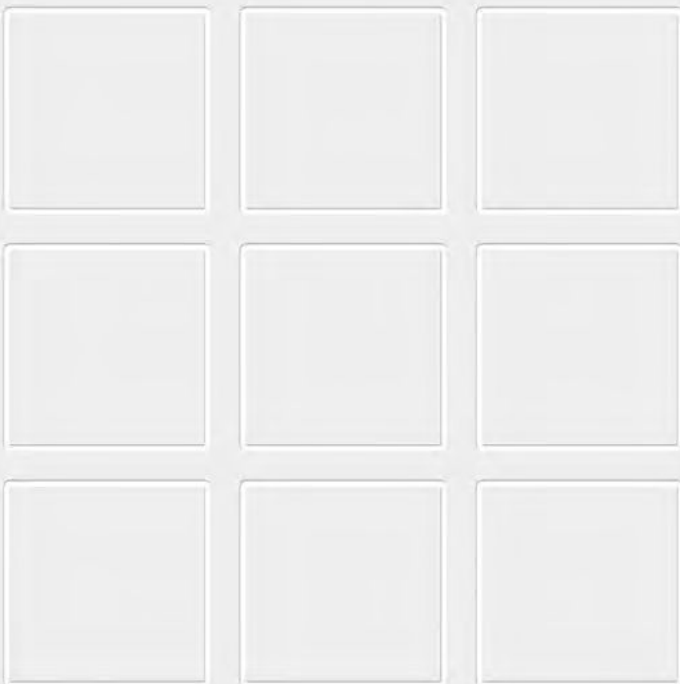**SCHALTBAU**
Connect Contact Control

1

Connectors

Series NF07, NF10

Circular Audio Miniature Connectors

Catalogue A58.en

More information
schaltbau.com

SCHALTBAU
Connect Contact Control

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:

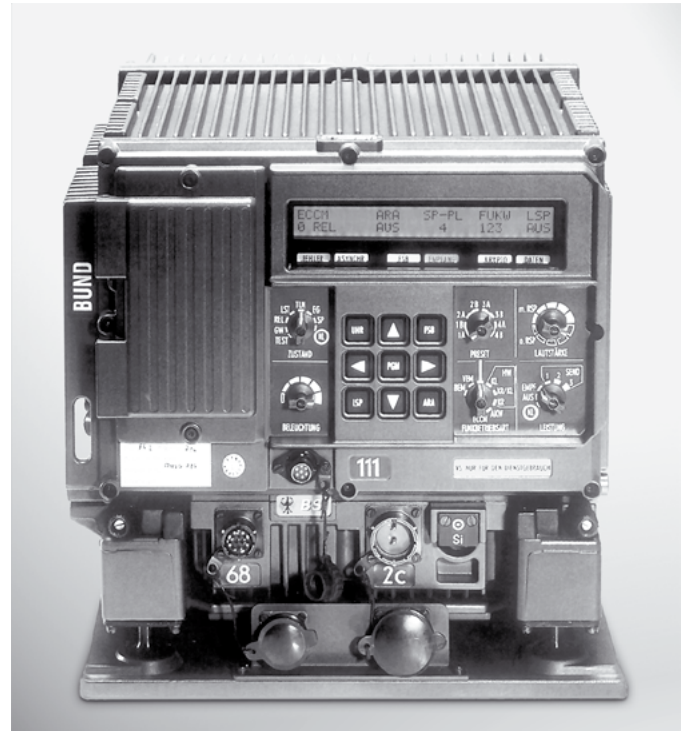| Series	Description
● **NF07 series:** 7 pole standard series	Page 7
● **NF07 /S series:** 7 pole series with enhanced shielding	Page 16
● **NF10 series:** 7 pole series with enhanced shielding	Page 23

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

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

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 leads
    - Solder pin 3.5 mm for PCB terminal
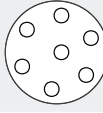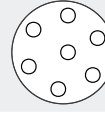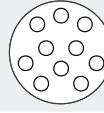   - Solder pin 8.0 mm for PCB terminal

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, π-filter
- **Tubular technique:**   C-filter, π-filter, RFI-filter

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Specifications

Series	NF07	NF07 /S	NF10
Number of contacts	7	7	10
Contact arrangement Plug: Front view Receptacle: Rear view			
Contact identification Plug: Front view Receptacle: Rear view	A B F G C E D	A B F G C E D	A B G H K F C J E D
Rated voltage	50 V	50 V	50 V
Connector orientations	3	4	5
Rated current: I min. I max.	6 µA 2.5 A [*1]	6 µA 2.5 A [*1]	6 µA 2.5 A [*1]
Contact resistance	approx. 5 mΩ [*2]	approx. 5 mΩ [*2]	approx. 5 mΩ [*2]
Temperature range	-55°C ... +100°C (10 sec. max. up to +150°C)	-55°C ... +100°C (10 sec. max. up to +150°C)	-55°C ... +100°C (10 sec. max. up to +150°C)
Insulation resistance	≥ 5,000 MΩ	≥ 5,000 MΩ	≥ 5,000 MΩ
Test voltage	500 V_{rms} 50 Hz	500 V_{rms} 50 Hz	500 V_{rms} 50 Hz
EMP-shielding	approx. 60 dB	70 dB [*3]	70 dB
Sealing mated and unmated	IP68 [*4] 0.4 bar, 2 hours at 25°C	IP68 [*4] 0.4 bar, 2 hours at 25°C	IP68 [*4] 0.4 bar, 2 hours at 25°C
Mechanical life	5,000 couplings	5,000 couplings	5,000 couplings

Shell:
Plug: Materials
 	
          Finish
          Colours
Receptacle: Materials
 	
          Finish
          Colours
	Stainless steel
	
	Cr 3^{+2}
	Black
	Stainless steel
	
	Cr 3^{+2}
	Black
		Aluminium alloy /
		Stainless steel
		Ni 3^{+2}Cd 6^{+2} cF / Cr 3^{+2}
		Olive (RAL6015) / Black
		Stainless,
		antimagnetic steel
		Cr 3^{+2}
		Black
			Aluminium alloy /
			Stainless steel
			Ni 3^{+2}Cd 6^{+2} cF / Cr 3^{+2}
			Olive (RAL6015) / Black
			Stainless,
			antimagnetic steel
			Cr 3^{+2}
			Black

Contact inserts	Thermoplastic / Duroplast	Thermoplastic / Duroplast	Thermoplastic / Duroplast
Sealing elements	Silicone elastomer / Fluorosilicone elastomer	Silicone elastomer / Fluorosilicone elastomer	Silicone elastomer / Fluorosilicone elastomer

Contact type: Plug
               Receptacle
               Material: Crimp-type copper
                       wrought alloy
               Finish: Layer in micrometer
	Rigid contacts
	Spring contacts
	
	●
	
	Gold
	Cu: 1.0 / Ni: 2.0 / Au: 5±1
		Rigid contacts
		Spring contacts
		
		●
		
		Gold
		Cu: 1.0 / Ni: 2.0 / Au: 5±1
			Rigid contacts
			Spring contacts
			
			●
			
			Gold
			Cu: 1.0 / Ni: 2.0 / Au: 5±1

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*1 for any two contacts
*2 required: ≤ 20 mΩ (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 07:

● 7 pole standard connector:
VG95351 meets requirements regarding test and approval.

● 7 pole connector, suitable for shielding:
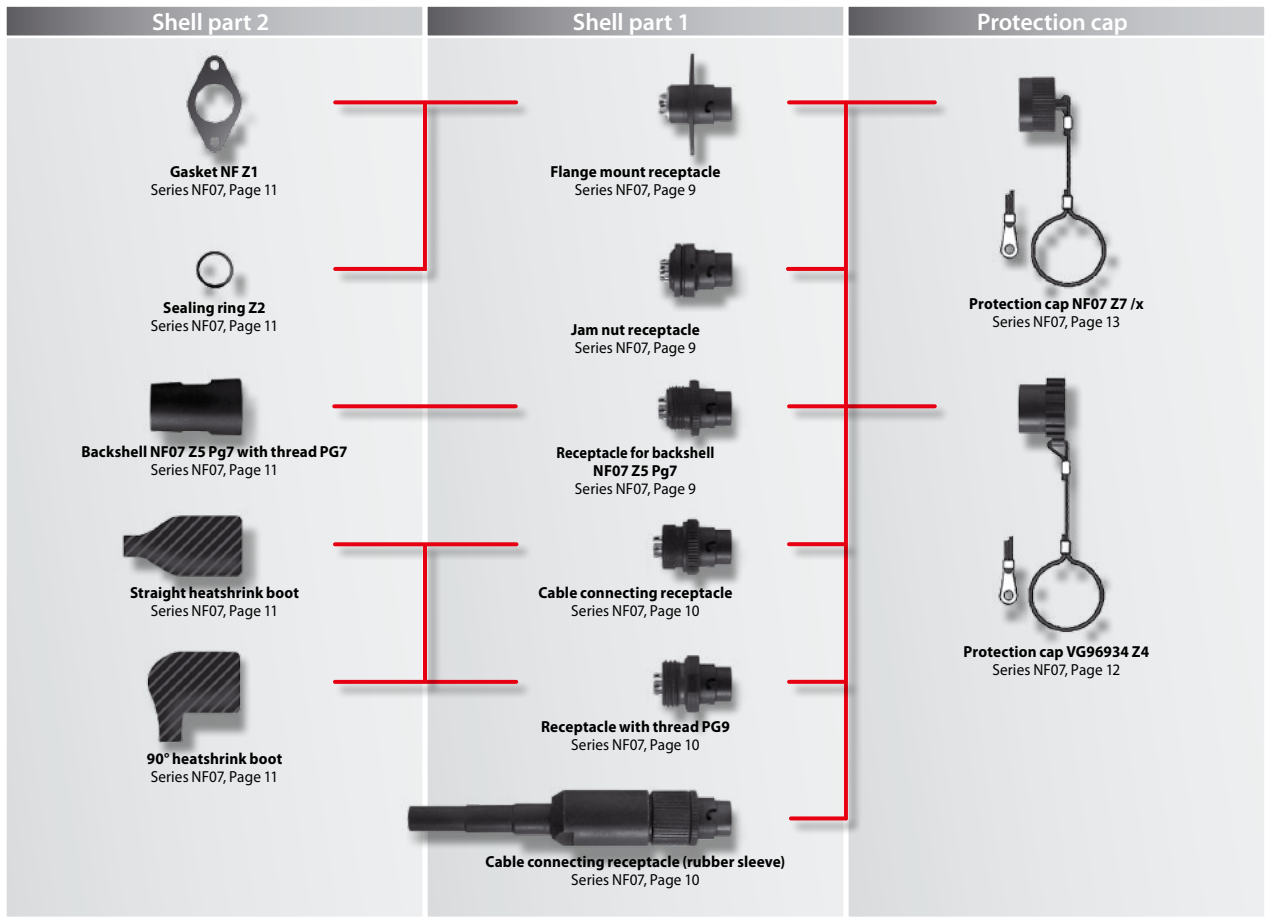Test according to VG96934

Series NF 10:

● 10 pole connector, suitable for shielding:
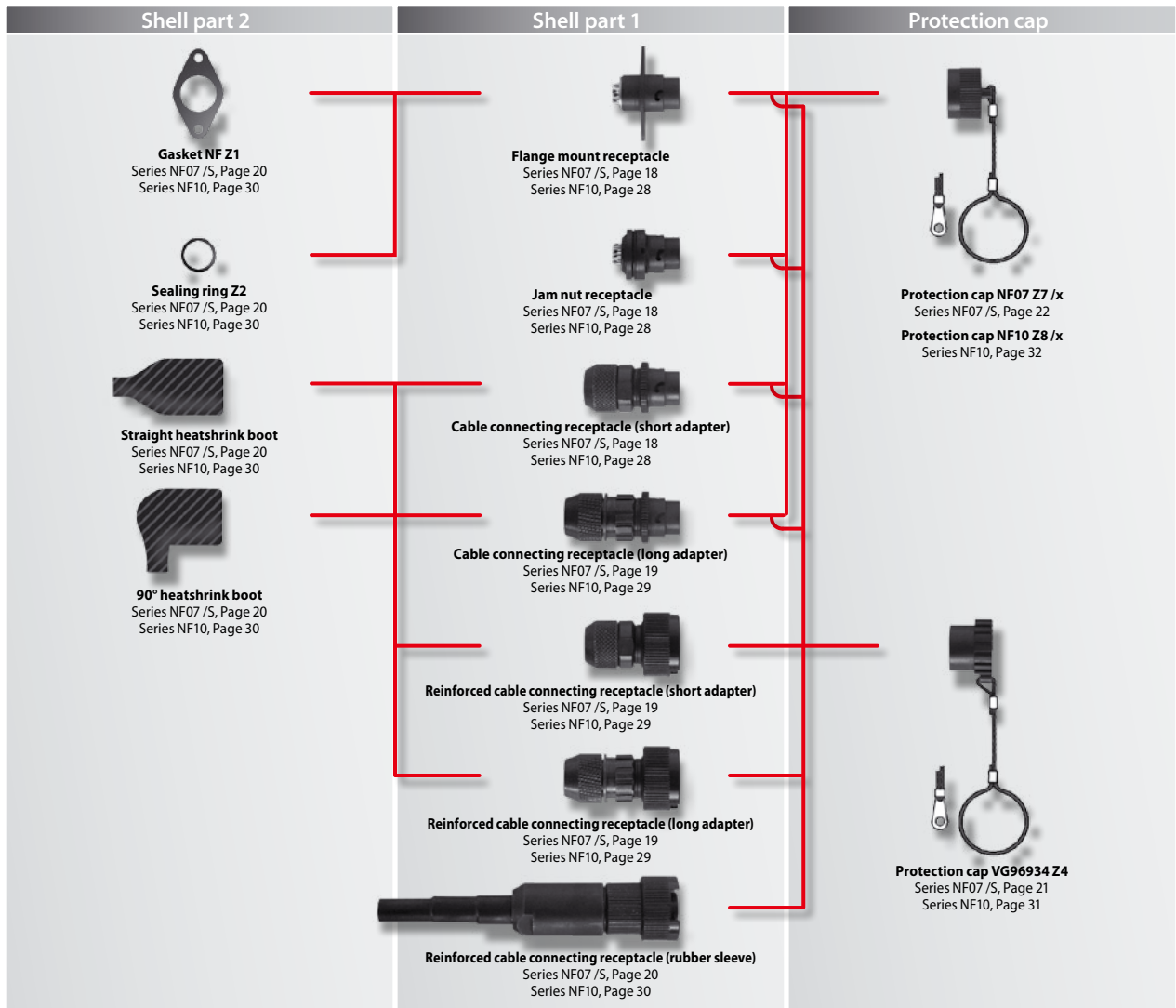VG96934 meets requirements regarding test and approval.

ⓘ *Note:*

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

Subject to change

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NF07 Receptacle

Shell part 2	Shell part 1	Protection cap

Gasket NF Z1
Series NF07, Page 11

Sealing ring Z2
Series NF07, Page 11

Backshell NF07 Z5 Pg7 with thread PG7
Series NF07, Page 11

Straight heatshrink boot
Series NF07, Page 11

90° heatshrink boot
Series NF07, Page 11

Flange mount receptacle
Series NF07, Page 9

Jam nut receptacle
Series NF07, Page 9

Receptacle for backshell NF07 Z5 Pg7
Series NF07, Page 9

Cable connecting receptacle
Series NF07, Page 10

Receptacle with thread PG9
Series NF07, Page 10

Cable connecting receptacle (rubber sleeve)
Series NF07, Page 10

Protection cap NF07 Z7 /x
Series NF07, Page 13

Protection cap VG96934 Z4
Series NF07, Page 12

NF07 /S, NF10 Receptacle

Shell part 2	Shell part 1	Protection cap

Gasket NF Z1
Series NF07 /S, Page 20
Series NF10, Page 30

Sealing ring Z2
Series NF07 /S, Page 20
Series NF10, Page 30

Straight heatshrink boot
Series NF07 /S, Page 20
Series NF10, Page 30

90° heatshrink boot
Series NF07 /S, Page 20
Series NF10, Page 30

Flange mount receptacle
Series NF07 /S, Page 18
Series NF10, Page 28

Jam nut receptacle
Series NF07 /S, Page 18
Series NF10, Page 28

Cable connecting receptacle (short adapter)
Series NF07 /S, Page 18
Series NF10, Page 28

Cable connecting receptacle (long adapter)
Series NF07 /S, Page 19
Series NF10, Page 29

Reinforced cable connecting receptacle (short adapter)
Series NF07 /S, Page 19
Series NF10, Page 29

Reinforced cable connecting receptacle (long adapter)
Series NF07 /S, Page 19
Series NF10, Page 29

Reinforced cable connecting receptacle (rubber sleeve)
Series NF07 /S, Page 20
Series NF10, Page 30

Protection cap NF07 Z7 /x
Series NF07 /S, Page 22

Protection cap NF10 Z8 /x
Series NF10, Page 32

Protection cap VG96934 Z4
Series NF07 /S, Page 21
Series NF10, Page 31

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NF07 Plug

Protection cap	Shell part 1	Shell part 2

Protection cap VG96934 Z3
Series NF07, Page 12

Dummy receptacle VG96934 Z6
Series NF07, Page 12

90° Cable connecting plug
Series NF07, Page 7

**Plug for backshell
NF07 Z5 Pg7**
Series NF07, Page 7

Cable connecting plug (short adapter)
Series NF07, Page 7

Plug
Series NF07, Page 8

Jam nut plug
Series NF07, Page 8

Cable connecting plug (rubber sleeve)
Series NF07, Page 8

Backshell NF07 Z5 Pg7 with thread PG7
Series NF07, Page 11

Straight heatshrink boot
Series NF07, Page 11

90° heatshrink boot
Series NF07, Page 11

NF07 /S, NF10 Plug

Protection cap	Shell part 1	Shell part 2

Protection cap VG96934 Z3
Series NF07 /S, Page 21
Series NF10, Page 31

Dummy receptacle VG96934 Z6
Series NF07 /S, Page 21
Series NF10, Page 31

90° Cable connecting plug
Series NF07 /S, Page 16
Series NF10, Page 26

Cable connecting plug (short adapter)
Series NF07 /S, Page 16
Series NF10, Page 26

Cable connecting plug (long adapter)
Series NF07 /S, Page 16
Series NF10, Page 26

Jam nut plug
Series NF07 /S, Page 17
Series NF10, Page 27

Flange plug
Series NF07 /S, Page 17
Series NF10, Page 27

Cable connecting plug (rubber sleeve)
Series NF07 /S, Page 17
Series NF10, Page 27

Straight heatshrink boot
Series NF07 /S, Page 20
Series NF10, Page 30

90° heatshrink boot
Series NF07 /S, Page 20
Series NF10, Page 30

Gasket NF Z1
Series NF07 /S, Page 20
Series NF10, Page 30

Sealing ring Z2
Series NF07 /S, Page 20
Series NF10, Page 30

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**

Series ①

| NF | Connectors to suit the special requirements of communications engineering |

Number of poles ②

| 07 | 7 pole |
| 10 | 10 pole |

Shell styles ③

A	Plug (short adapter)
B	Flange mount receptacle
C	Jam nut receptacle
D	Cable connecting receptacle
E	Jam nut plug
F	Flange plug
H	Jam nut receptacle, PG9 *1
J	Plug (long adapter)
K	Reinforced cable connecting receptacle *2, *3
L	Cable connecting plug (rubber sleeve)
M	Cable connecting receptacle (rubber sleeve) *2, *3
N	Reinforced cable connecting receptacle (short adapter) *2, *3

Polarization 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

Terminal styles ⑤

L0	Solder cup
L1	Solder pin for PCB Ø0.53 / 3.5 mm length
L2	Solder pin for PCB Ø0.50 / 8.0 mm length *2, *3

Special designs, beyond VG96934 / VG95351 ⑥

A1	Cable connecting plug (short adapter) *1, *2
A5	Cable connecting plug (rubber sleeve) *1, *3
A6	Jam nut plug M14x1
A7	Cable connecting plug (long adapter) *3
A11	Cable connecting plug for backshell NF07 Z5 PG7 *1
A17	90° Cable connecting plug
D3	Cable connecting receptacle for backshell NF07 Z5 PG7 *1
D6	Cable connecting receptacle (rubber sleeve) *1
D7	Reinforced cable connecting receptacle (long adapter) *2, *3
/S	Enhanced shielding, NF07 /S only *4

● **Protection caps and dummy receptacles**

Example: **NF07 Z7 /1**

Protection caps/dummy receptacles ①

VG96934 Z3	Protection cap (VG96934)
VG96934 Z4	Protection cap (VG96934)
VG96934 Z6	Dummy receptacle (VG96934)
NF07 Z7	NF07: Protection cap for polarization
NF10 Z8	NF10: Protection cap for polarization

Polarization 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**

Backshell ①

NF07 Z5 Pg7	Backshell, PG7
203W112-30	Straight heatshrink boot*
224K012-30	90° heatshrink boot*

* *Order direct from Raychem or other OEMs*

● **Seals**

Example: **Z1**

Seals ①

| Z1 | Gasket |
| Z2 | O-Ring |

● **Tools**

Example: **Z16**

Tool ①

| Z16 | Assembly tool for jam nut receptacle NF07, NF07 /S, NF10 |

ⓘ *Note:*
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.

ⓘ *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.
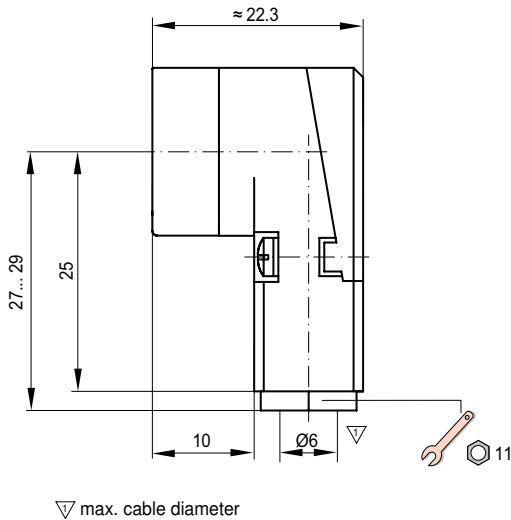*Please contact us for terms and conditions.*

Special variants:

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.

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90° cable connecting plug   Series NF07

Device outline

≈ 22.3

27...29   25

10   Ø6   ▽

⬡ 11

▽ max. cable diameter

Ordering code   Shell part 1

Example:
See also ordering information on page 6

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

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

Plug for backshell NF07 Z5 Pg7   Series NF07

Device outline

21
9
Ø17.5   M14x1
39

Ordering code   Shell part 1
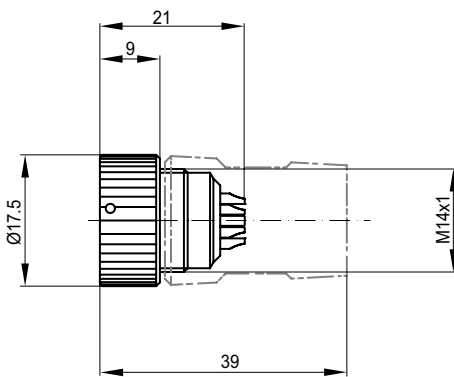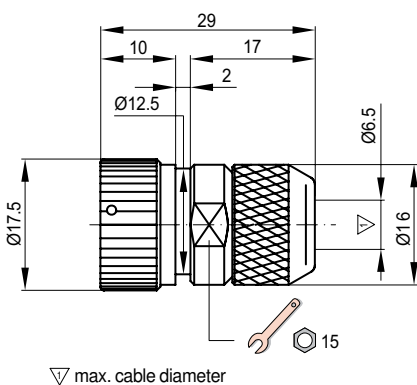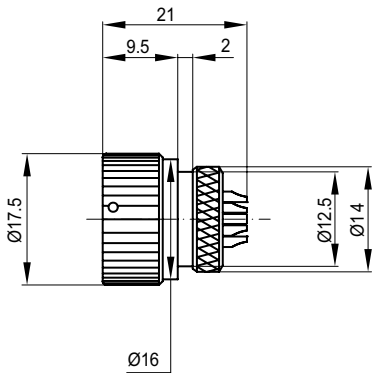
Example:
See also ordering information on page 6

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

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

Cable connecting plug (short adapter)   Series NF07

Device outline

29
10   17
2
Ø12.5   Ø6.5
Ø17.5   Ø16
▽
⬡ 15

▽ max. cable diameter

Ordering code   Shell part 1

Example:
See also ordering information on page 6

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

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

Subject to change / Dimensions in mm

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Plug for heatshrink boot
Series NF07

Device outline

Ordering code
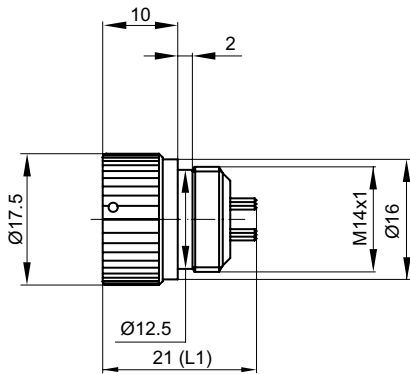Shell part 1

Example:
See also ordering information on page 6

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

ⓘ **Note:**
Heatshrink boots on page 11
Terminal styles on page 13
2 Customized designs upon request

Jam nut plug M14x1
Series NF07

Device outline

Ordering code
Shell part 1
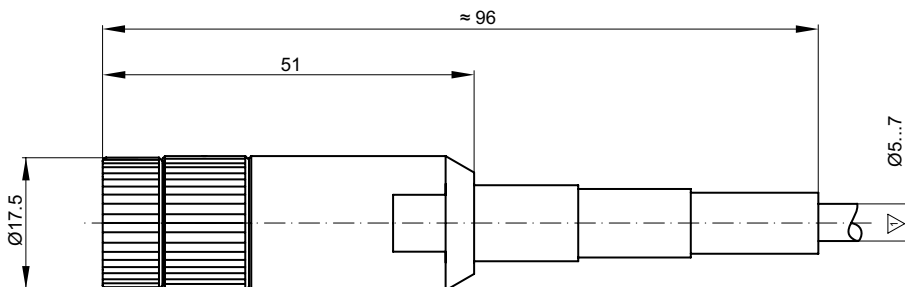
Example:
See also ordering information on page 6

NF	07	A	1	L0	A6^2
①	②	③	④	⑤	⑥
NF	07	A	1	L0	A6
		A	2	L0	A6
		A	3	L0	A6

ⓘ **Note:**
Terminal styles on page 13
2 Customized designs upon request

Cable connecting plug (rubber sleeve)
Series NF07

Device outline

▽ cable diameter

Ordering code
Shell part 1

Example:
See also ordering information on page 6

NF	07	A	1	L0	A5
①	②	③	④	⑤	⑥
NF	07	A	1	L0	A5
		A	2	L0	A5
		A	3	L0	A5

ⓘ **Note:**
Terminal styles on page 13

Dimensions in mm / Subject to change

Flange mount receptacle
Series NF07

Device outline

13
1.5
32
25
Ø12.6
Ø12.3
L0 = 24.2
L1 = 25.2
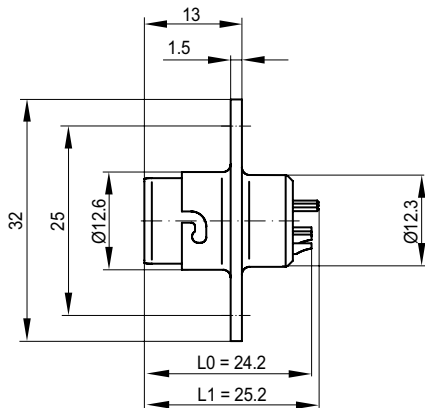
Ordering code
Shell part 1

Example:
See also ordering information on page 6

NF	07	B	1	L0	---*2
①	②	③	④	⑤	⑥
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

ℹ **Note:**
Terminal styles on page 13

Jam nut receptacle
Series NF07

Device outline

16
10.5
Sealing
M14x1
Ø12.6
L0 = 24.2
L1 = 25.2
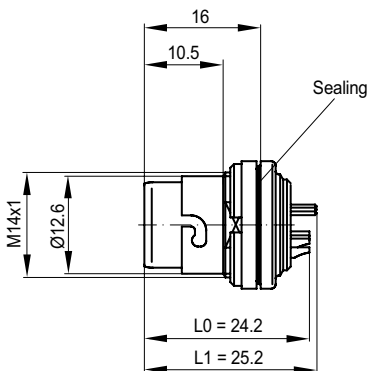
Ordering code
Shell part 1

Example:
See also ordering information on page 6

NF	07	C	1	L0	---*2
①	②	③	④	⑤	⑥
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

ℹ **Note:**
Terminal styles on page 13

Receptacle for backshell NF07 Z5 Pg7
Series NF07

Device outline

15
5
Ø17.5
Ø12.6
M14x1
24.2

Ordering code
Shell part 1

Example:
See also ordering information on page 6

NF	07	D	1	L0	D3
①	②	③	④	⑤	⑥
NF	07	D	1	L0	D3
		D	2	L0	D3
		D	3	L0	D3

ℹ **Note:**
Backshell NF07 Z5 Pg7 on page 11
Terminal styles on page 13

Subject to change / Dimensions in mm

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Cable connecting receptacle for heatshrink boot

Series NF07

Device outline

Ordering code

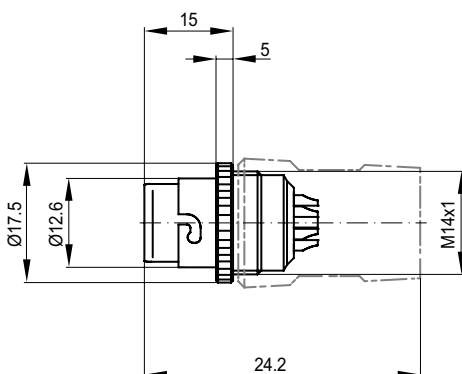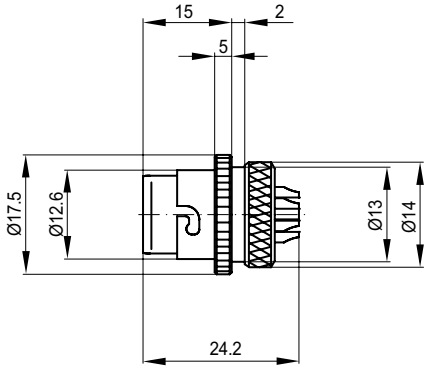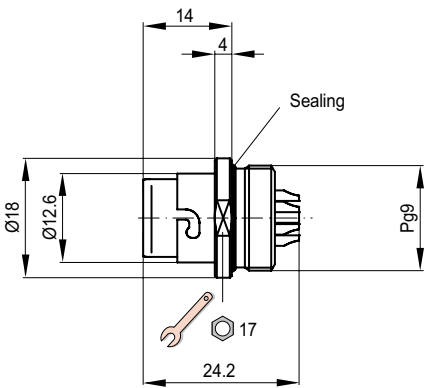Shell part 1

Example:
See also ordering information on page 6

NF	07	D	1	L0	---*2
①	②	③	④	⑤	⑥
NF	07	D	1	L0	---*2
		D	2	L0	---*2
		D	3	L0	---*2

ⓘ *Note:*
Heatshrink boots on page 11
Terminal styles on page 13
*2 Customized designs upon request

Jam nut receptacle with thread PG9

Series NF07

Device outline

Sealing

Ordering code

Shell part 1
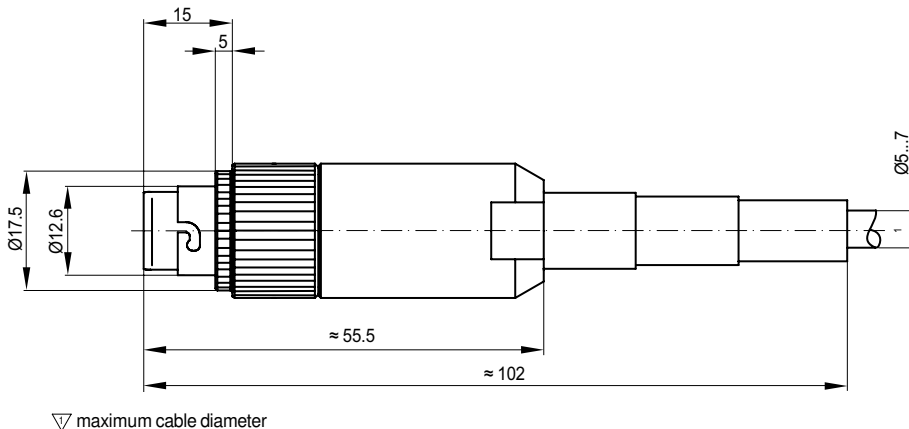
Example:
See also ordering information on page 6

NF	07	H	1	L0	---*2
①	②	③	④	⑤	⑥
NF	07	H	1	L0	---*2
		H	2	L0	---*2
		H	3	L0	---*2

ⓘ *Note:*
Terminal styles on page 13
*2 Customized designs upon request

Cable connecting receptacle (rubber sleeve)

Series NF07

Device outline

▽ maximum cable diameter

Ordering code

Shell part 1

Example:
See also ordering information on page 6

NF	07	D	1	L0	D6
①	②	③	④	⑤	⑥
NF	07	D	1	L0	D6
		D	2	L0	D6
		D	3	L0	D6

ⓘ *Note:*
Terminal styles on page 13

Dimensions in mm / Subject to change

SCHALTBAU
Connect Contact Control

Backshell NF07 Z5 Pg7 with thread PG7 | Series NF07

Device outline

24.2

⚲ 14

Ø17 M14x1

Ø8

Pg7
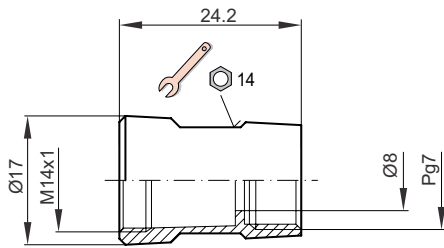
▽ cable diameter

Ordering code   Shell part 1

Example:
See also ordering information on page 6

NF07 Z5 Pg7
①
Backshell with thread PG7 NF07 Z5 Pg7

ⓘ *Note:*
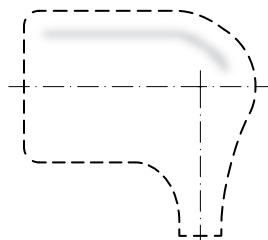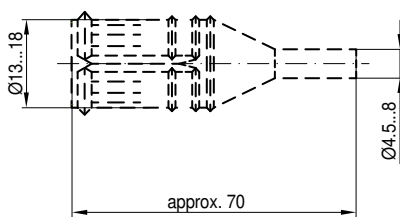*For use with commercially available screw coupling built to DIN 46320*

Heatshrink boots | Series NF07

Device outline

Heatshrink boot, straight

Heatshrink boot, 90°

Ø13...18

Ø4.5...8

approx. 70

Ordering code   Accessories / Shell part 2

Example:
See also ordering information on page 6

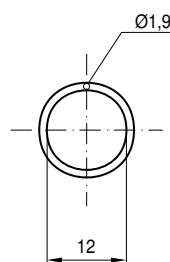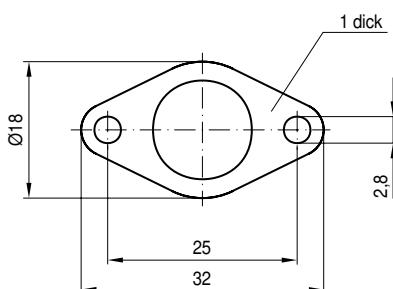| 203W 112-30 |
|---|
| ① |
| Heatshrink boot, straight 203W112-30 *

 Heatshrink boot, 90° 222K 142-15 * |

Note:
* Order direct from Raychem or other OEMs

Seals NF Z1 and NF Z2 | Series NF07

Device outline

Gasket NF Z1 (Flange seal)

Sealing ring NF Z2 (O-ring)

1 dick

Ø18

2,8

25

32

Ø1,9

12

Ordering code   Accessories / Shell part 2

Example:
See also ordering information on page 6

NF Z1
①
Gasket NF Z1   Sealing ring NF Z2

SCHALTBAU
Connect Contact Control

Protection cap VG96934 Z3 | Series NF07

Device outline

15.5
Ø22.5

Crimp ring
2.5 mm² / AWG13

Ring terminal
2.5 mm² / AWG13

25

Ø3.2

≈ 200

Ordering code   Accessories/Protection cap

Example:
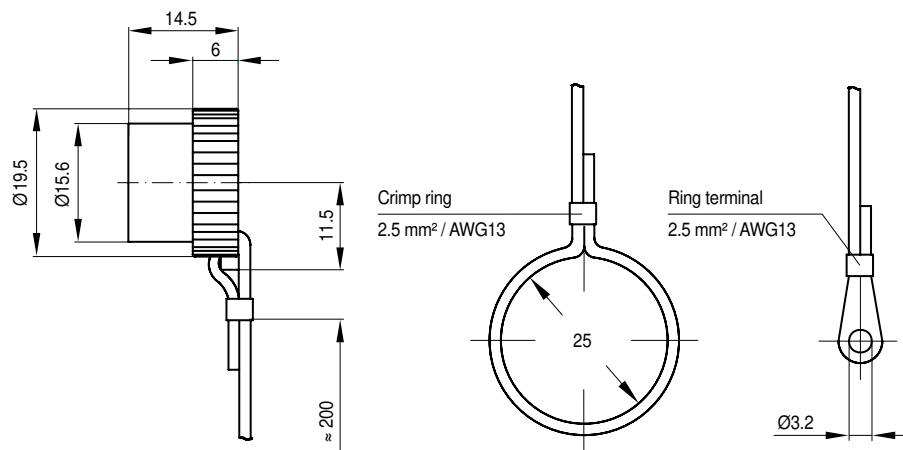See also ordering information on page 6

VG96934 Z3

①

Protection
cap
VG96934 Z3

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

Protection cap VG96934 Z4 (rubber) | Series NF07

Device outline

14.5
6
Ø19.5
Ø15.6
11.5

Crimp ring
2.5 mm² / AWG13

Ring terminal
2.5 mm² / AWG13

25

Ø3.2

≈ 200

Ordering code   Accessories/Protection cap

Example:
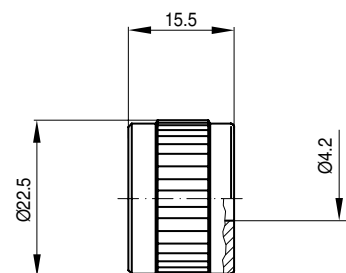See also ordering information on page 6

VG96934 Z4

①

Protection
cap
VG96934 Z4

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

Dummy receptacle VG96934 Z6 | Series NF07

Device outline

15.5
Ø22.5
Ø4.2

Ordering code   Accessories/Protection cap
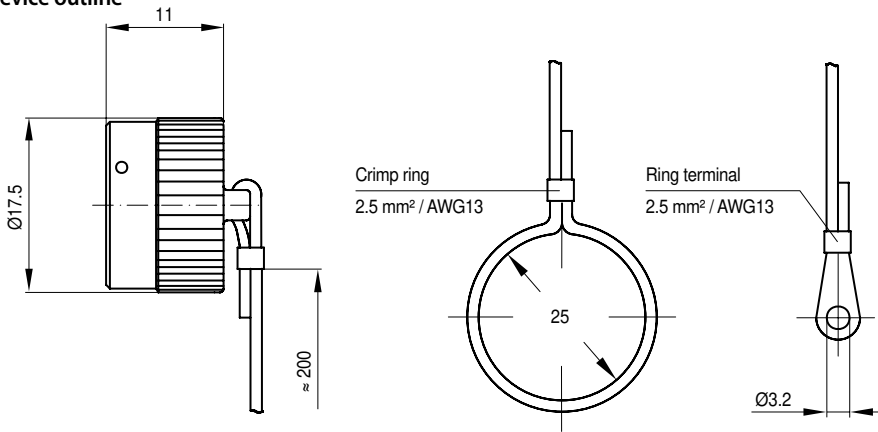
Example:
See also ordering information on page 6

VG96934 Z6

①

Dummy
receptacle
VG96934 Z6

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

Dimensions in mm / Subject to change

SCHALTBAU
Connect Contact Control

Protection cap for polarization NF07 Z7/x | Series NF07

Device outline

11

Ø17.5

≈ 200

Crimp ring
2.5 mm² / AWG13

25

Ring terminal
2.5 mm² / AWG13

Ø3.2

Ordering code — Accessories/Protection cap

Example:
See also ordering information on page 6

	NF07 Z7 /	1
	①	②

Protection cap		1
		2
NF07 Z7 /		3

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

Terminal styles, Assembly tool Z16 | Series NF07

Terminal styles
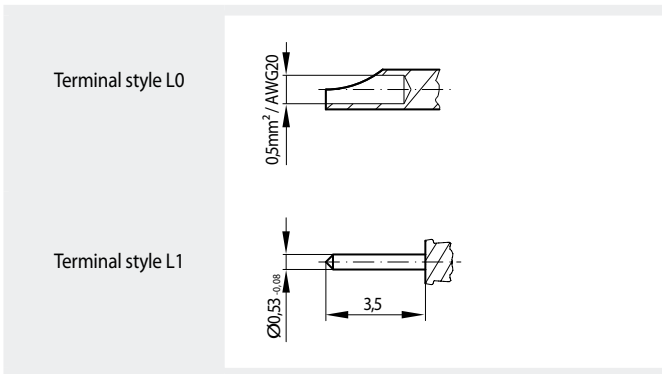
Terminal style L0

0.5mm² / AWG20

Terminal style L1

Ø0.53 -0.08

3,5

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

Assembly tool Z16 — Accessories

Ordering code: **Z16**

Assembly tool for
jam nut receptacles
NF07 C x xx

1	
Assembly tool Z16	

ⓘ *Note:*
Assembly tool for jam nut receptacles NF07 C x xx
Width across flats SW13, use with torque spanner,
torque 8⁺² Nm max.

Contact arrangement, Polarization | Series NF07

Contact arrangement

Plug	Receptacle
0° B A G C F D E	0° A B F G C E D

ⓘ *Note:*
Planforms seen from connector face
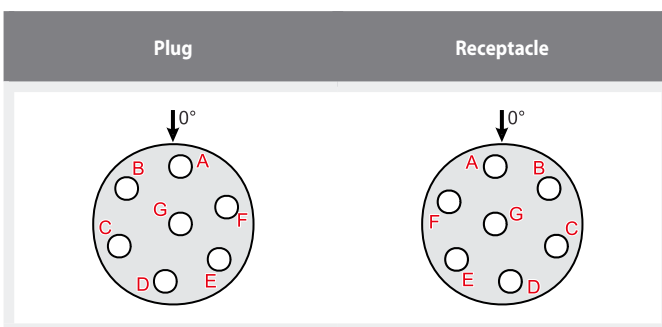
Polarization

Bayonet latch positions	Polarization NF07 Series			
0° 90° α2 α1	Orientation	α1	α2	Colour
	1	90°	120°	red
	2	105°	130°	yellow
	3	110°	135°	green

Subject to change / Dimensions in mm

Standard mounting borings

Flange mount receptacles

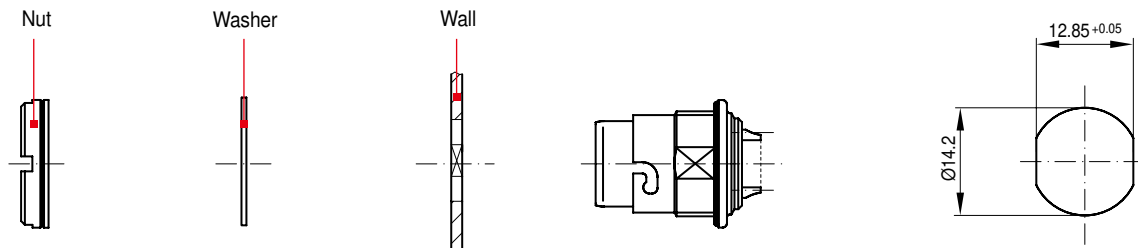- Panel cutout for flange mount receptacles with gasket NF Z1

M3 / Ø3.5

25

M3 (Section)

Ø3.5 (Section)

Ø12.4

Ø12.4

- Panel cutout for flange mount receptacles with sealing ring NF Z2

M3 / Ø3.5

25

M3 (Section)

Ø3.5 (Section)

Ø15.8

Ø12.4

Ø15.8

Ø12.4

1.5

1.5

Jam nut receptacles

- Panel cutout for jam nut receptacles

Nut

Washer

Wall

12.85 +0.05

Ø14.2

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

PCB terminal

- Panel drilling for plugs

Ø0.6 min.

0.26 1.5 3.0

A

F

B

E

G

C D

1.5 3.0

0.15

2.6 2.6

- Panel drilling for receptacles

2.83 2.44

0.4

3.03 1.87 1.17

Ø0.6 min.

A

B

F

G

C

E

D

1.17 1.87 2.93

2.44 2.83

0.4
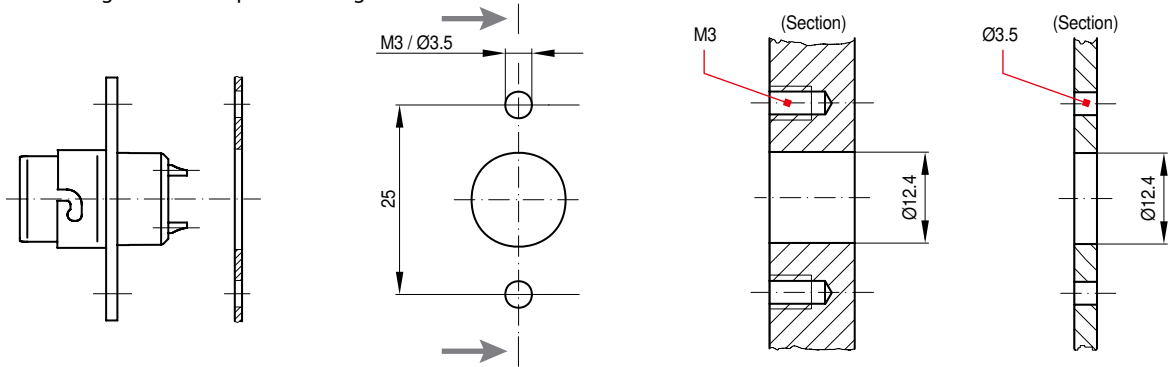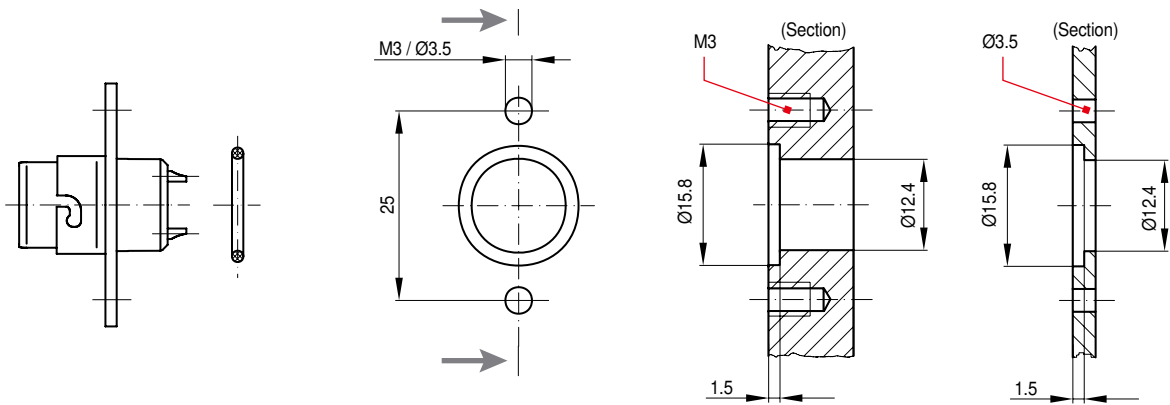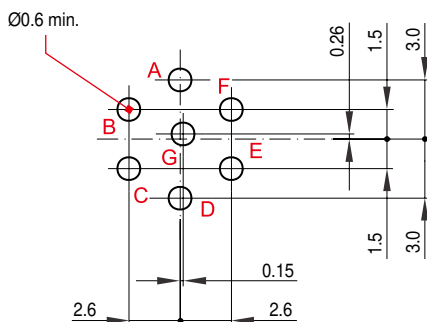
Note:
These mounting borings can also be used for NF07 /S Series receptacles

SCHALTBAU
Connect Contact Control
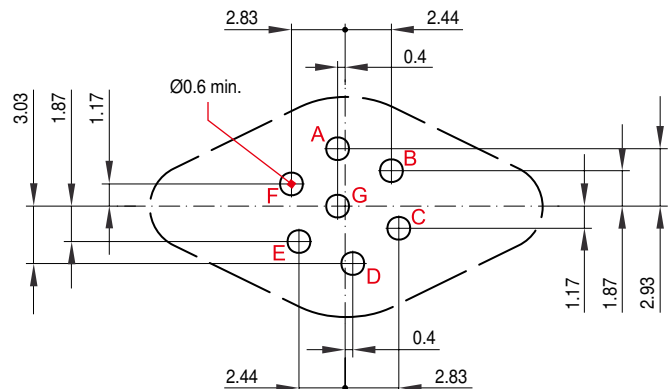
Standard assembly and installation dimensions

● **Cable connecting plug (short adapter) ⇔ Jam nut receptacle**

≈46

≈29

2 max.

6.5±0.7 L0

1

16 max.

7.5±0.7 L1
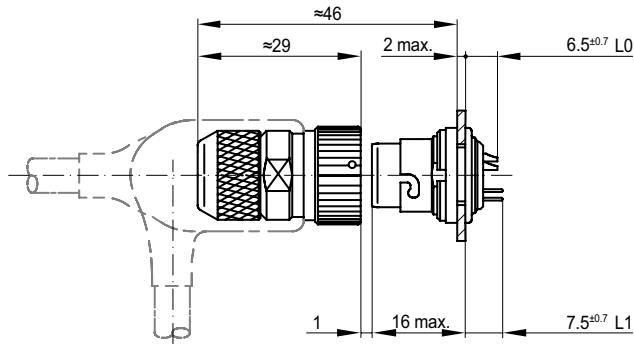
● **Plug for heatshrink boot ⇔ Jam nut receptacle**
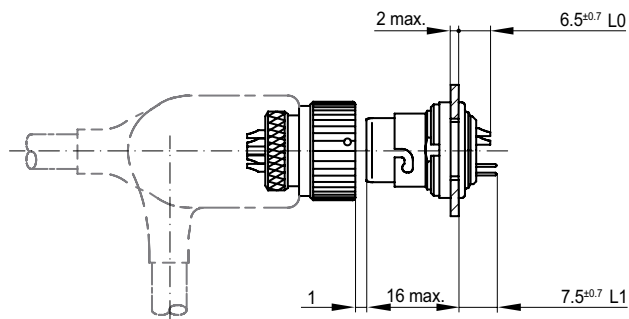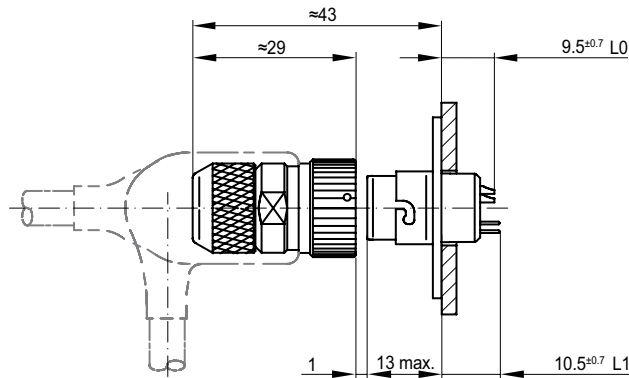
2 max.

6.5±0.7 L0

1

16 max.

7.5±0.7 L1

● **Cable connecting plug (short adapter) ⇔ Flange mount receptacle**

≈43

≈29

9.5±0.7 L0

1

13 max.

10.5±0.7 L1

● **Receptacle for heatshrink boot ⇔ Jam nut plug**

$11_{-1.5}^{0}$ L0

6 min.

$10_{0}^{+0.5}$

1

$10.6_{-1.0}^{+0.5}$ L1

Subject to change / Dimensions in mm

SCHALTBAU
Connect Contact Control

90° cable connecting plug

Series NF07 /S

Device outline

≈ 22.3

27...29

25

10   Ø6

⌀ maximum cable diameter

11
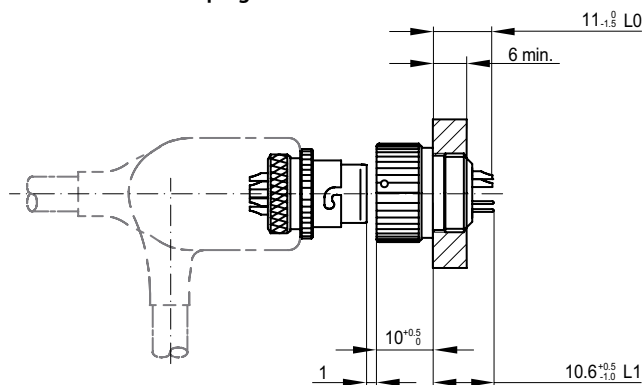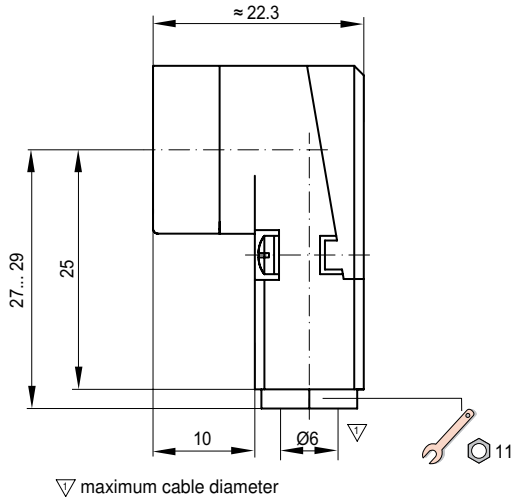
Ordering code

Shell part 1

Example:
See also ordering information on page 6

NF	07	A	1	L0	A17/S
①	②	③	④	⑤	⑥
NF	07	A	1	L0	A17/S
		A	2	L0	A17/S
		A	3	L0	A17/S
		A	4	L0	A17/S

ⓘ **Note:**
Terminal styles on page 22

Cable connecting plug (short adapter)

Series NF07 /S

Device outline

30.5 max
10   18
2
Ø12.5
Ø6.5
Ø17.5
Ø16

⌀ maximum cable diameter

15
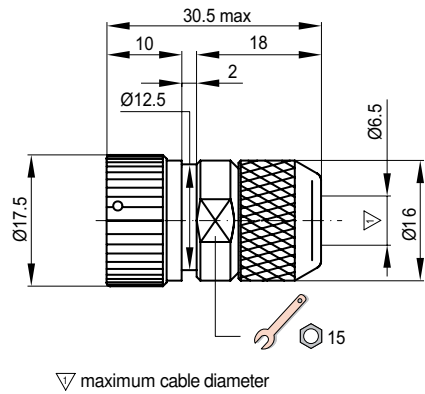
Ordering code

Shell part 1

Example:
See also ordering information on page 6

NF	07	A	1	L0	A1/S
①	②	③	④	⑤	⑥
NF	07	A	1	L0	A1/S
		A	2	L0	A1/S
		A	3	L0	A1/S
		A	4	L0	A1/S

ⓘ **Note:**
Terminal styles on page 22

Cable connecting plug (long adapter)

Series NF07 /S

Device outline

10
2
Ø12.5
Ø9
Ø17.5
Ø16
24.5
36.5 max.

⌀ maximum cable diameter
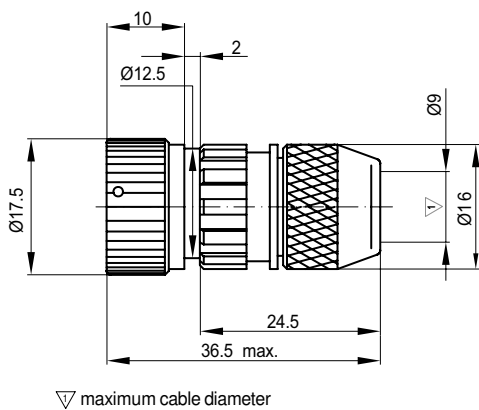
Ordering code

Shell part 1

Example:
See also ordering information on page 6

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

ⓘ **Note:**
Terminal styles on page 22

Dimensions in mm / Subject to change

SCHALTBAU
Connect Contact Control

Jam nut plug

Series NF07 /S

Device outline

10
2
Ø17.5
M14x1
Ø16
Ø12.5
20.6 (L1)
21 (L0)

Ordering code

Shell part 1

Example:
See also ordering information on page 6

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

ⓘ **Note:**
Terminal styles on page 22

Flange plug

Series NF07 /S

Device outline

11.5
1.5
Ø17.5
Ø12.3
25
32
20.6 (L1)
21 (L0)
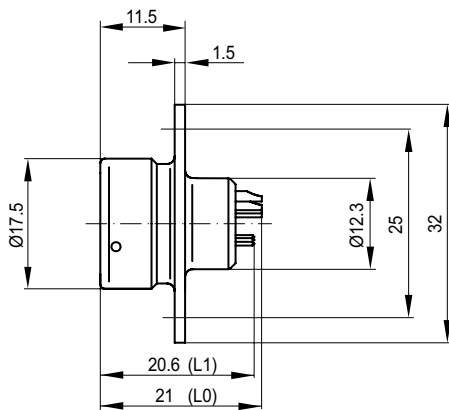
Ordering code

Shell part 1

Example:
See also ordering information on page 6

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

ⓘ **Note:**
Terminal styles on page 22

Cable connecting plug (rubber sleeve)

Series NF07 /S

Device outline

≈ 96
51
Ø17.5
Ø5...7
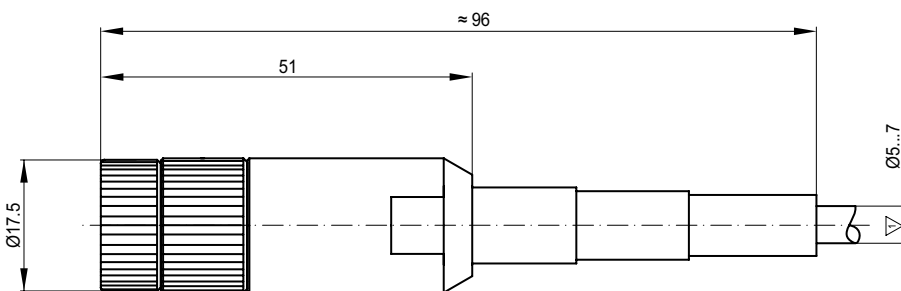
▽ cable diameter

Ordering code

Shell part 1

Example:
See also ordering information on page 6

NF	07	L	1	L0	/S
▼	▼	▼	▼	▼	▼
①	②	③	④	⑤	⑥
NF	07	L	1	L0	/S
		L	2	L0	/S
		L	3	L0	/S
		L	4	L0	/S

ⓘ **Note:**
Terminal styles on page 22

SCHALTBAU
Connect Contact Control

Flange mount receptacle — Series NF07 /S

Device outline

13
1.5
32
25
Ø12.6
Ø12.3
L0 = 24.2
L1 = 25.2
L2 = 27.2

Ordering code — Shell part 1

Example:
See also ordering information on page 6

NF	07	B	1	L0	/S
①	②	③	④	⑤	⑥
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

ⓘ **Note:** Terminal styles on page 22

Jam nut receptacle — Series NF07 /S

Device outline

16
10.5
Dichtung
M14x1
Ø12.6
L0 = 24.2
L1 = 25.2
L2 = 27.2
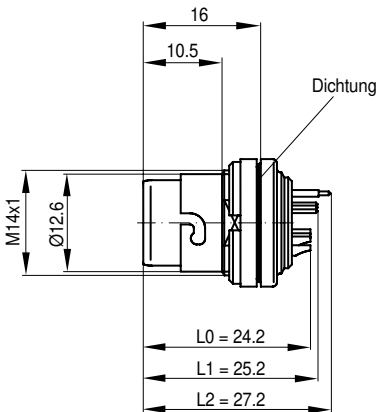
Ordering code — Shell part 1

Example:
See also ordering information on page 6

NF	07	C	1	L0	/S
①	②	③	④	⑤	⑥
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	L2	/S
		C	4	L2	/S

ⓘ **Note:** Terminal styles on page 22

Cable connecting receptacle (short adapter) — Series NF07 /S

Device outline

33 max.
12.5
18
2
Ø13
Ø6.5
Ø17.5
Ø13.03
Ø16
15

▽ maximum cable diameter
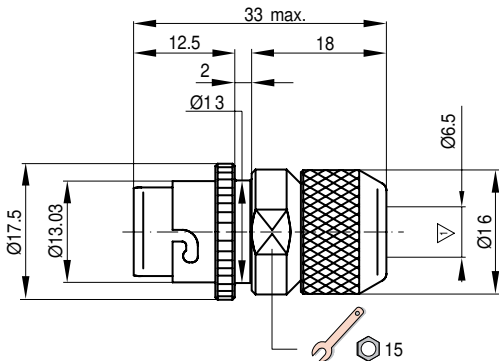
Ordering code — Shell part 1

Example:
See also ordering information on page 6

NF	07	D	1	L0	/S
①	②	③	④	⑤	⑥
NF	07	D	1	L0	/S
		D	2	L0	/S
		D	3	L0	/S
		D	4	L0	/S

ⓘ **Note:** Terminal styles on page 22

Dimensions in mm / Subject to change

SCHALTBAU
Connect Contact Control

Cable connecting receptacle (long adapter)

Device outline

12.5
2
Ø13
Ø17.5
Ø12.6
Ø9
Ø16
24.5
39.5 max.
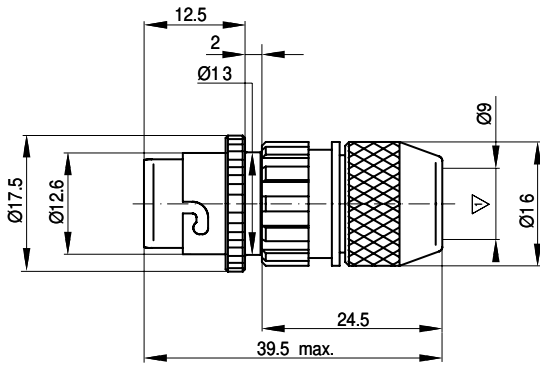
▽ maximum cable diameter

Ordering code

Shell part 1

Example:
See also ordering information on page 6

NF	07	D	1	L0	D7/S
①	②	③	④	⑤	⑥
NF	07	D	1	L0	D7/S
		D	2	L0	D7/S
		D	3	L0	D7/S
		D	4	L0	D7/S

ⓘ **Note:**
Terminal styles on page 22

Reinforced cable connecting receptacle (short adapter)

Device outline

12.5
18
2
Ø13.2
Ø22
Ø6.5
Ø16
15
33 max.
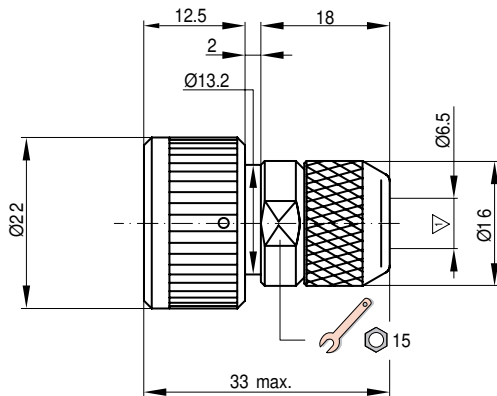
▽ maximum cable diameter

Ordering code

Shell part 1

Example:
See also ordering information on page 6

NF	07	N	1	L0	/S
①	②	③	④	⑤	⑥
NF	07	N	1	L0	/S
		N	2	L0	/S
		N	3	L0	/S
		N	4	L0	/S

ⓘ **Note:**
Terminal styles on page 22

Reinforced cable connecting receptacle (long adapter)

Device outline

12.5
2
Ø13.2
Ø22
Ø9
Ø16
24.5
39.5 max.
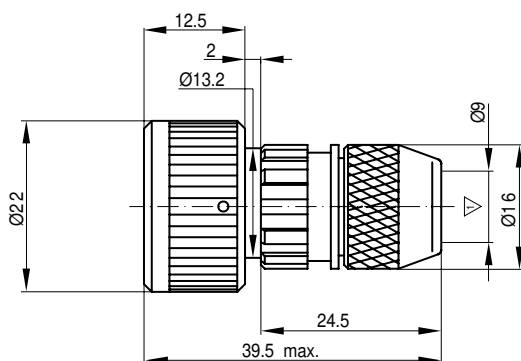
▽ maximum cable diameter

Ordering code

Shell part 1

Example:
See also ordering information on page 6
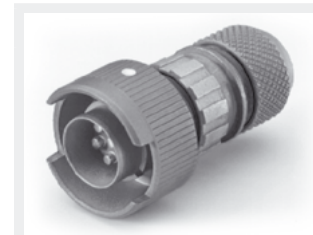
NF	07	K	1	L0	/S
①	②	③	④	⑤	⑥
NF	07	K	1	L0	/S
		K	2	L0	/S
		K	3	L0	/S
		K	4	L0	/S

ⓘ **Note:**
Terminal styles on page 22

Reinforced cable connecting receptacle (rubber sleeve)
Series NF07 /S

Device outline

≈ 102

55.5

Ø22

Ø5 ...7
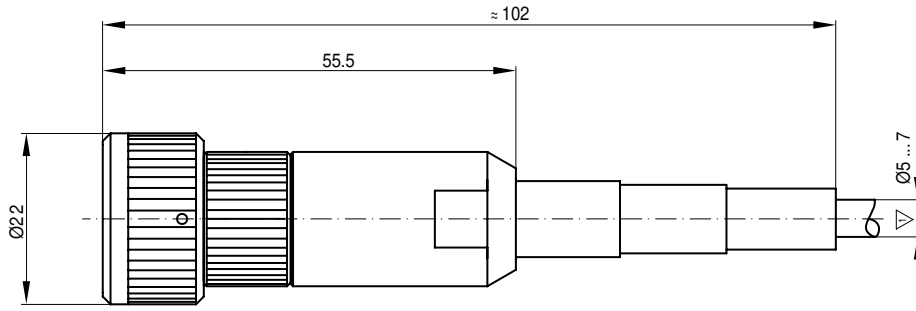
▽ cable diameter

Ordering code   Shell part 1

Example:
See also ordering information on page 6

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

ⓘ *Note:*
Terminal styles on page 32
*2 Customized designs upon request

Heatshrink boots
Series NF07 /S

Device outline

Heatshrink boot,
straight
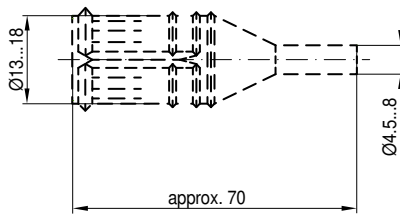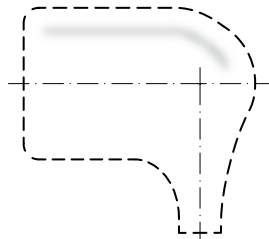
Heatshrink boot,
90°

Ø13...18

Ø4.5...8

approx. 70

Ordering code   Accessories / Shell part 2

Example:
See also ordering information on page 6

203W 112-30
▼
①
Heatshrink boot, straight 203W112-30 *
Heatshrink boot, 90° 222K 142-15 *

Note:
* Order direct from Raychem or other OEMs

Seals NF Z1 and NF Z2
Series NF07 /S

Device outline

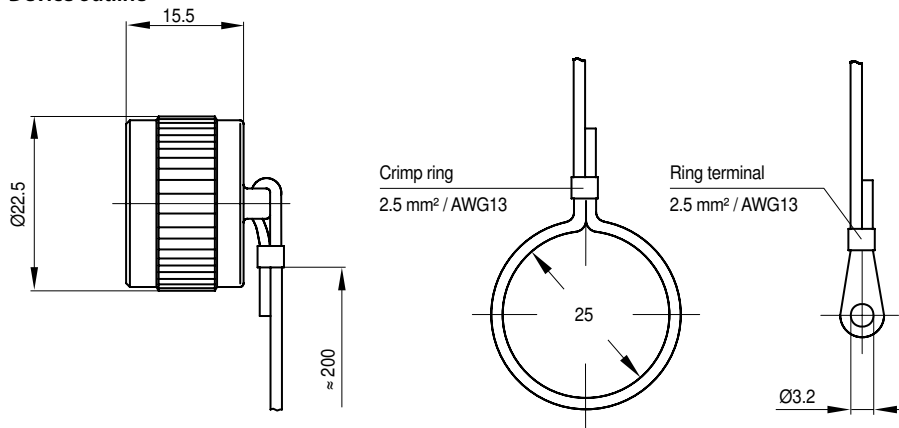Gasket NF Z1
(Flange seal)

Sealing ring NF Z2
(O-ring)

1 thick

Ø1.8

Ø18

2.8

25

32

10.7

Ordering code   Accessories / Shell part 2

Example:
See also ordering information on page 6

NF Z1
▼
①
Gasket NF Z1
Sealing ring NF Z2

SCHALTBAU
Connect Contact Control

Protection cap VG96934 Z3
Series NF07 /S

Device outline

15.5

Ø22.5

Crimp ring
2.5 mm² / AWG13

25

Ring terminal
2.5 mm² / AWG13

≈ 200

Ø3.2

Ordering code   Accessories/Protection cap

Example:
See also ordering information on page 6

VG96934 **Z3**

▼

①

Protection
cap
VG96934 Z3

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

Protection cap VG96934 Z4 (rubber)
Series NF07 /S

Device outline

14.5
6

Ø19.5
Ø15.6

11.5

Crimp ring
2.5 mm² / AWG13

25

Ring terminal
2.5 mm² / AWG13

≈ 200

Ø3.2

Ordering code   Accessories/Protection cap

Example:
See also ordering information on page 6

VG96934 **Z4**

▼

①

Protection
cap
VG96934 Z4

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

Dummy receptacle VG96934 Z6
Series NF07 /S

Device outline

15.5

Ø22.5

Ø4.2

Ordering code   Accessories/Protection cap

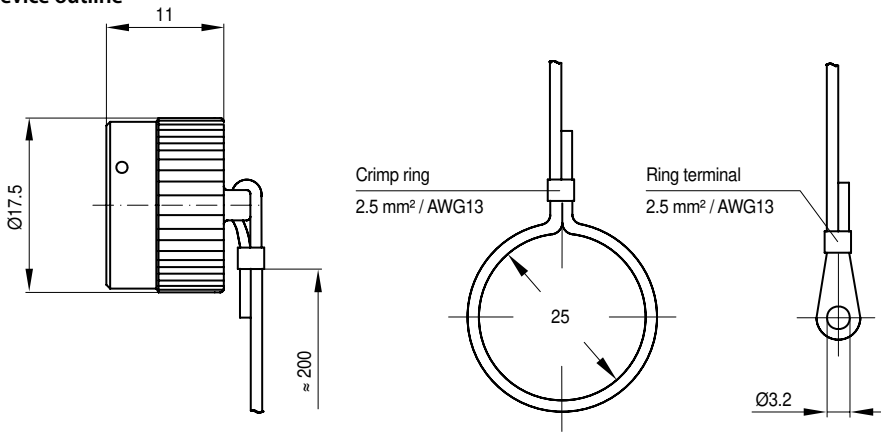Example:
See also ordering information on page 6

VG96934 **Z6**

▼

①

Dummy
receptacle
VG96934 Z6

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

SCHALTBAU
Connect Contact Control

Protection cap for polarization NF07 Z7/x   Series NF07 /S

Device outline

| 11 |

Ø17,5

Crimp ring
2.5 mm² / AWG13

Ring terminal
2.5 mm² / AWG13

≈ 200

25

Ø3.2

Ordering code   Accessories/Protection cap

Example:
See also ordering information on page 6

	NF07 Z7 /	1
	▼	▼
	①	②
	Protection cap NF07 Z7 /	1 2 3 4

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

Terminal styles, Assembly tool Z16   Series NF07 /S

Terminal styles
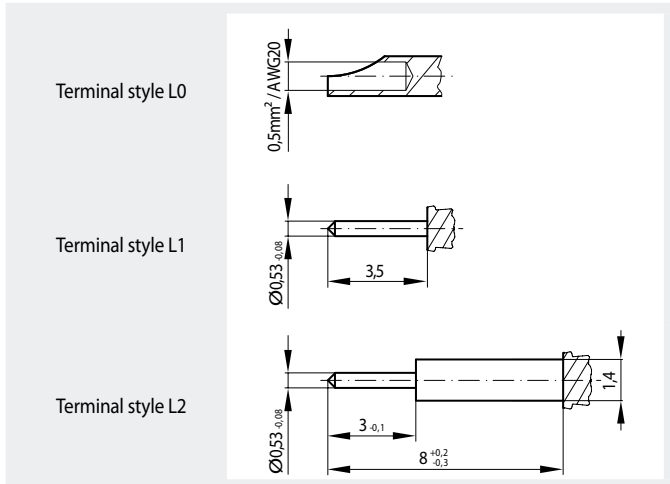
Terminal style L0

0,5mm² / AWG20

Terminal style L1

Ø0,53 -0,08   3,5

Terminal style L2

Ø0,53 -0,08   3 -0,1   1,4

8 +0,2 -0,3

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

Assembly tool Z16   Accessories

Ordering code: Z16

▼
1

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

Assembly tool Z16

ⓘ *Note:*
Assembly tool for jam nut receptacles NF07 C x xx /S
Width across flats SW13, use with torque spanner,
torque 8+2 Nm max.

Contact arrangement, Polarization   Series NF07 /S

Contact arrangement
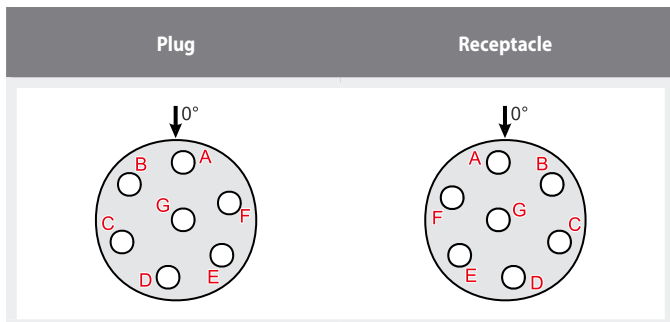
Plug	Receptacle
0° B A G C F D E	0° A B F G C E D

ⓘ *Note:*
Planforms seen from connector face

Polarization

Bayonet latch positions	Polarization NF07/S Series		
0° 90° α2 α1	Orientation	α1	α2	Colour

Orientation	α1	α2	Colour
1	90°	120°	red
2	105°	130°	yellow
3	110°	135°	green
4	100°	165°	pink

Dimensions in mm / Subject to change

Mounting borings

Flange mount receptacles

- Panel cutout for flange mount receptacles with gasket NF Z1

M3 / Ø3.5

25

M3 (Section)

Ø12.4

Ø3.5 (Section)

Ø12.4

- Panel cutout for flange mount receptacles with sealing ring NF Z2

M3 / Ø3.5

25

M3 (Section)

Ø15.8 Ø12.4

1.5

Ø3.5 (Section)

Ø15.8 Ø12.4

1.5

Jam nut receptacles

- Panel cutout for jam nut receptacles

Nut

Washer

Wall

12.85 +0.05

Ø14.2

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

PCB terminal

- Panel drilling for plugs

Ø0.6 min.

A

F

B

E

G

C

D

0.26 | 1.5 | 3.0

1.5 | 3.0

0.15

2.6 | 2.6

- Panel drilling for receptacles

2.38 | 2.77

0.4

2.97 | 1.83 | 1.15

Ø0.6 min.

A

B

F

G

C

E

D

1.15 | 1.83 | 2.97

0.4

2.38 | 2.77
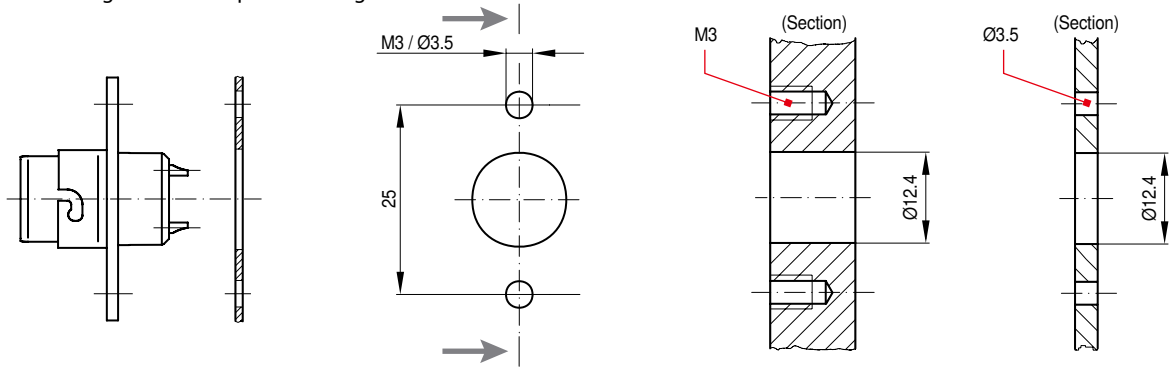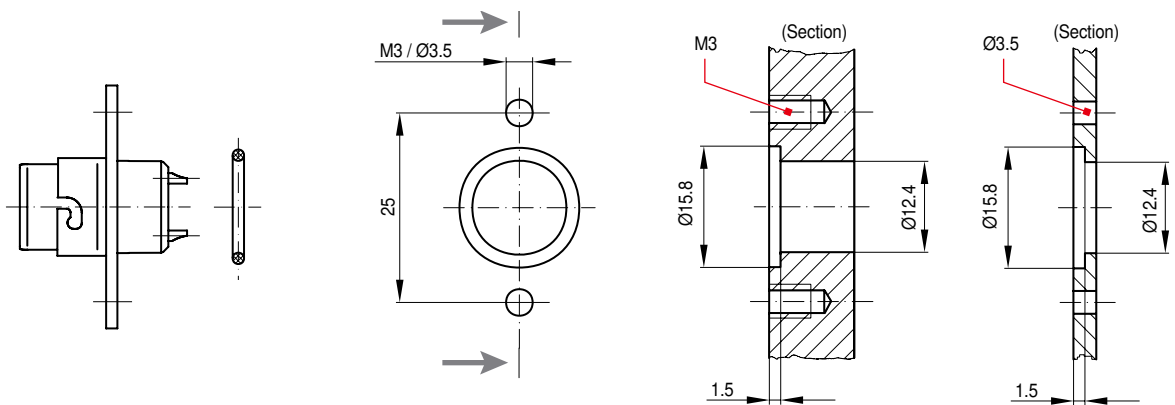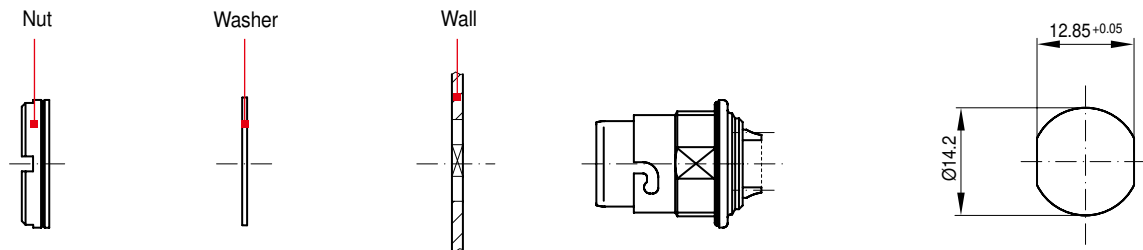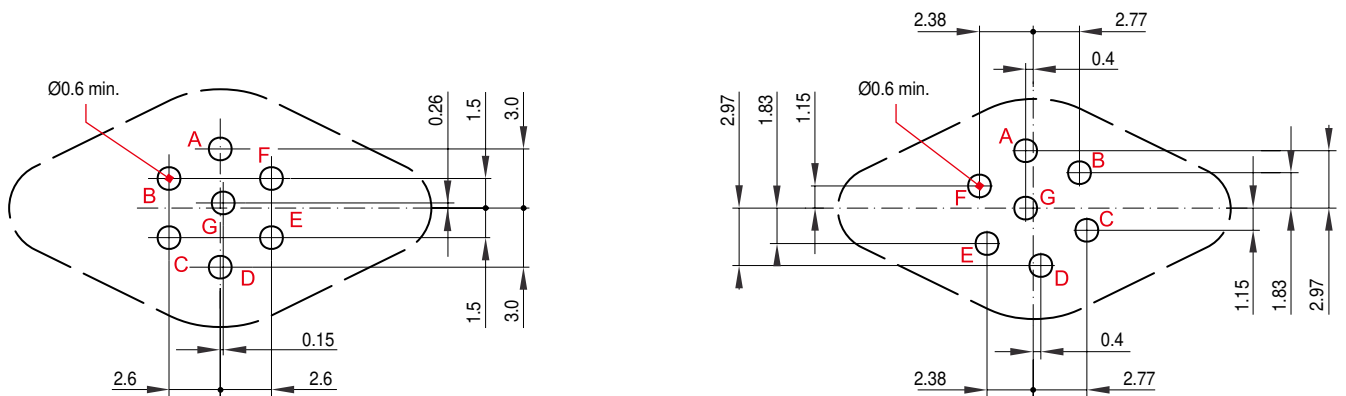
Note:
These mounting borings can also be used for NF07 Series receptacles

Subject to change / Dimensions in mm

SCHALTBAU
Connect Contact Control

● **Cable connecting plug (short adapter) ⟺ Jam nut receptacle**

≈47.5
≈30.5
2 max.
6.5±0.7 L0
1
16 max.
7.5±0.7 L1
12 +0.4 -0.7 L2

● **Cable connecting plug (long adapter) ⟺ Jam nut receptacle**

≈53.5
≈36.5
2 max.
6.5±0.7 L0
1
16 max.
7.5±0.7 L1
12 +0.4 -0.7 L2

● **Cable connecting plug (short adapter) ⟺ Flange mount receptacle**

1
13 max.
10.5±0.7 L1
14.5 +0.4 -0.7 L2

● **90° Cable connecting plug ⟺ Flange mount receptacle**

≈36.3
≈22.3
9.5±0.7 L0
1
13 max.
10.5±0.7 L1
14.5 +0.4 -0.7 L2

● **Cable connecting plug (short adapter) ⟺ Reinforced cable connecting receptacle (long adapter)**

≈30.5
1
≈39.5

Dimensions in mm / Subject to change

Assembly and installation dimensions

● **Reinforced cable connecting receptacle (short adapter) ⟨⟩ Jam nut plug**

≈42.5
≈31.5
$11_{-1.5}^{0}$ L0
6 min.
$10_{0}^{+0.5}$
1
$10.6_{-1.0}^{+0.5}$ L1

● **Reinforced cable connecting receptacle (long adapter) ⟨⟩ Jam nut plug**

≈50.5
≈39.5
$11_{-1.5}^{0}$ L0
6 min.
$10_{0}^{+0.5}$
1
$10.6_{-1.0}^{+0.5}$ L1

● **Reinforced cable connecting receptacle (short adapter) ⟨⟩ Flange plug**

≈44
≈31.5
$9.5_{-1.0}^{+0.3}$ L0
11.5 $_{-1}^{0}$
1
$9.1_{-0.5}^{+0.8}$ L1

● **Reinforced cable connecting receptacle (long adapter) ⟨⟩ Flange plug**

≈52
≈39.5
$9.5_{-1.0}^{+0.3}$ L0
11.5 $_{-1}^{0}$
1
$9.1_{-0.5}^{+0.8}$ L1

Subject to change / Dimensions in mm

90° cable connecting plug

Series NF10

Device outline

≈ 22.3

27...29

25

10

Ø6

⬇ 11

▽ maximum cable diameter

Ordering code

Shell part 1

Example:
See also ordering information on page 6

NF	10	A	1	L0	A17/S
▼	▼	▼	▼	▼	▼
①	②	③	④	⑤	⑥
		A	1	L0	A17/S
		A	2	L0	A17/S
NF	10	A	3	L0	A17/S
		A	4	L0	A17/S
		A	5	L0	A17/S

ⓘ **Note:**
Terminal styles on page 32

Cable connecting plug (short adapter)

Series NF10

Device outline

30.5 max

10

18

2

Ø12.5

Ø6.5

Ø17.5

Ø16

⬇ 15

▽ maximum cable diameter
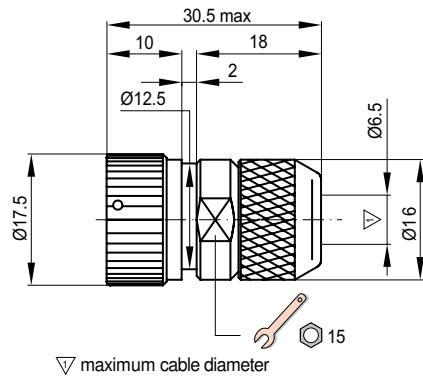
Ordering code

Shell part 1

Example:
See also ordering information on page 6

NF	10	A	1	L0	A1/S
▼	▼	▼	▼	▼	▼
①	②	③	④	⑤	⑥
		A	1	L0	A1/S
		A	2	L0	A1/S
NF	10	A	3	L0	A1/S
		A	4	L0	A1/S
		A	5	L0	A1/S

ⓘ **Note:**
Terminal styles on page 32

Cable connecting plug (long adapter)

Series NF10

Device outline

10

2

Ø12.5

Ø9

Ø17.5

Ø16

24.5

36.5 max.

▽ maximum cable diameter
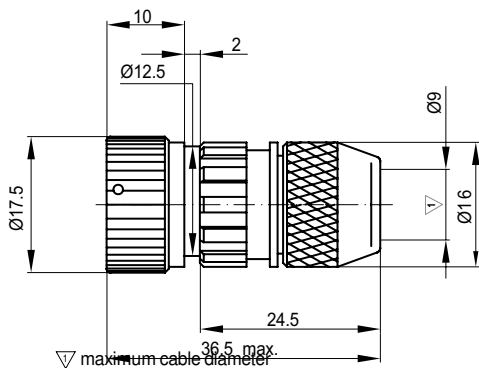
Ordering code

Shell part 1

Example:
See also ordering information on page 6

NF	10	A	1	L0	/S
▼	▼	▼	▼	▼	▼
①	②	③	④	⑤	⑥
		A	1	L0	/S
		A	2	L0	/S
NF	10	A	3	L0	/S
		A	4	L0	/S
		A	5	L0	/S

ⓘ **Note:**
Terminal styles on page 32

Dimensions in mm / Subject to change

Jam nut plug

Series NF10

Device outline

Ordering code

Shell part 1

Example:
See also ordering information on page 6

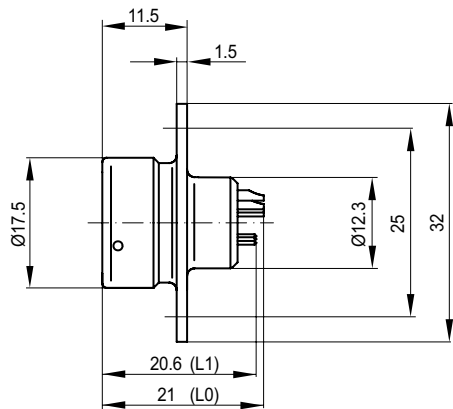| NF	10	E	1	L0	/S
①	②	③	④	⑤	⑥
		E	1	L0	/S
		E	2	L0	/S
NF	10	E	3	L0	/S
		E	4	L0	/S
		E	5	L1	/S
		E	1	L1	/S
		E	2	L1	/S
NF	10	E	3	L1	/S
		E	4	L1	/S
		E	5	L1	/S

ⓘ **Note:**
Terminal styles on page 32

Flange plug

Series NF10

Device outline

Ordering code

Shell part 1

Example:
See also ordering information on page 6

NF	10	F	1	L0	/S
①	②	③	④	⑤	⑥
		F	1	L0	/S
		F	2	L0	/S
NF	10	F	3	L0	/S
		F	4	L0	/S
		F	5	L1	/S
		F	1	L1	/S
		F	2	L1	/S
NF	10	F	3	L1	/S
		F	4	L1	/S
		F	5	L1	/S

ⓘ **Note:**
Terminal styles on page 32

Cable connecting plug (rubber sleeve)

Series NF10

Device outline

▽ cable diameter

Ordering code

Shell part 1
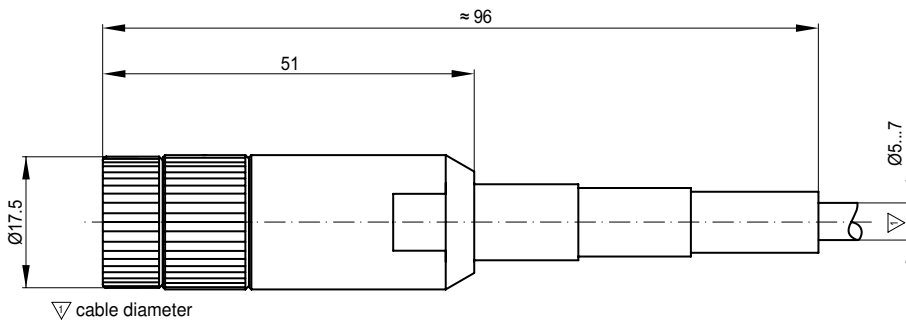
Example:
See also ordering information on page 6

NF	10	L	1	L0	/S
①	②	③	④	⑤	⑥
		L	1	L0	/S
		L	2	L0	/S
NF	10	L	3	L0	/S
		L	4	L0	/S
		L	5	L0	/S

ⓘ **Note:**
Terminal styles on page 32

Flange mount receptacle | Series NF10
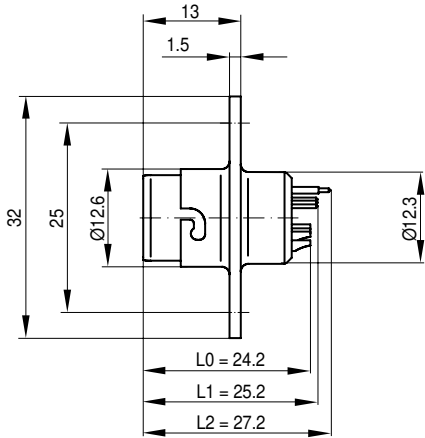
Device outline

13
1.5
32
25
Ø12.6
Ø12.3
L0 = 24.2
L1 = 25.2
L2 = 27.2

Ordering code | Shell part 1

Example:
See also ordering information on page 6

NF	10	B	1	L0	/S
①	②	③	④	⑤	⑥
		B	1	L0	/S
		B	2	L0	/S
NF	10	B	3	L0	/S
		B	4	L0	/S
		B	5	L0	/S
		B	1	L1	/S
		B	2	L1	/S
NF	10	B	3	L1	/S
		B	4	L1	/S
		B	5	L1	/S
		B	1	L2	/S
		B	2	L2	/S
NF	10	B	3	L2	/S
		B	4	L2	/S
		B	5	L2	/S

ⓘ **Note:**
Terminal styles on page 32

Jam nut receptacle | Series NF10
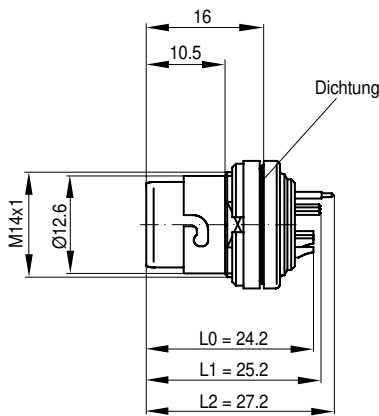
Device outline

16
10.5
Dichtung
M14x1
Ø12.6
L0 = 24.2
L1 = 25.2
L2 = 27.2

Ordering code | Shell part 1

Example:
See also ordering information on page 6

NF	10	C	1	L0	/S
①	②	③	④	⑤	⑥
		C	1	L0	/S
		C	2	L0	/S
NF	10	C	3	L0	/S
		C	4	L0	/S
		C	5	L0	/S
		C	1	L1	/S
		C	2	L1	/S
NF	10	C	3	L1	/S
		C	4	L1	/S
		C	5	L1	/S
		C	1	L2	/S
		C	2	L2	/S
NF	10	C	3	L2	/S
		C	4	L2	/S
		C	5	L2	/S

ⓘ **Note:**
Terminal styles on page 32

Cable connecting receptacle (short adapter) | Series NF10

Device outline

33 max.
12.5
18
2
Ø13
Ø6.5
Ø17.5
Ø13.03
Ø16
15

▽ maximum cable diameter
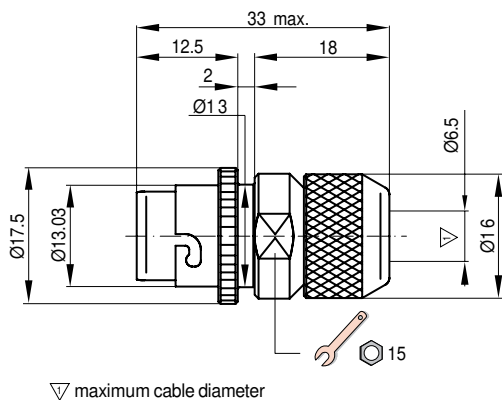
Ordering code | Shell part 1

Example:
See also ordering information on page 6

NF	10	D	1	L0	/S
①	②	③	④	⑤	⑥
		D	1	L0	/S
		D	2	L0	/S
NF	10	D	3	L0	/S
		D	4	L0	/S
		D	5	L0	/S

ⓘ **Note:**
Terminal styles on page 32

Dimensions in mm / Subject to change

SCHALTBAU
Connect Contact Control

Cable connecting receptacle (long adapter)

Series NF10

Device outline

▽ maximum cable diameter
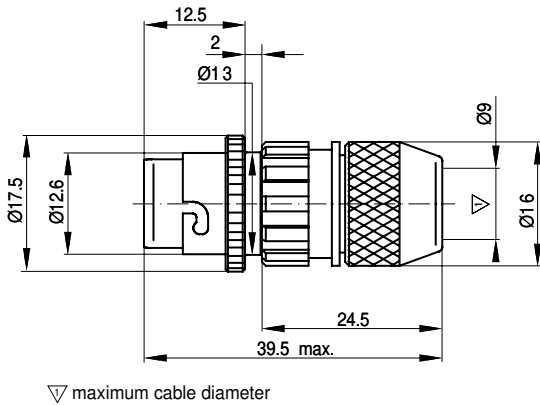
Ordering code

Shell part 1

Example:
See also ordering information on page 6

NF	10	D	1	L0	D7/S
▼	▼	▼	▼	▼	▼
①	②	③	④	⑤	⑥
		D	1	L0	D7/S
		D	2	L0	D7/S
NF	07	D	3	L0	D7/S
		D	4	L0	D7/S
		D	5	L0	D7/S

ⓘ **Note:**
Terminal styles on page 32

Reinforced cable connecting receptacle (short adapter)

Series NF10

Device outline

▽ maximum cable diameter
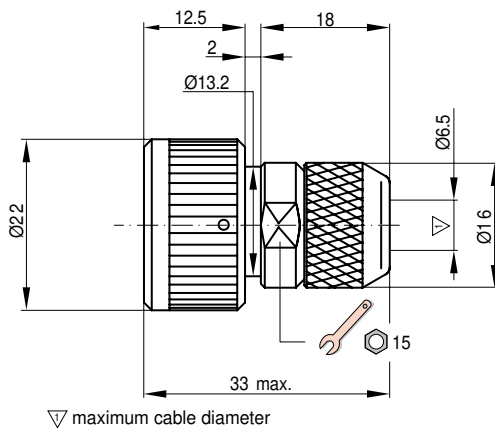
Ordering code

Shell part 1

Example:
See also ordering information on page 6
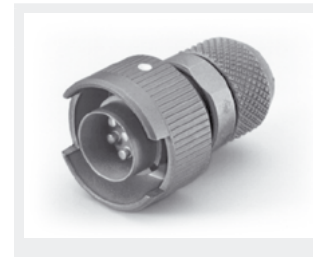
NF	10	N	1	L0	/S
▼	▼	▼	▼	▼	▼
①	②	③	④	⑤	⑥
		N	1	L0	/S
		N	2	L0	/S
NF	10	N	3	L0	/S
		N	4	L0	/S
		N	5	L0	/S

ⓘ **Note:**
Terminal styles on page 32

Reinforced cable connecting receptacle (long adapter)

Series NF10

Device outline

▽ maximum cable diameter
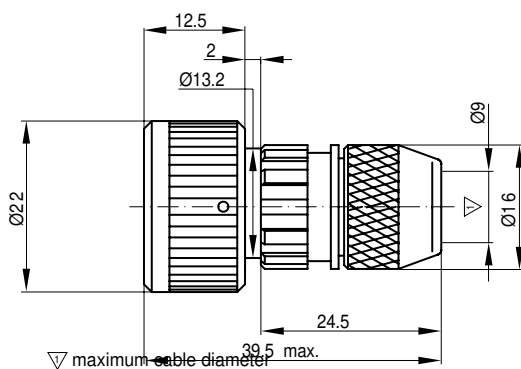
Ordering code

Shell part 1

Example:
See also ordering information on page 6
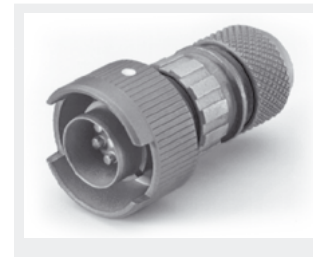
NF	10	K	1	L0	/S
▼	▼	▼	▼	▼	▼
①	②	③	④	⑤	⑥
		K	1	L0	/S
		K	2	L0	/S
NF	10	K	3	L0	/S
		K	4	L0	/S
		K	5	L0	/S

ⓘ **Note:**
Terminal styles on page 32

Subject to change / Dimensions in mm

Reinforced cable connecting receptacle (rubber sleeve)　　Series NF10

Device outline

≈ 102
55.5
Ø22
Ø5 ...7
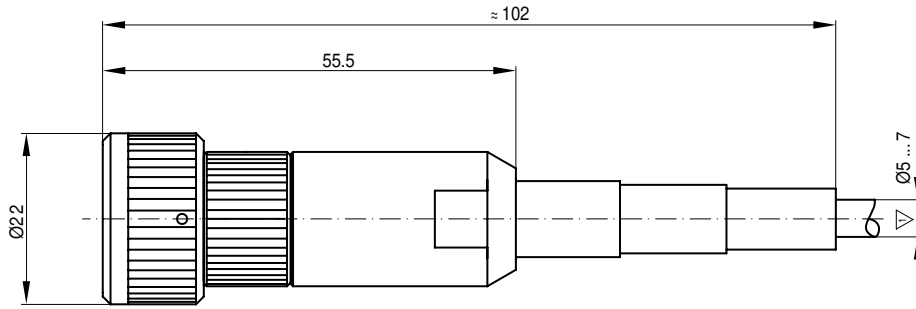
▽ cable diameter

Ordering code　　Shell part 1

Example:
See also ordering information on page 6

NF	10	M	1	L0	---*2
▼	▼	▼	▼	▼	▼
①	②	③	④	⑤	⑥
NF	10	M	1	L0	---*2
		M	2	L0	---*2
		M	3	L0	---*2
		M	4	L0	---*2
		M	5	L0	---*2

ⓘ *Note:*
Terminal styles on page 32
2 Customized designs upon request

Heatshrink boots　　Series NF10

Device outline

Heatshrink boot,
straight
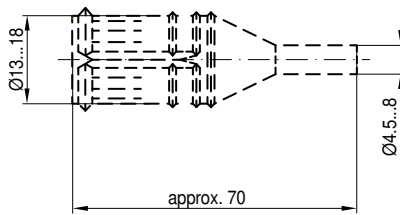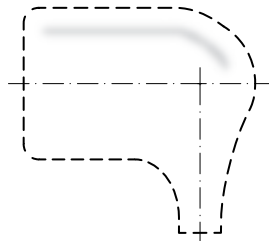
Heatshrink boot,
90°

Ø13...18
Ø4.5...8
approx. 70

Ordering code　　Accessories / Shell part 2

Example:
See also ordering information on page 6

203W 112-30
▼
①
Heatshrink boot, straight
203W112-30 *
Heatshrink boot, 90°
224K012-30 *

Note:
* *Order direct from Raychem or other OEMs*

Seals NF Z1 and NF Z2　　Series NF10

Device outline

Gasket NF Z1
(Flange seal)
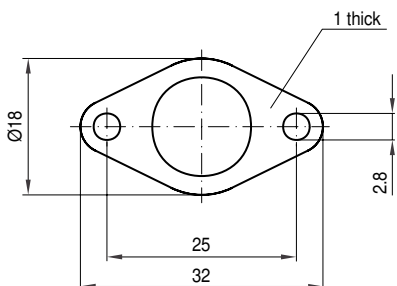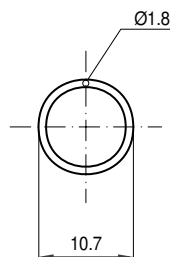
Sealing ring NF Z2
(O-ring)

1 thick
Ø18
2.8
25
32

Ø1.8
10.7

Ordering code　　Accessories / Shell part 2

Example:
See also ordering information on page 6

NF Z1
▼
①
Gasket NF Z1
Sealing ring NF Z2

Dimensions in mm / Subject to change

Protection cap VG96934 Z3   Series NF10

Device outline
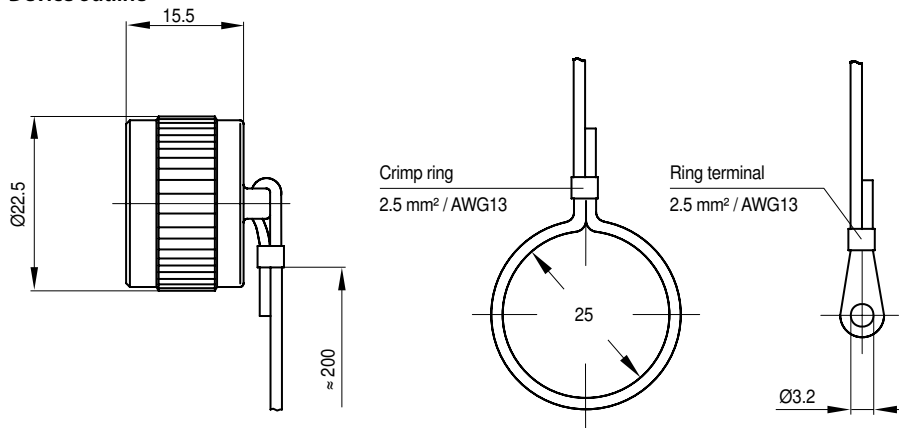
15.5

Ø22.5

≈ 200

Crimp ring
2.5 mm² / AWG13

25

Ring terminal
2.5 mm² / AWG13

Ø3.2

Ordering code   Accessories/Protection cap

Example:
See also ordering information on page 6

VG96934 Z3
①
Protection cap VG96934 Z3

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

Protection cap VG96934 Z4 (rubber)   Series NF10

Device outline

14.5

6

Ø19.5

Ø15.6

11.5

≈ 200

Crimp ring
2.5 mm² / AWG13

25

Ring terminal
2.5 mm² / AWG13

Ø3.2

Ordering code   Accessories/Protection cap
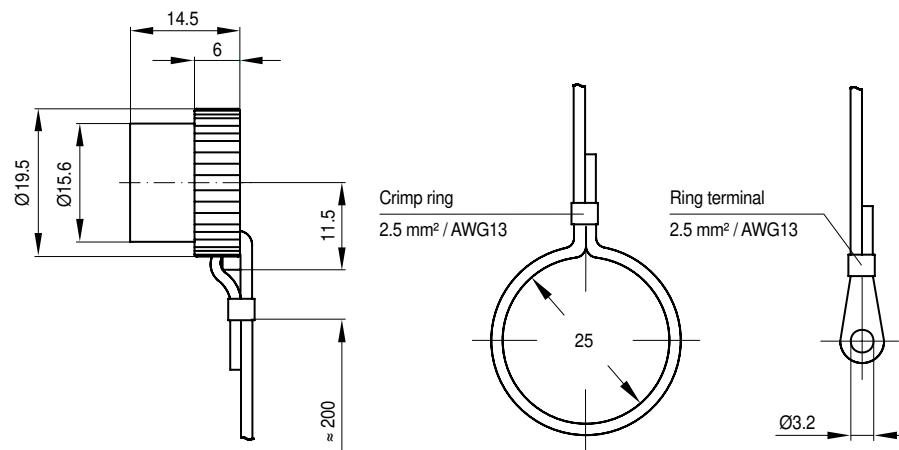
Example:
See also ordering information on page 6

VG96934 Z4
①
Protection cap VG96934 Z4

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

Dummy receptacle VG96934 Z6   Series NF10

Device outline
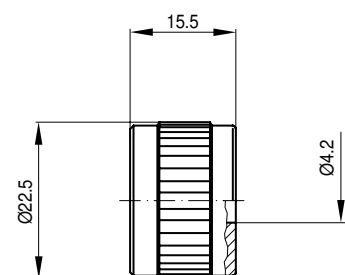
15.5

Ø22.5

Ø4.2

Ordering code   Accessories/Protection cap

Example:
See also ordering information on page 6

VG96934 Z6
①
Dummy receptacle VG96934 Z6

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

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Protection cap for polarization NF10 Z8/x

Series NF10

Device outline
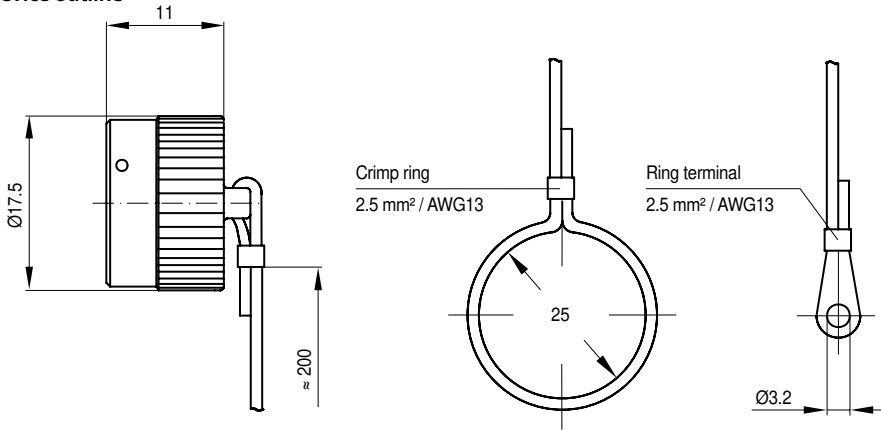
11

Ø17.5

≈ 200

Crimp ring
2.5 mm² / AWG13

25

Ring terminal
2.5 mm² / AWG13

Ø3.2

Ordering code   Accessories/Protection cap

Example:
See also ordering information on page 6

	NF10 Z8 /	1
	①	②
	Protection cap NF10 Z8 /	1 2 3 4

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

Terminal styles, Assembly tool Z16

Series NF10

Terminal styles
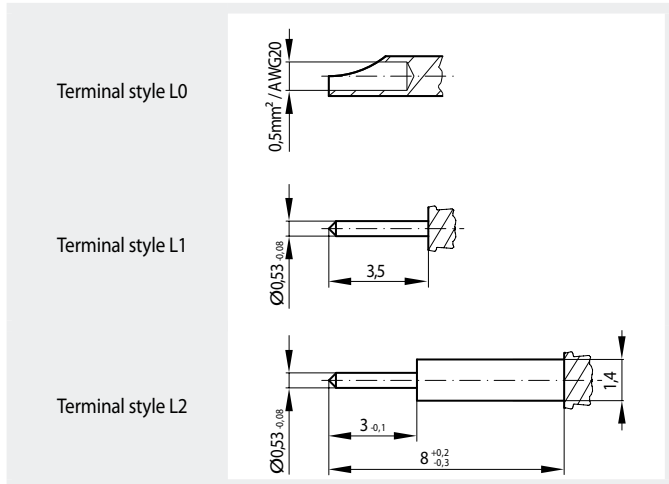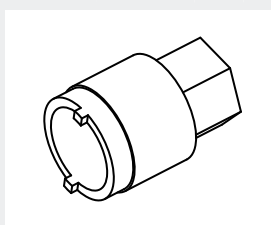
Terminal style L0

0.5mm² / AWG20

Terminal style L1

Ø0,53 -0,08

3,5

Terminal style L2

Ø0,53 -0,08

3 -0,1

8 +0,2 -0,3

1,4

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

Assembly tool Z16

Accessories

Ordering code: Z16

Assembly tool for jam nut receptacles NF10 C x xx

1

Assembly tool Z16

Note:
Assembly tool for jam nut receptacles NF10 C x xx
Width across flats SW13, use with torque spanner,
torque 8+2 Nm max.
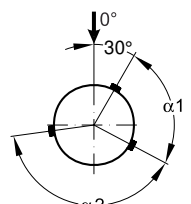
Contact arrangement, Polarization

Series NF10

Contact arrangement

Plug	Receptacle
0° A B H K G C J D E F	0° A G K H B F J C D E

Note:
Planforms seen from connector face
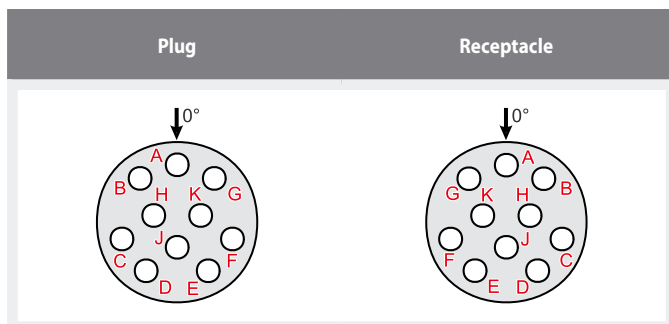
Polarization

Bayonet latch positions	Polarization Series NF10		
0° 30° α1 α2	Orientation	α1	α2	Colour
	1	95°	140°	white
	2	85°	115°	blue
	3	100°	105°	violet
	4	110°	120°	chrome yellow
	5	80°	145°	dark red

Dimensions in mm / Subject to change

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Mounting borings

Flange mount receptacles

- Panel cutout for flange mount receptacles with gasket NF Z1

M3 / Ø3.5

25

M3 (Section)

Ø12.4

Ø3.5 (Section)

Ø12.4

- Panel cutout for flange mount receptacles with sealing ring NF Z2

M3 / Ø3.5

25

M3 (Section)

Ø15.8

Ø12.4

1.5

Ø3.5 (Section)

Ø15.8

Ø12.4

1.5

Jam nut receptacles

- Panel cutout for jam nut receptacles

Nut

Washer

Wall

12.85 +0.05

Ø14.2

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

PCB terminal

- Panel drilling for plugs

2.4   2.4

1.65   1.65

Ø0.6 min.

2.85

0.5

3.75

A

B   H   K   G

J

C   F

1.75

1.1

D   E

3.15

2.05   2.05

3.6   3.6

- Panel drilling for receptacles

2.45   2.45

1.55   1.55

Ø0.6 min.

3.8

0.45   2.9

A

G   K   H   B

J

F   C

3.2

E   D

1.1

1.65

2.05   2.05

3.65   3.65

Subject to change / Dimensions in mm

Assembly and installation dimensions

● **Cable connecting plug (short adapter) ⟺ Jam nut receptacle**

≈47.5
≈30.5
2 max.
6.5$^{±0.7}$ L0
1
16 max.
7.5$^{±0.7}$ L1
12$^{+0.4}_{-0.7}$ L2

● **Cable connecting plug (long adapter) ⟺ Jam nut receptacle**

≈53.5
≈36.5
2 max.
6.5$^{±0.7}$ L0
1
16 max.
7.5$^{±0.7}$ L1
12$^{+0.4}_{-0.7}$ L2

● **Cable connecting plug (short adapter) ⟺ Flange mount receptacle**

1
13 max.
10.5$^{±0.7}$ L1
14.5$^{+0.4}_{-0.7}$ L2

● **90° Cable connecting plug ⟺ Flange mount receptacle**

≈36.3
≈22.3
9.5$^{±0.7}$ L0
1
13 max.
10.5$^{±0.7}$ L1
14.5$^{+0.4}_{-0.7}$ L2

● **Cable connecting plug (short adapter) ⟺ Reinforced cable connecting receptacle (long adapter)**

≈30.5
1
≈39.5

Dimensions in mm / Subject to change

Assembly and installation dimensions

● **Reinforced cable connecting receptacle (short adapter) ⇔ Jam nut plug**

≈42.5
≈31.5
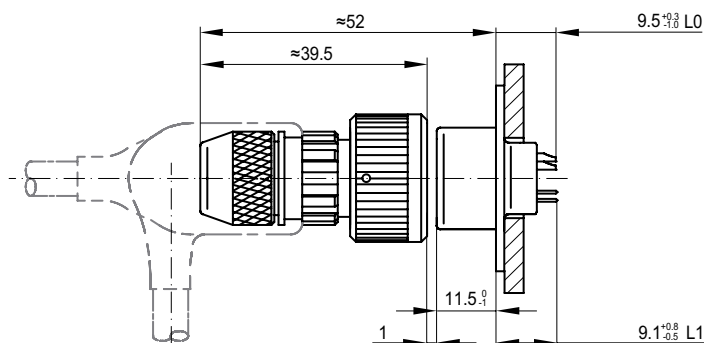$11_{-1.5}^{\ 0}$ L0
6 min.
$10_{\ 0}^{+0.5}$
1
$10.6_{-1.0}^{+0.5}$ L1

● **Reinforced cable connecting receptacle (long adapter) ⇔ Jam nut plug**

≈50.5
≈39.5
$11_{-1.5}^{\ 0}$ L0
6 min.
$10_{\ 0}^{+0.5}$
1
$10.6_{-1.0}^{+0.5}$ L1

● **Reinforced cable connecting receptacle (short adapter) ⇔ Flange plug**

≈44
≈31.5
$9.5_{-1.0}^{+0.3}$ L0
$11.5_{-1}^{\ 0}$
1
$9.1_{-0.5}^{+0.8}$ L1

● **Reinforced cable connecting receptacle (long adapter) ⇔ Flange plug**

≈52
≈39.5
$9.5_{-1.0}^{+0.3}$ L0
$11.5_{-1}^{\ 0}$
1
$9.1_{-0.5}^{+0.8}$ L1

Subject to change / Dimensions in mm

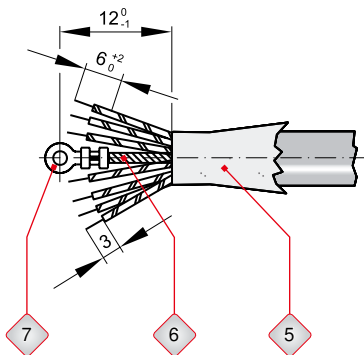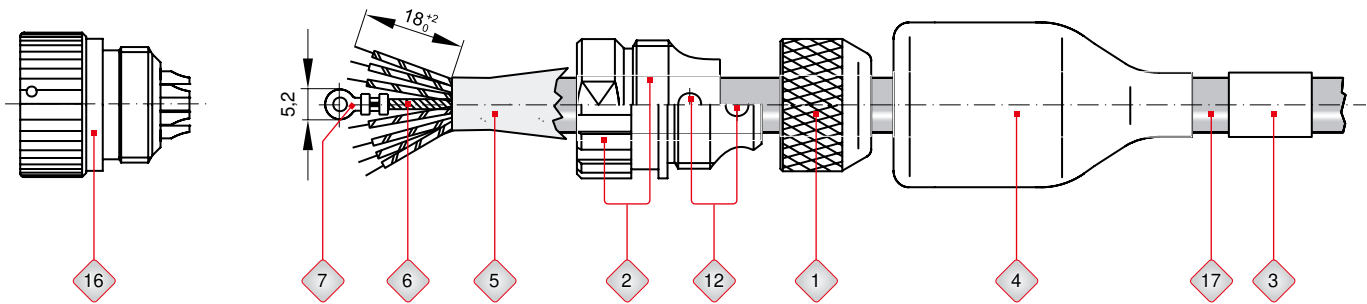## Cable assembly details for plugs with short or long adapter

Styles A, D, J, K and N with cable according to VG95218-11.

Details not mentioned are to be chosen appropriately.

18_0^{+2}

5,2

| 16 | 7 | 6 | 5 | 2 | 12 | 1 | 4 | 17 | 3 |

12_{-1}^{0}

6_0^{+2}

3

| 7 | 6 | 5 |

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.
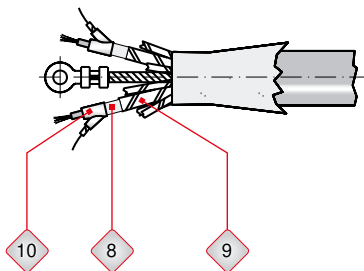
Fold back screen meshing (5).

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).

| 10 | 8 | 9 |

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.

| 10 |
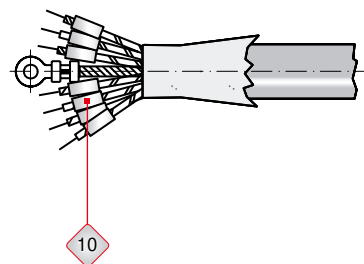
Note:

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.

*Dimensions in mm / Subject to change*

Solder single wires on the contacts with filament type extra thin tin solder LSn60, 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).

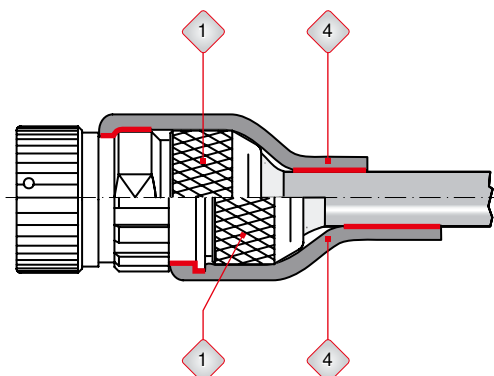Tighten securely with pliers covered with plastic or rubber.
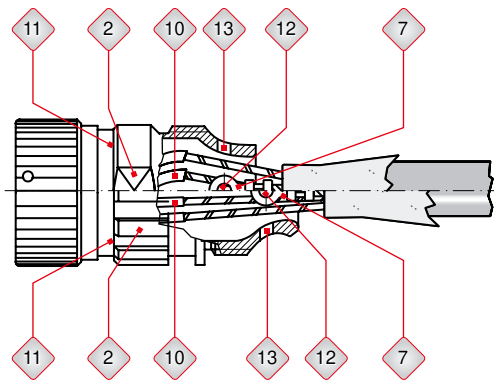
Slide cable in connector backshell (2) so that strain relief split pin (12) can be slid through bore holes (13) in connector backshell (2) and cable eye or ring eyelet (7).

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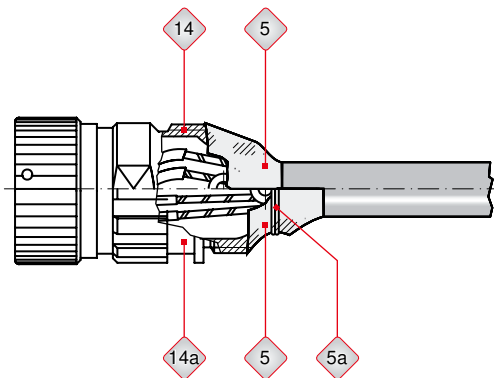
Fold the screen meshing (5) over the back of the conical adapter (14), and trim off just short of the thread.

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 op-

posite drawing.

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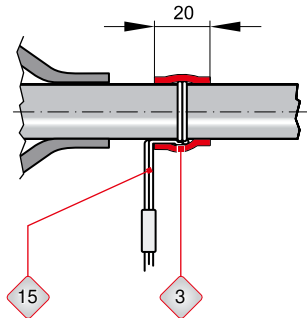
Final examination:

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

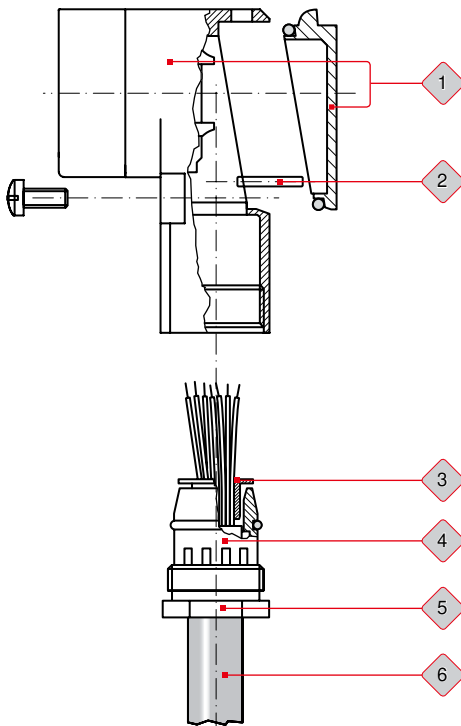**Fitting of the protective cap to cable:**

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

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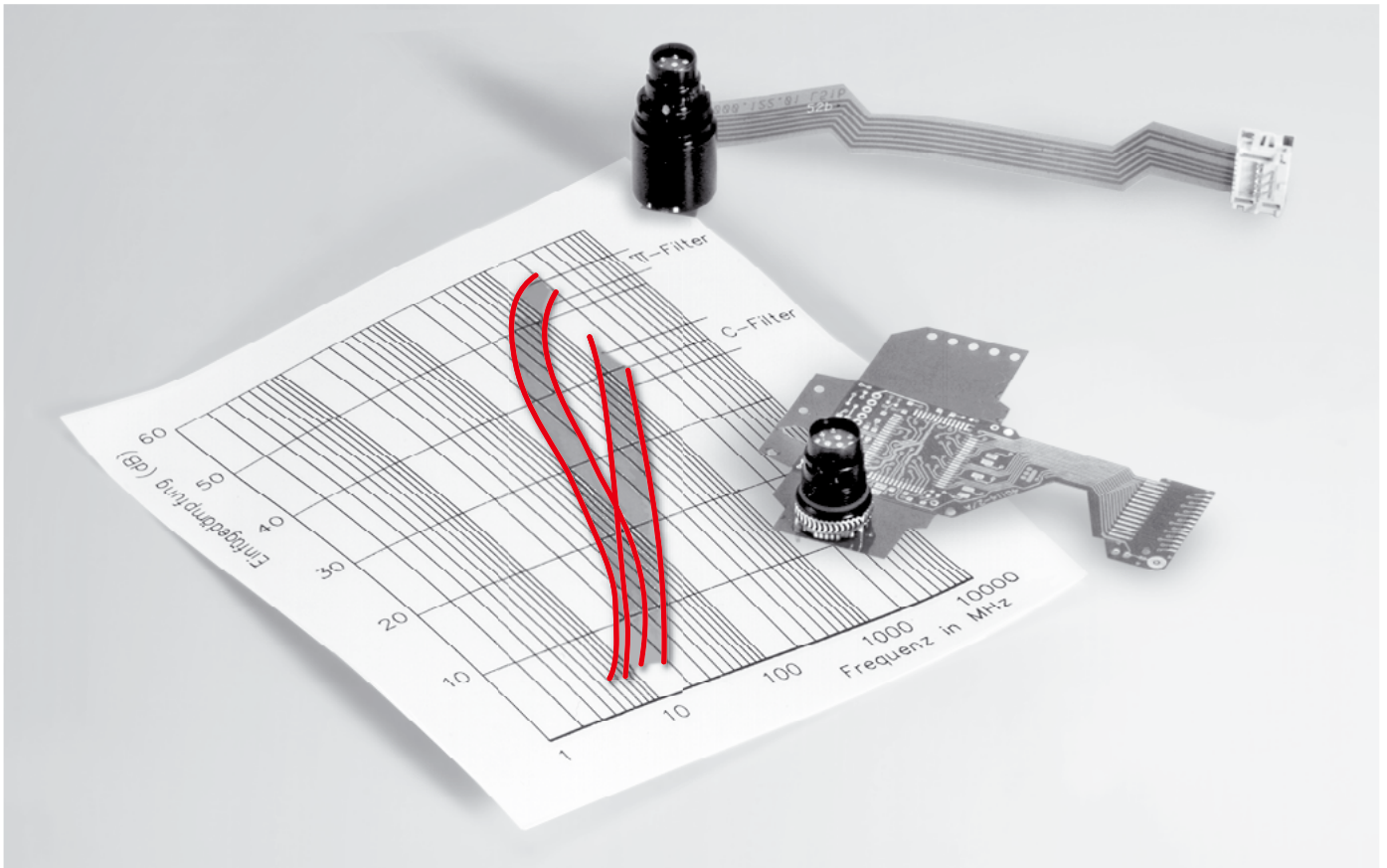
More and more highly efficient electronic systems co-operate on limited space. The protection against electromagnetic influence increasingly requires EMC-suitable interfaces.

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
  - π-filter
- Tubular technique:
  - C-filter
  - π-filter
  - RFI-filter

Please do not hesitate to request detailed information.

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For detailed information on our products
and services visit our website –
or give us a call!

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