
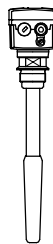
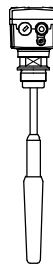


## Table of contents

---

	Page
Specifications	P2
Applications	P4
-----	
CN 4020 Short extension length	P5
	
-----	
CN 4030 Pipe extension	P7
	
-----	
CN 4050 Cable extension	P8
	
-----	
Options / accessories	P9
Dimensions	P11
Electrical installation	P12
Spare parts	P13

Subject to change.

All dimensions in mm (inches).

All prices in Euro, excluding VAT.

All prices are EXW Betzigau, excluding packaging costs.

Valid: From 01.04.2013 until 31.03.2014, unless otherwise agreed.

By publishing this selection list all other lists become invalid.

We assume no liability for typing errors.

Different variations to those specified are possible.  
 Please contact our technical consultants.

## Specifications

- Level limit detection in bulk goods / solids
- Compact unit
- Wide range of applications, no maintenance
- Full-, demand-, empty detector
- Capacitive technology with active shield
- Plastic or aluminium housing
- Sensitivity: dielectric constant  $\geq 1,6$
- Precalibration allows measurement of most applications without calibration on site
- FSL/FSH switch
- Output with adjustable delay
- 1935/2004/EC food grade material

Approvals	CE	
	ATEX / IEC-Ex	Zone 20/21 (Dust Ignition Proof)
	GOST-R	

Electronics	Relay SPDT	21..27V DC $\pm 10\%$
	Relay DPDT	21..230V AC 21..45V DC $\pm 10\%$
	PNP	20..40V DC $\pm 10\%$

Housing	Material	Plastics PA6 (glass fibre reinforced) or Aluminium
	Type of protection	IP66

CN 4020 (version 120°C)	Length of extension	155mm (6.1")
	Ambient temperature	-40 .. +60°C (-40 .. +140°F) -20 .. +60°C (-4 .. +140°F) (Ex)
	Process temperature	-40 .. +120°C (-40 .. +248°F) -20 .. +120°C (-4 .. +248°F) (Ex)
	Process pressure	-1 .. +16 bar (-14.5 .. +232 psi)
	Process connection	G 1" (with flat gasket) G 1 1/2" adapter
	Material of process connection / probe	Plastics PPS (glass fibre reinforced) FDA listed, food grade



CN 4020 (version 180°C)	Length of extension	190mm (7.5") or 400mm (15.7")
	Ambient temperature	-40 .. +60°C (-40 .. +140°F)
	Process temperature	-40 .. +180°C (-40 .. +356°F) -20 .. +180°C (-4 .. +356°F) (Ex)
	Process pressure	-1 .. +16 bar (-14.5 .. +232 psi)
	Process connection	G 1 1/2" (with flat gasket)
	Material of process connection / extension	1.4305 (SS 303), food grade
	Material of probe	Plastics PPS (glass fibre reinforced) FDA listed, food grade



## Specifications

CN 4030	Length of extension	210 .. 3.000mm (8.3 .. 118")
	Ambient temperature	-40 .. +60°C (-40 ..+140°F) -20 .. +60°C (-4 .. +140°F) (Ex)
	Process temperature	-40 .. +110°C (-40 .. +230°F) -20 .. +110°C (-4 .. +230°F) (Ex)
	Process pressure	-1 .. +16 bar (-14.5 .. +232 psi)
	Process connection	G 1 1/2" (with flat gasket)
	Material of process connection / extension	Aluminium or 1.4305 (SS 303), food grade
	Material of probe	Plastics PPS (glass fibre reinforced) FDA listed, food grade



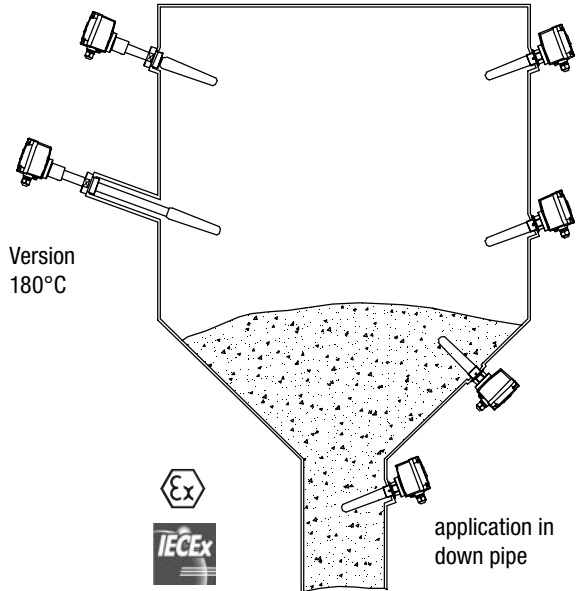
CN 4050	Length of extension	350 .. 6.000mm (13.8 .. 236")
	Ambient temperature	-20 .. +60°C (-4 .. +140°F)
	Process temperature	-20 .. +80°C (-4 .. +176°F)
	Process pressure	-1 .. +6 bar (-14.5 .. +87 psi)
	Process connection	G 1 1/2" (with flat gasket)
	Material of process connection	Aluminium or 1.4305 (SS 303)
	Material of cable isolation	PUR, not food grade
	Material of probe	Plastics PPS/PBT (glass fibre reinforced)



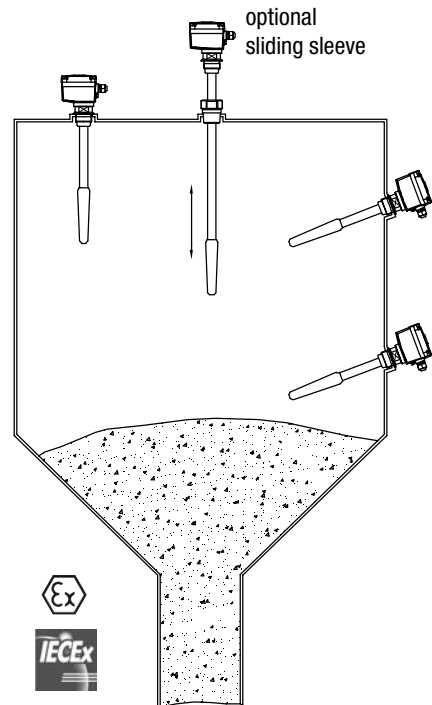
## Applications

### Detection of solids

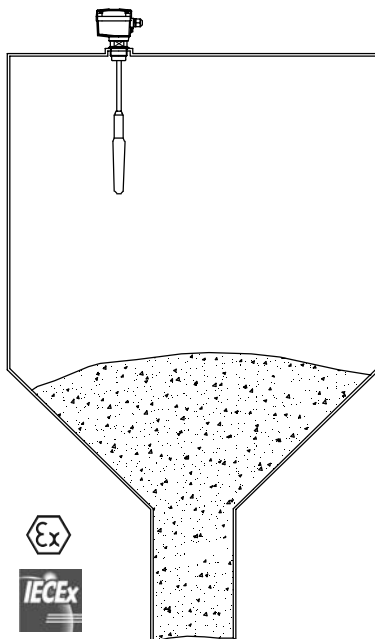
CN 4020



CN 4030



CN 4050



## CN 4020 (120°C) Short extension length



**Version:** 120°C, G1", L=155mm, PPS (food grade)  
**Dimensions:** see page 11  
**Cable entries:** M20x1,5 (1x cable gland + 1x blind plug)\*  
**Housing material:** Plastics PA6\*

\*Options see page 9

### Basic type

**CN 4020 (120°C)** .....

pos. 2     **Certificate**  
 0 CE<sup>(1)</sup> .....

W ATEX II 1/2D .....

A IEC-Ex ta/tb IIIC Da/Db .....

pos. 4     **Electronic module**  
 E Relay SPDT 21..27V DC .....

D PNP 20..40V DC .....

L Relay DPDT 21..230V AC 21..45V DC .....

**Further options:** see page 9

<b>CN 4020</b>	<b>A</b>		<b>1</b>		<b>A</b>	<b>A</b>	<b>1</b>	<b>A</b>	← <b>Order code</b>
position	1	2	3	4	5	6	7	8	

All positions are available in special design (use code "Z").

<sup>(1)</sup> GOST-R included

## CN 4020 (180°C) Short extension length



**Version:** 180°C, G1 1/2", 1.4305/PPS (food grade)  
**Dimensions:** see page 11  
**Cable entries:** M20x1,5 (1x cable gland + 1x blind plug)\*  
**Housing material:** Plastics PA6\*

\*Options see page 9

### Basic type

#### CN 4020 (180°C)

- pos. 2     **Certificate**  
 0 CE <sup>(1)</sup> .....  
 W ATEX II 1/2D .....  
 A IEC-Ex ta/tb IIIC Da/Db .....
- pos. 4     **Electronic module**  
 D PNP     20..40V DC .....  
 L Relay DPDT     21..230V AC     21..45V DC .....
- pos. 7     **Length of extension "L"**  
 2 190mm (7.5") .....  
 3 400mm (15.7") .....

**Further options:** see page 9

<b>CN 4020</b>	<b>A</b>	<b>2</b>	<b>B</b>	<b>3</b>	<b>3</b>	← Order code	
position	1	2	3	4	5	6	7 8

All positions are available in special design (use code "Z").

<sup>(1)</sup> GOST-R included

## CN 4030 Pipe extension



**Version:** G1 1/2", Aluminium/1.4305/PPS (food grade)  
**Dimensions:** see page 11  
**Cable entries:** M20x1,5 (1x cable gland + 1x blind plug)\*  
**Housing material:** Plastics PA6\*

\*Options see page 9

### Basic type

**CN 4030** .....

pos. 2      **Certificate**  
 0 CE <sup>(1)</sup> .....  
 W ATEX II 1/2D .....  
 A IEC-Ex ta/tb IIIC Da/Db .....

pos. 4      **Electronic module**  
 D PNP      20..40V DC .....  
 L Relay DPDT    21..230V AC    21..45V DC .....

pos. 6      **Material of process connection**  
 1 Aluminium .....  
 3 Stainless steel 1.4305 (303) .....

pos. 7      **Length of extension "L"**  
 A 300mm (11.8") .....  
 B 500mm (19.7") .....  
 C 1.000mm (39.4") .....  
 D 1.500mm (59.1") .....  
 Z Price per 100mm (3.94") or part thereof (starting from 0mm) .....  
     min. 210mm (8.3"), max. 3.000mm (118")

pos. 8      **Material of extension "L"**  
 must be the same material as pos.6  
 1 Aluminium (probe: plastics PPS)  
 3 Stainless steel 1.4305 (303) (probe: plastics PPS)

**Further options:** see page 9

<b>CN 4030</b>	<b>B</b>		<b>1</b>		<b>B</b>			
position	1	2	3	4	5	6	7	8

← **Order code**

<sup>(1)</sup> GOST-R included

All positions are available in special design (use code "Z").

## CN 4050 Cable extension



**Version:** G1 1/2", extension PUR/PPS/PBT  
**Dimensions:** see page 11  
**Cable entries:** M20x1,5 (1x cable gland + 1x blind plug)\*  
**Housing material:** Plastics PA6\*

Cable length can be shortened at site  
 \*Options see page 9

### Basic type

#### CN 4050

pos. 2	<b>Certificate</b>	
	0 CE <sup>(1)</sup>	.....
	W ATEX II 1/2D	.....
	A IEC-Ex ia/tb IIIC Da/Db	.....
pos. 4	<b>Electronic module</b>	
	D PNP 20..40V DC	.....
	L Relay DPDT 21..230V AC 21..45V DC	.....
pos. 6	<b>Material of process connection</b>	
	1 Aluminium	.....
	3 Stainless steel 1.4305 (303)	.....
pos. 7	<b>Length of extension "L"</b>	
	P 500mm (19.7")	.....
	Q 1.000mm (39.4")	.....
	R 1.500mm (59.1")	.....
	T 2.500mm (98.4")	.....
	U 6.000mm (236")	.....
	Z Price per 100mm (3.94") or part thereof (starting from 0mm)	.....
	min. 350mm (138"), max. 6.000mm (236")	

**Further options:** see page 9

<b>CN 4050</b>	<b>D</b>	<b>1</b>	<b>B</b>	<b>B</b>
position 1	position 2	position 3	position 4	position 8

### Order code

All positions are available in special design (use code "Z"). ←

<sup>(1)</sup> GOST-R included



## Options / Accessories

### Options

pos. 21 **Weather-protection cover** .....  
 (for Ex only approved for Zone 22)

#### Housing material

pos. 22a Aluminium .....

#### Cable entry

Selection of the following options only necessary, if a deviation from the default cable gland is required:

pos. 23x M20x1,5 2x screwed cable gland .....

pos. 23a <sup>1</sup> NPT 1/2" tapered ANSI B1.20.1 (1x conduit + 1x Ex-d blind plug) .....

pos. 23b <sup>1</sup> NPT 3/4" tapered ANSI B1.20.1 (1x conduit + 1x Ex-d blind plug) ..... on request

#### Hexagon nut

pos. 24a aluminium 1 pcs .....

pos. 24b aluminium 2 pcs .....

pos. 24e stainless steel 1.4305 (303) 1 pcs .....

pos. 24f stainless steel 1.4305 (303) 2 pcs .....

#### Sliding sleeve

<sup>2</sup> For applications without overpressure

pos. 25a G 1½ inch DIN 228 material 1.4305 (303) .....

For applications with overpressure max. 16bar (232psi):

pos. 25e G 1½ inch DIN 2999 material 1.4305 (303) .....

#### <sup>3</sup> Signal lamp

pos. 27a Bulb in cable gland, 2W green .....

pos. 27c Bulb in cable gland, 2W red .....

#### <sup>4</sup> Plug

pos. 35x Valve connector (incl. mating plug) 4-pole (incl PE) max. 230V

pos. 35a M12 (without mating plug) 4-pole max. 25V

pos. 35b M12 (without mating plug) 5-pole (incl. PE) max. 60V

pos. 35c Harting Han 4A (incl. mating plug) 5-pole (incl. PE) max. 230V

<sup>1</sup> Available only for aluminium housing (pos.22a).

<sup>2</sup> Available only for CE (pos. 2, 0)

<sup>3</sup> Available only for CE (pos. 2, 0), not in combination with weather protection cover (pos. 21) and cable entries pos.23 x,a,b. For electronic module Relais DPDT (pos. 4.L) three bulbs (24V, 115V and 230V) will be delivered. For PNP (pos.4.D) a 24V bulb will be delivered.

<sup>4</sup> Available only for CE (pos.2 0). Without connection of stranded wires for installation and internal terminals (standard) or according to customer specification.

### Accessories

#### Adapter G 1" to G 1 1/2"

bu400606 Aluminium .....

bu400607 1.4305 (303) .....

#### Adapter G 1" to NPT 1 1/2"

bu400610 Aluminium .....

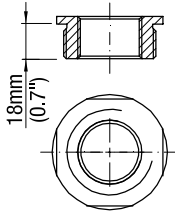
bu400611 1.4305 (303) .....

zu400200 **Shortening kit** for CN4050 cable .....

## Options / Accessories

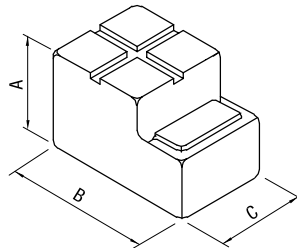
### Adapter

G 1" to G 1 1/2"

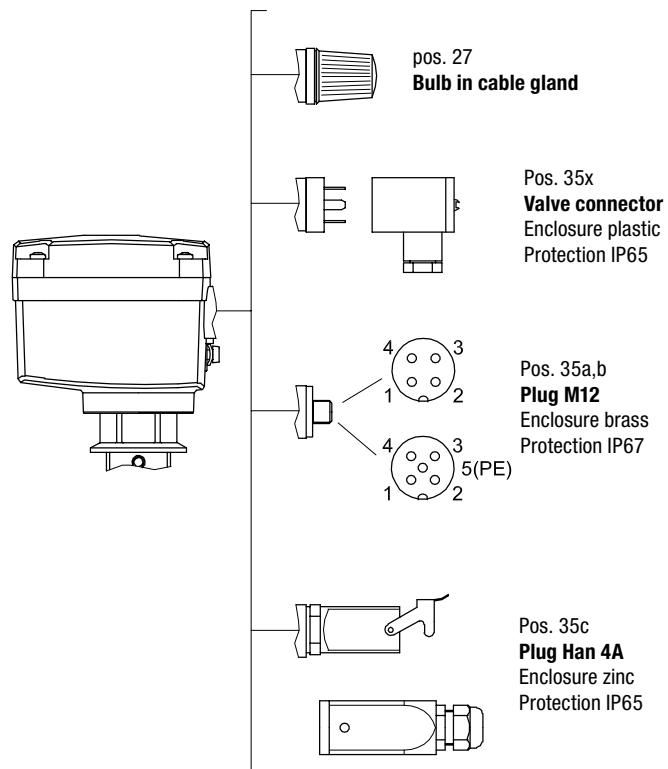
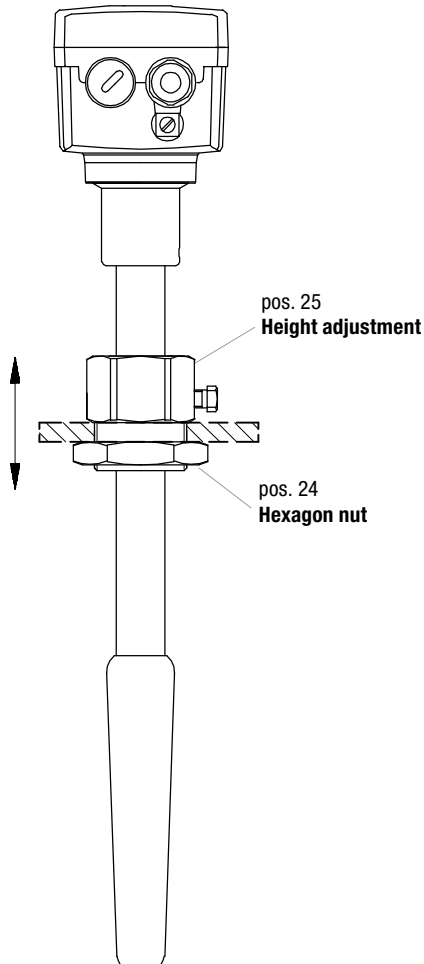


pos. 21

### Weather protection cover

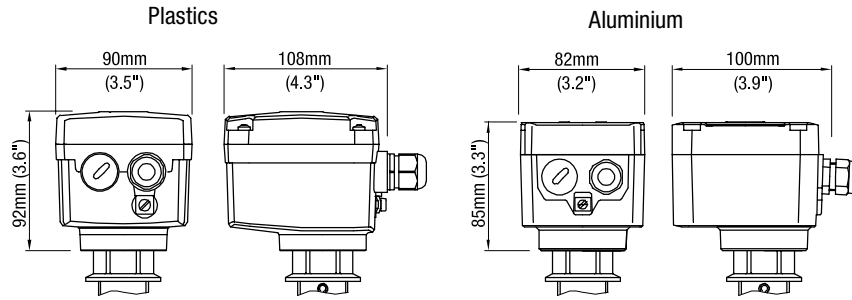


A	100mm (3.94")
B	165mm (6.30")
C	95mm (3.54")

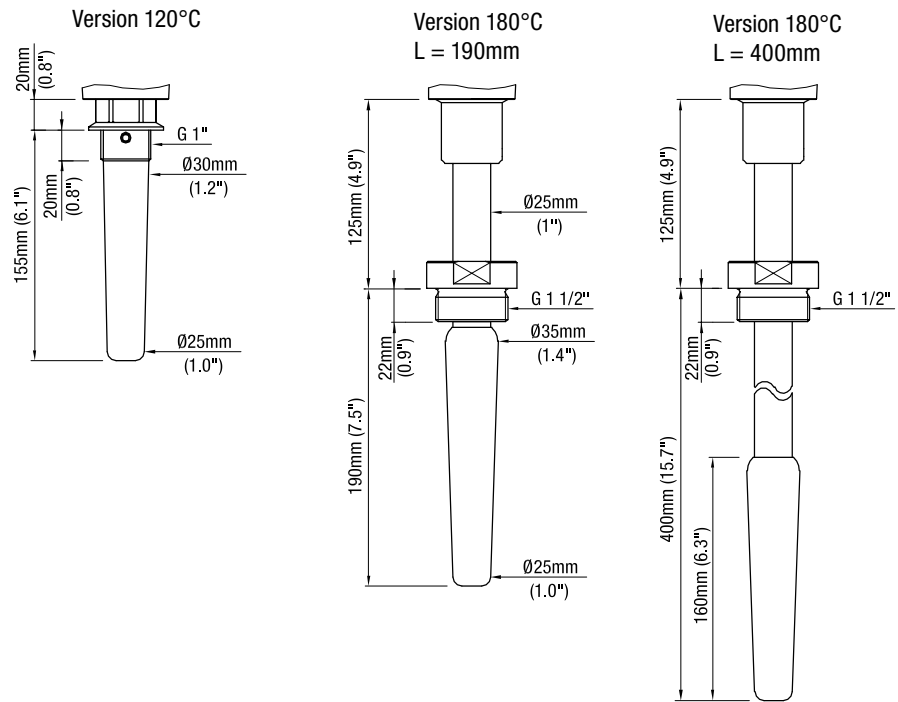


## Dimensions

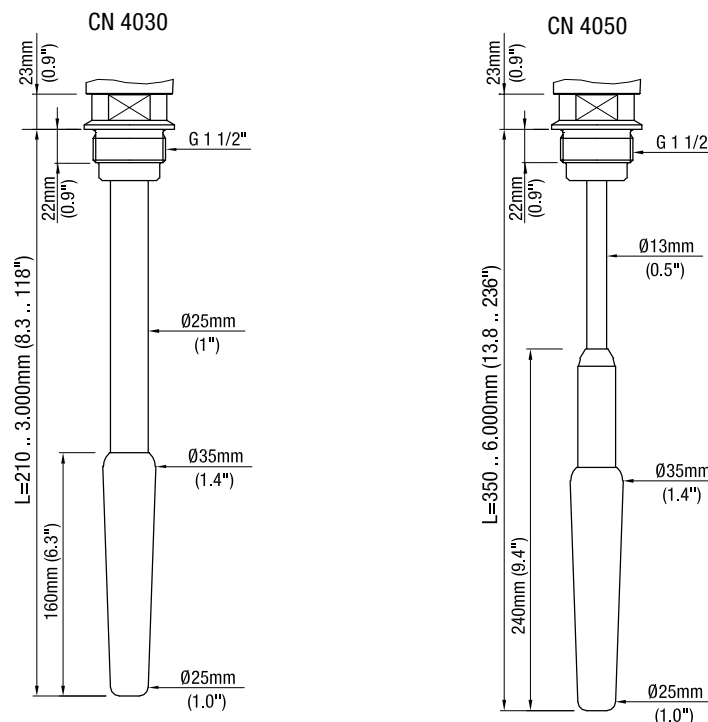
### Housing versions



### CN 4020



### CN 4030 CN 4050



## Electrical installation

### Relay SPDT

**Power supply:**

21..27V DC  $\pm 10\%^*$  1,5W  
 \*incl. 10% of EN 61010

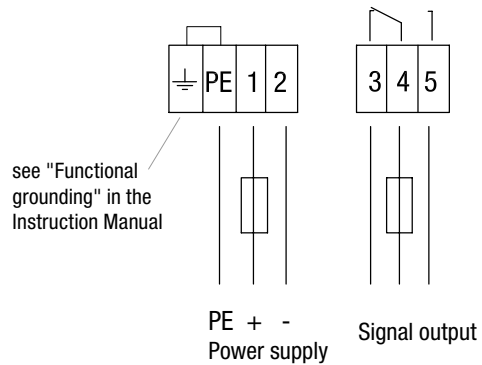
Fuse on power supply: max. 10A

**Signal output:**

Floating relay SPDT

AC max. 250V, 3A, non inductive  
 DC max. 30V, 5A, non inductive

Fuse on signal output: max 5A



### Relay DPDT

Universal voltage

**Power supply:**

21..230V 50-60Hz  $\pm 10\%^*$  18VA  
 21..45V DC  $\pm 10\%^*$  2W  
 \*incl. 10% of EN 61010

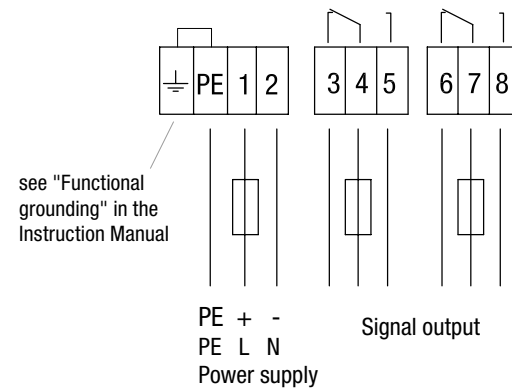
Fuse on power supply: max. 10A

**Signal output:**

Floating relay DPDT

AC max. 250V, 8A, non inductive  
 DC max. 30V, 5A, non inductive

Fuse on signal output: max 5A



### PNP

3-wire

**Power supply:**

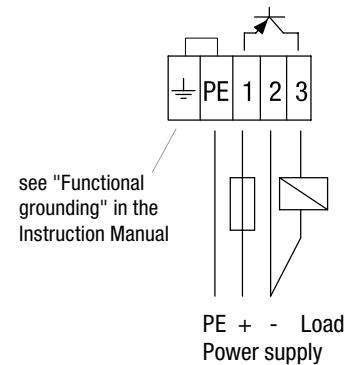
20 .. 40V DC  $\pm 10\%^*$  0.5A  
 \*incl. 10% of EN 61010

Fuse: max 4A

**Signal output:**

max. 0.4A

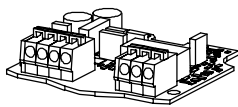
Load for example:  
 PLC, relay, contactor, bulb



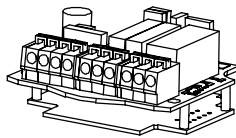
## Spare parts

For type	Electronics	Article number
<b>CN 4020</b> Version 120°C	<b>Relay SPDT</b> 21..27V DC	pl406100
	<b>Relay DPDT</b> 21..230V AC 21..45V DC	pl406110
	<b>PNP</b> 20..40V DC	pl406120
<b>CN 4020</b> Version 180°C	<b>Relay DPDT</b> 21..230V AC 21..45V DC	pl406111
	<b>PNP</b> 20..40V DC	pl406121
<b>CN 4030</b> <b>CN 4050</b>	For these types a non changeable electronic is located inside the probe. No spare parts are stated.	

**Relay SPDT**



**Relay DPDT**



**PNP**

