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Subject to change. Valid: From 01.04.2016 until 31.03.2017, unless otherwise agreed.
 All dimensions in mm (inches). By publishing this selection list all other lists become invalid.
 All prices in Euro, excluding VAT. We assume no liability for typing errors.
 All prices are EXW Betzigau, excluding Different variations to those specified are possible.
 packaging costs. Please contact our technical consultants.

Specifications

- Level limit detection in bulk goods / solids
- Compact unit
- Die-casted housing aluminium
- Wide range of applications, no maintenance
- Full-, demand-, empty detector
- Sensitivity > 30 g/l (1.9lb/ft³)
- ATEX, IEC-Ex, FM, CSA, TR-CU approvals (DustEx)
- 1935/2004/EC Food grade materials
- 2011/65/EU RoHS conform

	CE	
	ATEX / IEC-Ex	Zone 20/21 (Dust Ignition Proof)
Approvals	FM / CSA	Ordinary Locations
		Cl. II, III Div. 1 (Dust Ignition Proof)
	TR-CU	Ordinary Locations
Electro-nics	Relay DPDT	19..230V AC 19..40V DC ± 10%
	PNP	18..50V DC ± 10%

VN 4020	Length of extension	170mm (6.68")
	Ambient temperature	-40 .. +60°C (-40 .. +140°F)
	Process temperature	-40 .. +150°C (-40 .. +302°F)
	Process pressure	-1 .. +16 bar (-14.5 .. +232 psi)
	Process connection material / Extension	1.4581 (316) or 1.4541 (321) (food grade)

VN 4020



VN 4030	Length of extension	300 .. 4.000mm (11.8 .. 157")
	Ambient temperature	-40 .. +60°C (-40 .. +140°F)
	Process temperature	-40 .. +150°C (-40 .. +302°F)
	Process pressure	-1 .. +16 bar (-14.5 .. +232 psi)
	Process connection material / Extension	1.4301 (304)/1.4541 (321) or 1.4571 (316TI)/1.4404 (316L) (food grade)

VN 4030



VN 4040	Length of extension	max. 1500mm (59") or 4.000mm (157")
	Ambient temperature	-40 .. +60°C (-40 .. +140°F)
	Process temperature	-40 .. +150°C (-40 .. +302°F)
	Process pressure	-1 .. +16 bar (-14.5 .. +232 psi)
	Process connection material / Extension	1.4305 (303) / 1.4541 (321) or 1.4571 (316TI) / 1.4404 (316L) (food grade)

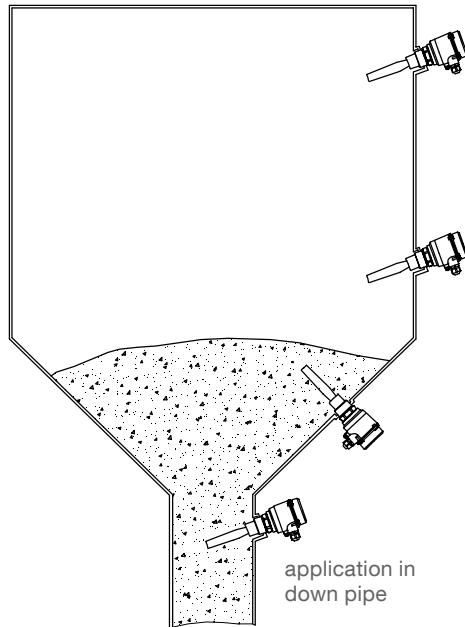
VN 4040



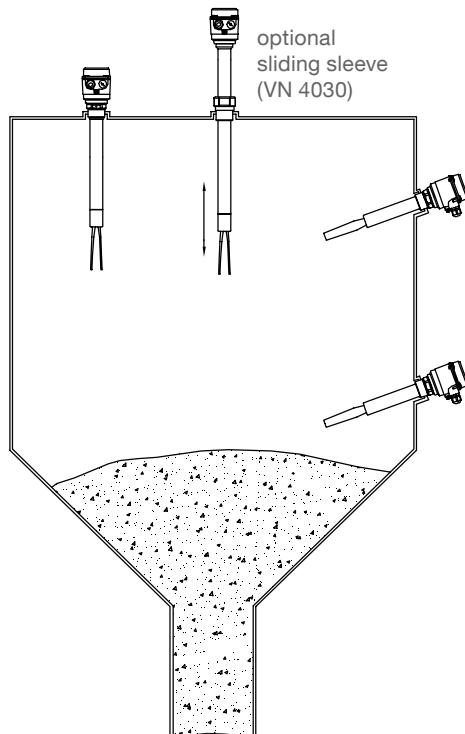
Applications

Detection of solids

VN 4020



VN 4030
VN 4040



VN 4020 Short extension length



Food grade materials

Cable entries (by default)

Depending on model selected the following cable entries are supported (options see pos 23 on page 10):

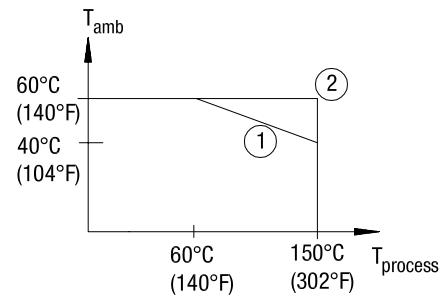
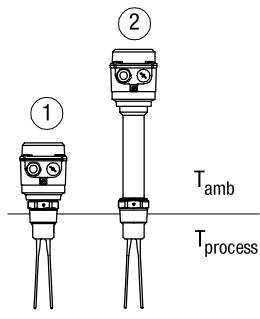
Version:	Cable entries:
CE / ATEX / IEC-Ex / TR-CU (pos.2 O,W,F,E)	M20x1,5 (1x cable gland + 1x blind plug)
FM and CSA (pos.2 M,N)	NPT 1/2" tapered ANSI B1.20.1 (1x open conduit + 1x blind plug)

Dimensions see page 12

pos. 3
 Temperature extended shaft

Application up to 150°C
 (302°F)

- 1 without
 2 with



VN 4020 Short extension length

Basic type

VN 4020

pos. 2

Certificate

- | | | | |
|---|---|-------|---|
| 0 | CE ⁽¹⁾ | | • |
| W | ATEX II 1/2D Ex t IIIC T1 Da/Db IP6X | ..... | • |
| A | IEC-Ex t IIIC T1 Da/Db IP6X | ..... | • |
| M | FM / CSA General Purpose | ..... | • |
| N | FM / CSA DIP Cl. II, III Div.1 Group E, F, G and CSA DIP A20/21 | ..... | • |
| E | TR-CU DIP A20/A21 | ..... | • |

pos. 3

Temperature extended shaft

- | | | | |
|---|---|-------|---|
| 1 | without (up to $T_{process} = 150^\circ\text{C}$ (302°F) at $T_{amb} < 40^\circ\text{C}$ (104°F)) | ..... | • |
| 2 | with (up to $T_{process} = 150^\circ\text{C}$ (302°F) at $T_{amb} > 40^\circ\text{C}$ (104°F)) | ..... | • |

pos. 4

Electronic module

- | | | | | |
|---|------------|------------------------|-------|---|
| L | Relay DPDT | 19..230V AC 19..40V DC | ..... | • |
| D | PNP | 18..50V DC | ..... | • |

pos. 5

Process connection

- | | | | | |
|---|--|----------------------|-------|---|
| A | Thread R 1½ inch, | conical DIN 2999 | ..... | • |
| B | Thread NPT 1½ inch, | conical ANSI B1.20.1 | ..... | • |
| D | Thread NPT 1 ¼ inch, | conical ANSI B1.20.1 | ..... | • |
| P | Triclamp 2" (DN50) ISO 2852 | ..... | • | • |
| L | Flange DN 100 PN6, EN1092-1 (max. 6 bar (87psi)) | ..... | • | • |
| M | Flange DN 100 PN16, EN1092-1 | ..... | • | • |
| S | Flange 2" 150lbs ANSI B16.5 | ..... | • | • |
| T | Flange 3" 150lbs ANSI B16.5 | ..... | • | • |
| U | Flange 4" 150lbs ANSI B16.5 | ..... | • | • |

pos. 8

Material of process connection / extension "L"

- | | | |
|---|--|-------|
| 1 | Stainless steel 1.4541 (321) | ..... |
| 2 | Stainless steel 1.4581 (316)/1.4404 (316L) | ..... |

Further options: see page 10

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

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

⁽¹⁾ TR-CU (Ordinary Locations) included

VN 4030 Pipe extension



Food grade materials

Cable entries (by default)

Depending on model selected the following cable entries are supported (options see pos 23 on page 10):

Version:	Cable entries:
CE / ATEX / IEC-Ex / TR-CU (pos.2 O,W,F,E)	M20x1,5 (1x cable gland + 1x blind plug)
FM and CSA (pos.2 M,N)	NPT 1/2" tapered ANSI B1.20.1 (1x open conduit + 1x blind plug)

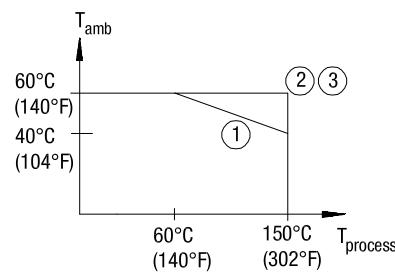
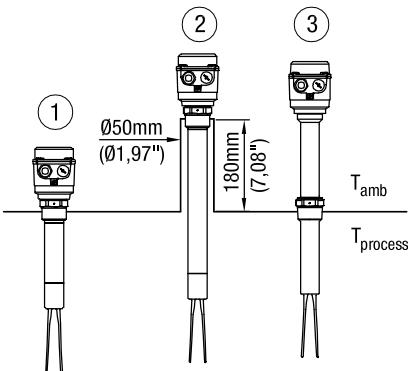
Dimensions

see page 12

pos. 3
 Temperature extended shaft

Application up to 150°C (302°F)

- 1 without
- 2 without and with extended socket
- 3 with



VN 4030 Pipe extension

Basic type

VN 4030

pos. 2

Certificate

- | | | | |
|---|---|-------|---|
| 0 | CE ⁽¹⁾ | | • |
| W | ATEX II 1/2D Ex t IIIC T! Da/Db IP6X | ..... | • |
| A | IEC-Ex t IIIC T! Da/Db IP6X | ..... | • |
| M | FM / CSA General Purpose | ..... | • |
| N | FM / CSA DIP Cl. II, III Div.1 Group E, F, G and CSA DIP A20/21 | ..... | • |
| E | TR-CU DIP A20/A21 | ..... | • |

pos. 3

Temperature extended shaft

- | | | | |
|---|---|-------|---|
| 1 | without (up to $T_{process} = 150^{\circ}\text{C}$ (302°F) at $T_{amb} < 40^{\circ}\text{C}$ (104°F})) | ..... | • |
| 2 | with (up to $T_{process} = 150^{\circ}\text{C}$ (302°F) at $T_{amb} > 40^{\circ}\text{C}$ (104°F})) | ..... | • |

pos. 4

Electronic module

- | | | | | |
|---|------------|------------------------|-------|---|
| L | Relay DPDT | 19..230V AC 19..40V DC | ..... | • |
| D | PNP | 18..50V DC | ..... | • |

pos. 5

Process connection

- | | | | | | |
|---|--|----------------------|-------|---|---|
| A | Thread R 1½ inch, | conical DIN 2999 | ..... | • | • |
| B | Thread NPT 1½ inch, | conical ANSI B1.20.1 | ..... | • | • |
| D | Thread NPT 1 ¼ inch, | conical ANSI B1.20.1 | ..... | • | • |
| P | Triclamp 2" (DN50) ISO 2852 | ..... | ..... | • | • |
| L | Flange DN 100 PN6, EN1092-1 (max. 6 bar (87psi)) | ..... | ..... | • | • |
| M | Flange DN 100 PN16, EN1092-1 | ..... | ..... | • | • |
| S | Flange 2" 150lbs ANSI B16.5 | ..... | ..... | • | • |
| T | Flange 3" 150lbs ANSI B16.5 | ..... | ..... | • | • |
| U | Flange 4" 150lbs ANSI B16.5 | ..... | ..... | • | • |

pos. 7

Length of extension "L"

- | | | | | |
|---|--|-------|---|---|
| Z | from 0mm per 100mm (3.94") and part thereof; min. 300mm (11.8"), max. 4.000mm (157") | | • | • |
|---|--|-------|---|---|

pos. 8

Material of process connection / extension "L"

- | | | |
|---|--|-------|
| 1 | Stainless steel 1.4301 (304)/1.4541 (321) | ..... |
| 2 | Stainless steel 1.4571 (316Ti)/1.4404 (316L) | ..... |

Further options: see page 10

VN 4030	B						3	Z		-	L=	mm	←	Order code
position	1	2	3	4	5	6	7	8						

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

⁽¹⁾ TR-CU (general purpose) included

VN 4040 Pipe extension (screwed)



Food grade materials

Cable entries (by default)

Depending on model selected the following cable entries are supported (options see pos 23 on page 10):

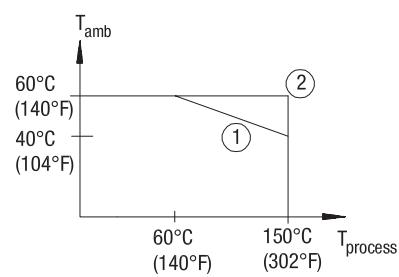
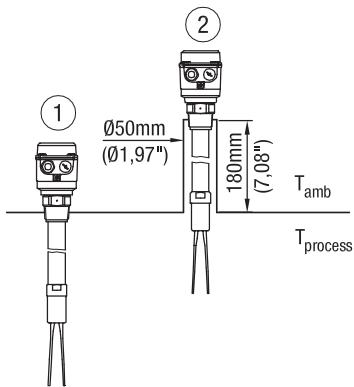
Version:	Cable entries:
CE / ATEX / IEC-Ex (pos.2 O,W,F)	M20x1,5 (1x cable gland + 1x blind plug)
FM (pos.2 M,N)	NPT 1/2" tapered ANSI B1.20.1 (1x open conduit + 1x blind plug)

Dimensions

see page 13

Application up to 150°C (302°F)

- 1 without exteded socket
- 2 with extended socket



VN 4040 Pipe extension (screwed)

Basic type

VN 4040

pos. 2

Certificate

- | | | |
|---|--|---|
| 0 | CE | • |
| W | ATEX II 1/2D Ext IIC T1 Da/Db IP6X | • |
| A | IEC-Ext IIC T1 Da/Db IP6X | • |
| M | FM General Purpose | • |
| N | FM DIP Cl. II, III Div.1 Group E, F, G | • |

pos. 4

Electronic module

- | | | |
|---|---|---|
| L | Relay DPDT 19..230V AC 19..40V DC | • |
| D | PNP 18..50V DC | • |

pos. 5

Process connection

- | | | | |
|---|--|---|---|
| A | Thread R 1½ inch, conical DIN 2999 | • | • |
| B | Thread NPT 1½ inch, conical ANSI B1.20.1 | • | • |
| P | Triclamp 2" (DN50) ISO 2852 | • | • |
| L | Flange DN 100 PN6, EN1092-1 (max. 6 bar (87psi)) | • | • |
| M | Flange DN 100 PN16, EN1092-1 | • | • |
| S | Flange 2" 150lbs ANSI B16.5 | • | • |
| T | Flange 3" 150lbs ANSI B16.5 | • | • |
| U | Flange 4" 150lbs ANSI B16.5 | • | • |

pos. 7

Length of extension "L"

- | | | |
|---|--|---|
| L | 1500mm (59") (cutable cable length) | • |
| M | 4000mm (157") (cutable cable length) | • |

pos. 8

Material of process connection / extension "L"

- | | |
|---|--|
| 1 | Stainless steel 1.4305 (303) / 1.4541 (321) |
| 2 | Stainless steel 1.4571 (316Ti) / 1.4404 (316L) |

Further options: see page 10

VN 4040	C		1		3		
position	1	2	3	4	5	6	7 8

← Order code

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

Options

pos. 11x **Guarantee extension to 5 years**

•

pos. 21 **Weather protection cover**

•

Mounting set for flange mounting

process connection flange	for counter flange with	consists of			
		screws*	nuts*	washers*	sealing**
pos. 22c	L	hole ø18	4 x M16x60	4 x M16	4 pcs
pos. 22d	L	thread M16	4 x M16x40		1 piece
pos. 22e	M	hole ø18	4 x M16x60	8 x M16	4 pcs
pos. 22f	M	thread M16	4 x M16x40		1 piece

* material stainless steel A2 **max. 125°C (256°F), material not food grade

Cable entry

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

- pos. 23x M20x1.5 2x screwed cable gland
 - pos. 23y M20x1.5 1x screwed cable gland +1x blind plug
 - pos. 23a NPT 1/2" tapered ANSI B1.20.1 (1x conduit + 1x Ex-d blind plug)
 - pos. 23b NPT 3/4" tapered ANSI B1.20.1 (1x conduit + 1x Ex-d blind plug)
- on request

•

•

•

•

Sliding sleeve⁶

Process connection as follows or flange as chosen

³ For applications without overpressure, max. 150°C (302°F)

- pos. 25a R 1½ inch DIN 2999 material 1.4301 (304)
- pos. 25b NPT 1½ inch ANSI B1.20.1 material 1.4301 (304)
- pos. 25c Flange⁵ material 1.4301 (304)/1.4541 (321)

•

•

•

For applications with overpressure max. 16bar (232psi), max. 150°C (302°F)

- pos. 25e R 1½ inch DIN 2999 material 1.4571 (316 TI)
- pos. 25f NPT 1½ inch ANSI B1.20.1 material 1.4571 (316 TI)
- pos. 25g Flange⁵ material 1.4571 (316TI)/1.4404 (316L)

•

•

•

Signal lamp

- pos. 27a Bulb in cable gland, 2W green¹
- pos. 27c Bulb in cable gland, 2W red¹
- pos. 27b LED (glass window in lid)⁴

•

•

•

- pos. 29 **Plug 4-pole² (incl. PE)**

•

¹ Available 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.

² Available for CE (pos. 2, 0)

³ Available for CE and FM/CSA general purpose (pos. 2, 0, M)

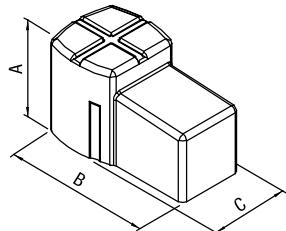
⁴ Not in combination with weather protection cover (Pos. 21)

⁵ Flange as selected in pos.5

⁶ Available for VN 4030

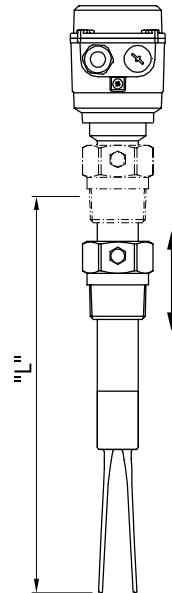
Options

pos. 21
Weather protection cover

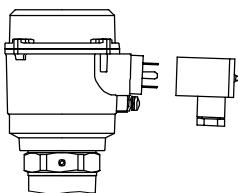


A	100mm (3.94")
B	165mm (6.5")
C	88mm (3.46")

pos. 25
Sliding sleeve

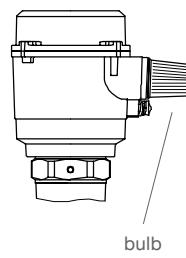


pos. 29
Plug 4-pole

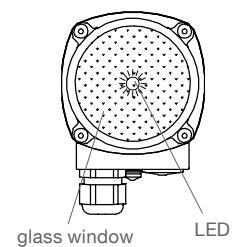


Signal lamp

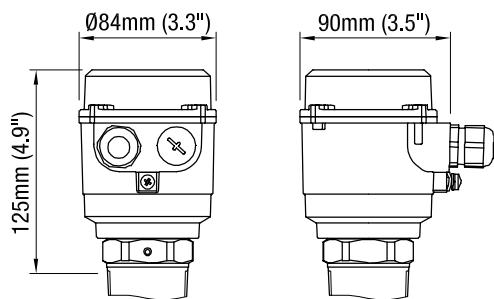
pos. 27a, c
 Bulb in cable gland



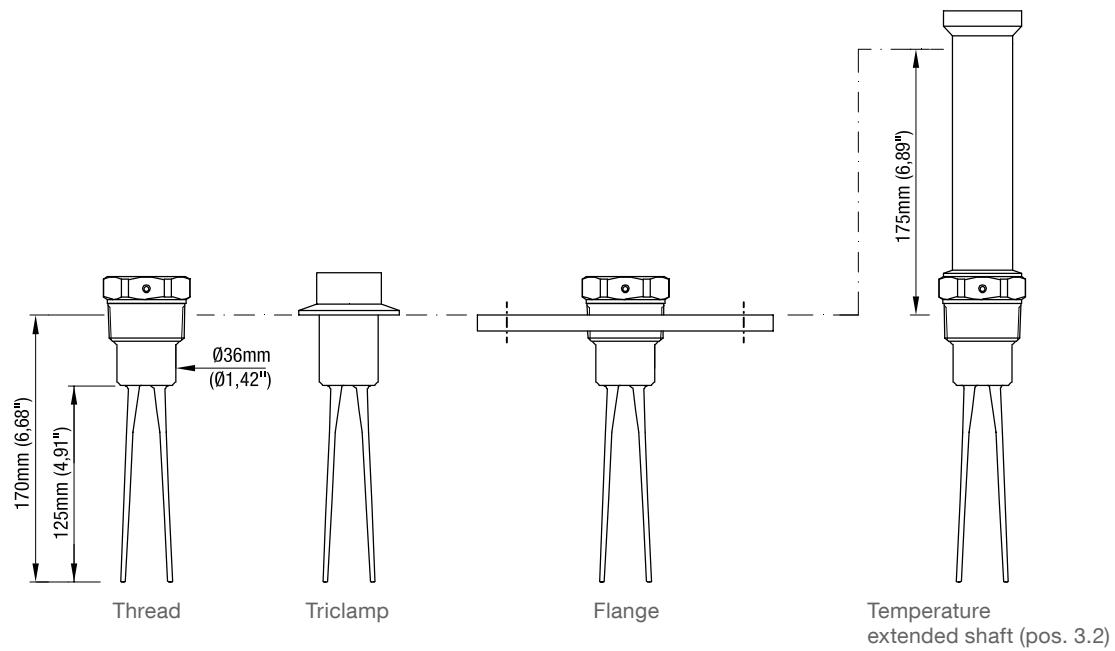
pos. 27b
 LED (glass window in lid)



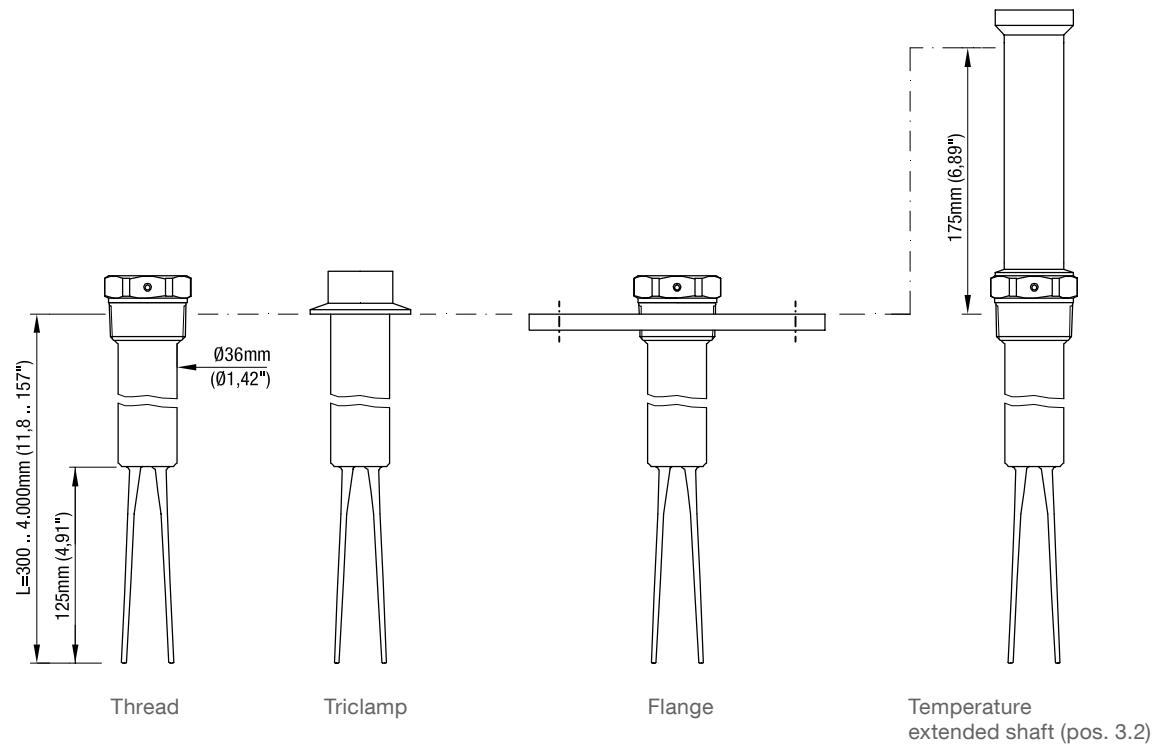
Dimensions



VN 4020

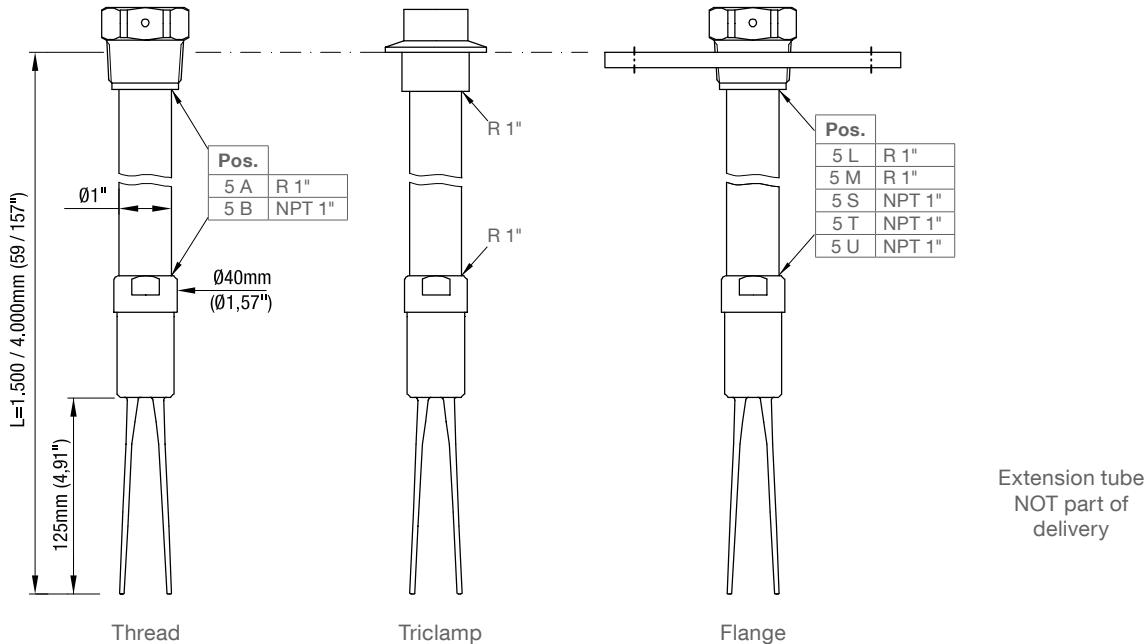


VN 4030



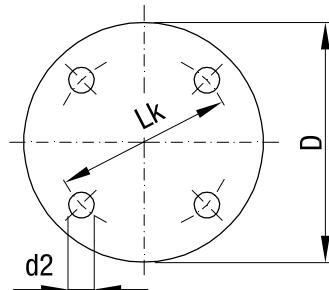
Dimensions / Spare parts

VN 4040



Flanges

code	type	number of holes	d2	Lk	D	T (thickness)
L	flange DN100 PN6	4	18mm (0.71")	170mm (6.69")	210mm (8.27")	16mm (0.63")
M	flange DN100 PN16	8	18mm (0.71")	180mm (7.09")	220mm (8.66")	20mm (0.79")
S	flange 2" 150lbs	4	19.1mm (0.75")	120.7mm (4.75")	152.4mm (6.01")	19.1mm (0.75")
T	flange 3" 150lbs	4	19.1mm (0.75")	152.4mm (6.01")	190.5mm (7.5")	23.9mm (0.94")
U	flange 4" 150lbs	8	19.1mm (0.75")	190.5mm (7.5")	228.6mm (9")	23.9mm (0.94")

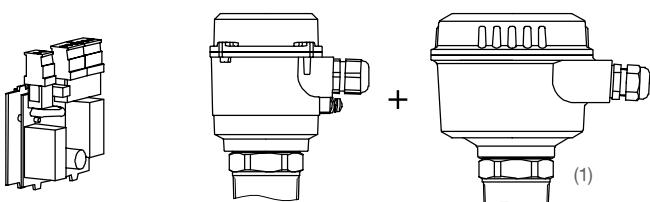


Spare parts

Electronic board

Electronic board	Article number	Price
Relais DPDT 19..230V AC 19..50V DC	pl408265	•
PNP 18..50V DC	pl408266	•

Fitting for housing



(1) Adapting plate included

Electrical installation

Universal voltage

Relay DPDT

Power supply:

19..230V 50-60Hz $\pm 10\%^*$ 22VA
 19..40V DC $\pm 10\%^*$ 2W
 *incl. $\pm 10\%$ of EN 61010

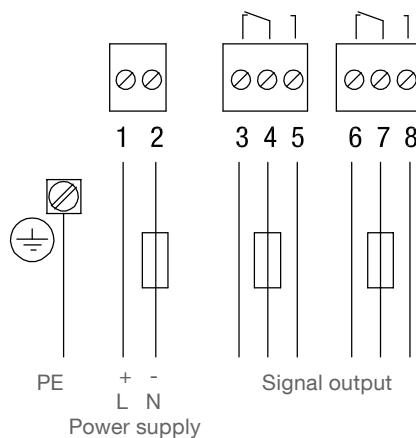
Fuse on power supply:
 max. 10A, fast or slow, HBC, 250V

Signal output:

Floating relay DPDT

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

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



3-wire

PNP

Power supply:

18 .. 50V DC $\pm 10\%^*$
 *incl. $\pm 10\%$ of EN 61010
 Input current: max. 0.5A

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

Signal output:
 max. 0.4A
 Output voltage equal to input
 voltage, drop <2.5V

Load for example:
 PLC, relay, contactor, bulb

