br>1D | 14.0            | 17.0 | 13.5 | 5.6 | 85 |
| BRD.2B.200.PCSG | 2S-2B       | 18.0            | 21.0 | 14.5 | 6.0 | 85 |
| BRD.3B.200.PCSG | 3S-3B       | 22.0            | 25.5 | 17.0 | 7.0 | 95 |

**Note:** on request this cap is available in black. If required, replace the last letter «G» of the part number by «N».

### Fitting the cord

Slide the socket into the loop of the cord.  
Place the loop into the groove in front of the collet nut.  
Tighten the loop.

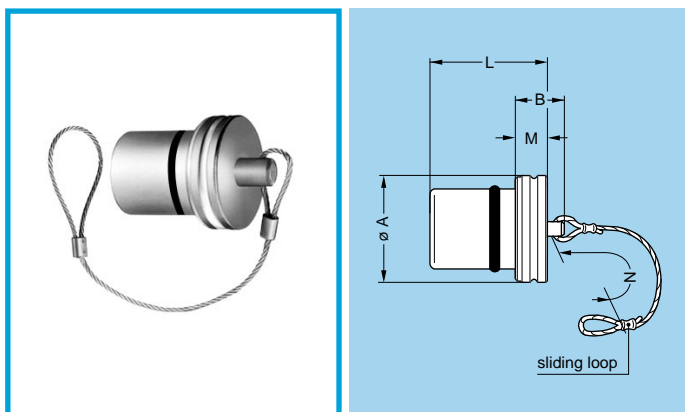


- Body material: Nickel-plated brass (Ni 3 µm)
- Lanyard material: Stainless steel
- Crimp ferrule material: Nickel-plated brass + polyolefin
- O-ring material: Silicone rubber or FPM
- Maximum operating temperature: 135°C
- Watertightness: IP61 according to IEC 60529 for S series

### BRF Blanking caps for free sockets

| Part number    | Series      | Dimensions (mm) |      |      |      |     |
|----------------|-------------|-----------------|------|------|------|-----|
|                |             | A               | B    | L    | M    | N   |
| BRF.00.200.NAS | 00          | 8               | 7.5  | 8.8  | 3.5  | 85  |
| BRF.0S.200.NAS | 0S-0B       | 10              | 9.5  | 10.5 | 4.5  | 85  |
| BRF.1S.200.NAS | 1S-1B<br>1D | 14              | 11.0 | 12.5 | 5.0  | 85  |
| BRF.2S.200.NAS | 2S-2B       | 18              | 12.0 | 14.0 | 6.0  | 85  |
| BRF.3S.200.NAS | 3S-3B       | 22              | 14.0 | 18.0 | 8.0  | 120 |
| BRF.4S.200.NAS | 4S-4B       | 28              | 20.0 | 23.0 | 10.0 | 120 |
| BRF.5S.200.NAS | 5S-5B       | 40              | 22.0 | 30.0 | 12.0 | 150 |
| BRF.6S.200.NAS | 6S          | 54              | 22.0 | 30.0 | 12.0 | 150 |

**Note:** these caps are suitable for use with any alignment key configuration. The last letter «S» of the part number stands for the O-ring material (silicone rubber). O-ring's made from FPM are also available; if required, replace the letter «S» by «V».



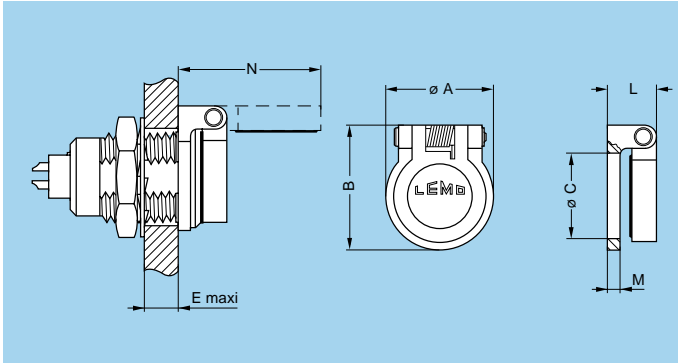
- Body material: Nickel-plated brass (Ni 3 µm)
- Lanyard material: Stainless steel
- Crimp ferrule material: Nickel-plated brass + polyolefin

### BRF Blanking caps for free sockets

| Part number    | Series   | Dimensions (mm) |    |      |    |     |
|----------------|----------|-----------------|----|------|----|-----|
|                |          | A               | B  | L    | M  | N   |
| BRF.0K.200.NAS | 0K-0E-0L | 15.0            | 10 | 15.0 | 4  | 85  |
| BRF.1K.200.NAS | 1K-1E-1L | 17.0            | 12 | 20.0 | 6  | 85  |
| BRF.2K.200.NAS | 2K-2E-2L | 20.5            | 14 | 24.0 | 8  | 85  |
| BRF.3K.200.NAS | 3K-3E    | 24.0            | 14 | 28.0 | 8  | 120 |
| BRF.4K.200.NAS | 4K-4E    | 30.0            | 20 | 30.5 | 10 | 120 |
| BRF.5K.200.NAS | 5K-5E    | 44.0            | 22 | 37.0 | 12 | 150 |

**Note:** these caps are suitable for use with any alignment key configuration. The last letter «S» of the part number stands for the O-ring material (silicone rubber). O-ring's made from FPM are also available; if required, replace the letter «S» by «V».

- O-ring material: Silicone rubber or FPM
- Maximum operating temperature: 135°C
- Watertightness: IP68 according to IEC 60529

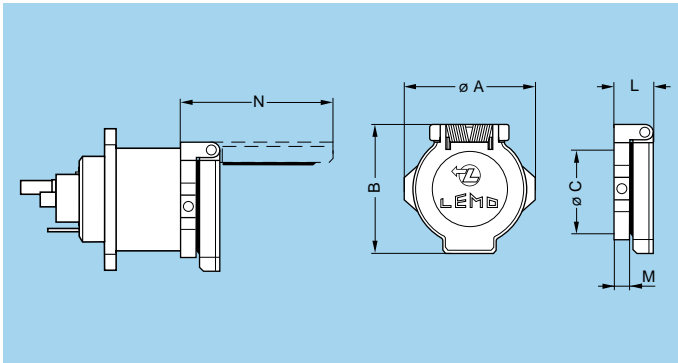


### BRR Spring loaded dust caps for ERA, ERN and EG sockets or PSA and PK fixed sockets

| Part number     | Series         | Dimensions (mm) |      |      |     |     |     |      |
|-----------------|----------------|-----------------|------|------|-----|-----|-----|------|
|                 |                | A               | B    | C    | E   | L   | M   | N    |
| BRR.0S.200.PZSG | 0S-0B          | 11.0            | 13.3 | 9.0  | 5.8 | 5.0 | 1.2 | 15.3 |
| BRR.1S.200.PZSG | 1S-1B<br>1D    | 14.2            | 17.1 | 12.0 | 6.0 | 6.3 | 1.5 | 20.3 |
| BRR.2S.200.PZSG | 2S-2B<br>2C-2G | 18.6            | 22.4 | 15.2 | 6.5 | 8.2 | 2.0 | 26.2 |
| BRR.3S.200.PZSG | 3S-3B          | 22.5            | 26.5 | 18.2 | 9.0 | 8.8 | 2.5 | 30.8 |

**Note:** On request, this cap is available in black. If so replace the last letter «G» of the part number by «N».

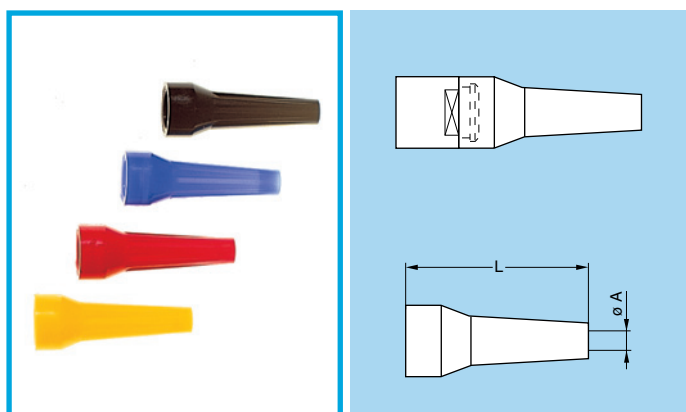
- Body material: Polyoxymethylene (POM) grey (or black)
- Gasket material: Silicone rubber
- Spring material: Stainless steel
- Axes material: Nickel-plated brass
- Maximum operating temperature: 100°C
- Watertightness: IP61 according to IEC 60529



### BRR Spring loaded dust cap for ED and EB fixed sockets

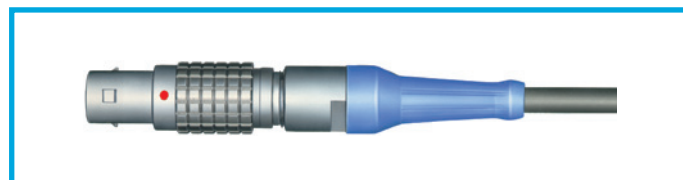
| Part number     | Series | Dimensions (mm) |    |    |     |   |      |
|-----------------|--------|-----------------|----|----|-----|---|------|
|                 |        | A               | B  | C  | L   | M | N    |
| BRR.3K.200.PZSG | 3K     | 29              | 29 | 23 | 8.1 | 3 | 33.2 |

- Cap material: Polyoxymethylene (POM) grey
- Body material: Nickel-plated brass
- Gasket material: Silicone rubber
- Spring material: Stainless steel
- Axes material: Nickel-plated brass
- Maximum operating temperature: 100°C
- Watertightness: IP61 according to IEC 60529



### GM• Bend relief (Polyurethane)

A bend relief made from thermoplastic polyurethane elastomer (Desmopan 786) can be fitted over LEMO plugs and sockets that are supplied with nut for fitting such bend relief. They are available in nine different colours that match with the GRA insulating washers (see page 144). Use the part numbers shown below to order this accessory separately.

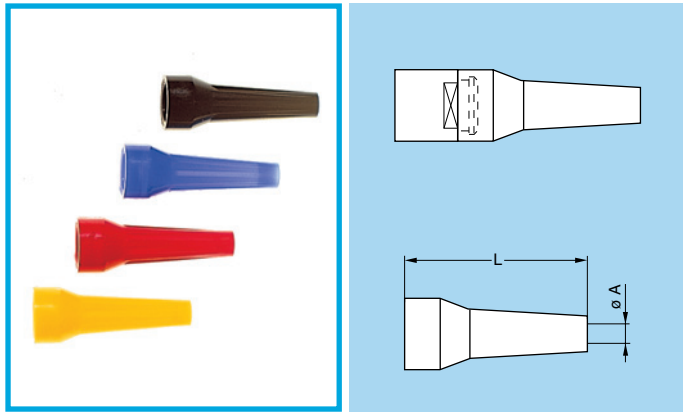


#### Main characteristics

- Material: Polyurethane elastomer
- Temperature range in dry atmosphere: -40°C +80°C

| Part number   | Dimensions (mm) |    |         |      | Series        | Part number of nut for fitting the bend relief | Note   |
|---------------|-----------------|----|---------|------|---------------|--|--|
|               | Bend relief     |    | Cable ø |      |               |  |  |
|               | A               | L  | max.    | min. |               |  |  |
| GMA.00.012.DG | 1.2             | 22 | 1.4     | 1.1  | 00            | FFM.00.130.LC 1)<br>FFM.00.131.LC 2)           | 1) For unipole connectors<br>2) For multipole connectors<br><br>The «GMD» are thin bend reliefs (for very flexible cables)       |
| GMA.00.018.DG | 1.8             | 22 | 2.1     | 1.8  |               |  |  |
| GMB.00.025.DG | 2.5             | 22 | 2.8     | 2.5  |               |  |  |
| GMB.00.028.DG | 2.8             | 22 | 3.1     | 2.8  |               |  |  |
| GMB.00.032.DG | 3.2             | 22 | 3.5     | 3.2  |               |  |  |
| GMD.00.025.DG | 2.5             | 22 | 2.8     | 2.5  |               |  |  |
| GMD.00.028.DG | 2.8             | 22 | 3.1     | 2.8  |               |  |  |
| GMD.00.032.DG | 3.2             | 22 | 3.5     | 3.2  |               |  |  |
| GMA.0B.025.DG | 2.5             | 24 | 2.9     | 2.5  | 0B            | FFM.0B.130.LC<br>FFM.2B.132.LC 1)              | 1) For use only with connectors from series 2B equipped with cable fixing type M and where a bend relief from series 0B is used. |
| GMA.0B.030.DG | 3.0             | 24 | 3.4     | 3.0  | 0S            |  |  |
| GMA.0B.035.DG | 3.5             | 24 | 3.9     | 3.5  |               |  |  |
| GMA.0B.040.DG | 4.0             | 24 | 4.4     | 4.0  | 0E-0K-0L      |  |  |
| GMA.0B.045.DG | 4.5             | 24 | 5.2     | 4.5  |               |  |  |
| GMA.1B.025.DG | 2.5             | 30 | 2.9     | 2.5  | 1B-1D         | FFM.1B.130.LC<br>FFM.3B.131.LC 1)              | 1) For use only with connectors from series 3B equipped with cable fixing type M and where a bend relief from series 1B is used. |
| GMA.1B.030.DG | 3.0             | 30 | 3.4     | 3.0  | 1S            |  |  |
| GMA.1B.035.DG | 3.5             | 30 | 3.9     | 3.5  |               |  |  |
| GMA.1B.040.DG | 4.0             | 30 | 4.4     | 4.0  |               | 1E-1K-1L                                       |  |
| GMA.1B.045.DG | 4.5             | 30 | 4.9     | 4.5  |               |  |  |
| GMA.1B.054.DG | 5.4             | 30 | 6.0     | 5.4  | FFM.1E.130.LC |  |  |
| GMA.1B.065.DG | 6.5             | 30 | 7.0     | 6.5  |               |  |  |
| GMA.2B.040.DG | 4.0             | 36 | 4.5     | 4.0  | 2B            | FFM.2B.130.LC<br>FFM.4K.132.LC 1)              | 1) For use only with connectors from series 4B equipped with cable fixing type M and where a bend relief from series 2B is used. |
| GMA.2B.045.DG | 4.5             | 36 | 5.0     | 4.5  | 2S            |  |  |
| GMA.2B.050.DG | 5.0             | 36 | 5.5     | 5.0  |               | 2E-2K-2L                                       |  |
| GMA.2B.060.DG | 6.0             | 36 | 6.5     | 6.0  |               |  |  |
| GMA.2B.070.DG | 7.0             | 36 | 7.7     | 7.0  | 2C-2G         |  |  |
| GMA.2B.080.DG | 7.8             | 36 | 8.8     | 7.8  |               | FFM.2E.130.LC<br>FFM.2C.130.LC                 |  |
| GMA.3B.050.DG | 4.5             | 42 | 5.2     | 4.5  | 3S            | FFM.3S.130.LC                                  |  |
| GMA.3B.060.DG | 6.0             | 42 | 6.9     | 6.0  | 3B            | FFM.3B.130.LC                                  |  |
| GMA.3B.070.DG | 7.0             | 42 | 7.9     | 7.0  | 3E-3K         | FFM.3E.130.LC                                  |  |
| GMA.3B.080.DG | 8.0             | 42 | 8.9     | 8.0  |               |  |  |
| GMA.3B.090.DG | 9.0             | 42 | 10.0    | 9.0  | 4S            | FFM.4S.130.LC                                  |  |
| GMA.4B.080.DG | 8.0             | 60 | 9.0     | 8.0  | 4S            | FFM.4S.130.LC                                  |  |
| GMA.4B.010.DG | 10.0            | 60 | 10.9    | 10.0 |               |  |  |
| GMA.4B.011.DG | 11.0            | 60 | 11.9    | 11.0 | 4B            | FFM.4B.130.LC                                  |  |
| GMA.4B.012.DG | 12.0            | 60 | 13.0    | 12.0 |               |  |  |
| GMA.4B.013.DG | 13.5            | 60 | 14.5    | 13.5 | 4E-4K         | FFM.4E.130.LC                                  |  |

**Note:** the last letter «G» of the part number indicates the grey colour of the bend relief. For ordering a bend relief with another colour, see table on page 142 and replace the letter «G» by the letter of the required colour.  
See also detailed information for each series: B series on page 54; K series on page 54; S series on page 107; E series on page 107.



## GMA Bend relief (Silicone)

A bend relief has been designed for connectors used in applications at high temperature or requiring vapour sterilization.

These bend reliefs are different from previous ones as for their material, a silicone elastomer which is noted for its retention of flexibility over a wide temperature range. They are available in nine colours.

Use the part numbers shown below to order this accessory separately.

### Main characteristics

- Material: Silicone elastomer VMQ
- Temperature range in dry atmosphere: -60°C +200°C
- Temperature range in water steam: +140°C

| Part number   | Dimensions (mm) |    |              |      | Series   | Part number of nut for fitting the bend relief | Note  |   |
|---------------|-----------------|----|--------------|------|----------|--|---|---|
|               | Bend relief     |    | Cable $\phi$ |      |          |  |   |   |
|               | A               | L  | max.         | min. |          |  |   |   |
| GMA.0B.025.RG | 2.5             | 27 | 2.9          | 2.5  | 0B       | FFM.0B.130.LC<br>FFM.2B.132.LC <sup>1)</sup>   | <sup>1)</sup> For use only with connectors from series 2B equipped with cable fixing type M and where a bend relief from series 0B is used. |   |
| GMA.0B.030.RG | 3.0             | 27 | 3.4          | 3.0  |          |  |   |   |
| GMA.0B.035.RG | 3.5             | 27 | 3.9          | 3.5  | 0S       | FFM.0S.130.LC                                  |   |   |
| GMA.0B.040.RG | 4.0             | 27 | 4.4          | 4.0  | 0E-0K-0L | FFM.0E.130.LC                                  |   |   |
| GMA.0B.045.RG | 4.5             | 27 | 5.2          | 4.5  |          |  |   |   |
| GMA.1B.025.RG | 2.5             | 34 | 2.9          | 2.5  | 1B-1D    | FFM.1B.130.LC<br>FFM.3B.131.LC <sup>1)</sup>   | <sup>1)</sup> For use only with connectors from series 3B equipped with cable fixing type M and where a bend relief from series 1B is used. |   |
| GMA.1B.030.RG | 3.0             | 34 | 3.4          | 3.0  |          |  |   |   |
| GMA.1B.035.RG | 3.5             | 34 | 3.9          | 3.5  | 1S       | FFM.1S.130.LC                                  |   |   |
| GMA.1B.040.RG | 4.0             | 34 | 4.4          | 4.0  |          |  |   |   |
| GMA.1B.045.RG | 4.5             | 34 | 5.0          | 4.5  | 1E-1K-1L | FFM.1E.130.LC                                  |   |   |
| GMA.1B.051.RG | 5.1             | 34 | 5.6          | 5.1  |          |  |   |   |
| GMA.1B.057.RG | 5.7             | 34 | 6.2          | 5.7  |          |  |   |   |
| GMA.1B.063.RG | 6.3             | 34 | 7.0          | 6.3  |          |  |   |   |
| GMA.2B.040.RG | 4.0             | 41 | 4.4          | 4.0  | 2B       | FFM.2B.130.LC<br>FFM.4K.132.LC <sup>1)</sup>   |   | <sup>1)</sup> For use only with connectors from series 4B equipped with cable fixing type M and where a bend relief from series 2B is used. |
| GMA.2B.045.RG | 4.5             | 41 | 5.0          | 4.5  | 2S       | FFM.2S.130.LC                                  |   |   |
| GMA.2B.051.RG | 5.1             | 41 | 5.6          | 5.1  |          |  |   |   |
| GMA.2B.057.RG | 5.7             | 41 | 6.2          | 5.7  | 2E-2K-2L | FFM.2E.130.LC                                  |   |   |
| GMA.2B.063.RG | 6.3             | 41 | 7.0          | 6.3  |          |  |   |   |
| GMA.2B.071.RG | 7.1             | 41 | 7.9          | 7.1  | 2C-2G    | FFM.2C.130.LC                                  |   |   |
| GMA.2B.080.RG | 8.0             | 41 | 9.0          | 8.0  |          |  |   |   |

**Note:** the last letter «G» of the part number indicates the grey colour of the bend relief. For ordering a bend relief with another colour, see table on page 142 and replace the letter «G» by the letter of the required colour.

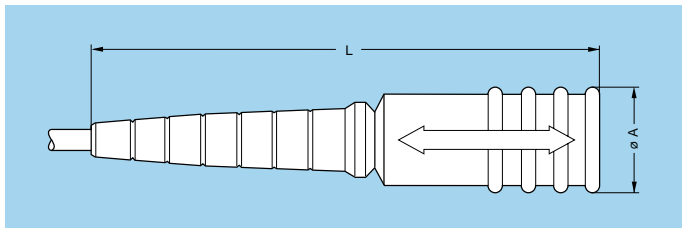
See also detailed information for each series: B series on page 54; K series on page 54; S series on page 107; E series on page 107.

**Note:** the selection of pigments, which should remain stable at high temperature, is limited by the new regulations. For this reason, some colours will be a shade different from those used for Desmopan bend reliefs. The selected solutions represent the best possible compromise.

| Ref. | Colour | Ref. | Colour |
|------|--------|------|--------|
| A    | blue   | N    | black  |
| B    | white  | R    | red    |
| G    | grey   | S    | orange |
| J    | yellow | V    | green  |
| M    | brown  |      |        |

## GM Overall bend relief for plugs and sockets

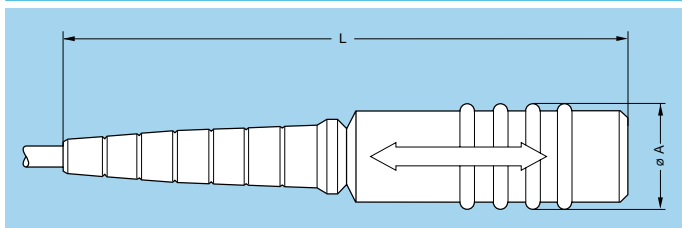
Overall bend reliefs, type GMF for plugs and GMP for sockets offer optimum protection against mechanical damage and give a protection index of IP65 according to IEC 60529 (mated position). These bend reliefs slide easily over the connector shell and are positioned by slightly pressing the bend relief backnut. The special design of the bend relief for plug provides for easy use of the push-pull self-latching system.



### GMF Bend relief for straight plug

| Part number      | Series | Dimensions (mm) |      |         |      |
|------------------|--------|-----------------|------|---------|------|
|                  |        | Bend relief     |      | Cable ø |      |
|                  |        | A               | L    | max.    | min. |
| GMF.0B.035.060EN | 0S-0B  | 11.0            | 60.5 | 3.5     | 1.0  |
| GMF.1B.062.072EN | 1S-1B  | 16.0            | 72.0 | 6.2     | 2.5  |
| GMF.2B.082.095EN | 2S-2B  | 22.0            | 95.0 | 8.2     | 5.0  |

- Material: Elastomer rubber black colour
- Operating temperature: -30°C to +120°C



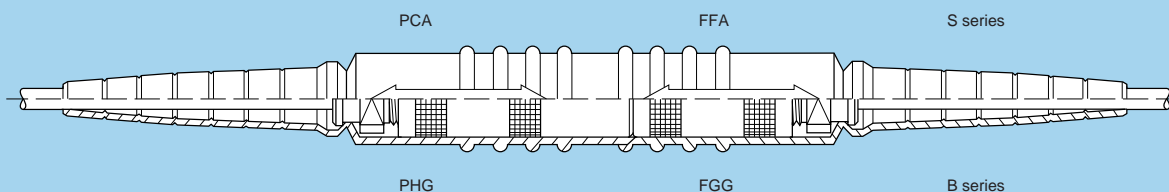
### GMP Bend relief for free socket

| Part number      | Series | Dimensions (mm) |       |         |      |
|------------------|--------|-----------------|-------|---------|------|
|                  |        | Bend relief     |       | Cable ø |      |
|                  |        | A               | L     | max.    | min. |
| GMP.0B.035.069EN | 0S-0B  | 11.0            | 69.0  | 3.5     | 1.0  |
| GMP.1B.062.079EN | 1S-1B  | 16.0            | 80.0  | 6.2     | 2.5  |
| GMP.2B.082.102EN | 2S-2B  | 21.0            | 102.5 | 8.2     | 5.0  |

- Material: Elastomer rubber black colour
- Operating temperature: -30°C to +120°C

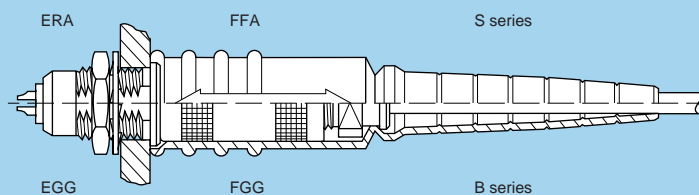
- The overall bend relief shall be installed over plug or free socket fitted with a nut for bend relief.
- The typical applications are shown below.
- The overall bend relief can be cut at different length depending on cable diameter.

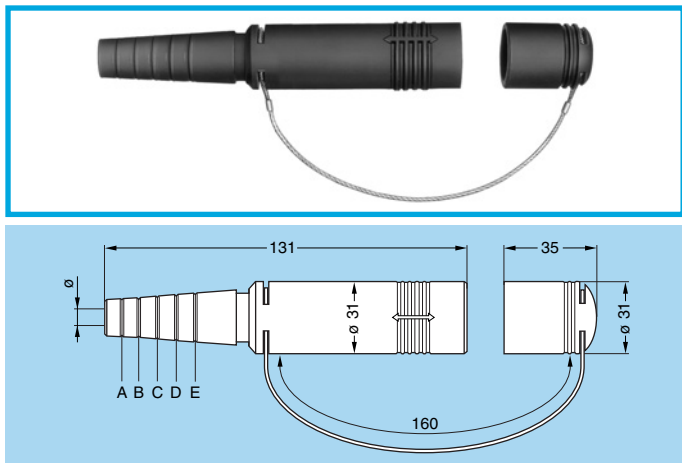
#### Plug-free socket



#### Plug-fixed socket

Optimum protection is offered only when using front panel mounting fixed sockets

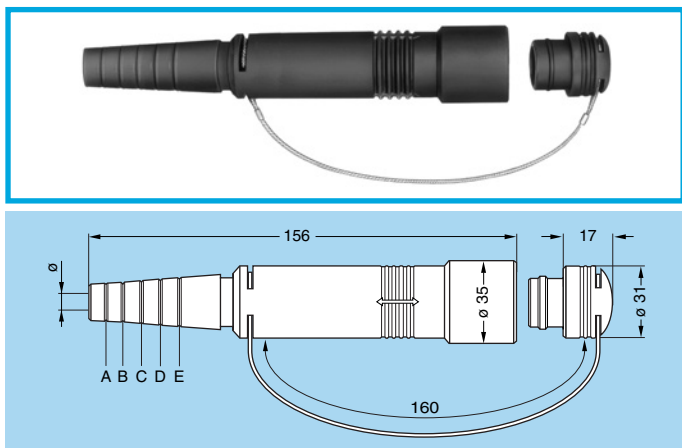




### GMF Bend relief with cap for plug

| Part number     | Series | For models | Cut | admissible $\varnothing$ (mm) |      |
|-----------------|--------|------------|-----|-------------------------------|------|
|                 |        |            |     | min.                          | max. |
| GMF.4K.080.EANZ | 4E     | FFA        | -   | 8.0                           | 8.9  |
|                 |        |            | A   | 9.0                           | 9.9  |
|                 |        |            | B   | 10.0                          | 11.4 |
|                 | 4K     | FGG        | C   | 11.5                          | 12.9 |
|                 |        |            | D   | 13.0                          | 14.9 |
| E               | 15.0   | 16.5       |     |                               |      |

● Material: Black EPDM



### GMP Bend relief with cap for free socket

| Part number     | Series | For models | Cut | admissible $\varnothing$ (mm) |      |
|-----------------|--------|------------|-----|-------------------------------|------|
|                 |        |            |     | min.                          | max. |
| GMP.4K.080.EANZ | 4E     | PCA        | -   | 8.0                           | 8.9  |
|                 |        |            | A   | 9.0                           | 9.9  |
|                 |        |            | B   | 10.0                          | 11.4 |
|                 | 4K     | PHG        | C   | 11.5                          | 12.9 |
|                 |        |            | D   | 13.0                          | 14.9 |
| E               | 15.0   | 16.5       |     |                               |      |

● Material: Black EPDM



### GRA Insulating washers

Sockets or plugs mounted on panels can be fitted with insulating washers. The nine colours available combined with those for the bend reliefs makes colour coding possible.

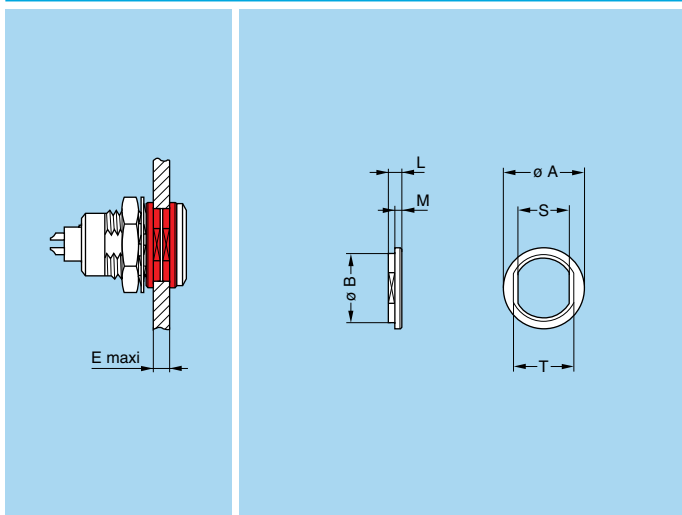
| Part number   | Series | Dimensions (mm) |      |      |     |     |      |      |
|---------------|--------|-----------------|------|------|-----|-----|------|------|
|               |        | A               | B    | E    | L   | M   | S    | T    |
| GRA.00.269.GG | 00     | 10.0            | 8.8  | 4.5  | 1.8 | 1.0 | 6.4  | 8.0  |
| GRA.0S.269.GG | 0S-0B  | 12.0            | 10.8 | 6.0  | 1.8 | 1.0 | 8.3  | 9.9  |
| GRA.1S.269.GG | 1S-1B  | 16.0            | 13.8 | 6.5  | 1.8 | 1.0 | 10.6 | 12.2 |
| GRA.2S.269.GG | 2S-2B  | 21.1            | 17.9 | 7.3  | 2.3 | 1.3 | 13.6 | 16.2 |
| GRA.3S.269.GG | 3S-3B  | 25.0            | 21.8 | 10.3 | 2.2 | 1.2 | 16.7 | 20.2 |
| GRA.4S.269.GG | 4S-4B  | 31.9            | 28.7 | 10.5 | 2.5 | 1.5 | 23.6 | 27.1 |

**Note:** insulating washers for series 5B are available on request.

**Caution:** these insulating washers can be used with fixed and free sockets with across flat dimension S1 equivalent to the S dimension of the washer.

| Ref. | Colour | Ref. | Colour |
|------|--------|------|--------|
| A    | blue   | N    | black  |
| B    | white  | R    | red    |
| G    | grey   | S    | orange |
| J    | yellow | V    | green  |
| M    | brown  |      |        |

**Note:** the last letter «G» of the part number indicates the colour grey for the insulating washer. To obtain an insulating washer of another colour, refer to the table above and change the letter «G» of the part number to the corresponding letter of the colour required. For the panel cut-out, please consult chapter «Panel cut-out» on page 153.



● Material: Polyamide  
● Maximum operating temperature: 90° C



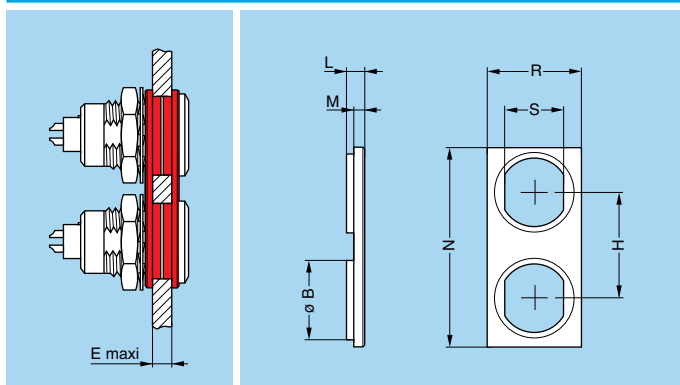


### GRC Double panel washers

Double panel washers have been designed to make the drilling of panel holes easier for mounting fixed and free sockets. The combination of the nine different colours of the double panel washers and of the bend reliefs makes colour coding possible.

| Part number   | Series | Dimensions (mm) |   |    |     |     |      |      |      |
|---------------|--------|-----------------|---|----|-----|-----|------|------|------|
|               |        | B               | E | H  | L   | M   | N    | R    | S    |
| GRC.0S.260.HG | 0S-0B  | 10.9            | 5 | 14 | 2.5 | 1.5 | 26.5 | 12.5 | 8.3  |
| GRC.1B.260.HG | 1S-1B  | 13.9            | 5 | 20 | 3.3 | 1.8 | 34.5 | 14.5 | 10.6 |

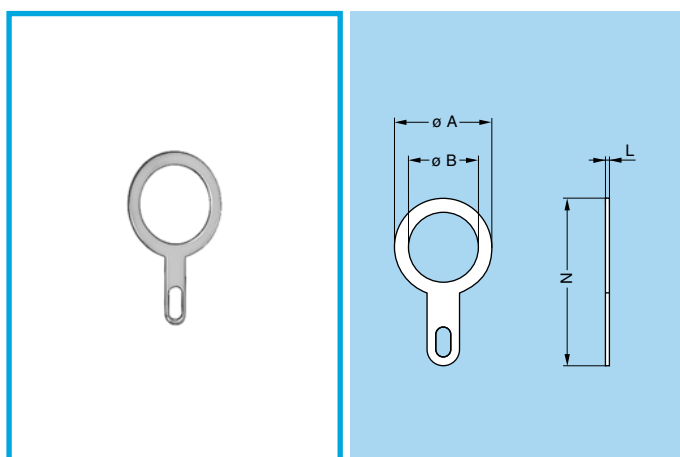
**Caution:** these double panel washers can be used with fixed or free sockets with across flat dimension S1 equivalent to the S dimension of the washer.



| Ref. | Colour | Ref. | Colour |
|------|--------|------|--------|
| A    | blue   | N    | black  |
| B    | white  | R    | red    |
| G    | grey   | S    | orange |
| J    | yellow | V    | green  |
| M    | brown  |      |        |

**Note:** the last letter «G» of the washer's part number indicates the colour grey. For other colours, refer to the above table and replace letter «G» by the one corresponding to the colour required. For the panel cut-out, please consult chapter «Panel cut-out» on page 153.

- Material: Polyamide
- Maximum operating temperature: 90° C



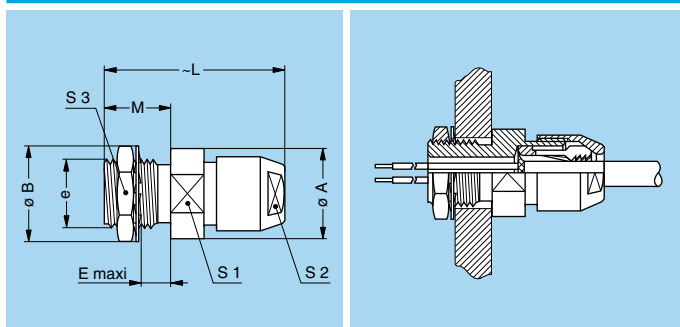
### GCA Earthing washer

| Part number   | Series | Dimensions (mm) |      |     |      |
|---------------|--------|-----------------|------|-----|------|
|               |        | A               | B    | L   | N    |
| GCA.00.255.LT | 00     | 9.5             | 7.1  | 0.4 | 18.2 |
| GCA.0S.255.LT | 0S-0B  | 13.0            | 9.1  | 0.4 | 22.0 |
| GCA.0E.255.LT | 0E-0K  | 17.0            | 14.1 | 0.5 | 27.5 |
| GCA.1S.255.LT | 1S-1B  | 17.0            | 12.2 | 0.5 | 27.5 |
| GCA.1E.255.LT | 1E-1K  | 20.0            | 16.2 | 0.5 | 32.0 |
| GCA.2S.255.LT | 2S-2B  | 20.0            | 15.2 | 0.5 | 32.0 |
| GCA.2E.255.LT | 2E-2K  | 25.0            | 20.2 | 0.5 | 39.0 |
| GCA.3S.255.LT | 3S-3B  | 25.0            | 18.2 | 0.5 | 39.0 |
| GCA.4S.255.LT | 4S-4B  | 35.0            | 25.6 | 0.6 | 50.0 |
| GCA.4E.255.LT | 4E-4K  | 35.0            | 30.6 | 0.6 | 50.0 |
| GCA.5S.255.LT | 5S-5B  | 42.0            | 35.1 | 0.3 | 57.5 |

- Material: CuSnZn plated brass (2  $\mu$ m)



### GSC Lead-through with cable collet



| Part number     | Dimensions (mm) |      |         |     |    |      |    |    |    |
|-----------------|-----------------|------|---------|-----|----|------|----|----|----|
|                 | A               | B    | e       | E   | L  | M    | S1 | S2 | S3 |
| GSC.1S.290.ND●● | 12              | 12.5 | M9x0.6  | 5.0 | 26 | 7.5  | 11 | 9  | 11 |
| GSC.3S.290.ND●● | 17              | 19.5 | M15x1.0 | 8.1 | 30 | 12.0 | -  | 14 | 17 |

**Note:** ●● = collet cable diameter of the B series. For cable diameter refer to page 52. The cable collet system stands for both screened and unscreened cables. It can be delivered with a nut for fitting a bend relief if you add a «Z» at the end of the part number.