

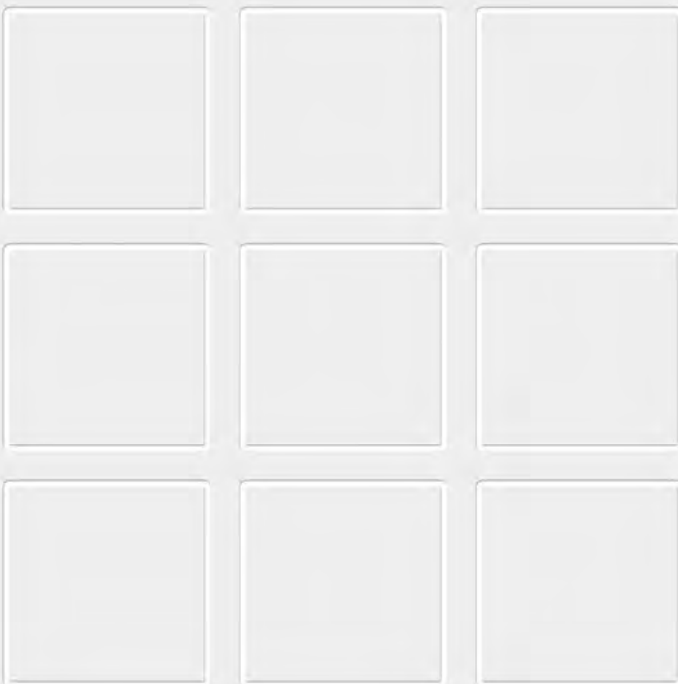
# 1

## Connectors

Series NF07, NF10

Circular Audio  
Miniature Connectors

Catalogue A58.en



## Connectors for audio technology: Series NF07 and NF10

Our well-proven 7- and 10-pole circular audio miniature connectors NF07 and NF10 are especially designed for communication engineering. They provide high reliability under extreme ambient conditions. The present catalogue

describes the watertight connectors with a bayonet groove, covering a wide temperature range. The modular design provides many combinations allowing to suit your particular requirements.

### Features

Series NF

Our 7- and 10-pole circular audio miniature connectors are watertight and locked by a bayonet coupling. Hard gold plated spring-loaded contacts with self-cleaning faces ensure a continuously low contact resistance.

The following series are available:

| Series   | Description |
|--|-------------|
| 7-pole standard <b>NF07</b> series                   | Page 7      |
| 7-pole <b>NF07 /S</b> series with enhanced shielding | Page 16     |
| 10-pole <b>NF10</b> series with enhanced shielding   | Page 23     |

### Important features of our circular audio miniature connectors series NF07 and NF10:

#### General application characteristics:

- Reliability under extreme ambient conditions
- High protection degree and water-tightness even when unmated
- Application under a wide temperature range.
- Stockable for 10 years in Schaltbau original packing

#### Electrical features:

- **Scoop proof:** The design prevents a short-circuit between plug shells and receptacle contacts while mating.
- **Spring-loaded contacts:** hard gold plated with self-cleaning faces. High shock and vibration resistance and a very low contact resistance allow high reliability even at low voltages and currents.
- **EMP Shielding:** Series NF10 and the shielded NF07 show good attenuation characteristics with regard to electromagnetic influences, HF influences and pulse repetition frequencies.
- **Contact termination:** Available as follows:
  - solder cup for connecting leads
  - solder pin 3.5 mm for PCB terminal
  - solder pin 8.0 mm for PCB terminal



Audio connectors to military specification (Photo: SEL Defence Systems)

#### Mechanical features:

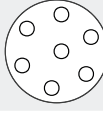
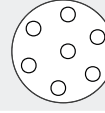
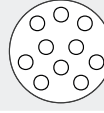
- **Shell material:** All shells consist of stainless steel and non magnetic materials. The receptacle shells and the plug shells are black anodised. The finish of the backshells is olive drab or black.  
The modular design of the connector systems allows many combinations.  
The following connector backshells are available:
  - for heatshrink boots
  - for cable sleeves
  - for screen termination
  - for potting
- **Polarization:** The NF series feature a variety of connector orientations. NF10 series comes with an option of 5 bayonet latch positions, whereas NF07 series connectors are available with 4 max. A marking colour corresponds to each of the different insert positions.

#### Optional customized filters:

- **Planar technique:** C-filter
- **Modular technique:** C-filter,  $\pi$ -filter
- **Tubular technique:** C-filter,  $\pi$ -filter, RFI-filter

## Specifications

Series NF

| Series  | NF07   | NF07 /S   | NF10  |
|---|--|---|---|
| Number of contacts  | 7  | 7   | 10  |
| Contact arrangement<br>Plug: Rear view<br>Receptacle: Front view  |                         |    |    |
| Contact identification<br>Plug: Rear view<br>Receptacle: Front view   | B A F<br>C G E<br>D  | B A F<br>C G E<br>D   | B A G<br>C H K F<br>D J E   |
| Rated voltage   | 50 V   | 50 V  | 50 V  |
| Connector orientations  | 3  | 4   | 5   |
| Rated current: I min.<br>I max.   | 6 $\mu$ A<br>2.5 A *1  | 6 $\mu$ A<br>2.5 A *1   | 6 $\mu$ A<br>2.5 A *1   |
| Contact resistance  | approx. 5 m $\Omega$ *2  | approx. 5 m $\Omega$ *2   | approx. 5 m $\Omega$ *2   |
| Temperature range   | -55°C ... +100°C<br>(10 sec. max. up to +150°C)  | -55°C ... +100°C<br>(10 sec. max. up to +150°C)   | -55°C ... +100°C<br>(10 sec. max. up to +150°C)   |
| Insulation resistance   | $\geq$ 5,000 M $\Omega$  | $\geq$ 5,000 M $\Omega$   | $\geq$ 5,000 M $\Omega$   |
| Test voltage  | 500 V <sub>rms</sub> 50 Hz   | 500 V <sub>rms</sub> 50 Hz  | 500 V <sub>rms</sub> 50 Hz  |
| EMP-shielding   | approx. 60 dB  | 70 dB *3  | 70 dB   |
| Sealing<br>mated and unmated  | IP68 *4<br>0.4 bar, 2 hours at 25°C  | IP68 *4<br>0.4 bar, 2 hours at 25°C   | IP68 *4<br>0.4 bar, 2 hours at 25°C   |
| Mechanical life   | 5,000 couplings  | 5,000 couplings   | 5,000 couplings   |
| Shell:<br>Plug: Materials<br>Finish<br>Colours<br>Receptacle: Materials<br>Finish<br>Colours                    | Stainless steel<br><br>Cr 3 <sup>+2</sup><br>Black<br>Stainless steel<br><br>Cr 3 <sup>+2</sup><br>Black | Aluminium alloy /<br>Stainless steel<br>Ni 3 <sup>+2</sup> Cd 6 <sup>+2</sup> cF / Cr 3 <sup>+2</sup><br>Olive (RAL6015) / Black<br>Stainless,<br>antimagnetic steel<br>Cr 3 <sup>+2</sup><br>Black | Aluminium alloy /<br>Stainless steel<br>Ni 3 <sup>+2</sup> Cd 6 <sup>+2</sup> cF / Cr 3 <sup>+2</sup><br>Olive (RAL6015) / Black<br>Stainless,<br>antimagnetic steel<br>Cr 3 <sup>+2</sup><br>Black |
| Contact inserts   | Thermoplastic / Duroplast  | Thermoplastic / Duroplast   | Thermoplastic / Duroplast   |
| Sealing elements  | Silicone elastomer /<br>Fluor-silicone elastomer   | Silicone elastomer /<br>Fluor-silicone elastomer  | Silicone elastomer /<br>Fluor-silicone elastomer  |
| Contact type: Plug<br>Receptacle<br>Material: Crimp-type copper<br>wrought alloy<br>Finish: Layer in micrometer | Rigid contacts<br>Spring contacts<br><br>Gold<br>Cu: 1.0 / Ni: 2.0 / Au: 5 $\pm$ 1                       | Rigid contacts<br>Spring contacts<br><br>Gold<br>Cu: 1.0 / Ni: 2.0 / Au: 5 $\pm$ 1  | Rigid contacts<br>Spring contacts<br><br>Gold<br>Cu: 1.0 / Ni: 2.0 / Au: 5 $\pm$ 1  |



\*1 for any two contacts

\*2 required:  $\leq$  20 m $\Omega$  (VG96934 / VG95351)

\*3 Do not intermate connectors NF07 /S series with enhanced shielding with NF07 series connectors.

\*4 according to VG95319-2, Test-No. 5.9.2.

## Competence of Schaltbau

At the beginning of the seventies Schaltbau developed the 7-pole connector NF07. It was standardized as VG 95351.

In 1982 the procurement authorities of the German armed forces (BWB) placed an order to develop a 10-pole connector. It was standardized as VG 96934.

Schaltbau has been continuously enhancing the series NF07 and NF10. Presently approx. 22 type variants of NF07 and 34 variants of NF10 are available (not including orientations).

Variants with attenuation values exceeding 80dB and completely antimagnetic types are being manufactured.

## Standards

Series NF

### Series NF07:

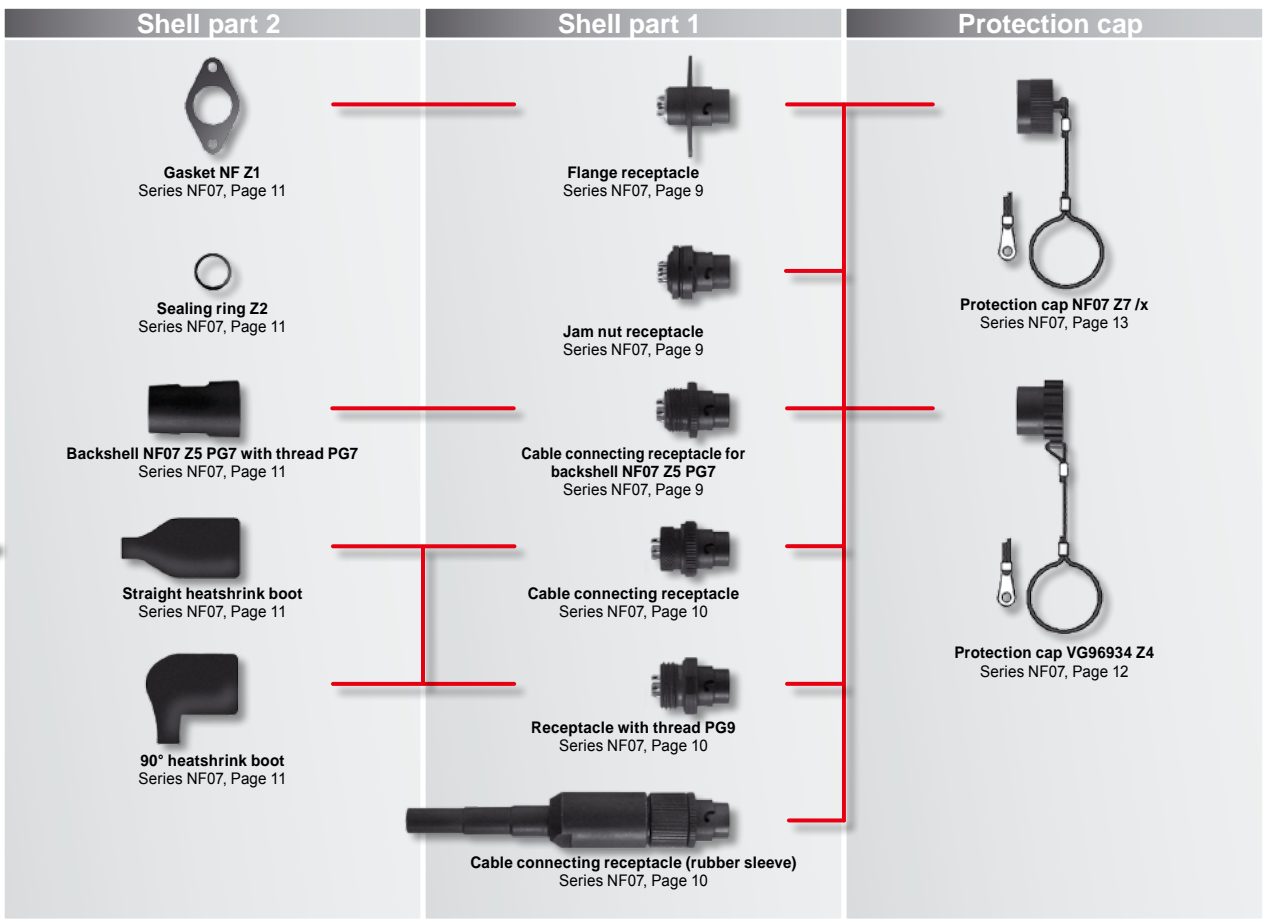
- **7-pole standard connector:**  
VG 95351 meets requirements regarding test and approval.
- **7-pole connector, suitable for shielding:**  
Test according to VG 96934

### Series NF10:

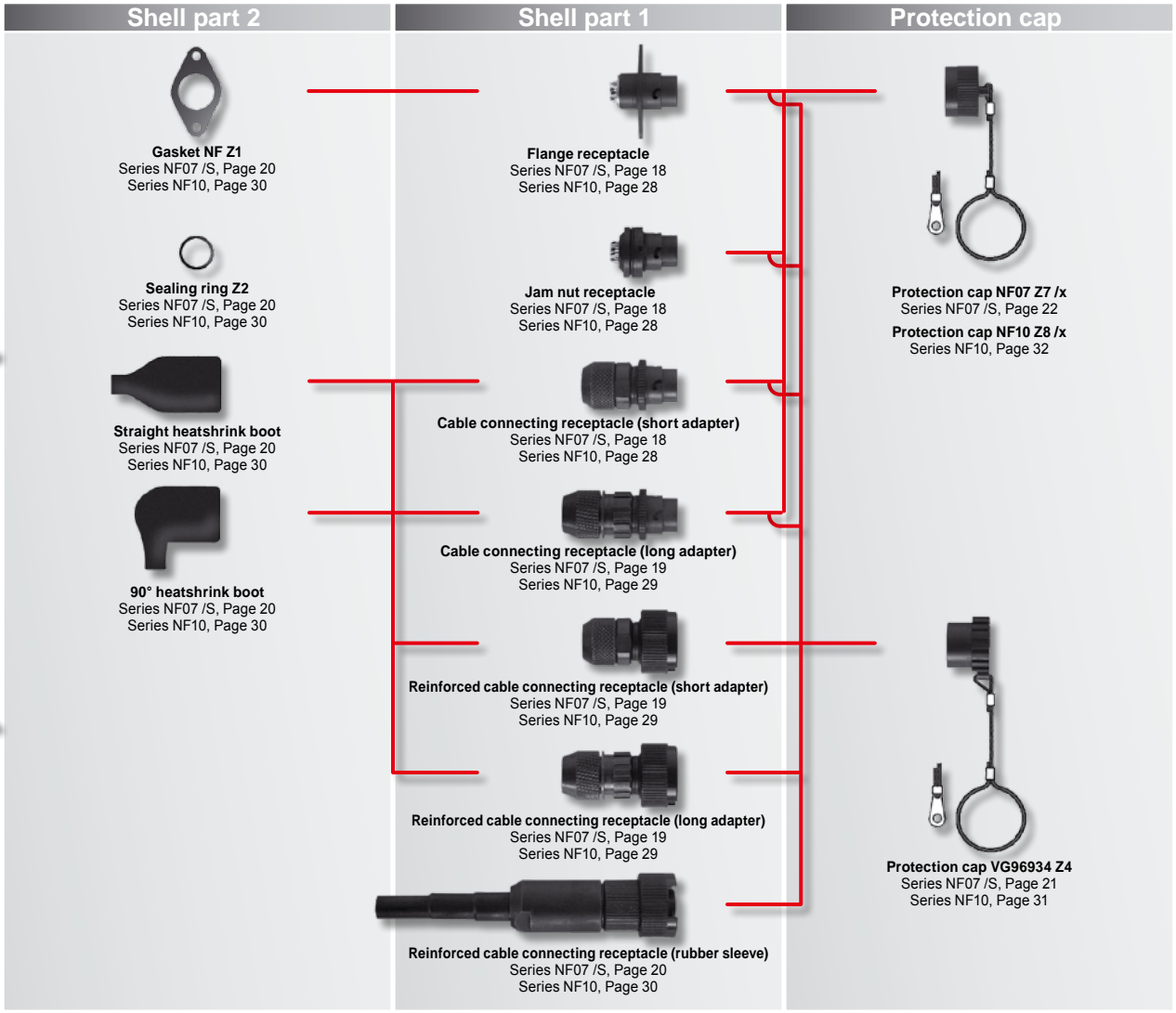
- **10-pole connector, suitable for shielding:**  
VG 96934 meets requirements regarding test and approval.

**Note:** According to IEC 61984 connectors are devices which in normal use must not be coupled or uncoupled when live or under load.

**NF07 Receptacle**














**NF07 /S, NF10 Receptacle**















**OVERVIEW**

**OVERVIEW**  
**NF07 Plug**

| Protection cap  | Shell part 1   | Shell part 2  |
|---|--|---|
| <br><b>Protection cap VG96934 Z3</b><br>Series NF07, Page 12   | <br><b>90° Cable connecting plug</b><br>Series NF07, Page 7                       | <br><b>Backshell NF07 Z5 PG7 with thread PG7</b><br>Series NF07, Page 11 |
| <br><b>Dummy receptacle VG96934 Z6</b><br>Series NF07, Page 12 | <br><b>Cable connecting plug for backshell NF07 Z5 PG7</b><br>Series NF07, Page 7 | <br><b>Straight heatshrink boot</b><br>Series NF07, Page 11              |
|   | <br><b>Cable connecting plug (short adapter)</b><br>Series NF07, Page 7           | <br><b>90° heatshrink boot</b><br>Series NF07, Page 11                   |
|   | <br><b>Plug</b><br>Series NF07, Page 8  |   |
|   | <br><b>Jam nut plug</b><br>Series NF07, Page 8                                    |   |
|   | <br><b>Cable connecting plug (rubber sleeve)</b><br>Series NF07, Page 8           |   |

**NF07 /S, NF10 Plug**

| Protection cap   | Shell part 1   | Shell part 2  |
|--|--|---|
| <br><b>Protection cap VG96934 Z3</b><br>Series NF07 /S, Page 21<br>Series NF10, Page 31   | <br><b>90° Cable connecting plug</b><br>Series NF07 /S, Page 16<br>Series NF10, Page 26             | <br><b>Straight heatshrink boot</b><br>Series NF07 /S, Page 20<br>Series NF10, Page 30 |
| <br><b>Dummy receptacle VG96934 Z6</b><br>Series NF07 /S, Page 21<br>Series NF10, Page 31 | <br><b>Cable connecting plug (short adapter)</b><br>Series NF07 /S, Page 16<br>Series NF10, Page 26 | <br><b>90° heatshrink boot</b><br>Series NF07 /S, Page 20<br>Series NF10, Page 30      |
|  | <br><b>Cable connecting plug (long adapter)</b><br>Series NF07 /S, Page 16<br>Series NF10, Page 26  |   |
|  | <br><b>Jam nut plug</b><br>Series NF07 /S, Page 17<br>Series NF10, Page 27                          |   |
|  | <br><b>Flange plug</b><br>Series NF07 /S, Page 17<br>Series NF10, Page 27                           | <br><b>Gasket NF Z1</b><br>Series NF07 /S, Page 20<br>Series NF10, Page 30             |
|  | <br><b>Cable connecting plug (rubber sleeve)</b><br>Series NF07 /S, Page 17<br>Series NF10, Page 27 | <br><b>Sealing ring Z2</b><br>Series NF07 /S, Page 20<br>Series NF10, Page 30          |

## Ordering information

Series NF

Our NF connector system has a modular structure. Consequently, there are many variation possibilities. You will find the exact ordering code for all variants listed in

a chart relating to the corresponding device outline. We make a difference between an ordering code for our NF series connectors and a separate one for accessories.

### • Series NF07, NF07 /S and NF10

Example: **NF07 A 1 L0 A7/S**

|  |  |        |          |                 |
|--|--|--------|----------|-----------------|
| <b>Series</b> (parameter 1)  | NF   |        |          |                 |
|  | Connectors to suit the special requirements of communications engineering  |        |          |                 |
| <b>Number of poles</b> (parameter 2)                               | 07 7-pole<br>10 10-pole  |        |          |                 |
| <b>Shell styles</b> (parameter 3)                                  | A Cable connecting plug (short adapter)<br>B Flange receptacle<br>C Jam nut receptacle<br>D Cable connecting receptacle<br>E Jam nut plug<br>F Flange plug<br>H Jam nut receptacle, PG9 *1<br>J Cable connecting plug (long adapter)<br>K Reinforced cable connecting receptacle *2, *3<br>L Cable connecting plug (rubber sleeve)<br>M Cable connecting receptacle (rubber sleeve) *2, *3<br>N Reinforced cable connecting receptacle (short adapter) *2, *3  |        |          |                 |
| <b>Polarization</b> (parameter 4)                                  | Series:  | NF07   | NF07 /S  | NF10            |
| /1   | Orientation 1:   | red    | / red    | / white         |
| /2   | Orientation 2:   | yellow | / yellow | / blue          |
| /3   | Orientation 3:   | green  | / green  | / violet        |
| /4   | Orientation 4:   | ---    | / pink   | / chrome yellow |
| /5   | Orientation 5:   | ---    | / ---    | / dark red      |
| <b>Terminal styles</b> (parameter 5)                               | L0 Solder cup<br>L1 Solder pin for PCB Ø0.53 / 3.5 mm length<br>L2 Solder pin for PCB Ø0.50 / 8.0 mm length *2, *3   |        |          |                 |
| <b>Special designs</b> (parameter 6)<br>(beyond VG96934 / VG95351) | A1 Cable connecting plug (short adapter) *1, *2<br>A5 Cable connecting plug (rubber sleeve) *1, *3<br>A6 Jam nut plug M14x1<br>A7 Cable connecting plug (long adapter) *3<br>A11 Cable connecting plug for backshell NF07 Z5 PG7 *1<br>A17 90° Cable connecting plug<br>D3 Cable connecting receptacle for backshell NF07 Z5 PG7 *1<br>D6 Cable connecting receptacle (rubber sleeve) *1<br>D7 Reinforced cable connecting receptacle (long adapter) *2, *3<br>/S enhanced shielding, extra parameter for series NF07 /S only *4 |        |          |                 |

\*1 Series NF07 only

\*2 Series NF07 /S only

\*3 Series NF10 only

\*4 Unlike the NF07 series, the NF07 /S and NF10 series connectors feature enhanced shielding. The extra parameter /S is not necessary for the NF10 series.

### • Protection caps and dummy receptacles

Example: **NF07 Z7 /1**

|  |   |        |          |                 |
|--|---|--------|----------|-----------------|
| <b>Protection caps/dummy receptacles</b> (parameter 1) | VG96934 Z3 Protection cap (VG96934)<br>VG96934 Z4 Protection cap (VG96934)<br>VG96934 Z6 Dummy receptacle (VG96934)<br>NF07 Z7 NF07: Protection cap for polarization<br>NF10 Z8 NF10: Protection cap for polarization |        |          |                 |
| <b>Polarization</b> (parameter 2)                      | Series  | NF07   | NF07 /S  | NF10            |
| /1   | Orientation 1:  | red    | / red    | / white         |
| /2   | Orientation 2:  | yellow | / yellow | / blue          |
| /3   | Orientation 3:  | green  | / green  | / violet        |
| /4   | Orientation 4:  | ---    | / pink   | / chrome yellow |
| /5   | Orientation 5:  | ---    | / ---    | / dark red      |

### • Backshells

Example: **NF07 Z5 PG7**

|                                |   |  |
|--------------------------------|---|--|
| <b>Backshell</b> (parameter 1) | NF07 Z5 PG7 Backshell, PG7<br>203W112-30 Straight heatshrink boot<br>224K012-30 90° heatshrink boot |  |
|--------------------------------|---|--|

### • Gaskets

Example: **NF Z1**

|                             |                        |  |
|-----------------------------|------------------------|--|
| <b>Gasket</b> (parameter 1) | NF Z1 Gasket (VG96934) |  |
|-----------------------------|------------------------|--|

### • Tools

Example: **Z14**

|                           |  |  |
|---------------------------|--|--|
| <b>Tool</b> (parameter 1) | Z14 Mounting tool for jam nut receptacle NF07, NF07 /S, NF10 |  |
|---------------------------|--|--|

#### Note:

Presented in this catalogue are only stock items which can be supplied in short delivery time.

**For some connectors minimum order quantities may apply. Please contact us for terms and conditions.**

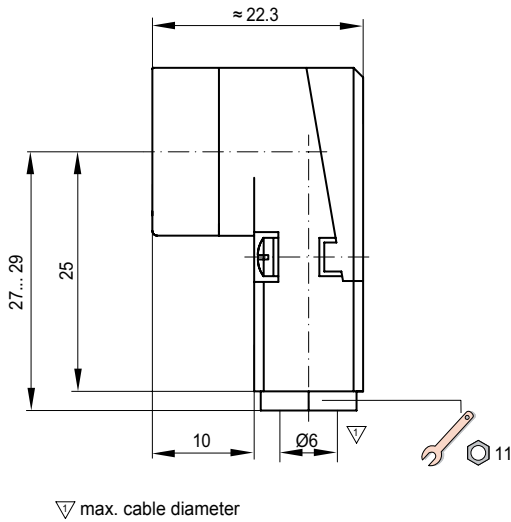
#### Special variant:

If you need a special variant feel free to contact us. Maybe the type of connector you are looking for is among our many special designs. If not, we can also supply customized designs. In this case, however, minimum order quantities apply.

### 90° cable connecting plug

Series NF07

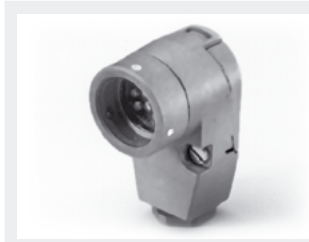
#### Device outline



#### Ordering code

Example\*1:

|    |    |   |   |    |     | Shell part 1 |   |   |   |    |     |
|----|----|---|---|----|-----|--------------|---|---|---|----|-----|
| NF | 07 | A | 1 | L0 | A17 |              |   |   |   |    |     |
| ↑  | ↑  | ↑ | ↑ | ↑  | ↑   | 1            | 2 | 3 | 4 | 5  | 6   |
|    |    |   |   |    |     |              |   | A | 1 | L0 | A17 |
| NF | 07 | A | 2 | L0 | A17 |              |   |   |   |    |     |
|    |    | A | 3 | L0 | A17 |              |   |   |   |    |     |



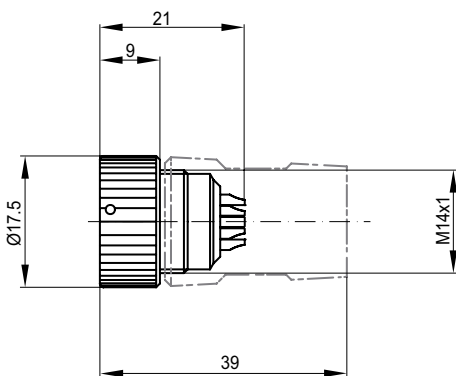
\*1 See also ordering information on page 6

**Note:** Terminal styles on page 13

### Cable connecting plug for backshell NF07 Z5 Pg7

Series NF07

#### Device outline



#### Ordering code

Example\*1:

|    |    |   |   |    |     | Shell part 1 |   |   |   |    |     |
|----|----|---|---|----|-----|--------------|---|---|---|----|-----|
| NF | 07 | A | 1 | L0 | A11 |              |   |   |   |    |     |
| ↑  | ↑  | ↑ | ↑ | ↑  | ↑   | 1            | 2 | 3 | 4 | 5  | 6   |
|    |    |   |   |    |     |              |   | A | 1 | L0 | A11 |
| NF | 07 | A | 2 | L0 | A11 |              |   |   |   |    |     |
|    |    | A | 3 | L0 | A11 |              |   |   |   |    |     |



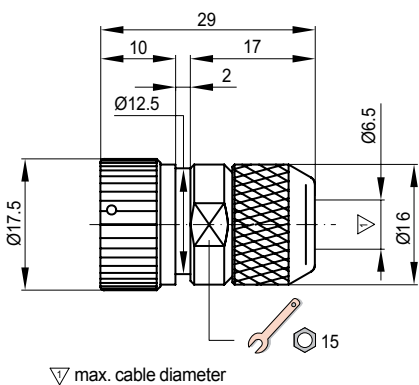
\*1 See also ordering information on page 6

**Note:** Backshell NF07 Z5 PG7 on page 11  
Terminal styles on page 13

### Cable connecting plug (short adapter)

Series NF07

#### Device outline



#### Ordering code

Example\*1:

|    |    |   |   |    |    | Shell part 1 |   |   |   |    |    |
|----|----|---|---|----|----|--------------|---|---|---|----|----|
| NF | 07 | A | 1 | L0 | A1 |              |   |   |   |    |    |
| ↑  | ↑  | ↑ | ↑ | ↑  | ↑  | 1            | 2 | 3 | 4 | 5  | 6  |
|    |    |   |   |    |    |              |   | A | 1 | L0 | A1 |
| NF | 07 | A | 2 | L0 | A1 |              |   |   |   |    |    |
|    |    | A | 3 | L0 | A1 |              |   |   |   |    |    |



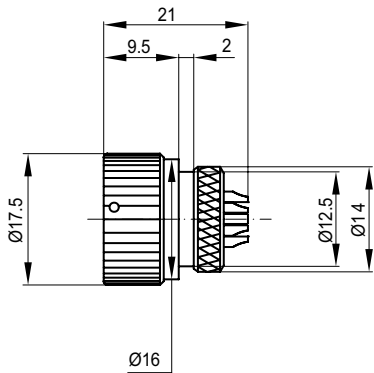
\*1 See also ordering information on page 6

**Note:** Terminal styles on page 13

**Plug for heatshrink boot**

Series NF07

**Device outline**



**Ordering code**

Example\*1:



| Shell part 1 |    |   |   |    |       |
|--------------|----|---|---|----|-------|
| 1            | 2  | 3 | 4 | 5  | 6     |
| NF           | 07 | A | 1 | L0 | ---*2 |
|              |    | A | 1 | L0 | ---*2 |
| NF           | 07 | A | 2 | L0 | ---*2 |
|              |    | A | 3 | L0 | ---*2 |

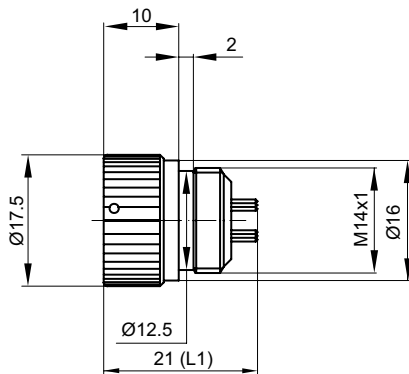
\*1 See also ordering information on page 6  
 \*2 Customized designs upon request

**Note:** Heatshrink boots on page 11  
 Terminal styles on page 13

**Jam nut plug M14x1**

Series NF07

**Device outline**



**Ordering code**

Example\*1:



| Shell part 1 |    |   |   |    |    |
|--------------|----|---|---|----|----|
| 1            | 2  | 3 | 4 | 5  | 6  |
| NF           | 07 | A | 1 | L0 | A6 |
|              |    | A | 1 | L0 | A6 |
| NF           | 07 | A | 2 | L0 | A6 |
|              |    | A | 3 | L0 | A6 |

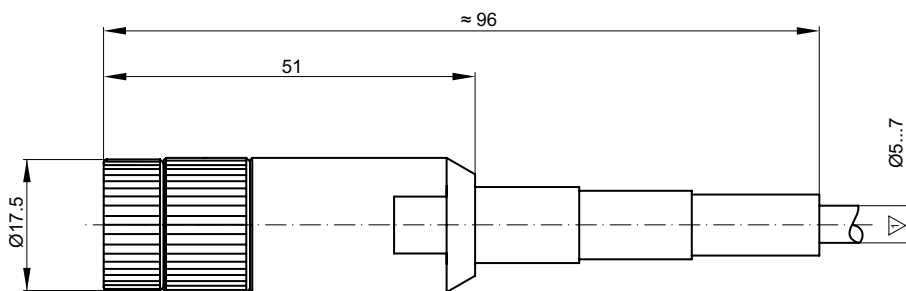
\*1 See also ordering information on page 6

**Note:** Terminal styles on page 13

**Cable connecting plug (rubber sleeve)**

Series NF07

**Device outline**



**Ordering code**

Example\*1:

| Shell part 1 |    |   |   |    |    |
|--------------|----|---|---|----|----|
| 1            | 2  | 3 | 4 | 5  | 6  |
| NF           | 07 | A | 1 | L0 | A5 |
|              |    | A | 1 | L0 | A5 |
| NF           | 07 | A | 2 | L0 | A5 |
|              |    | A | 3 | L0 | A5 |

\*1 See also ordering information on page 6

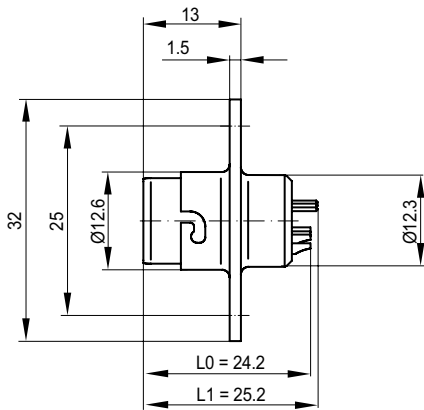
▽ cable diameter

**Note:** Terminal styles on page 13



**Flange receptacle** Series NF07

**Device outline**



**Ordering code**

Example\*1:



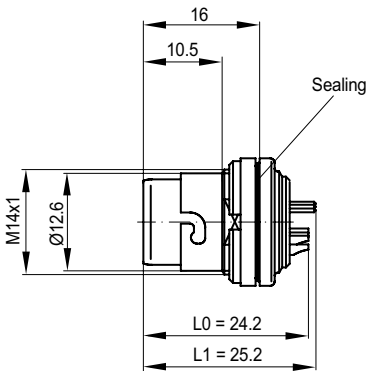
|          |          | Shell part 1 |          |          |          |    |
|----------|----------|--------------|----------|----------|----------|----|
| NF       | 07       | B            | 1        | L0       | ---      | *2 |
| ↑        | ↑        | ↑            | ↑        | ↑        | ↑        | ↑  |
| <b>1</b> | <b>2</b> | <b>3</b>     | <b>4</b> | <b>5</b> | <b>6</b> |    |
| NF       | 07       | B            | 1        | L0       | ---      | *2 |
|          |          | B            | 2        | L0       | ---      | *2 |
|          |          | B            | 3        | L0       | ---      | *2 |
| NF       | 07       | B            | 1        | L1       | ---      | *2 |
|          |          | B            | 2        | L1       | ---      | *2 |
|          |          | B            | 3        | L1       | ---      | *2 |

\*1 See also ordering information on page 6  
 \*2 Customized designs upon request

**Note:** Terminal styles on page 13

**Jam nut receptacle** Series NF07

**Device outline**



**Ordering code**

Example\*1:



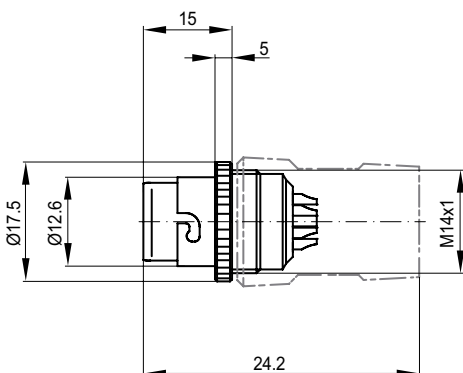
|          |          | Shell part 1 |          |          |          |    |
|----------|----------|--------------|----------|----------|----------|----|
| NF       | 07       | C            | 1        | L0       | ---      | *2 |
| ↑        | ↑        | ↑            | ↑        | ↑        | ↑        | ↑  |
| <b>1</b> | <b>2</b> | <b>3</b>     | <b>4</b> | <b>5</b> | <b>6</b> |    |
| NF       | 07       | C            | 1        | L0       | ---      | *2 |
|          |          | C            | 2        | L0       | ---      | *2 |
|          |          | C            | 3        | L0       | ---      | *2 |
| NF       | 07       | C            | 1        | L1       | ---      | *2 |
|          |          | C            | 2        | L1       | ---      | *2 |
|          |          | C            | 3        | L1       | ---      | *2 |

\*1 See also ordering information on page 6  
 \*2 Customized designs upon request

**Note:** Terminal styles on page 13

**Cable connecting receptacle for backshell NF07 Z5 Pg7** Series NF07

**Device outline**



**Ordering code**

Example\*1:



|          |          | Shell part 1 |          |          |          |   |
|----------|----------|--------------|----------|----------|----------|---|
| NF       | 07       | D            | 1        | L0       | D3       |   |
| ↑        | ↑        | ↑            | ↑        | ↑        | ↑        | ↑ |
| <b>1</b> | <b>2</b> | <b>3</b>     | <b>4</b> | <b>5</b> | <b>6</b> |   |
| NF       | 07       | D            | 1        | L0       | D3       |   |
|          |          | D            | 2        | L0       | D3       |   |
|          |          | D            | 3        | L0       | D3       |   |

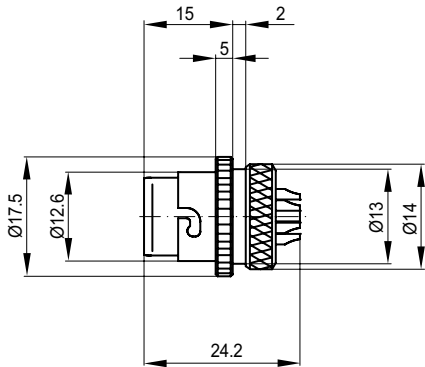
\*1 See also ordering information on page 6

**Note:** Backshell NF07 Z5 PG7 on page 11  
 Terminal styles on page 13

**Cable connecting receptacle (for heatshrink boot)**

Series NF07

**Device outline**



**Ordering code**

Example\*1:



**Shell part 1**

|          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|
| NF       | 07       | D        | 1        | L0       | ---*2    |
| ↑        | ↑        | ↑        | ↑        | ↑        | ↑        |
| <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> |
|          |          | D        | 1        | L0       | ---*2    |
| NF       | 07       | D        | 2        | L0       | ---*2    |
|          |          | D        | 3        | L0       | ---*2    |

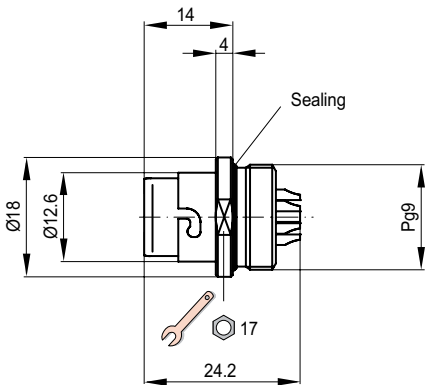
\*1 See also ordering information on page 6  
\*2 Customized designs upon request

**Note:** Heatshrink boots on page 11  
Terminal styles on page 13

**Jam nut receptacle with thread Pg9**

Series NF07

**Device outline**



**Ordering code**

Example\*1:



**Shell part 1**

|          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|
| NF       | 07       | H        | 1        | L0       | ---*2    |
| ↑        | ↑        | ↑        | ↑        | ↑        | ↑        |
| <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> |
|          |          | H        | 1        | L0       | ---*2    |
| NF       | 07       | H        | 2        | L0       | ---*2    |
|          |          | H        | 3        | L0       | ---*2    |

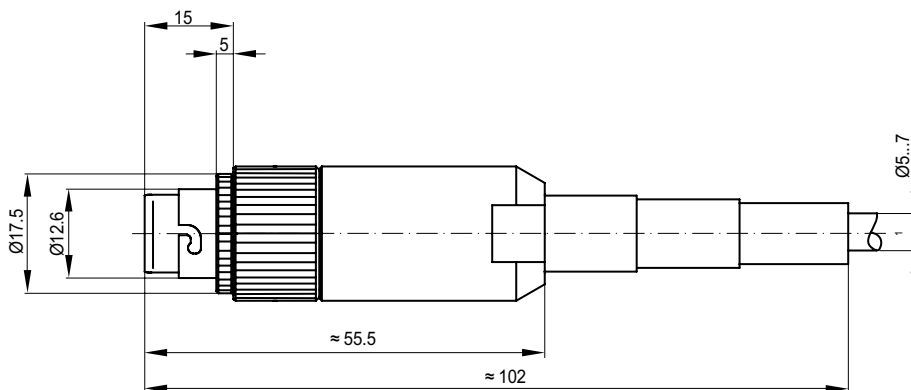
\*1 See also ordering information on page 6  
\*2 Customized designs upon request

**Note:** Terminal styles on page 13

**Cable connecting receptacle (rubber sleeve)**

Series NF07

**Device outline**



**Ordering code**

Example\*1:

|          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|
| NF       | 07       | D        | 1        | L0       | D6       |
| ↑        | ↑        | ↑        | ↑        | ↑        | ↑        |
| <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> |
|          |          | D        | 1        | L0       | D6       |
| NF       | 07       | D        | 2        | L0       | D6       |
|          |          | D        | 3        | L0       | D6       |

\*1 See also ordering information on page 6

▽ cable diameter

**Note:** Terminal styles on page 13

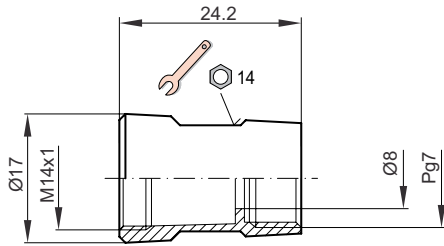
### Backshell NF07 Z5 with thread Pg7

Series NF07

Device outline

Ordering code

Accessories / Shell part 2



**Note:** For use with commercially available screw coupling built to DIN 46 320

Example\*1:

NF07 Z5 PG7



\*1 See also ordering information on page 6

### Heatshrink boots

Series NF07

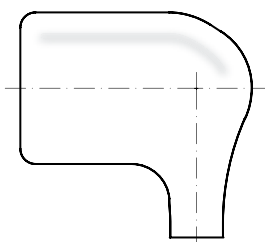
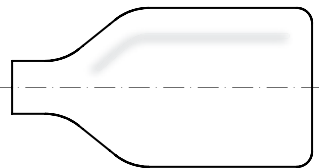
Device outline

Ordering code

Accessories / Shell part 2

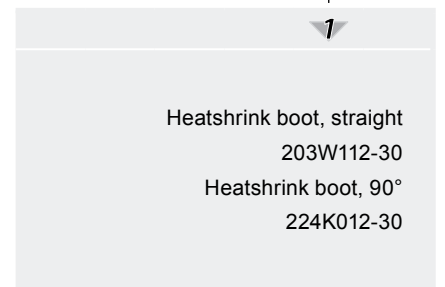
Heatshrink boot, straight

Heatshrink boot, 90°



Example\*1:

203W 112-30



\*1 See also ordering information on page 6

### Seals NF Z1 and NF Z2

Series NF07

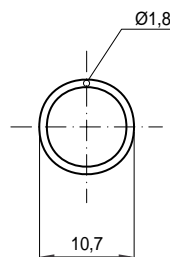
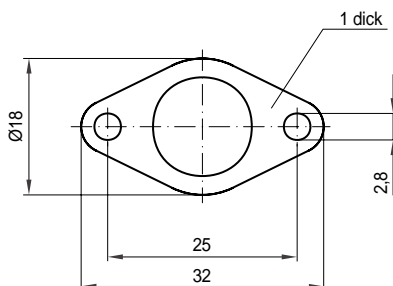
Device outline

Ordering code

Accessories / Shell part 2

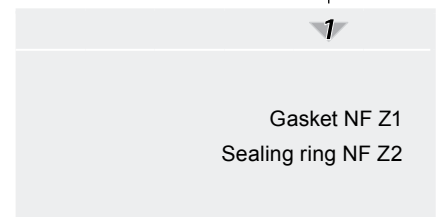
Gasket NF Z1  
(Flange seal)

Sealing ring NF Z2  
(O-ring)



Example\*1:

NF Z1

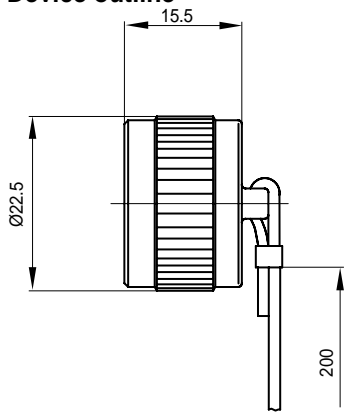


\*1 See also ordering information on page 6

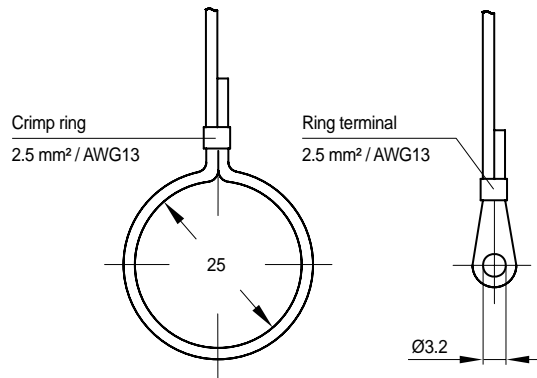
**Protection cap VG96934 Z3**

Series NF07

**Device outline**



**Ordering code**



**Accessories/Protection cap**

Example\*1:

VG96934 Z3



Protection cap  
VG9634 Z3

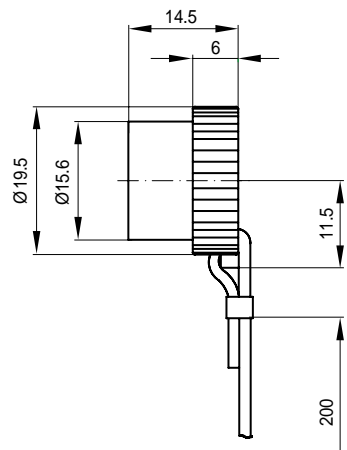
\*1 See also ordering information on page 6

**Note:** It is possible to fit loops or ring terminals (both included)

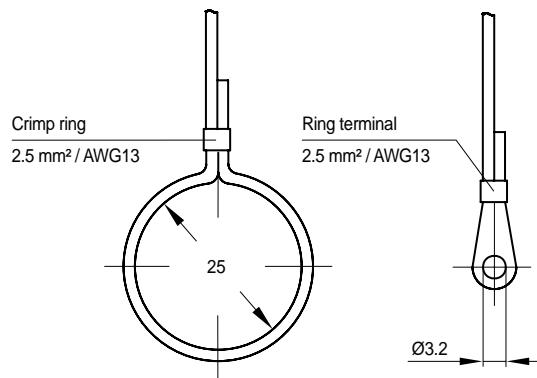
**Protection cap VG96934 Z4 (rubber)**

Series NF07

**Device outline**



**Ordering code**



**Accessories/Protection cap**

Example\*1:

VG96934 Z3



Protection cap  
VG9634 Z4

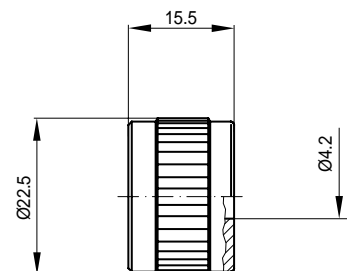
\*1 See also ordering information on page 6

**Note:** It is possible to fit loops or ring terminals (both included)

**Dummy receptacle VG96934 Z6**

Series NF07

**Device outline**



**Ordering code**

**Accessories/Protection cap**

Example\*1:

VG96934 Z4



Dummy receptacle  
VG9634 Z6

\*1 See also ordering information on page 6

**Note:** Dummy receptacle to be mounted onto the case of a device for receiving a free plug cable

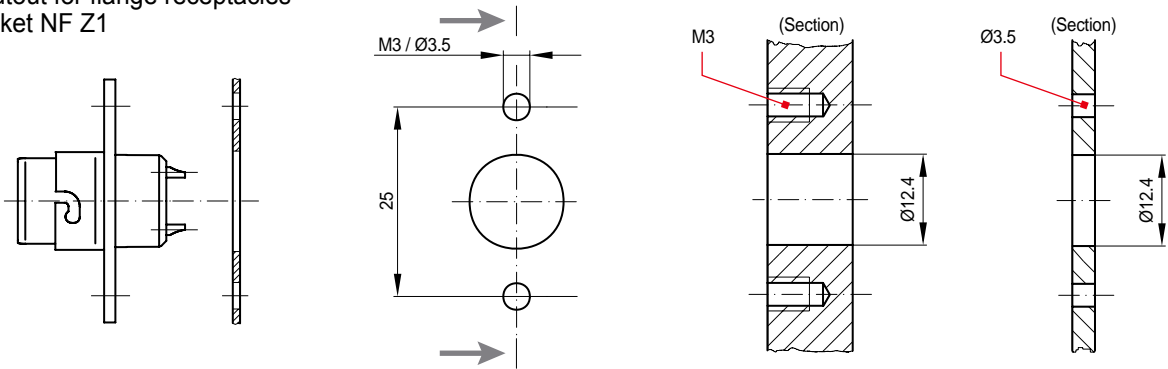


**Standard mounting borings**

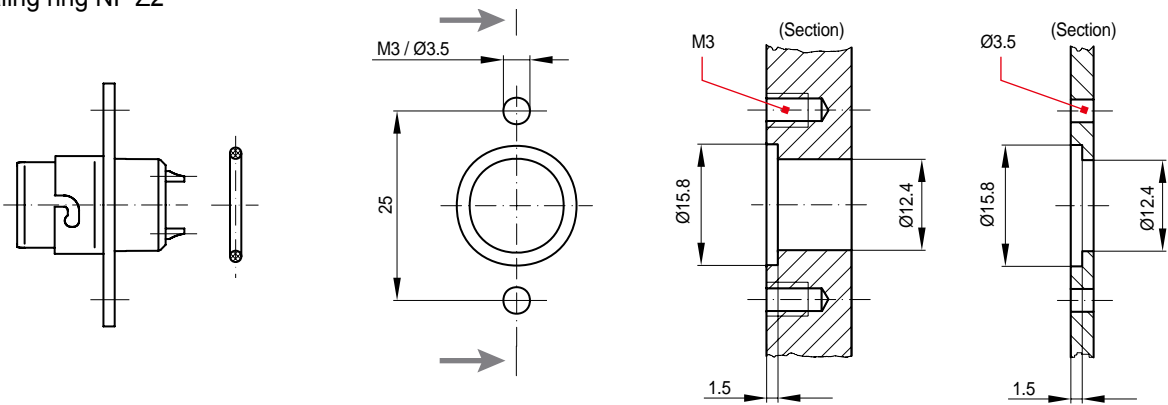
Series NF07

**Flange receptacles**

- Panel cutout for flange receptacles with gasket NF Z1

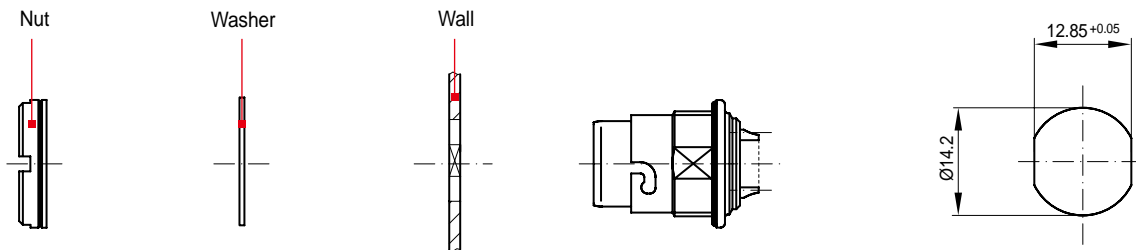


- Panel cutout for flange receptacles with sealing ring NF Z2



**Jam nut receptacles**

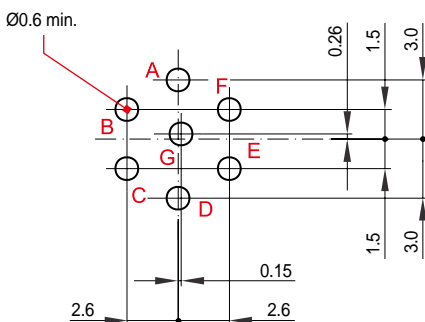
- Panel cutout for jam nut receptacles



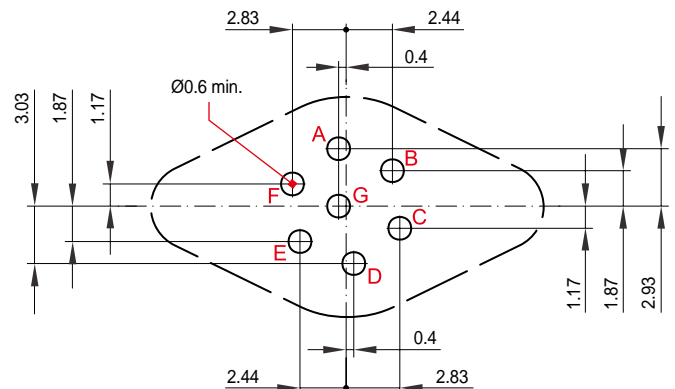
**Note:** Use mounting tool VG96934 Z10  
Torque 2 Nm max.

**PCB terminal**

- Panel drilling for plugs



- Panel drilling for receptacles

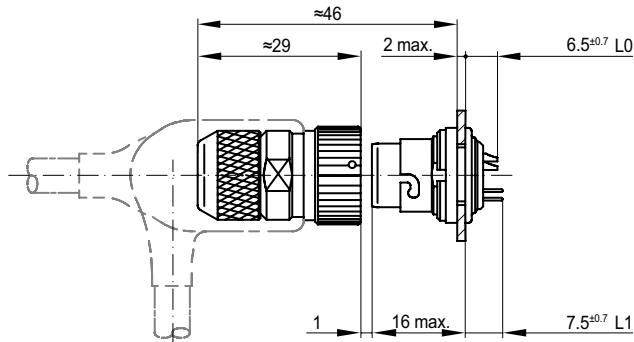


**Note:** These mounting borings can also be used for NF07 /S Series receptacles

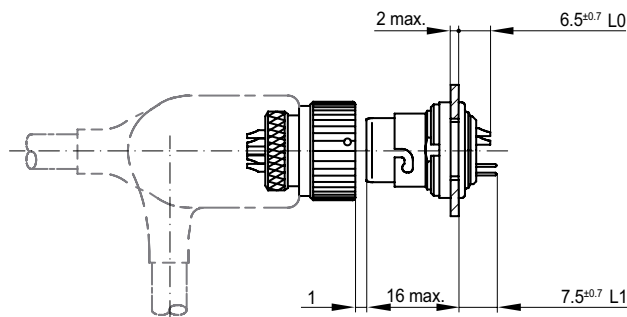
**Standard assembly and installation dimensions**

Series NF07

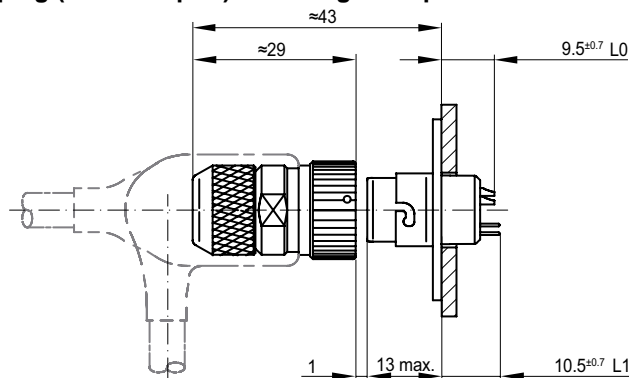
- Cable connecting plug (short adapter) ↔ Jam nut receptacle



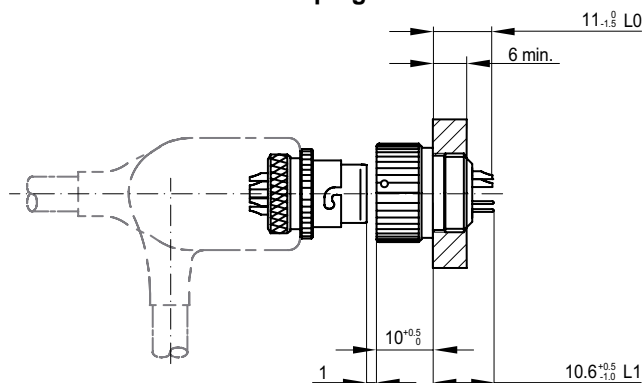
- Plug for heatshrink boot ↔ Jam nut receptacle



- Cable connecting plug (short adapter) ↔ Flange receptacle

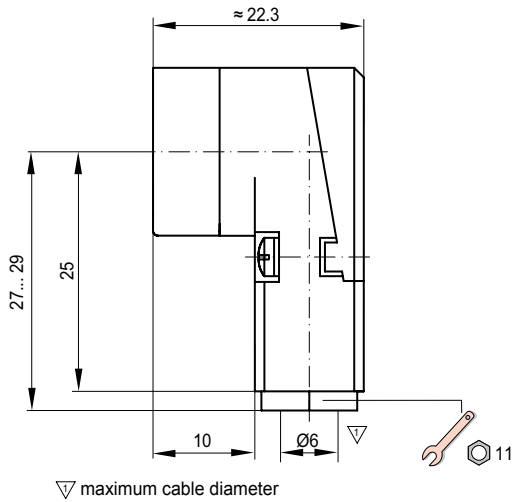


- Receptacle for heatshrink boot ↔ Jam nut plug



**90° cable connecting plug**

Series NF07 /S

**Device outline**

**Ordering code**

Example\*1:

|    |    |   |   |    |       |
|----|----|---|---|----|-------|
| NF | 07 | A | 1 | L0 | A17/S |
| ↑  | ↑  | ↑ | ↑ | ↑  | ↑     |



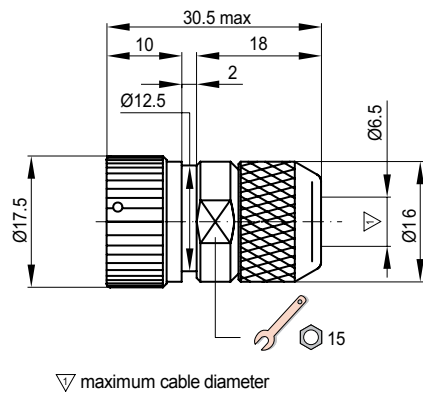
|    |    |   |          |          |          |          |          |          |
|----|----|---|----------|----------|----------|----------|----------|----------|
|    |    |   | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> |
|    |    | A | 1        | L0       | A17/S    |          |          |          |
| NF | 07 | A | 2        | L0       | A17/S    |          |          |          |
|    |    | A | 3        | L0       | A17/S    |          |          |          |
|    |    | A | 4        | L0       | A17/S    |          |          |          |

\*1 See also ordering information on page 6

**Note:** Terminal styles on page 22

**Cable connecting plug (short adapter)**

Series NF07 /S

**Device outline**

**Ordering code**

Example\*1:

|    |    |   |   |    |      |
|----|----|---|---|----|------|
| NF | 07 | A | 1 | L0 | A1/S |
| ↑  | ↑  | ↑ | ↑ | ↑  | ↑    |



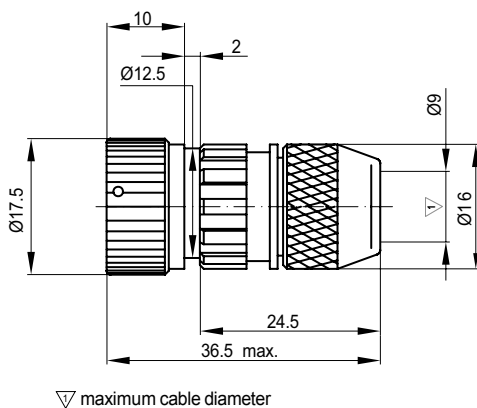
|    |    |   |          |          |          |          |          |          |
|----|----|---|----------|----------|----------|----------|----------|----------|
|    |    |   | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> |
|    |    | A | 1        | L0       | A1/S     |          |          |          |
| NF | 07 | A | 2        | L0       | A1/S     |          |          |          |
|    |    | A | 3        | L0       | A1/S     |          |          |          |
|    |    | A | 4        | L0       | A1/S     |          |          |          |

\*1 See also ordering information on page 6

**Note:** Terminal styles on page 22

**Cable connecting plug (long adapter)**

Series NF07 /S

**Device outline**

**Ordering code**

Example\*1:

|    |    |   |   |    |    |
|----|----|---|---|----|----|
| NF | 07 | A | 1 | L0 | /S |
| ↑  | ↑  | ↑ | ↑ | ↑  | ↑  |



|    |    |   |          |          |          |          |          |          |
|----|----|---|----------|----------|----------|----------|----------|----------|
|    |    |   | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> |
|    |    | A | 1        | L0       | /S       |          |          |          |
| NF | 07 | A | 2        | L0       | /S       |          |          |          |
|    |    | A | 3        | L0       | /S       |          |          |          |
|    |    | A | 4        | L0       | /S       |          |          |          |

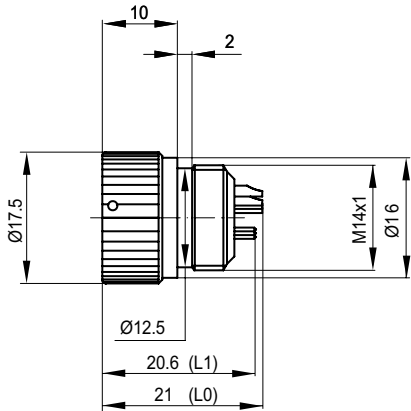
\*1 See also ordering information on page 6

**Note:** Terminal styles on page 22



**Jam nut plug** Series NF07 /S

**Device outline**



**Ordering code**

Example\*1:



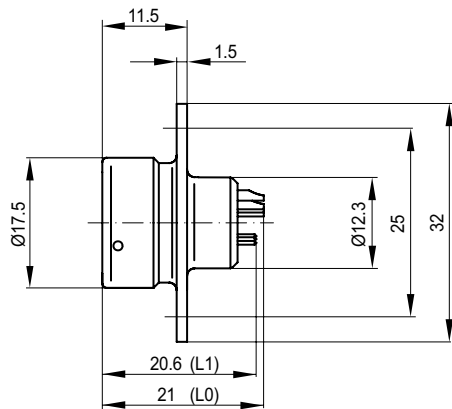
|    |    | Shell part 1 |   |    |    |
|----|----|--------------|---|----|----|
| NF | 07 | E            | 1 | L0 | /S |
| 1  | 2  | 3            | 4 | 5  | 6  |
| NF | 07 | E            | 1 | L0 | /S |
|    |    | E            | 2 | L0 | /S |
|    |    | E            | 3 | L0 | /S |
|    |    | E            | 4 | L0 | /S |
| NF | 07 | E            | 1 | L1 | /S |
|    |    | E            | 2 | L1 | /S |
|    |    | E            | 3 | L1 | /S |
|    |    | E            | 4 | L1 | /S |

\*1 See also ordering information on page 6

**Note:** Terminal styles on page 22

**Flange plug** Series NF07 /S

**Device outline**



**Ordering code**

Example\*1:



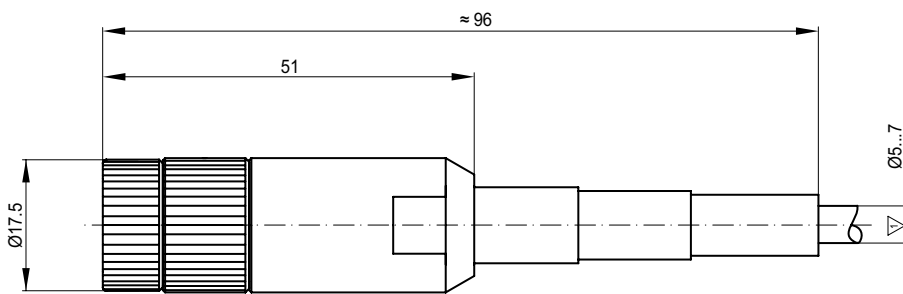
|    |    | Shell part 1 |   |    |    |
|----|----|--------------|---|----|----|
| NF | 07 | F            | 1 | L0 | /S |
| 1  | 2  | 3            | 4 | 5  | 6  |
| NF | 07 | F            | 1 | L0 | /S |
|    |    | F            | 2 | L0 | /S |
|    |    | F            | 3 | L0 | /S |
|    |    | F            | 4 | L0 | /S |
| NF | 07 | F            | 1 | L1 | /S |
|    |    | F            | 2 | L1 | /S |
|    |    | F            | 3 | L1 | /S |
|    |    | F            | 4 | L1 | /S |

\*1 See also ordering information on page 6

**Note:** Terminal styles on page 22

**Cable connecting plug (rubber sleeve)** Series NF07 /S

**Device outline**



▽ cable diameter

**Ordering code**

Example\*1:

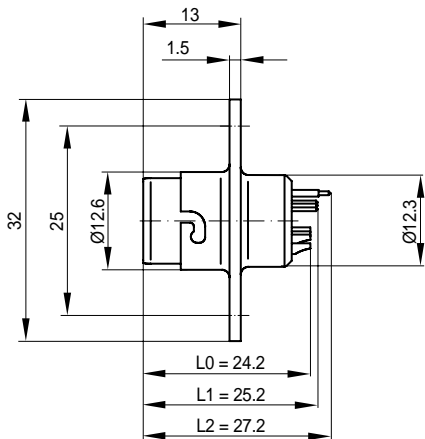
|    |    | Shell part 1 |   |    |    |
|----|----|--------------|---|----|----|
| NF | 07 | A            | 1 | L0 | /S |
| 1  | 2  | 3            | 4 | 5  | 6  |
| NF | 07 | A            | 1 | L0 | /S |
|    |    | A            | 2 | L0 | /S |
|    |    | A            | 3 | L0 | /S |
|    |    | A            | 4 | L0 | /S |

\*1 See also ordering information on page 6

**Note:** Terminal styles on page 22

**Flange receptacle**

Series NF07 /S

**Device outline**

**Ordering code**

Example\*1:



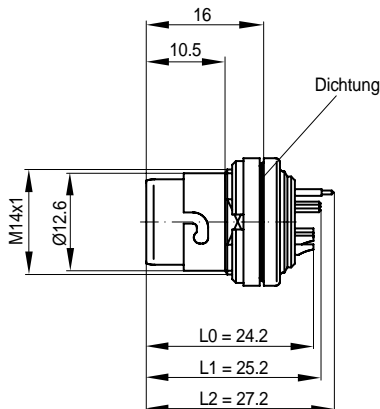
|    |    | Shell part 1 |          |          |          |
|----|----|--------------|----------|----------|----------|
| NF | 07 | B            | 1        | L0       | /S       |
| ↑  | ↑  | ↑            | ↑        | ↑        | ↑        |
|    |    |              | <b>1</b> | <b>2</b> | <b>3</b> |
| NF | 07 | B            | 1        | L0       | /S       |
|    |    | B            | 2        | L0       | /S       |
|    |    | B            | 3        | L0       | /S       |
|    |    | B            | 4        | L0       | /S       |
| NF | 07 | B            | 1        | L1       | /S       |
|    |    | B            | 2        | L1       | /S       |
|    |    | B            | 3        | L1       | /S       |
|    |    | B            | 4        | L1       | /S       |
| NF | 07 | B            | 1        | L2       | /S       |
|    |    | B            | 2        | L2       | /S       |
|    |    | B            | 3        | L2       | /S       |
|    |    | B            | 4        | L2       | /S       |

\*1 See also ordering information on page 6

**Note:** Terminal styles on page 22

**Jam nut receptacle**

Series NF07 /S

**Device outline**

**Ordering code**

Example\*1:



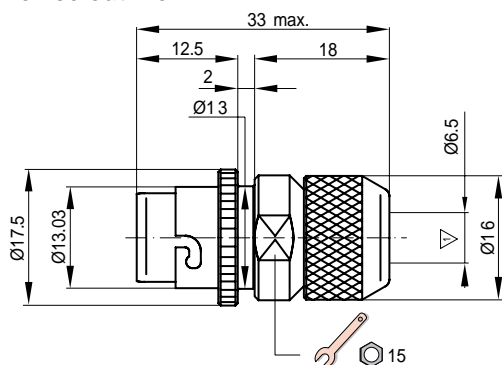
|    |    | Shell part 1 |          |          |          |
|----|----|--------------|----------|----------|----------|
| NF | 07 | C            | 1        | L0       | /S       |
| ↑  | ↑  | ↑            | ↑        | ↑        | ↑        |
|    |    |              | <b>1</b> | <b>2</b> | <b>3</b> |
| NF | 07 | C            | 1        | L0       | /S       |
|    |    | C            | 2        | L0       | /S       |
|    |    | C            | 3        | L0       | /S       |
|    |    | C            | 4        | L0       | /S       |
| NF | 07 | C            | 1        | L1       | /S       |
|    |    | C            | 2        | L1       | /S       |
|    |    | C            | 3        | L1       | /S       |
|    |    | C            | 4        | L1       | /S       |
| NF | 07 | C            | 1        | L2       | /S       |
|    |    | C            | 2        | L2       | /S       |
|    |    | C            | 3        | L3       | /S       |
|    |    | C            | 4        | L4       | /S       |

\*1 See also ordering information on page 6

**Note:** Terminal styles on page 22

**Cable connecting receptacle (short adapter)**

Series NF07 /S

**Device outline**

**Ordering code**

Example\*1:



|    |    | Shell part 1 |          |          |          |
|----|----|--------------|----------|----------|----------|
| NF | 07 | D            | 1        | L0       | /S       |
| ↑  | ↑  | ↑            | ↑        | ↑        | ↑        |
|    |    |              | <b>1</b> | <b>2</b> | <b>3</b> |
| NF | 07 | D            | 1        | L0       | /S       |
|    |    | D            | 2        | L0       | /S       |
|    |    | D            | 3        | L0       | /S       |
|    |    | D            | 4        | L0       | /S       |

\*1 See also ordering information on page 6

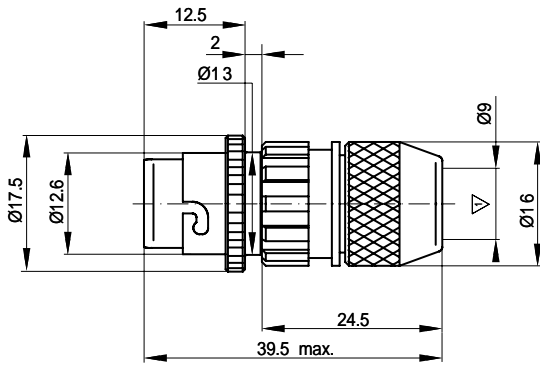
▽ maximum cable diameter

**Note:** Terminal styles on page 22

**Cable connecting receptacle (long adapter)**

Series NF07 /S

**Device outline**



▽ maximum cable diameter

**Designation / Ordering**

Shell part 1

Example\*1:

|          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|
| NF       | 07       | D        | 1        | L0       | D7/S     |
| ↑        | ↑        | ↑        | ↑        | ↑        | ↑        |
| <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> |



|    |    |  |   |   |    |      |
|----|----|--|---|---|----|------|
|    |    |  | D | 1 | L0 | D7/S |
|    |    |  | D | 2 | L0 | D7/S |
| NF | 07 |  | D | 3 | L0 | D7/S |
|    |    |  | D | 4 | L0 | D7/S |

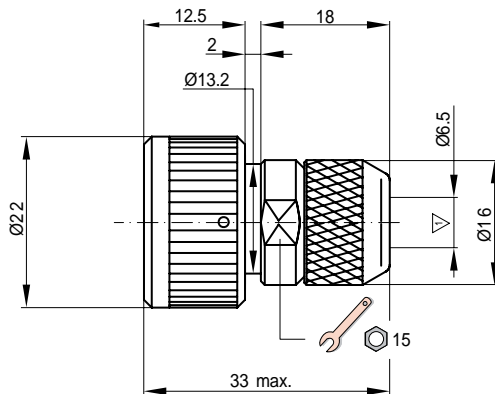
\*1 See also ordering information on page 6

**Note:** Terminal styles on page 22

**Reinforced cable connecting receptacle (short adapter)**

Series NF07 /S

**Device outline**



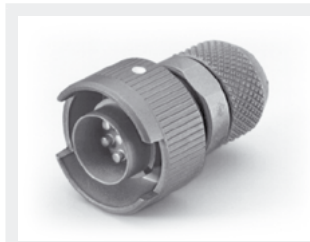
▽ maximum cable diameter

**Designation / Ordering**

Shell part 1

Example\*1:

|          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|
| NF       | 07       | N        | 1        | L0       | /S       |
| ↑        | ↑        | ↑        | ↑        | ↑        | ↑        |
| <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> |



|    |    |  |   |   |    |    |
|----|----|--|---|---|----|----|
|    |    |  | N | 1 | L0 | /S |
|    |    |  | N | 2 | L0 | /S |
| NF | 07 |  | N | 3 | L0 | /S |
|    |    |  | N | 4 | L0 | /S |

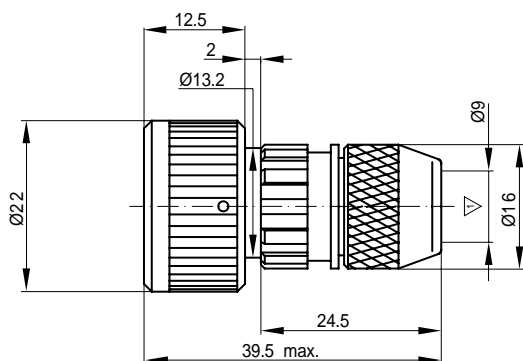
\*1 See also ordering information on page 6

**Note:** Terminal styles on page 22

**Reinforced cable connecting receptacle (long adapter)**

Series NF07 /S

**Device outline**



▽ maximum cable diameter

**Designation / Ordering**

Shell part 1

Example\*1:

|          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|
| NF       | 07       | K        | 1        | L0       | /S       |
| ↑        | ↑        | ↑        | ↑        | ↑        | ↑        |
| <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> |



|    |    |  |   |   |    |    |
|----|----|--|---|---|----|----|
|    |    |  | K | 1 | L0 | /S |
|    |    |  | K | 2 | L0 | /S |
| NF | 07 |  | K | 3 | L0 | /S |
|    |    |  | K | 4 | L0 | /S |

\*1 See also ordering information on page 6

**Note:** Terminal styles on page 22

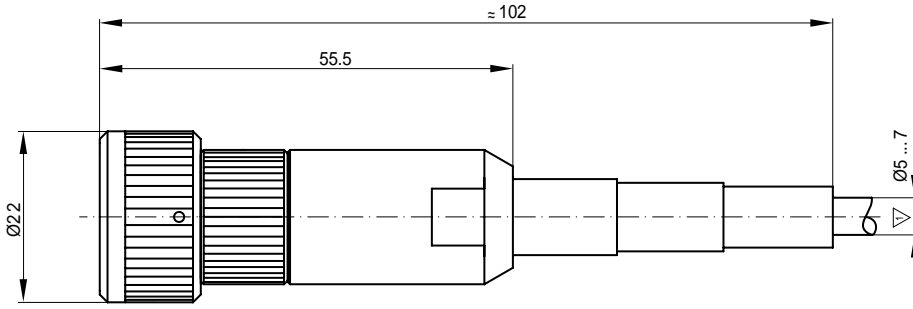
**Reinforced cable connecting receptacle (rubber sleeve)**

Series NF07 /S

Device outline

Ordering code

Shell part 1



Example\*1:

|    |    |   |   |    |       |
|----|----|---|---|----|-------|
| NF | 07 | M | 1 | L0 | ---*2 |
| ↑  | ↑  | ↑ | ↑ | ↑  | ↑     |
| 1  | 2  | 3 | 4 | 5  | 6     |
|    |    | M | 1 | L0 | ---*2 |
| NF | 07 | M | 2 | L0 | ---*2 |
|    |    | M | 3 | L0 | ---*2 |
|    |    | M | 4 | L0 | ---*2 |

\*1 See also ordering information on page 6  
\*2 Customized designs upon request

▽ cable diameter

**Note:** Terminal styles on page 22

**Heatshrink boots**

Series NF07 /S

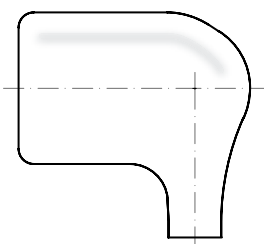
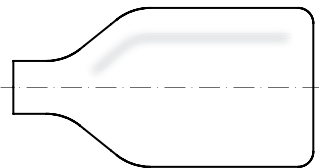
Device outline

Ordering code

Accessories / Shell part 2

Heatshrink boot, straight

Heatshrink boot, 90°



Example\*1:

203W 112-30



Heatshrink boot, straight  
203W112-30  
Heatshrink boot, 90°  
224K012-30

\*1 See also ordering information on page 6

**Seals NF Z1 and NF Z2**

Series NF07 /S

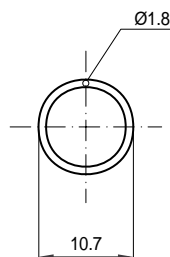
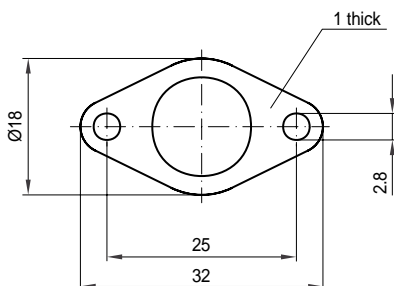
Device outline

Ordering code

Accessories / Shell part 2

**Gasket NF Z1**  
(Flange seal)

**Sealing ring NF Z2**  
(O-ring)



Example\*1:

NF Z1



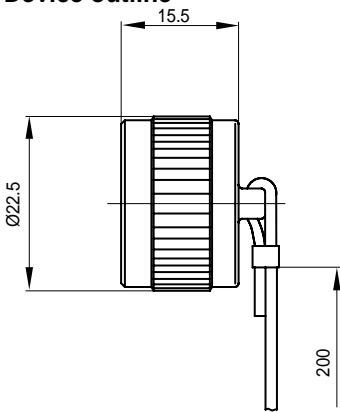
Gasket NF Z1  
Sealing ring NF Z2

\*1 See also ordering information on page 6

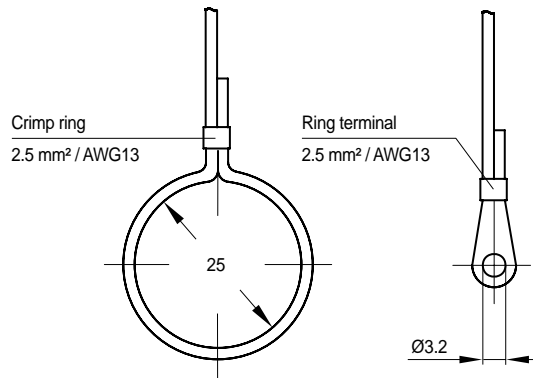
**Protection cap VG96934 Z3**

Series NF07 /S

**Device outline**



**Ordering code**



**Accessories/Protection cap**

Example\*1:

VG96934 Z3



Protection cap  
VG9634 Z3

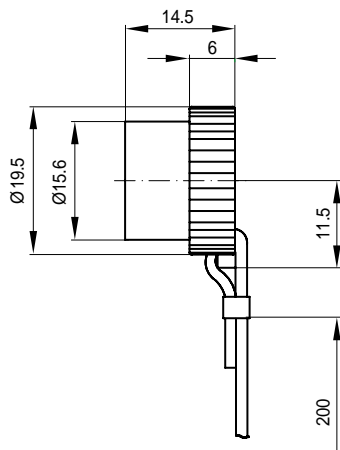
\*1 See also ordering information on page 6

**Note:** It is possible to fit loops or ring terminals (both included)

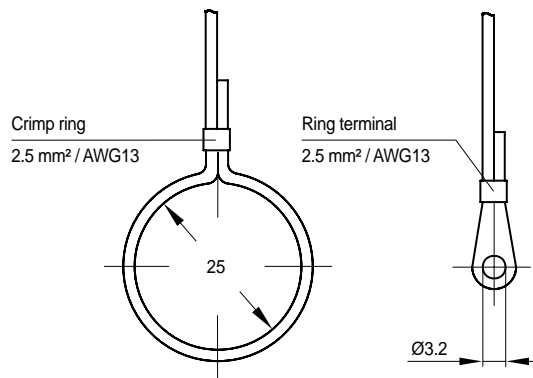
**Protection cap VG96934 Z4 (rubber)**

Series NF07 /S

**Device outline**



**Ordering code**



**Accessories/Protection cap**

Example\*1:

VG96934 Z3



Protection cap  
VG9634 Z4

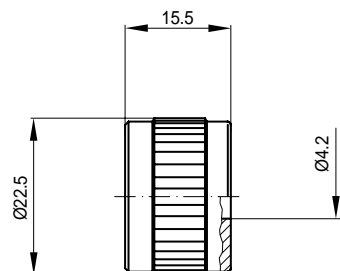
\*1 See also ordering information on page 6

**Note:** It is possible to fit loops or ring terminals (both included)

**Dummy receptacle VG96934 Z6**

Series NF07 /S

**Device outline**



**Ordering code**

**Accessories/Protection cap**

Example\*1:

VG96934 Z4



Dummy receptacle  
VG9634 Z6

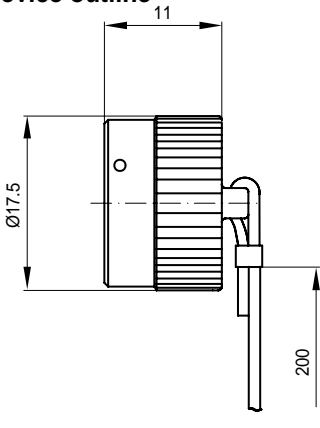
\*1 See also ordering information on page 6

**Note:** Dummy receptacle to be mounted onto the case of a device for receiving a free plug cable

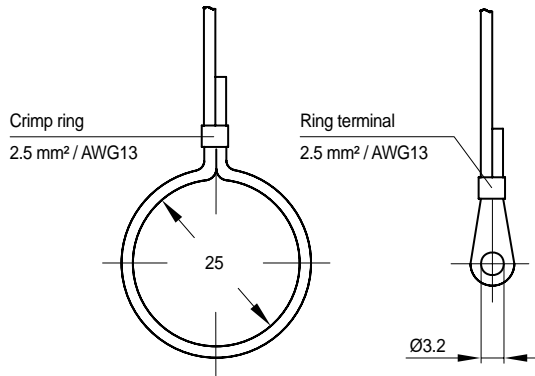
**Protection cap for polarization NF07 Z7/x**

Series NF07 /S

**Device outline**



**Ordering code**



**Accessories/Protection cap**

Example\*1:

NF07 Z7 / 1



|   |                |
|---|----------------|
| 1 | 2              |
| 1 | 2              |
| 3 | Protection cap |
| 4 | NF07 Z7        |
| 5 |                |

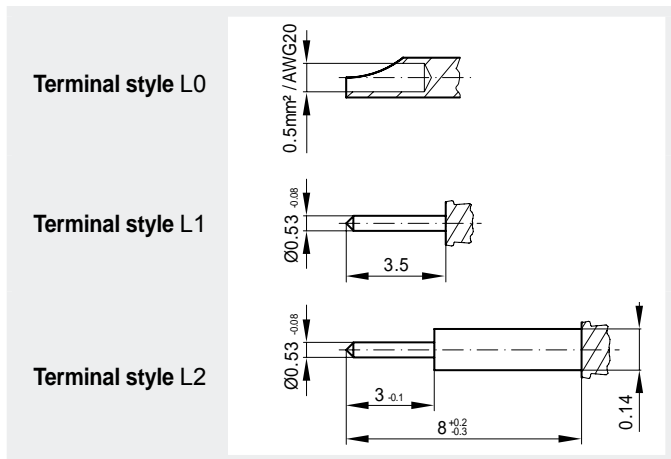
\*1 See also ordering information on page 6

**Note:** It is possible to fit loops or ring terminals (both included)

**Terminal styles, Mounting tool Z14**

Series NF07 /S

**Terminal styles**



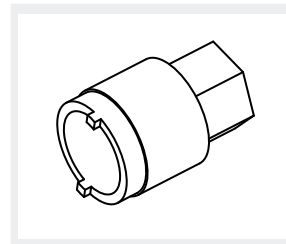
**Note:** Terminals must not be subjected to force or stress

**Mounting tool Z14**

Mounting tool for jam nut receptacles NF07 C x xx /S

Ordering code:

Z14



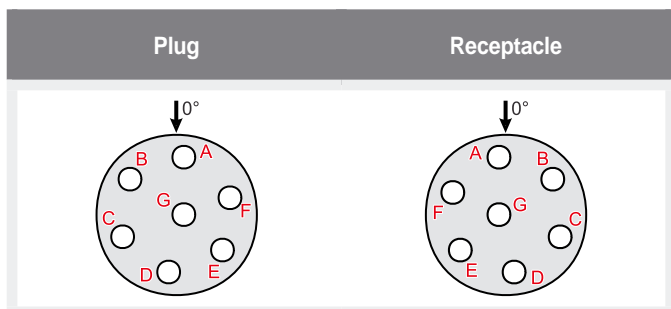
Mounting tool Z14

**Note:** Width across flats SW13, use with torque spanner, torque 8<sup>+2</sup> Nm max.

**Contact arrangement, Polarization**

Series NF07 /S

**Contact arrangement**



**Note:** Planforms seen from connector face

**Polarization**

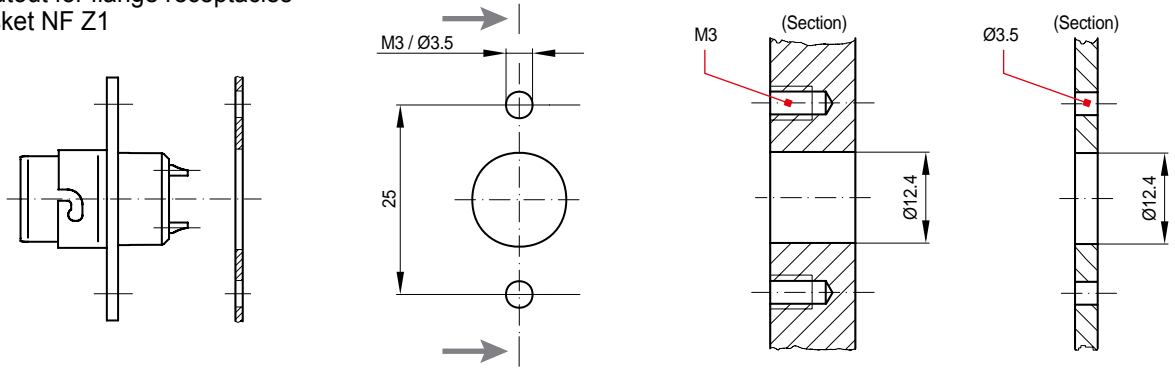
| Bayonet latch positions |            | Polarization Series NF07 |        |  |
|-------------------------|------------|--------------------------|--------|--|
| Orientation             | $\alpha 1$ | $\alpha 2$               | Colour |  |
| 1                       | 90°        | 120°                     | red    |  |
| 2                       | 105°       | 130°                     | yellow |  |
| 3                       | 110°       | 135°                     | green  |  |
| 4                       | 100°       | 165°                     | pink   |  |
| ---                     | ---        | ---                      | ---    |  |

**Mounting borings**

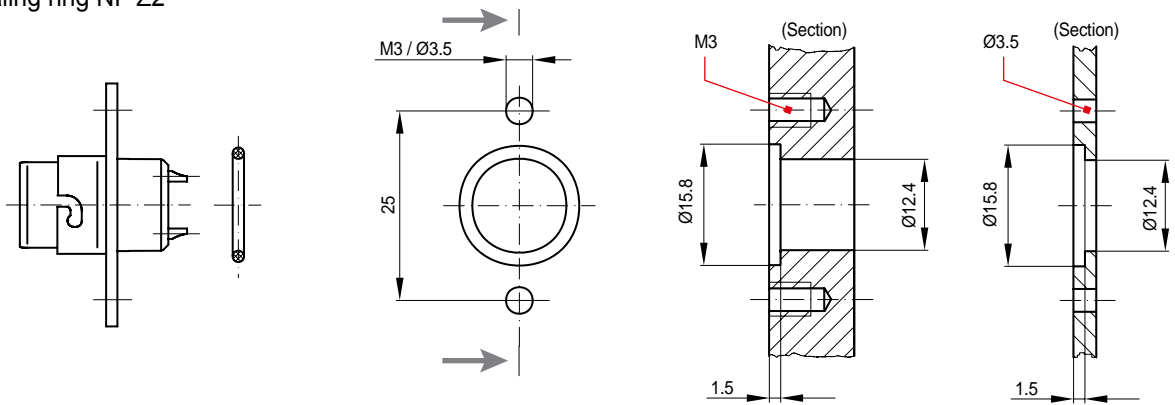
Series NF07 /S

**Flange receptacles**

- Panel cutout for flange receptacles with gasket NF Z1

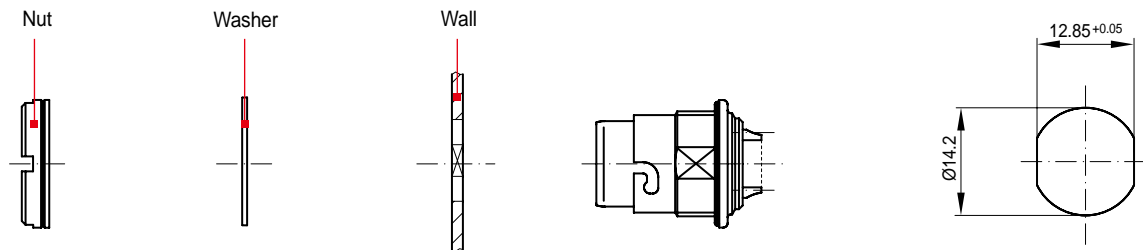


- Panel cutout for flange receptacles with sealing ring NF Z2



**Jam nut receptacles**

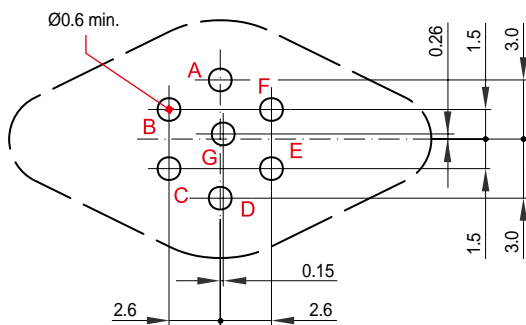
- Panel cutout for jam nut receptacles



**Note:** Use mounting tool VG96934 Z10  
Torque 2 Nm max.

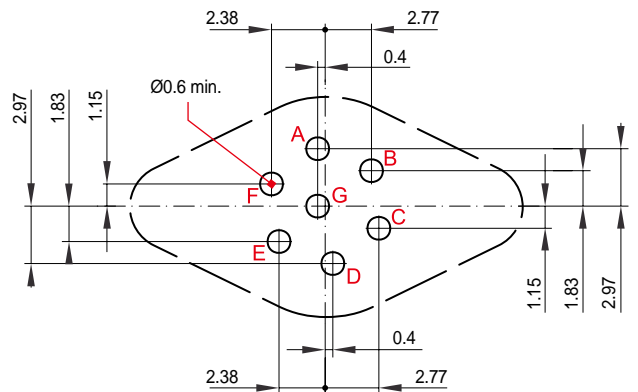
**PCB terminal**

- Panel drilling for plugs



**Note:** These mounting borings can also be used for NF07 Series receptacles

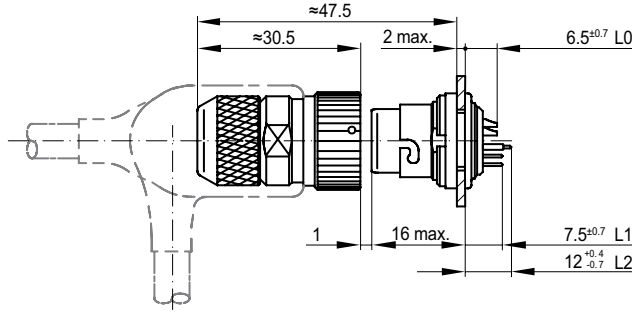
- Panel drilling for receptacles



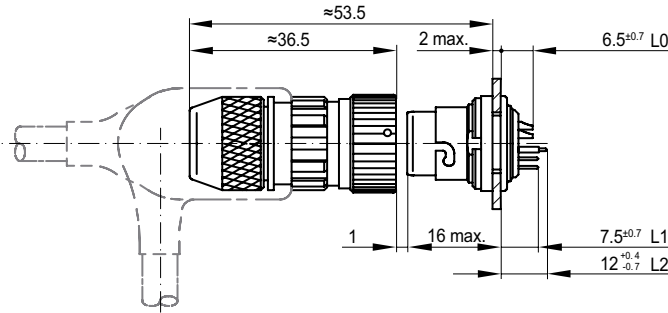
**Assembly and installation dimensions**

Series NF07 /S

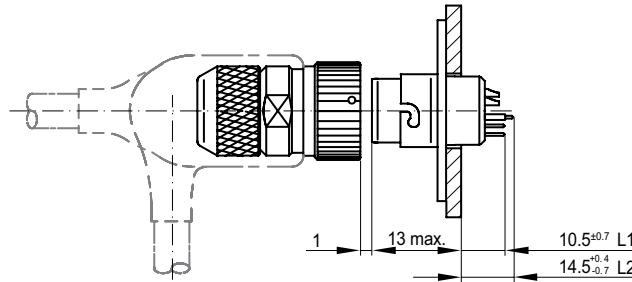
- Cable connecting plug (short adapter) ↔ Jam nut receptacle



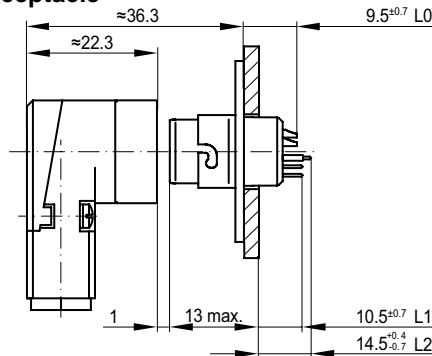
- Cable connecting plug (long adapter) ↔ Jam nut receptacle



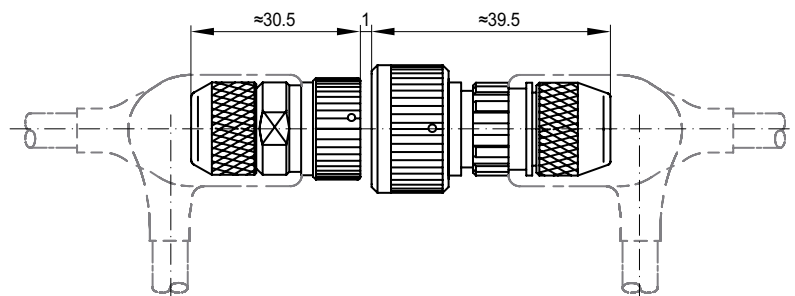
- Cable connecting plug (short adapter) ↔ Flange receptacle



- 90° Cable connecting plug ↔ Flange receptacle



- Cable connecting plug (short adapter) ↔ Reinforced cable connecting receptacle (long adapter)

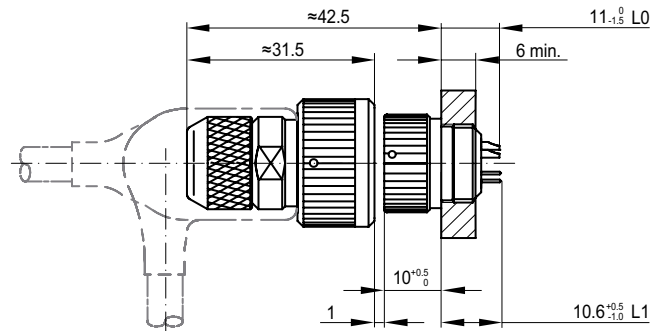




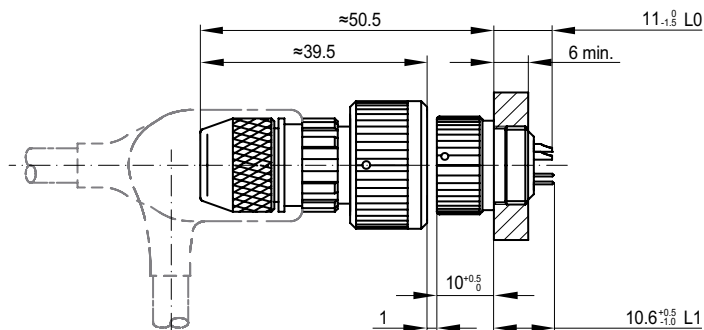
**Assembly and installation dimensions**

Series NF07 /S

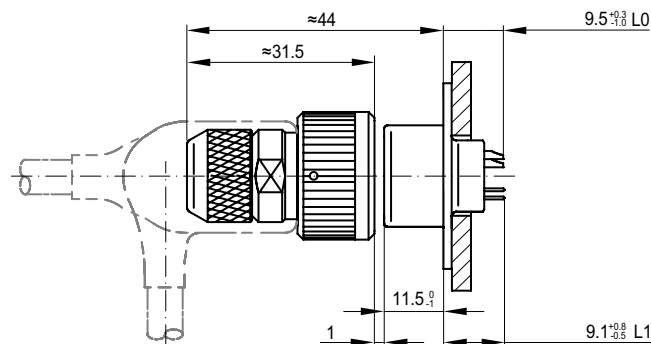
- Reinforced cable connecting receptacle (short adapter) ↔ Jam nut plug



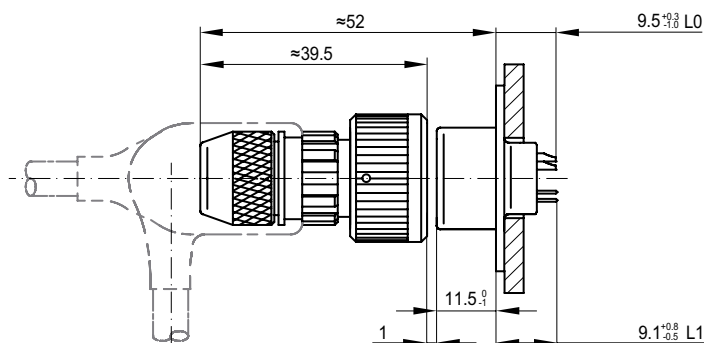
- Reinforced cable connecting receptacle (long adapter) ↔ Jam nut plug



- Reinforced cable connecting receptacle (short adapter) ↔ Flange plug

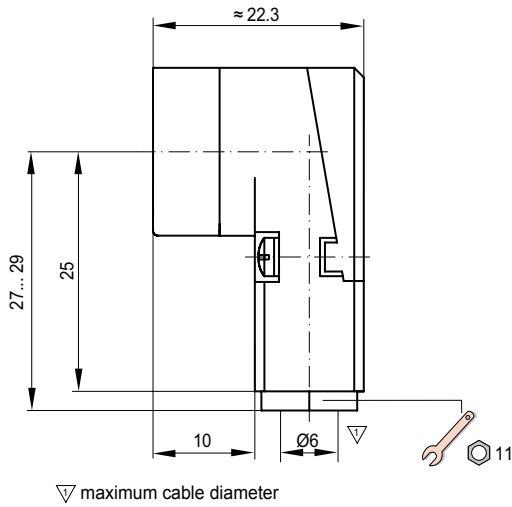


- Reinforced cable connecting receptacle (long adapter) ↔ Flange plug



**90° cable connecting plug**

Series NF10

**Device outline**

**Ordering code**

Example\*1:



\*1 See also ordering information on page 6

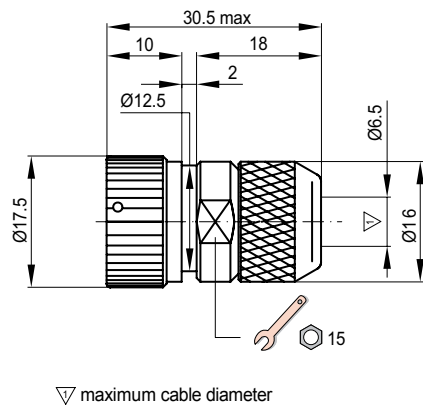
**Shell part 1**

|    |    |   |          |          |          |
|----|----|---|----------|----------|----------|
| NF | 10 | A | 1        | L0       | A17      |
| ↑  | ↑  | ↑ | ↑        | ↑        | ↑        |
|    |    |   | <b>1</b> | <b>2</b> | <b>3</b> |
|    |    | A | 1        | L0       | A17      |
|    |    | A | 2        | L0       | A17      |
| NF | 10 | A | 3        | L0       | A17      |
|    |    | A | 4        | L0       | A17      |
|    |    | A | 5        | L0       | A17      |

**Note:** Terminal styles on page 32

**Cable connecting plug (short adapter)**

Series NF10

**Device outline**

**Ordering code**

Example\*1:



\*1 See also ordering information on page 6

\*2 Customized designs upon request

**Shell part 1**

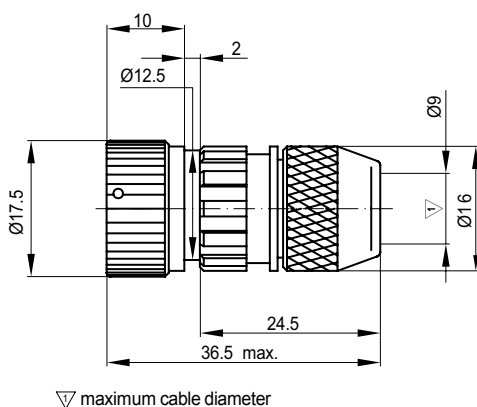
|    |    |   |          |          |          |
|----|----|---|----------|----------|----------|
| NF | 10 | A | 1        | L0       | ---*2    |
| ↑  | ↑  | ↑ | ↑        | ↑        | ↑        |
|    |    |   | <b>1</b> | <b>2</b> | <b>3</b> |
|    |    | A | 1        | L0       | ---*2    |
|    |    | A | 2        | L0       | ---*2    |
| NF | 10 | A | 3        | L0       | ---*2    |
|    |    | A | 4        | L0       | ---*2    |
|    |    | A | 5        | L0       | ---*2    |

**Note:** Terminal styles on page 32

Crimp ring eyelet and strain relief split pin included in delivery

**Cable connecting plug (long adapter)**

Series NF10

**Device outline**

**Ordering code**

Example\*1:



\*1 See also ordering information on page 6

**Shell part 1**

|    |    |   |          |          |          |
|----|----|---|----------|----------|----------|
| NF | 10 | A | 1        | L0       | A7       |
| ↑  | ↑  | ↑ | ↑        | ↑        | ↑        |
|    |    |   | <b>1</b> | <b>2</b> | <b>3</b> |
|    |    | A | 1        | L0       | A7       |
|    |    | A | 2        | L0       | A7       |
| NF | 10 | A | 3        | L0       | A7       |
|    |    | A | 4        | L0       | A7       |
|    |    | A | 5        | L0       | A7       |

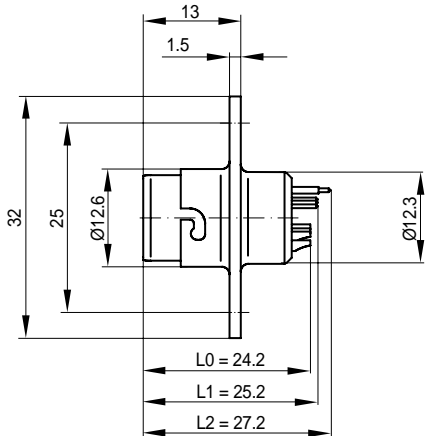
**Note:** Terminal styles on page 32

Crimp ring eyelet and strain relief split pin included in delivery



**Flange receptacle**

Series NF10

**Device outline**


Note: Terminal styles on page 32

**Ordering code**

Example\*1:



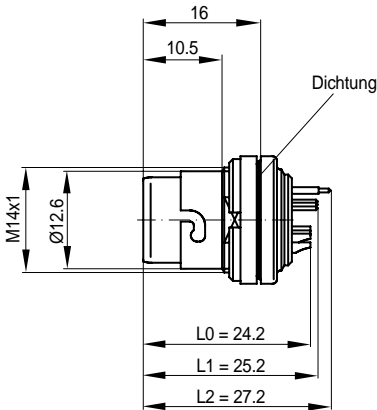
|    |    | Shell part 1 |   |    |       |  |
|----|----|--------------|---|----|-------|--|
| NF | 10 | B            | 1 | L0 | ---*2 |  |
| ↑  | ↑  | ↑            | ↑ | ↑  | ↑     |  |
| NF | 10 | B            | 1 | L0 | ---*2 |  |
|    |    | B            | 2 | L0 | ---*2 |  |
|    |    | B            | 3 | L0 | ---*2 |  |
|    |    | B            | 4 | L0 | ---*2 |  |
|    |    | B            | 5 | L0 | ---*2 |  |
| NF | 10 | B            | 1 | L1 | ---*2 |  |
|    |    | B            | 2 | L1 | ---*2 |  |
|    |    | B            | 3 | L1 | ---*2 |  |
|    |    | B            | 4 | L1 | ---*2 |  |
|    |    | B            | 5 | L1 | ---*2 |  |
| NF | 10 | B            | 1 | L2 | ---*2 |  |
|    |    | B            | 2 | L2 | ---*2 |  |
|    |    | B            | 3 | L2 | ---*2 |  |
|    |    | B            | 4 | L2 | ---*2 |  |
|    |    | B            | 5 | L2 | ---*2 |  |

\*1 See also ordering information on page 6

\*2 Customized designs upon request

**Jam nut receptacle**

Series NF10

**Device outline**


Note: Terminal styles on page 32

**Ordering code**

Example\*1:



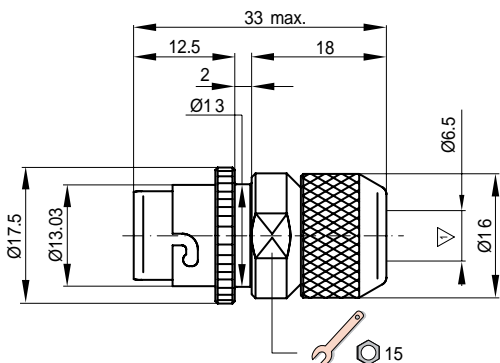
|    |    | Shell part 1 |   |    |       |  |
|----|----|--------------|---|----|-------|--|
| NF | 10 | C            | 1 | L0 | ---*2 |  |
| ↑  | ↑  | ↑            | ↑ | ↑  | ↑     |  |
| NF | 10 | C            | 1 | L0 | ---*2 |  |
|    |    | C            | 2 | L0 | ---*2 |  |
|    |    | C            | 3 | L0 | ---*2 |  |
|    |    | C            | 4 | L0 | ---*2 |  |
|    |    | C            | 5 | L0 | ---*2 |  |
| NF | 10 | C            | 1 | L1 | ---*2 |  |
|    |    | C            | 2 | L1 | ---*2 |  |
|    |    | C            | 3 | L1 | ---*2 |  |
|    |    | C            | 4 | L1 | ---*2 |  |
|    |    | C            | 5 | L1 | ---*2 |  |
| NF | 10 | C            | 1 | L2 | ---*2 |  |
|    |    | C            | 2 | L2 | ---*2 |  |
|    |    | C            | 3 | L3 | ---*2 |  |
|    |    | C            | 4 | L4 | ---*2 |  |
|    |    | C            | 5 | L5 | ---*2 |  |

\*1 See also ordering information on page 6

\*2 Customized designs upon request

**Cable connecting receptacle (short adapter)**

Series NF10

**Device outline**


▽ maximum cable diameter

**Ordering code**

Example\*1:



|    |    | Shell part 1 |   |    |       |  |
|----|----|--------------|---|----|-------|--|
| NF | 10 | D            | 1 | L0 | ---*2 |  |
| ↑  | ↑  | ↑            | ↑ | ↑  | ↑     |  |
| NF | 10 | D            | 1 | L0 | ---*2 |  |
|    |    | D            | 2 | L0 | ---*2 |  |
|    |    | D            | 3 | L0 | ---*2 |  |
|    |    | D            | 4 | L0 | ---*2 |  |
|    |    | D            | 5 | L0 | ---*2 |  |

\*1 See also ordering information on page 6

\*2 Customized designs upon request

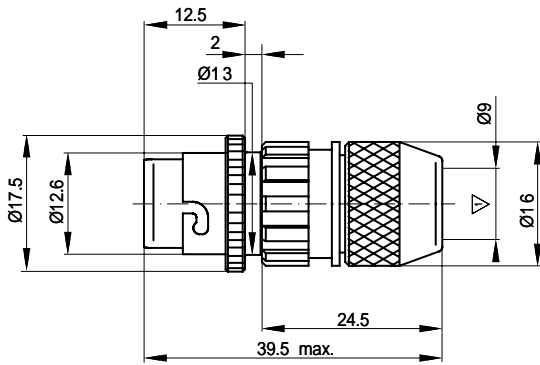
**Note:** Terminal styles on page 32

Crimp ring eyelet and strain relief split pin included in delivery

**Cable connecting receptacle (long adapter)**

Series NF10

**Device outline**



▽ maximum cable diameter

**Ordering code**

Example\*1:

Shell part 1

|    |    |   |   |    |    |
|----|----|---|---|----|----|
| NF | 10 | D | 1 | L0 | D7 |
| ↑  | ↑  | ↑ | ↑ | ↑  | ↑  |
| 1  | 2  | 3 | 4 | 5  | 6  |
|    |    | D | 1 | L0 | D7 |
|    |    | D | 2 | L0 | D7 |
| NF | 10 | D | 3 | L0 | D7 |
|    |    | D | 4 | L0 | D7 |
|    |    | D | 5 | L0 | D7 |



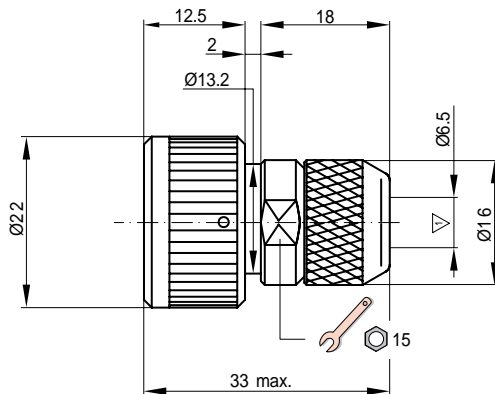
\*1 See also ordering information on page 6

**Note:** Terminal styles on page 32  
Crimp ring eyelet and strain relief split pin included in delivery

**Reinforced cable connecting receptacle (short adapter)**

Series NF10

**Device outline**



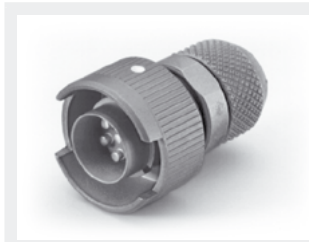
▽ maximum cable diameter

**Ordering code**

Example\*1:

Shell part 1

|    |    |   |   |    |       |
|----|----|---|---|----|-------|
| NF | 10 | N | 1 | L0 | ---*2 |
| ↑  | ↑  | ↑ | ↑ | ↑  | ↑     |
| 1  | 2  | 3 | 4 | 5  | 6     |
|    |    | N | 1 | L0 | ---*2 |
|    |    | N | 2 | L0 | ---*2 |
| NF | 10 | N | 3 | L0 | ---*2 |
|    |    | N | 4 | L0 | ---*2 |
|    |    | N | 5 | L0 | ---*2 |



\*1 See also ordering information on page 6

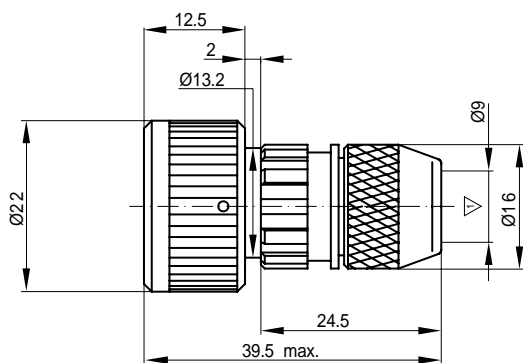
\*2 Customized designs upon request

**Note:** Terminal styles on page 32  
Crimp ring eyelet and strain relief split pin included in delivery

**Reinforced cable connecting receptacle (long adapter)**

Series NF10

**Device outline**



▽ maximum cable diameter

**Ordering code**

Example\*1:

Shell part 1

|    |    |   |   |    |       |
|----|----|---|---|----|-------|
| NF | 10 | K | 1 | L0 | ---*2 |
| ↑  | ↑  | ↑ | ↑ | ↑  | ↑     |
| 1  | 2  | 3 | 4 | 5  | 6     |
|    |    | K | 1 | L0 | ---*2 |
|    |    | K | 2 | L0 | ---*2 |
| NF | 10 | K | 3 | L0 | ---*2 |
|    |    | K | 4 | L0 | ---*2 |
|    |    | K | 5 | L0 | ---*2 |



\*1 See also ordering information on page 6

\*2 Customized designs upon request

**Note:** Terminal styles on page 32  
Crimp ring eyelet and strain relief split pin included in delivery

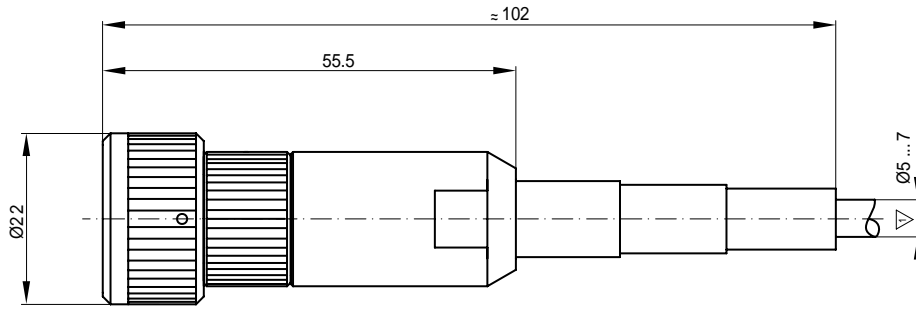
**Reinforced cable connecting receptacle (rubber sleeve)**

Series NF10

Device outline

Ordering code

Shell part 1



▽ cable diameter

Example\*1:

|          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|
| NF       | 10       | M        | 1        | L0       | ---*2    |
| ↑        | ↑        | ↑        | ↑        | ↑        | ↑        |
| <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> |
|          |          | M        | 1        | L0       | ---*2    |
|          |          | M        | 2        | L0       | ---*2    |
| NF       | 10       | M        | 3        | L0       | ---*2    |
|          |          | M        | 4        | L0       | ---*2    |
|          |          | M        | 5        | L0       | ---*2    |

\*1 See also ordering information on page 6

\*2 Customized designs upon request

**Note:** Terminal styles on page 32

**Heatshrink boots**

Series NF10

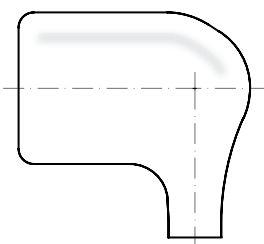
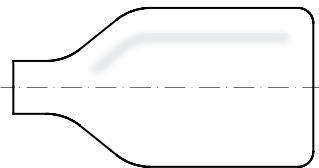
Device outline

Ordering code

Accessories / Shell part 2

Heatshrink boot, straight

Heatshrink boot, 90°



Example\*1:

203W 112-30



Heatshrink boot, straight  
203W112-30  
Heatshrink boot, 90°  
224K012-30

\*1 See also ordering information on page 6

**Seals NF Z1 and NF Z2**

Series NF10

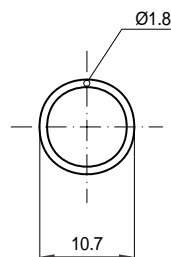
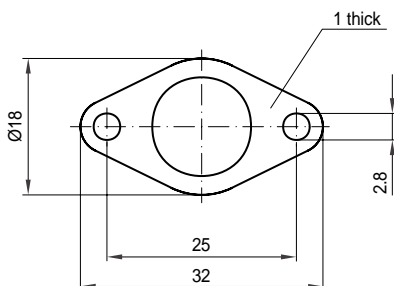
Device outline

Ordering code

Accessories / Shell part 2

**Gasket NF Z1**  
(Flange seal)

**Sealing ring NF Z2**  
(O-ring)



Example\*1:

NF Z1



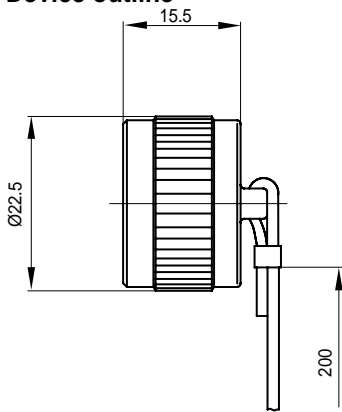
Gasket NF Z1  
Sealing ring NF Z2

\*1 See also ordering information on page 6

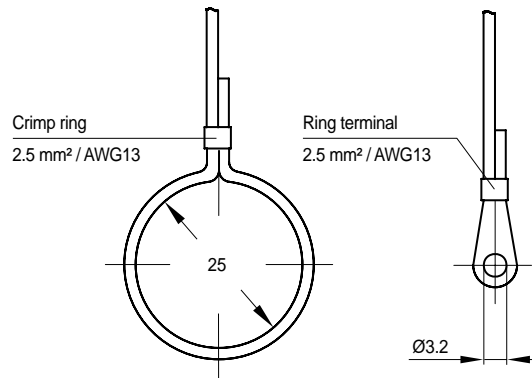
### Protection cap VG96934 Z3

Series NF10

#### Device outline



#### Ordering code



#### Accessories/Protection cap

Example\*1:

VG96934 Z3


 Protection cap  
VG9634 Z3

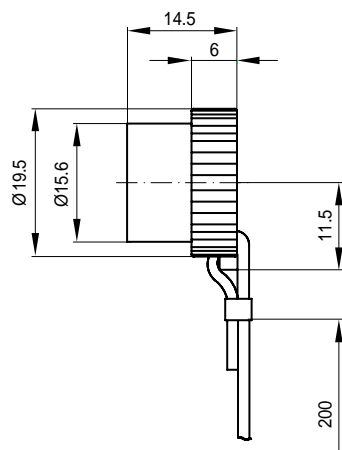
\*1 See also ordering information on page 6

**Note:** It is possible to fit loops or ring terminals (both included).

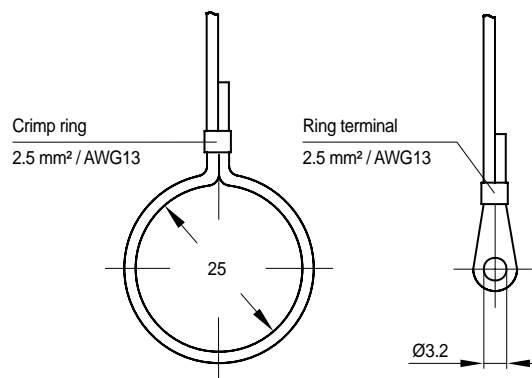
### Protection cap VG96934 Z4 (rubber)

Series NF10

#### Device outline



#### Ordering code



#### Accessories/Protection cap

Example\*1:

VG96934 Z4


 Protection cap  
VG9634 Z4

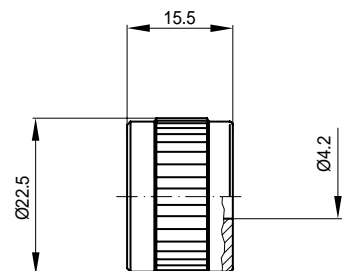
\*1 See also ordering information on page 6

**Note:** It is possible to fit loops or ring terminals (both included).

### Dummy receptacle VG96934 Z6

Series NF10

#### Device outline



#### Ordering code

#### Accessories/Protection cap

Example\*1:

VG96934 Z6


 Dummy receptacle  
VG9634 Z6

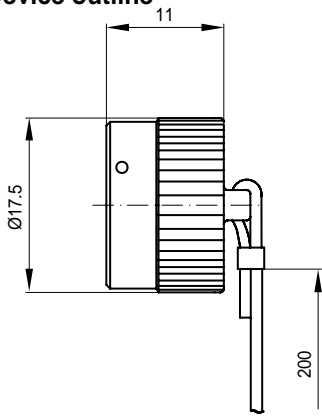
\*1 See also ordering information on page 6

**Note:** Dummy receptacle to be mounted onto the case of a device for receiving a free plug cable

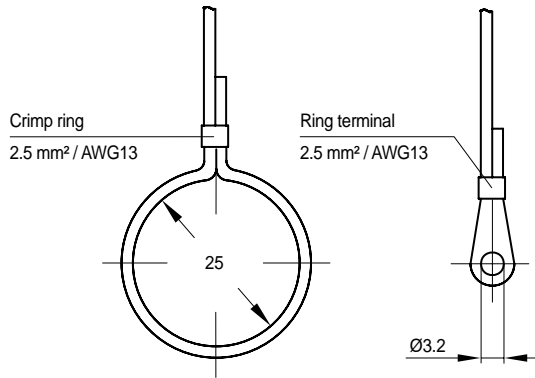
**Protection cap for polarization NF07 Z8/x**

Series NF10

**Device outline**



**Ordering code**



**Accessories/Protection cap**

Example\*1:

NF10 Z8 / 1



|   |                |
|---|----------------|
| 1 | 2              |
| 1 | 2              |
| 3 | Protection cap |
| 4 | NF10 Z8        |
| 5 |                |

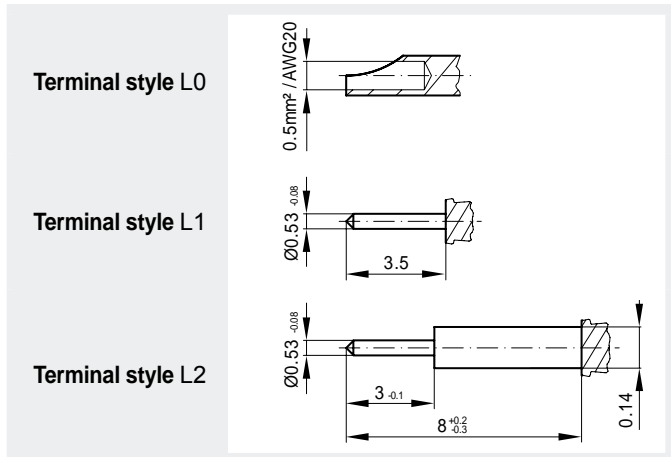
\*1 See also ordering information on page 6

**Note:** It is possible to fit loops or ring terminals (both included)

**Terminal styles, Mounting tool Z14**

Series NF10

**Terminal styles**



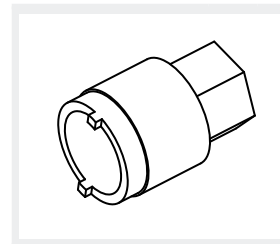
**Note:** Terminals must not be subjected to force or stress

**Mounting tool Z14**

Mounting tool for jam nut receptacles NF10 C x xx

Ordering code:

Z14



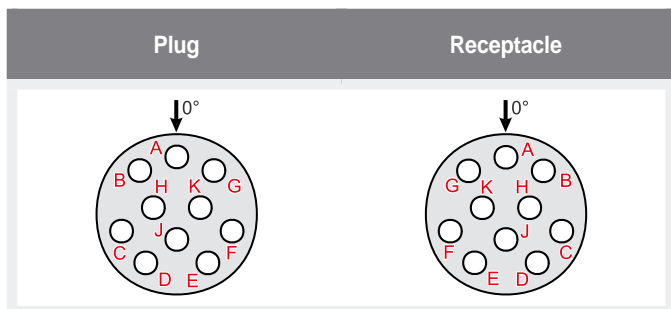
Mounting tool Z14

**Note:** Width across flats SW13, use with torque spanner, torque 8<sup>+2</sup> Nm max.

**Contact arrangement, Polarization**

Series NF10

**Contact arrangement**



**Note:** Planforms seen from connector face

**Polarization**

| Bayonet latch positions |            | Polarization Series NF10 |               |  |
|-------------------------|------------|--------------------------|---------------|--|
| Orientation             | $\alpha 1$ | $\alpha 2$               | Colour        |  |
| 1                       | 95°        | 140°                     | white         |  |
| 2                       | 85°        | 115°                     | blue          |  |
| 3                       | 100°       | 105°                     | violet        |  |
| 4                       | 110°       | 120°                     | chrome yellow |  |
| 5                       | 80°        | 145°                     | dark red      |  |

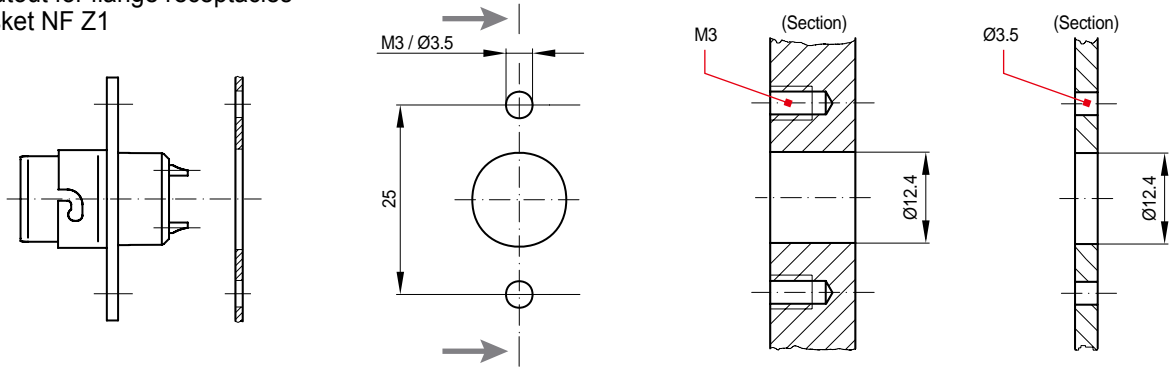


**Mounting borings**

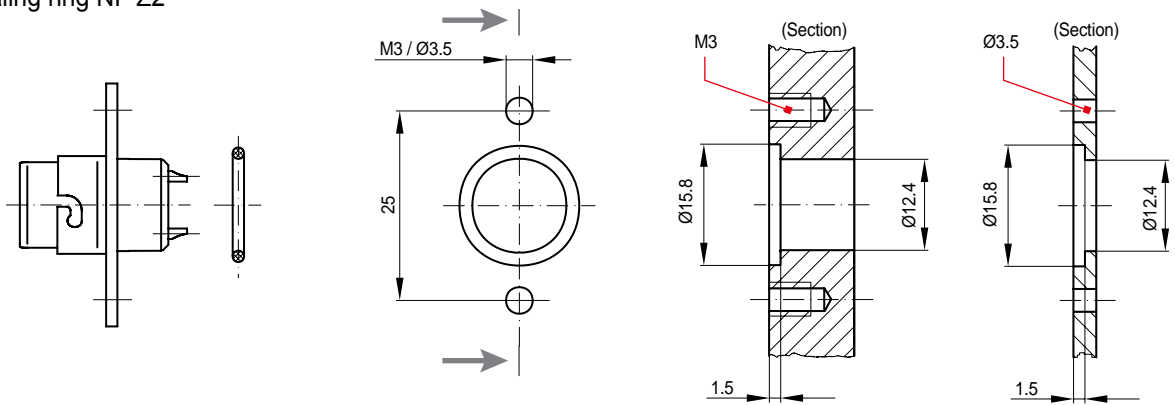
Series NF10

**Flange receptacles**

- Panel cutout for flange receptacles with gasket NF Z1

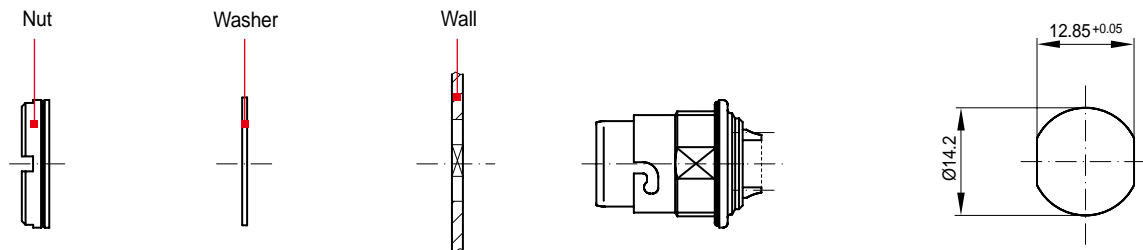


- Panel cutout for flange receptacles with sealing ring NF Z2



**Jam nut receptacles**

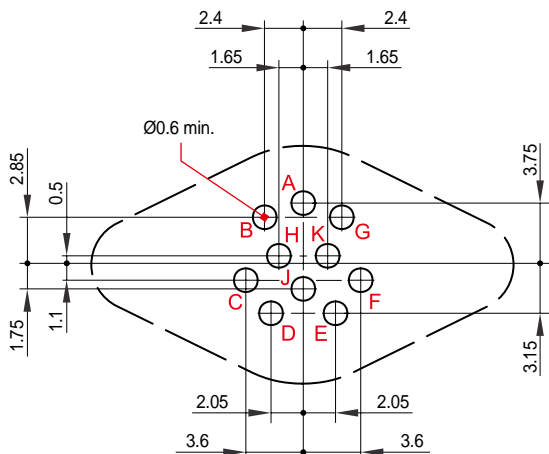
- Panel cutout for jam nut receptacles



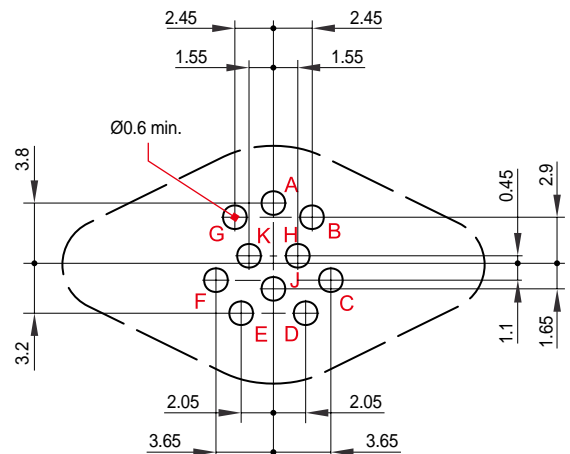
**Note:** Use mounting tool VG96934 Z10  
Torque 2 Nm max.

**PCB terminal**

- Panel drilling for plugs



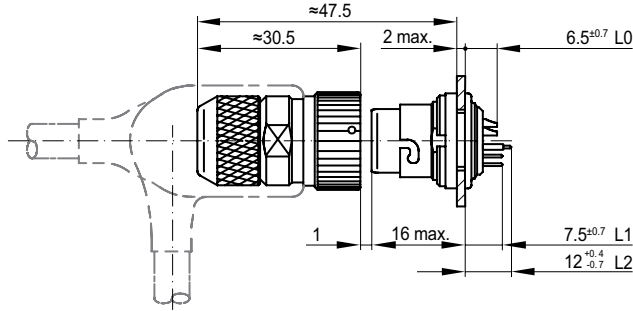
- Panel drilling for receptacles



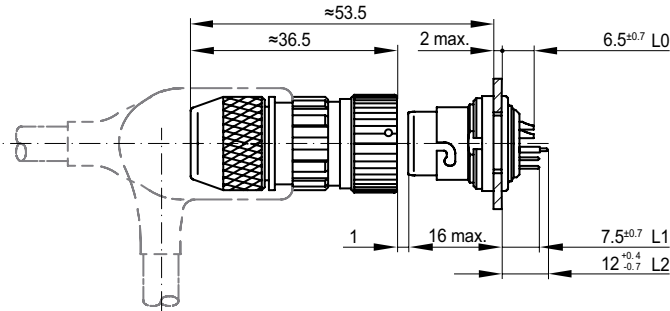
**Assembly and installation dimensions**

Series NF10

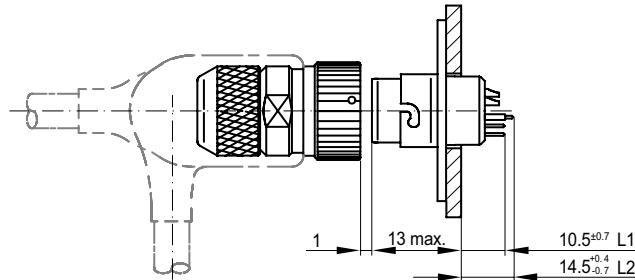
- Cable connecting plug (short adapter) ↔ Jam nut receptacle



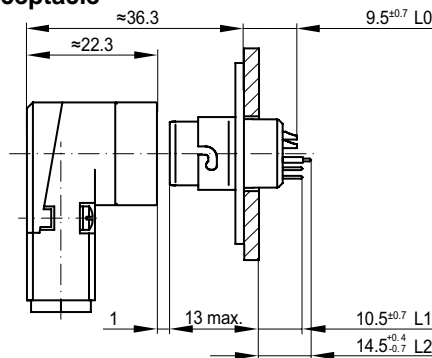
- Cable connecting plug (long adapter) ↔ Jam nut receptacle



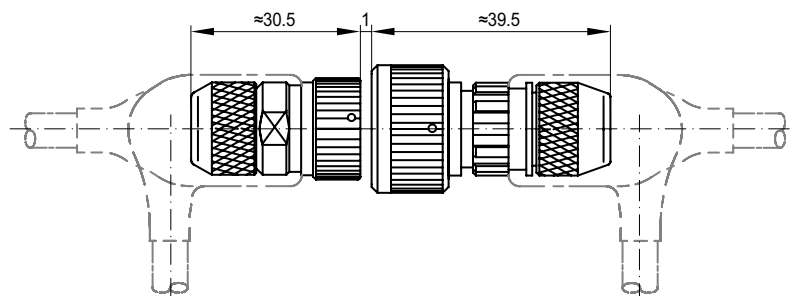
- Cable connecting plug (short adapter) ↔ Flange receptacle



- 90° Cable connecting plug ↔ Flange receptacle



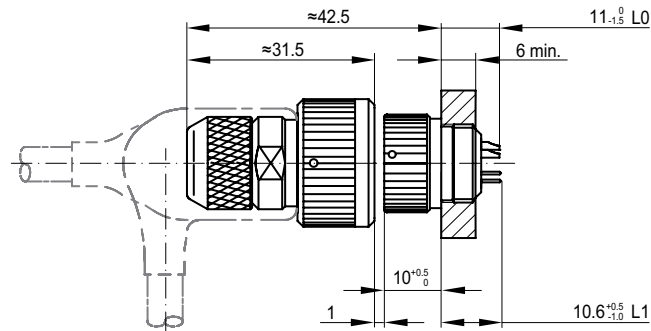
- Cable connecting plug (short adapter) ↔ Reinforced cable connecting receptacle (long adapter)



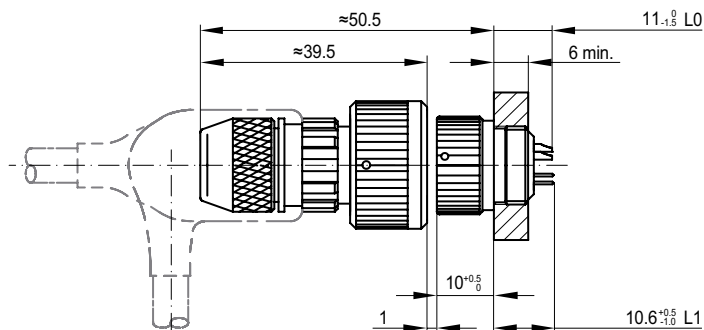
**Assembly and installation dimensions**

Series NF10

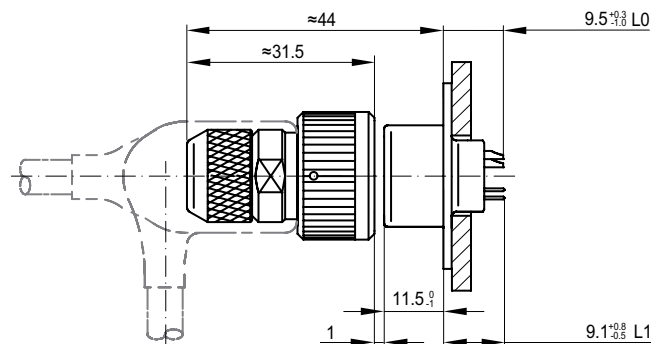
- Reinforced cable connecting receptacle (short adapter) ↔ Jam nut plug



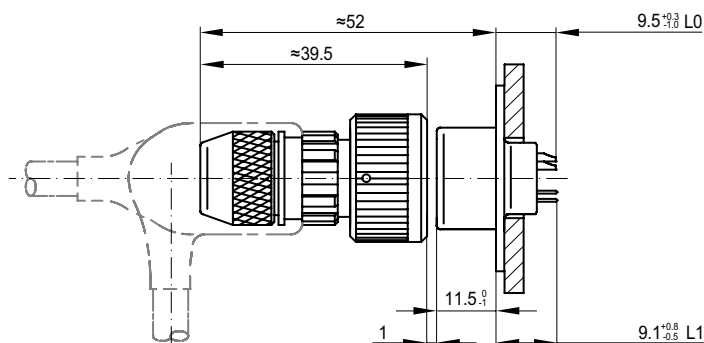
- Reinforced cable connecting receptacle (long adapter) ↔ Jam nut plug



- Reinforced cable connecting receptacle (short adapter) ↔ Flange plug



- Reinforced cable connecting receptacle (long adapter) ↔ Flange plug

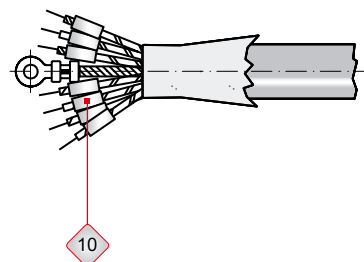
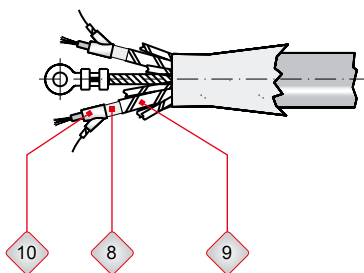
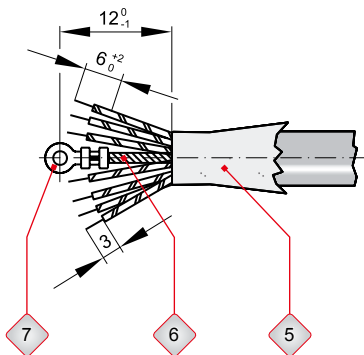
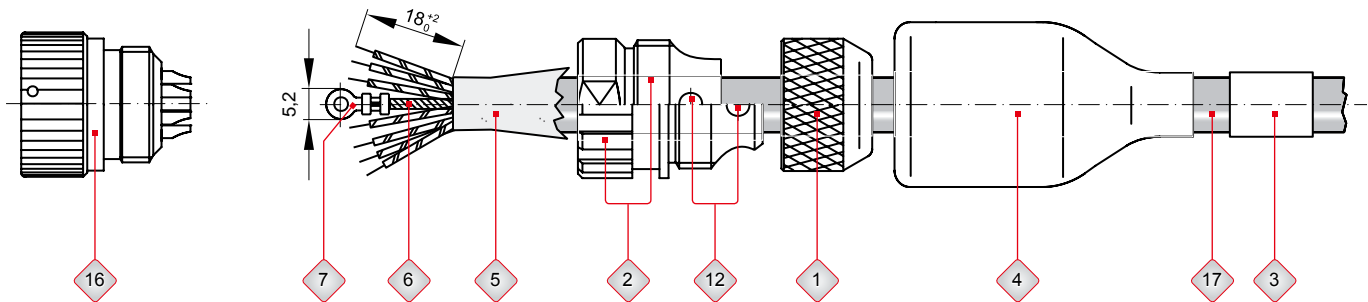


Cable assembly details for plugs with short or long adapter

Series NF

Styles A, D, J, K and N with cable according to VG 95218-11.

Details not mentioned are to be chosen appropriately.



The lock nut (1) and the connector backshell (2) are to be loosened from the connector (16).

Slide lock nut (1) heatshrink boot (4) and, if used, sleeve (3) for fixing the protective cap on the cable.

Remove jacket from cable end (17) approx. 18+2 mm with cable stripper.

Fold back screen meshing (5).

If existing, open and cut off foil type shielding with slitting tool (knife or similar).

Strip approx. 3 mm and tin single wires. Use thermal stripping device.

Shorten strain relief rope (6) to indicated dimensions 12-1 mm with crimp ring eyelet (7).

If existing:

Insulate the single wire screen meshing (8) of the shielded single wire (9) with small PTFE tape and if required gather them and crimp them together with an insulated single wire on the appropriate contact.

Note:

Prior to the form fit extrusion-coating of the connector, the connector backshell is to be potted.

If the connector backshell is not to be potted:

Slide shrinkable tubings (10) diameter 1.6 mm to 2.4 mm, approx. 7 mm long - over single wires or insulate with small PTFE tape.

Note:

For easier handling, clamp connector in an appropriate fixture and fix cable in suitable holder.

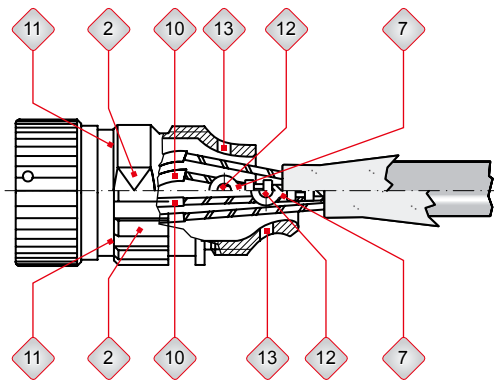
Solder single wires on the contacts with filament type extra thin tin solder L Sn60, diameter 1 mm with acid free flux core. Temperature stabilized soldering iron with a tip diameter of approx. 2 mm.

Solder tip temperature 310°C max.; soldering time 4 seconds max.

Slide insulating tubing (10) over solder cups (and shrink fit them)

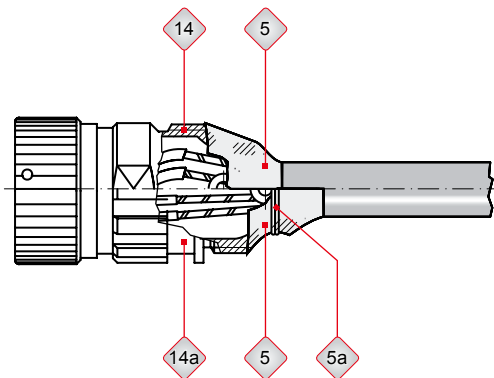
Apply on threads (11) of plug conductive adhesive (only on first thread) and screw on connector backshell (2).

Tighten securely with pliers covered with plastic or rubber.



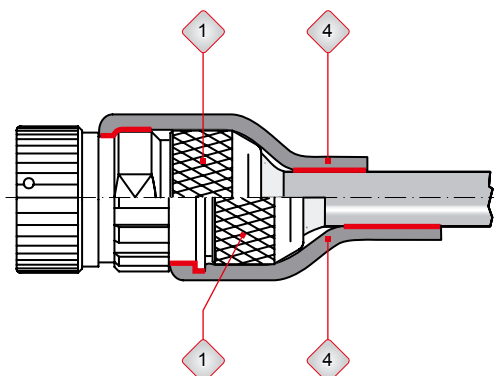
Slide cable in connector backshell (2) so that strain relief split pin (12) can be slid through bore holes (13) in connector backshell (2) and cable eye or ring eyelet (7).

The ring eyelet should be on the inner curve side at an angular connector backshell to avoid compressive load of the single wires at tensile load.



Fold the screen meshing (5) over the back of the conical adapter (14), and trim off just short of the thread.

In case of connector backshells with long adapter (14a), the screen meshing (5) has to be fixed by additional wire (5a).



Apply conductive adhesive to the first threads.

Screw jam nut (1) onto the connector backshell and tighten securely with pliers.

Intermediate examination:

Check contact resistance, insulation resistance and dielectric strength according to VG 96934-1, Test No.5.12 and 5.13.

Unless a moulded backfitting is to be applied:

Mount heatshrink boot (4) according to VG95343-4.

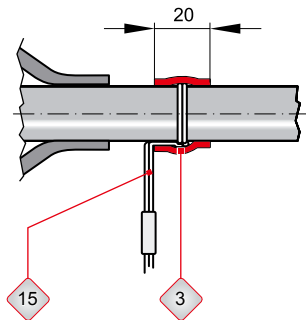
**Note:**

In order to achieve the tightness IP67 mentioned in the data sheet, the heatshrink boot has to be glued to the parts marked in red in the opposite drawing.

Schaltbau recommends to use adhesives made by manufacturers of the heatshrink boot.

**Final examination:**

Insulation resistance and dielectric strength tests according to VG 96934-1, Test No.5.12 and 5.13.



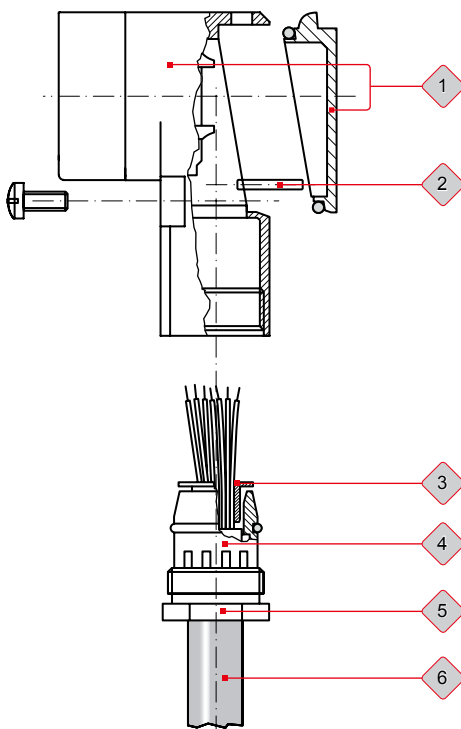
**Fitting of the protective cap to cable:**

Loop cord (15) of protective cap round the cable.

Shrink on heatshrink tube (3).

**Cable assembly details for 90° cable connecting plug**

Series NF



Slide pressure screw (5) and strain relief (4) on cable before screen end.

Slide screen cone (3) between single wire and screen meshing.

Press strain relief (4) over screen cone (3) with screen meshing from below.

The screen meshing is now between strain relief (4) and screen cone (3).

Cut off projecting parts of the screen meshing.

Insert premounted cable into housing (1).

Knot strain relief rope around the strain relief split pin (2).

**Note:**

An effective strain relief can only be achieved by a permanently and tightly knotted strain relief rope.

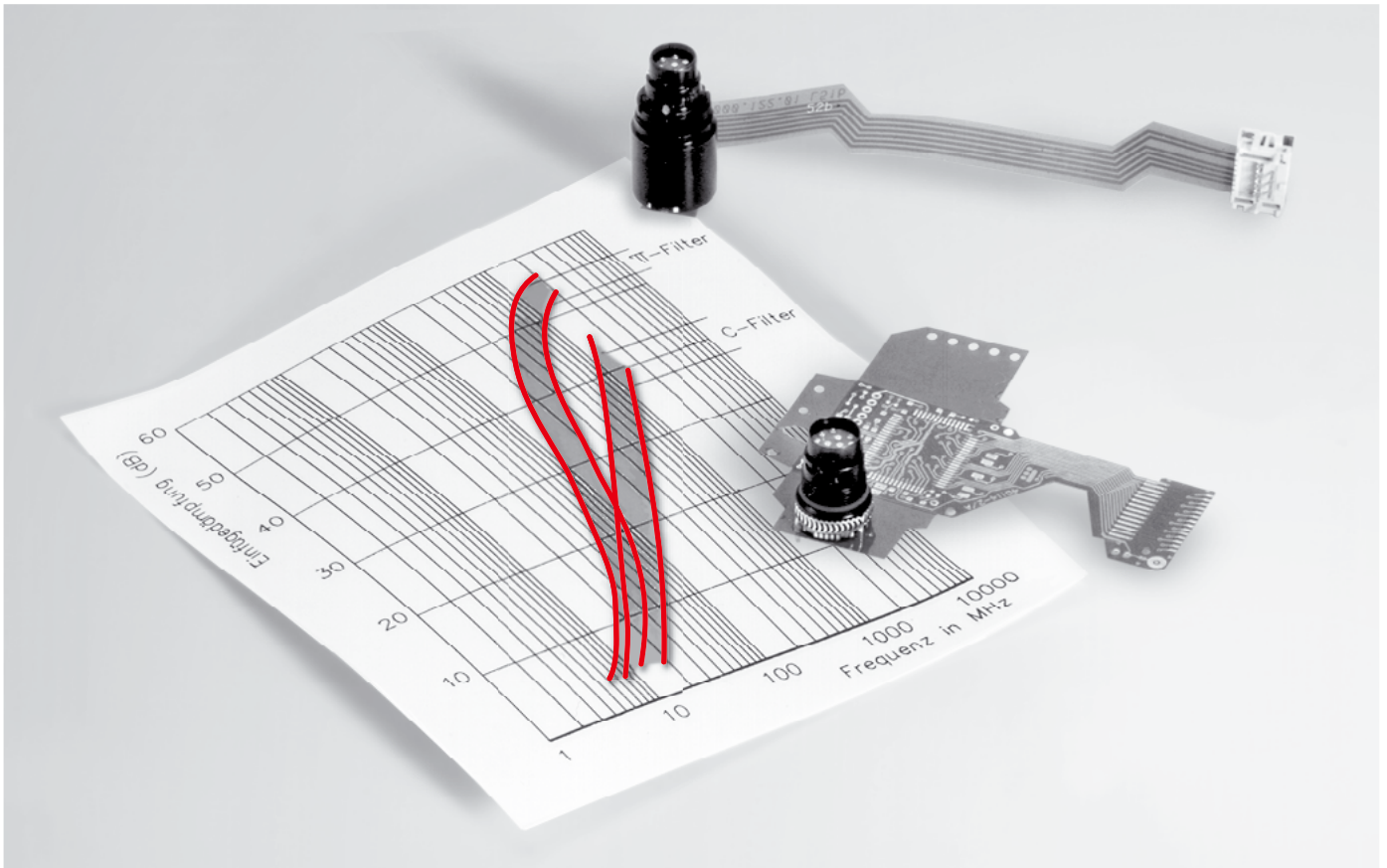
For further assembly steps (insulate, tin, solder and insulate single wires) and test please refer to prior chapter.

## SF07, SF10 Filtered connectors

Series SF

Connector series NF07 and NF10 were especially designed for application in modern telecommunication engineering. In case an additional protection against electromagnetic

disturbance is desired, we recommend our shielded and filtered connectors of series SF07 and SF10. Please inquire for customized designs.



More and more highly efficient electronic systems co-operate on limited space. The protection against electromagnetic influence increasingly requires EMC-suitable interfaces.

Shielded and filtered connectors help to protect the whole system against undesirable electromagnetic disturbance. Our solutions allow to avoid malfunctions and direct or indirect economic losses such as:

- Malfunction of peripheral electronics
- Destruction of modules
- Machine standstills.

For this purpose the SF concept offers filter systems in

- **Planar technique:**
  - C-filter
- **Modular technique:**
  - C-filter
  - $\pi$ -filter
- **Tubular technique:**
  - C-filter
  - $\pi$ -filter
  - RFI-filter

Please do not hesitate to request detailed information.





Schaltbau GmbH manufactures in compliance with RoHS.



The production facilities of Schaltbau GmbH have been IRIS certified since 2008.



Certified to DIN EN ISO 14001 since 2002. For the most recent certificate visit our website.



Certified to DIN EN ISO 9001 since 1994. For the most recent certificate visit our website.

## Electrical Components and Systems for Railway Engineering and Industrial Applications

### Connectors

- Connectors manufactured to industry standards
- Connectors to suit the special requirements of communications engineering (MIL connectors)
- Charging connectors for battery-powered machines and systems
- Connectors for railway engineering, including UIC connectors
- Special connectors to suit customer requirements

### Snap-action switches

- Snap-action switches with positive opening operation
- Snap-action switches with self-cleaning contacts
- Enabling switches
- Special switches to suit customer requirements

### Contactors

- Single and multi-pole DC contactors
- High-voltage AC/DC contactors
- Contactors for battery powered vehicles and power supplies
- Contactors for railway applications
- Terminal bolts and fuse holders
- DC emergency stop switches
- Special contactors to suit customer requirements

### Electrics for rolling stock

- Equipment for driver's cab
- Equipment for passenger use
- High-voltage switchgear
- High-voltage heaters
- High-voltage roof equipment
- Equipment for electric brakes
- Design and engineering of train electrics to customer requirements

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Internet [www.schaltbau.com](http://www.schaltbau.com)

with compliments: