
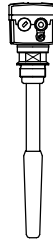
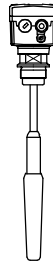


## Table of contents

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	Page
Specifications	2
Applications	4
-----	
CN 4020 Short extension length	5
	
-----	
CN 4030 Pipe extension	7
	
-----	
CN 4050 Cable extension	8
	
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Options/ accessories	9
Dimensions	11
Electrical installation	12
Spare parts	13

Subject to change.

All dimensions in mm (inches).

All prices in Euro (€) or USD (\$),  
excluding VAT.

All EURO prices are EXW Betzigau,  
all USD prices are EXW Memphis,  
excluding packaging costs.

Valid: From 01.04.2018 until 31.03.2019, 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
- 2011/65/EU RoHS conform

Approvals	CE	
	ATEX/ IEC-Ex	Zone 20/21 (Dust Ignition Proof)
	TR-CU	Ordinary Locations Zone 20/21 (Dust Ignition Proof)

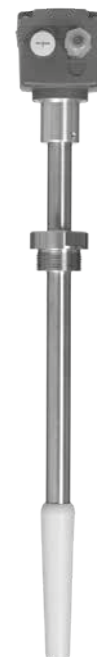
Electro-nics	Relay SPDT	21 .. 27 V DC $\pm 10\%$
	Relay DPDT	21 .. 230 V AC 21 .. 45 V DC $\pm 10\%$
	PNP	20 .. 40 V DC $\pm 10\%$

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

CN 4020 (version 120°C)	Length of extension	155 mm (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) -30 .. +120°C (-22 .. +248°F) (Ex)
	Process pressure	-1 .. +25 bar (-14.5 .. +363 psi)
	Process connection	G 1" (with flat gasket) G 1½" NPT 1¼" NPT 1½" (adapter)
	Material of process connection/ probe	Plastics PPS (glass fibre reinforced) FDA listed, food grade



CN 4020 (version 180°C)	Length of extension	190 mm (7.5") or 400 mm (15.7")
	Ambient temperature	-40 .. +60°C (-40 .. +140°F)
	Process temperature	-40 .. +180°C (-40 .. +356°F) -30 .. +180°C (-22 .. +356°F) (Ex)
	Process pressure	-1 .. +16 bar (-14.5 .. +232 psi)
	Process connection	G 1½" (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 .. 3,000 mm (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) -30 .. +110°C (-22 .. +230°F) (Ex)
	Process pressure	-1 .. +16 bar (-14.5 .. +232 psi)
	Process connection	G 1½" (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



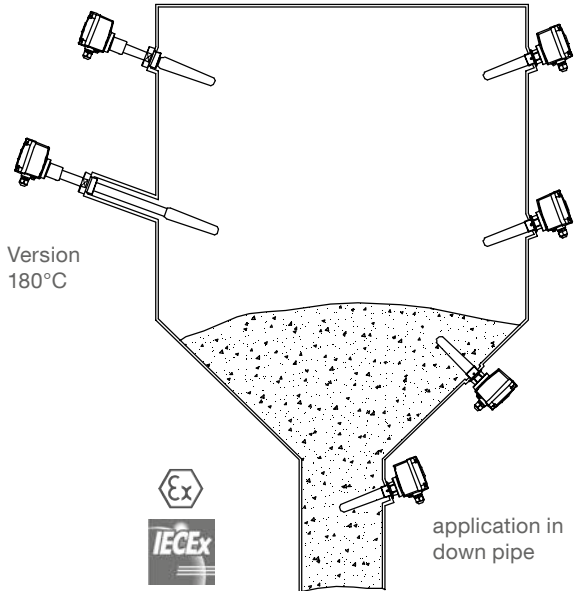
CN 4050	Length of extension	350 .. 6,000 mm (13.8 .. 236")
	Ambient temperature	-20 .. +60°C (-4 .. +140°F)
	Process temperature	-30 .. +80°C (-22 .. +176°F)
	Process pressure	-1 .. +6 bar (-14.5 .. +87 psi)
	Process connection	G 1½" (with flat gasket)
	Material of process connection	Aluminium or 1.4305 (SS 303)
	Material of cable isolation	PE, not food grade
	Material of probe	Plastics PPS/ PBT (glass fibre reinforced)



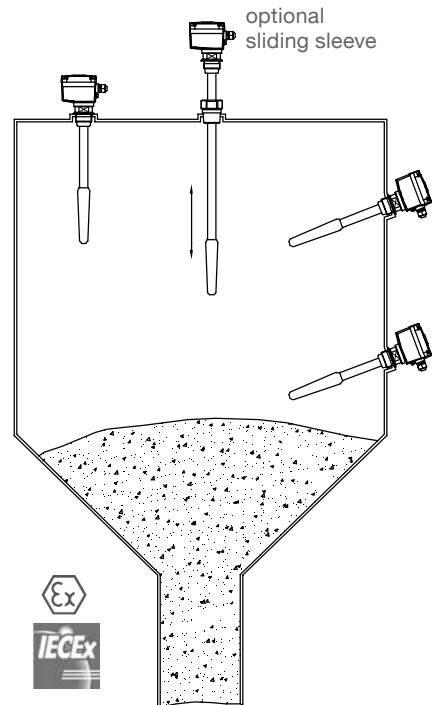
## Applications

### Detection of solids

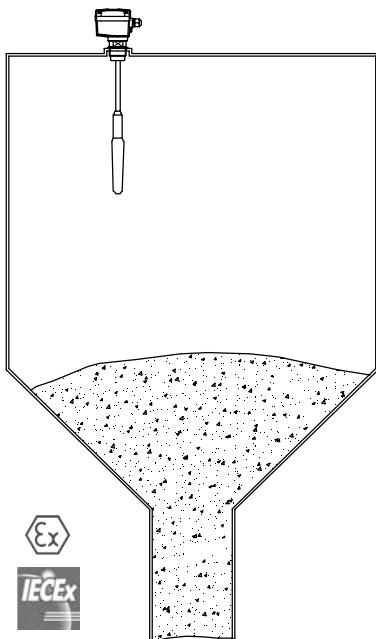
CN 4020



CN 4030



CN 4050



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



**Version:** 120°C, G 1", L=155 mm, PPS (food grade)  
**Dimensions:** see page 11  
**Cable entries:** M20 x 1.5 (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 ..... •
- E TR-CU Ex ta/tb IIIC T! Da/Db X ..... •

pos.4 **Electronic module**

- E Relay SPDT 21 .. 27 V DC ..... •
- D PNP 20 .. 40 V DC ..... •
- L Relay DPDT 21 .. 230 V AC 21 .. 45 V DC ..... •

**Further options:** see page 9

CN	4020	A		1		A	A	1	A
position	1	2	3	4	5	6	7	8	

← **Order code**

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

<sup>(1)</sup> TR-CU (Ordinary Locations) included

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



**Version:** 180°C, G 1½", 1.4305/ PPS (food grade)  
**Dimensions:** see page 11  
**Cable entries:** M20 x 1.5 (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 ..... •
- E TR-CU Ex ta/tb IIIC T! Da/Db X ..... •

pos.4 **Electronic module**

- D PNP 20 .. 40 V DC ..... •
- L Relay DPDT 21 .. 230 V AC 21 .. 45 V DC ..... •

pos.7 **Length of extension "L"**

- 2 190 mm (7.5") ..... •
- 3 400 mm (15.7") ..... •

**Further options:** see page 9

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

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

<sup>(1)</sup> TR-CU (Ordinary Locations) included

## CN 4030 Pipe extension



**Version:** G 1½", Aluminium/ 1.4305/ PPS (food grade)  
**Dimensions:** see page 11  
**Cable entries:** M20 x 1.5 (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 ..... •  
 E TR-CU Ex ta/tb IIIC T! Da/Db X ..... •

pos.4 **Electronic module**

D PNP 20 .. 40 V DC ..... •  
 L Relay DPDT 21 .. 230 V AC 21 .. 45 V DC ..... •

pos.6 **Material of process connection**

1 Aluminium ..... •  
 3 Stainless steel 1.4305 (303) ..... •

pos.7 **Length of extension "L"**

A 300 mm (11.8") ..... • •  
 B 500 mm (19.7") ..... • •  
 C 1,000 mm (39.4") ..... • •  
 D 1,500 mm (59.1") ..... • •  
 Z Price per 100 mm (3.94") or part thereof (starting from 0 mm) ..... • •  
 min. 210 mm (8.3"), max. 3,000 mm (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

CN 4030	B	1	B				
position	1	2	3	4	5	6	7 8

← **Order code**

<sup>(1)</sup> TR-CU (Ordinary Locations) included

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

## CN 4050 Cable extension



**Version:** G 1½", extension PE/ PPS/ PBT  
**Dimensions:** see page 11  
**Cable entries:** M20 x 1.5 (1x cable gland + 1x blind plug)\*  
**Housing material:** Plastics PA6\*

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

### Basic type

<b>CN 4050</b>	.....	•
pos.2	<b>Certificate</b>	
	0 CE <sup>(1)</sup> .....	•
	W ATEX II 1/2D .....	•
	A IEC-Ex ia/tb IIIC Da/Db .....	•
	E TR-CU Ex ia/tb IIIC T135°C Da/Db X .....	•
pos.4	<b>Electronic module</b>	
	D PNP 20 .. 40 V DC .....	•
	L Relay DPDT 21 .. 230 V AC 21 .. 45 V 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 500 mm (19.7") .....	•
	Q 1,000 mm (39.4") .....	•
	R 1,500 mm (59.1") .....	•
	T 2,500 mm (98.4") .....	•
	U 6,000 mm (236") .....	•
	Z Price per 100 mm (3.94") or part thereof (starting from 0 mm) .....	•
	min. 380 mm (15.0"), max. 6,000 mm (236")	

Further options: see page 9

CN 4050	D	1	B	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> TR-CU (Ordinary Locations) included



## Options / Accessories

### Options

pos.11 x	<b>Guarantee extension to 5 years</b> .....	•
pos.21	<b>Weather-protection cover</b> .....	•
	(for Ex only approved for Zone 22)	
	<b>Housing material</b>	
pos.22 a	Aluminium .....	•
	<b>Cable entry</b>	
	Selection of the following options only necessary, if a deviation from the default cable gland is required:	
pos.23 x	M20 x 1.5 2x screwed cable gland .....	•
pos.23 a	<sup>1</sup> NPT ½" tapered ANSI B1.20.1 (1x conduit + 1x Ex-d blind plug) .....	•
	<b>Hexagon nut</b>	
pos.24 a	aluminium 1 pcs .....	•
pos.24 b	aluminium 2 pcs .....	•
pos.24 e	stainless steel 1.4305 (303) 1 pcs .....	•
pos.24 f	stainless steel 1.4305 (303) 2 pcs .....	•
	<b>Sliding sleeve</b>	
	<sup>2</sup> For applications without overpressure	
pos.25 a	G 1½" DIN 228 material 1.4305 (303) .....	•
	For applications with overpressure max. 16 bar (232 psi):	
pos.25 e	G 1½" DIN 228 material 1.4305 (303) .....	•
	<b><sup>3</sup> Signal lamp</b>	
pos.27 a	Bulb, mounted in cable entry M20 x 1.5, 2 W green .....	•
pos.27 c	Bulb, mounted in cable entry M20 x 1.5, 2 W red .....	•
	<b><sup>4</sup> Plug</b>	
pos.35 x	Valve connector (incl. mating plug) 4-pole (incl. PE) max. 230 V .....	•
pos.35 a	M12 (without mating plug) 4-pole max. 25 V .....	•
pos.35 b	M12 (without mating plug) 5-pole (incl. PE) max. 60 V .....	•
pos.35 c	Harting Han 4A (incl. mating plug) 5-pole (incl. PE) max. 230 V .....	•
	<b><sup>5</sup> Grounding</b>	
pos.36 x	Without metal grounding pin inside the plastics process connection .....	•
	For applications with corrosive liquids	

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

<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 (24 V, 115 V and 230 V) will be delivered. For PNP (pos.4 D) a 24 V 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.

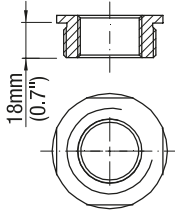
<sup>5</sup> Available only for CN4020 version 120°C.

### Accessories

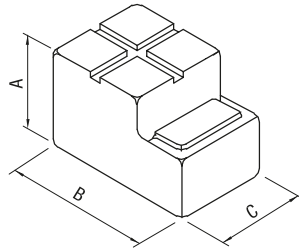
	<b>Adapter G 1" to G 1½"</b>	
bu400606	Aluminium .....	•
bu400607	1.4305 (303) .....	•
	<b>Adapter G 1" to NPT 1¼"</b>	
bu400618	Aluminium .....	•
bu400619	1.4305 (303) .....	•
	<b>Adapter G 1" to NPT 1½"</b>	
bu400610	Aluminium .....	•
bu400611	1.4305 (303) .....	•
zu400200	<b>Shortening kit for CN4050 cable</b> .....	•

## Options / Accessories

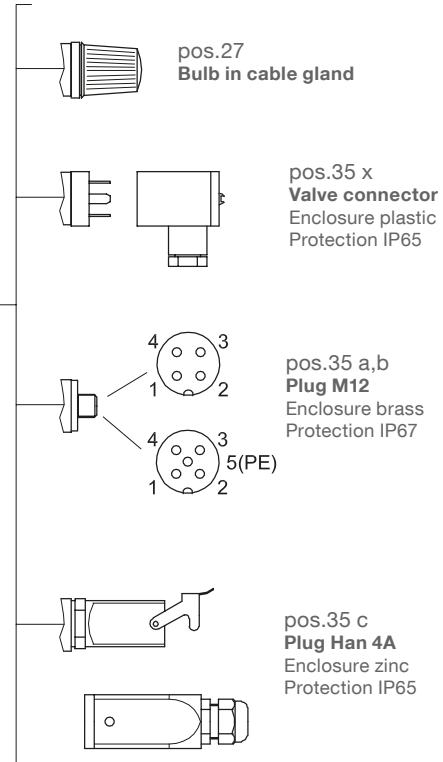
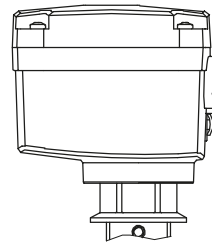
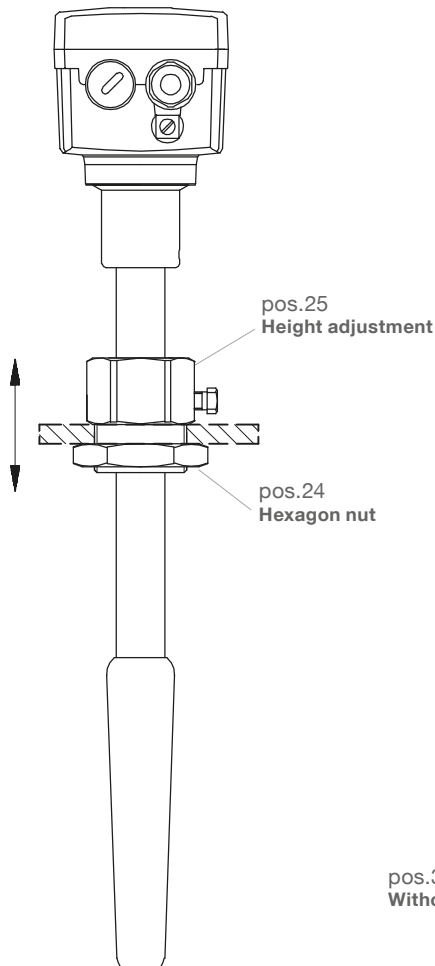
**Adapter**  
 G 1" to G 1½"



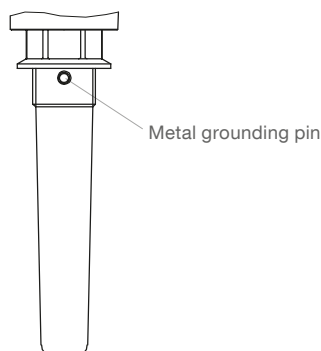
**pos.21**  
**Weather protection cover**



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

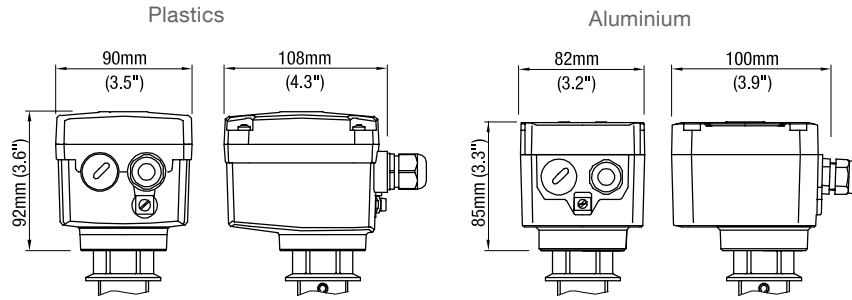


**pos.36 x**  
**Without metal grounding pin**

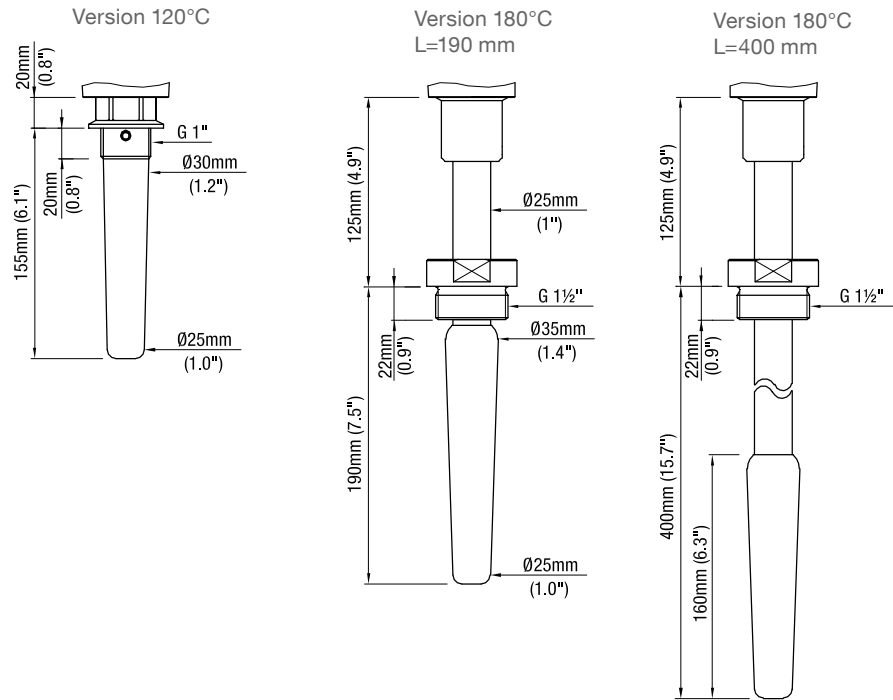


## Dimensions

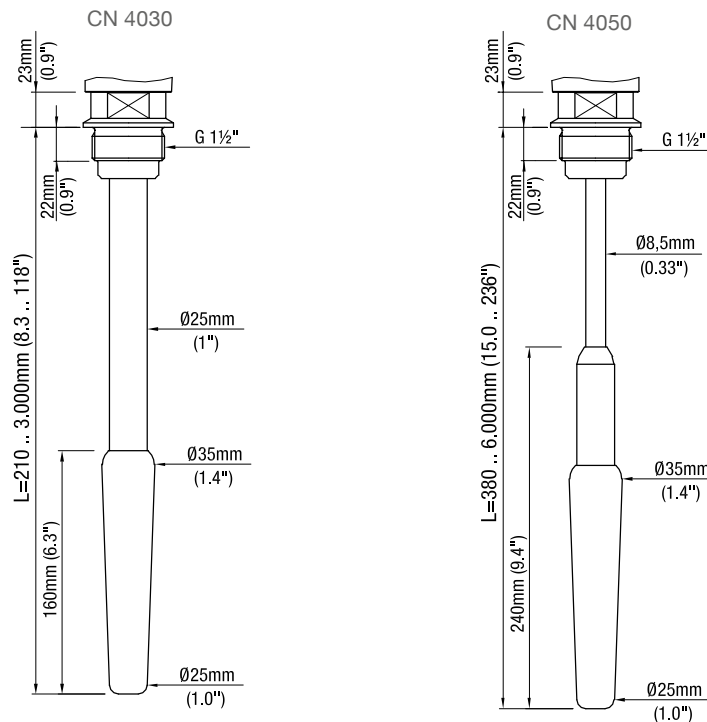
### Housing versions



### CN 4020



### CN 4030 CN 4050



## Electrical installation

### Relay SPDT

**Power supply:**

21 .. 27 V DC  $\pm 10\%$ \* 1.5 W  
 \*incl. 10% of EN 61010

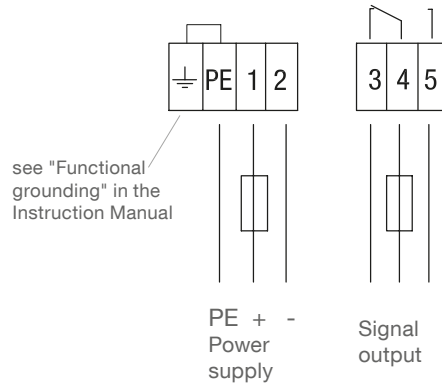
Fuse on power supply:  
 max. 10 A, fast or slow, HBC, 250 V

**Signal output:**

Floating relay SPDT

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

Fuse on signal output:  
 max. 5 A, fast or slow, HBC, 250 V



### Relay DPDT

Universal voltage

**Power supply:**

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

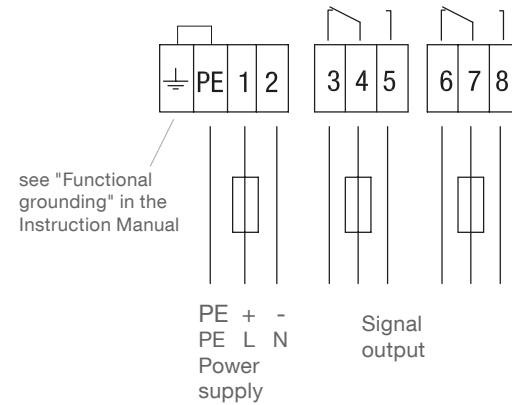
Fuse on power supply:  
 max. 10 A, fast or slow, HBC, 250 V

**Signal output:**

Floating relay DPDT

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

Fuse on signal output:  
 max. 10 A, fast or slow, HBC, 250 V



### PNP

3-wire

**Power supply:**

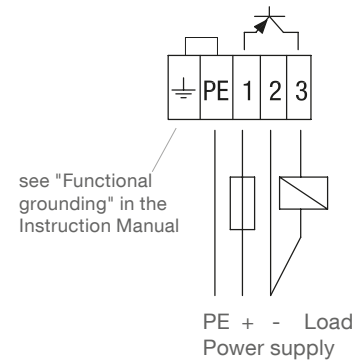
20 .. 40 V DC  $\pm 10\%$ \* 0.5 A  
 \*incl. 10% of EN 61010

Fuse:  
 max. 4 A, fast or slow, 250V, HBC

**Signal output:**

max. 0.4 A

Load for example:  
 PLC, relay, contactor, bulb

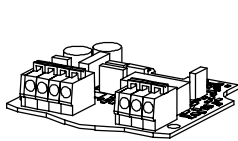


Approved power supply with reinforced insulation to mains is required

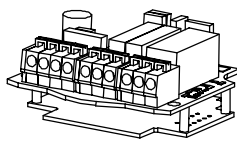
## Spare parts

For type	Electronics	Article number
<b>CN 4020</b> Version 120°C	<b>Relay SPDT</b> 21 .. 27 V DC	pl406100
	<b>Relay DPDT</b> 21 .. 230 V AC 21 .. 45 V DC	pl406110
	<b>PNP</b> 20 .. 40 V DC	pl406120
<b>CN 4020</b> Version 180°C	<b>Relay DPDT</b> 21 .. 230 V AC 21 .. 45 V DC	pl406111
	<b>PNP</b> 20 .. 40 V 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

