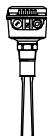
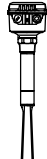
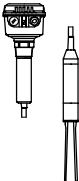


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Subject to change.

All dimensions in mm (inches).

All prices in Euro, excluding VAT.

All prices are EXW Betzigau, excluding packaging costs.

Valid: From 01.04.2016 until 31.03.2017, 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.

Overview

- Level limit detection in bulk goods / solids
- Compact unit
- Die-casted housing aluminium
- Wide range of applications, no maintenance
- Full, demand, empty detector

- ATEX, IEC-Ex, FM, CSA
- TR-CU, INMETRO
- EHEDG
- 1935/2004/EC
- 2011/65/EU

- Gas Ex and Dust Ex approvals
- Dust Ex approvals
- Hygiene approval
- Food grade materials
- RoHS conform

Series

VN 1000	VN 2000	VN 5000	VN 6000
ATEX / IEC-Ex / TR-CU / INMETRO / EHEDG	ATEX / IEC-Ex / TR-CU / INMETRO / EHEDG	ATEX / IEC-Ex / FM / CSA / INMETRO / EHEDG	ATEX / IEC-Ex / FM / CSA / INMETRO / EHEDG
Small housing	Small housing	Spacious housing	Spacious housing
Short oscillating rods	Standard oscillating rods	Short oscillating rods	Standard oscillating rods
Sensitivity > 50g/l (3lb/ft ³)	Sensitivity > 20 g/l (1.2lb/ft ³)	Sensitivity > 50g/l (3 lb/ft ³)	Sensitivity > 20g/l (1.2lb/ft ³)
For extreme mech. load	Option > 5g/l (0.3lb/ft ³)	For extreme mech. load	Option > 5g/l (0.3lb/ft ³)
For mounting in down pipes	Vibrasil® < 5g/l (0.3lb/ft ³)	For mounting in down pipes	Vibrasil® < 5g/l (0.3lb/ft ³)
Advantageous design to avoid bridges		Advantageous design to avoid bridges	
Also for interface applications		Also for interface applications	

Housing

Standard



Standard

d

de



VN ..020

Short extension length

VN 1020



VN 2020



VN 5020



VN 6020



VN ..030
Pipe extension

VN 1030



VN 2030



VN 5030



VN 6030



Overview

VN ..040
 Pipe extension
 (screwed)

Custom made
 pipe for flexible
 lengths

VN 1040



VN 2040



VN 5040



VN 6040



VN 1050



VN 2050



VN 5050



VN 6050



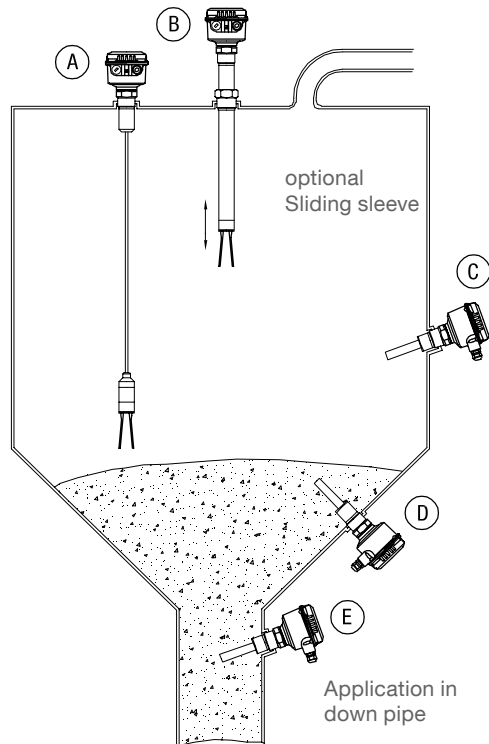
VN ..050
 Cable extension

Specifications

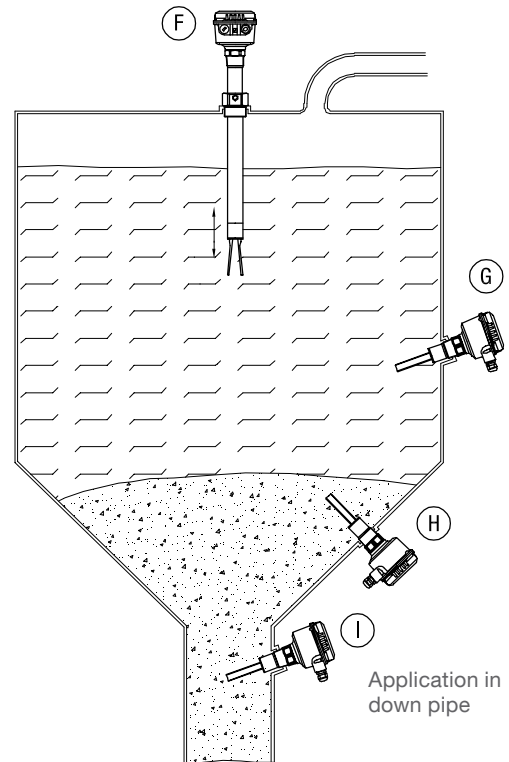
Series			VN 1000	VN 2000	VN 5000	VN 6000
Approvals	CE		•	•	•	•
	ATEX / IEC-Ex/ INMETRO:					
	Zone 20 and 20/21	Dust Ignition Proof	•	•	•	•
	Zone 0	Intrinsic Safe	•	•	•	•
	Zone 1	Flameproof / Increased Safety			•	•
	FM / CSA:					
	General purp.				•	•
	Cl. II, III Div. 1	Dust Ignition Proof			•	•
	Cl. I Div. 1	Intrinsic Safe			•	•
	Cl. I Div. 1	Explosionproof			•	•
	Zone 0	Intrinsic Safe			•	•
	Zone 1	Flameproof / Increased Safety			•	•
	TR-CU:					
		Ordinary Locations	•	•		
Electronics		Dust Ignition Proof	•	•		
	EHEDG:		•	•	•	•
	Relais SPDT	19..230V AC 19..55V DC	•	•	•	•
	Relais DPDT	19..230V AC 19..36V/55V DC	•	•	•	•
	PNP	18..50V DC	•	•	•	•
	2-wire without contact	19..230V AC/DC	•	•	•	•
Extensions	VN ..020	NAMUR	IEC 60947-5-6 2-wire	•		•
		8/16mA or 4-20mA	12.5-30/36V DC 2-wire	•	•	•
	VN ..030	Length of extension	165mm (6.47")	235mm (9.25")	165mm (6.47")	235mm (9.25")
		Ambient temperature	-40 .. +60°C (-40 .. +140°F)			
		Process temperature	-40 .. +150°C (-40 .. +302°F)			
		Process pressure	-1 .. +16bar (-14.5 .. +232 psi)			
		Process connection material / Extension	1.4301 (304) / 1.4541 (321) or 1.4404 (SS316L) / (food grade)			
	VN ..040	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 .. +16bar (-14.5 .. +232 psi)			
		Process connection material / Extension	1.4301 (304) / 1.4541 (321) or 1.4404 (SS316L) / (food grade)			
	VN ..050	Length of extension	1.500mm (59") or 4.000mm (157")			
		Ambient temperature	-40 .. +60°C (-40 .. +140°F)			
		Process temperature	-40 .. +150°C (-40 .. +302°F)			
		Process pressure	-1 .. +16bar (-14.5 .. +232 psi)			
		Process connection material / Extension	1.4305 (303) / 1.4541 (321) or 1.4404 (SS316L) / (food grade)			
	VN ..050	Length of extension	750 ... 20.000mm (27.6" .. 787")			
		Ambient temperature	-25 .. +60°C (-13 .. +140°F)			
		Process temperature	-25 .. +80°C (-13 .. +176°F)			
		Process pressure	-1 .. +6bar (-14.5 .. +87 psi)			
		Process connection material / Extension	1.4301 (304) / 1.4541 (321) Cable isolation: PUR (no food grade)			

Applications

Detection of solids



Detection of solids in water



	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
VN 1020			•	•	•		•	•	•
VN 1030		•	•			•	•		
VN 1040		•	•						
VN 1050	•								
VN 2020			•	•	•				
VN 2030		•	•						
VN 2040		•	•						
VN 2050	•								
VN 5020			•	•	•		•	•	•
VN 5030		•	•			•	•		
VN 5040		•	•						
VN 5050	•								
VN 6020			•	•	•				
VN 6030		•	•						
VN 6040		•	•						
VN 6050	•								

VN ..020 Short extension length

VN 1020



VN 2020



VN 5020



VN 6020



Housings VN 5020 / 6020



Food grade materials

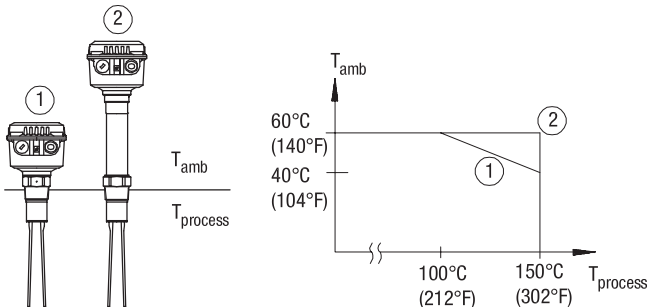
Cable entries (by default)
Depending on model selected, the following cable entries are supported (options see pos 23 on page 14):

Version:	Cable entries:
ATEX/IEC-Ex flameproof (pos.2 T,D)	M20x1.5 (1x open conduit + 1x Ex-d blind plug)
FM and CSA (pos.2 M,N,P,S,U)	NPT 1/2" tapered ANSI B1.20.1 (1x open conduit + 1x Ex-d blind plug)
All other versions	M20x1.5 (1x screwed cable gland + 1x blind plug)

Dimensions see pages 17-20

pos. 3
Temperature extended shaft
applications up to 150°C (302°F)

1 without
2 with



VN ..020 Short extension length

Basic type

VN 1020
VN 2020
VN 5020
VN 6020

pos. 2 Certificate (detailed Ex-markings: see page 20)

		Dust	Gas	Protection method
0	CE	-	-	
W	ATEX	Zone 20 and 20/21	-	Dust Ignition Proof
Y	ATEX	Zone 20 and 20/21	Zone 0 and 0/1	Intrinsic Safe / Dust Ignition Proof
R	ATEX	Zone 20/21	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
T	ATEX	Zone 20/21	Zone 1	Flameproof / Dust Ignition Proof
A	IEC-Ex	Zone 20 and 20/21	-	Dust Ignition Proof
B	IEC-Ex	Zone 20 and 20/21	Zone 0 and 0/1	Intrinsic Safe / Dust Ignition Proof
C	IEC-Ex	Zone 20/21	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
D	IEC-Ex	Zone 20/21	Zone 1	Flameproof / Dust Ignition Proof
M	FM /CSA	-	-	General purpose
N	FM /CSA	Cl. II, III, Div.1	-	Dust Ignition Proof
	CSA	A 20/21		
P	FM /CSA	Cl. II, III, Div.1	Cl. I Div.1 / Zone 0	Intrinsic Safe / Dust Ignition Proof
	CSA	A 20/21		
S	FM /CSA	Cl. II, III, Div.1	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
	CSA	A 20/21		
U	FM /CSA	Cl. II, III, Div.1	Cl. I Div.1 / Zone 1	Explosion Proof / Dust Ignition Proof
	CSA	A 20/21		
E	TR-CU	Zone 20 and 20/21	-	Dust Ignition Proof

For VN 1020, 2020: pos.2 0, W includes TR-CU

Pos.2 A, B, C, D, includes INMETRO

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

- E Relay SPDT 19..230V AC 19..55V DC
L Relay DPDT 19..230V AC 19..55V DC
19..230V AC 19..36V DC
D PNP 18..50V DC
K 2-wire without contact 19..230V AC/DC
M NAMUR IEC 60947-5-6 2-wire
N 8/16mA or 4-20mA 12..36V* DC 2-wire
N 8/16mA 12..36V DC 2-wire

*30V intrinsic safe

Available for certificates (pos.2)									
0	W/A/E	Y/B	R/C	T/D	M	N	P	S	U
•	•	•	•	•	•	•	•	•	•
•	(1)	(3)	(3)	•	(1)	(3)	(3)		
•	(2)	(4)	(4)		(2)	(4)	(4)		
•	•	•	•	•	•	•	•	•	•
•		•				•			
•	(1)	•	(3)	(3)					
•	(2)		(4)	(4)					

(1) without pos.26 1/2 (3) with pos.3.1, without pos.26 1/2
(2) with pos.26 1/2 (4) with pos.3.2 and/or pos.26 1/2

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" (DN 50) ISO 2852
G Cap nut (only with EHEDG (pos.30(, not with pos.2 C,D,R,S,T,U)
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 1.4301 (304) / 1.4541 (321)
2 Stainless steel 1.4404 (316L)
Vibrating rods polished, $Ra \leq 0,75\mu\text{m}$; Teflon coating on request

Basic type

Further options and accessories: see page 14-16

	A				3	1	
Position	1	2	3	4	5	6	7

Order code

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

VN ..030 Pipe extension

VN 1030



VN 2030



VN 5030



VN 6030



Housings VN 5030 / 6030



Standard

d (flameproof)

de (flameproof / increased safety)

Food grade materials

Cable entries (by default)

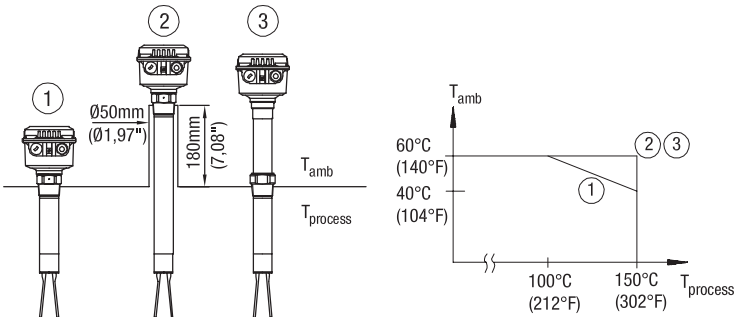
Depending on model selected, the following cable entries are supported (options see pos 23 on page 14):

Version:	Cable entries:
ATEX/IEC-Ex flameproof (pos.2 T,D)	M20x1.5 (1x open conduit + 1x Ex-d blind plug)
FM and CSA (pos.2 M,N,P,S,U)	NPT 1/2" tapered ANSI B1.20.1 (1x open conduit + 1x Ex-d blind plug)
All other versions	M20x1.5 (1x screwed cable gland + 1x blind plug)

Dimensions see pages 17-20

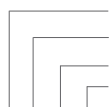
pos. 3
Temperature extended shaft
applications up to 150°C (302°F)

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



VN ..030 Pipe extension

Basic type



VN 1030		•
VN 2030		•
VN 5030		•
VN 6030		•

pos. 2 Certificate (detailed Ex-markings: see page 20)

	Dust	Gas	Protection method
0 CE	-	-	
W ATEX	Zone 20 and 20/21	-	Dust Ignition Proof
Y ATEX	Zone 20 and 20/21	Zone 0 and 0/1	Intrinsic Safe / Dust Ignition Proof
R ATEX	Zone 20/21	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
T ATEX	Zone 20/21	Zone 1	Flameproof / Dust Ignition Proof
A IEC-Ex	Zone 20 and 20/21	-	Dust Ignition Proof
B IEC-Ex	Zone 20 and 20/21	Zone 0 and 0/1	Intrinsic Safe / Dust Ignition Proof
C IEC-Ex	Zone 20/21	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
D IEC-Ex	Zone 20/21	Zone 1	Flameproof / Dust Ignition Proof
M FM /CSA	-	-	General purpose
N FM /CSA	Cl. II, III, Div.1 CSA A 20/21	-	Dust Ignition Proof
P FM /CSA	Cl. II, III, Div.1 CSA A 20/21	Cl. I Div.1 / Zone 0	Intrinsic Safe / Dust Ignition Proof
S FM /CSA	Cl. II, III, Div.1 CSA A 20/21	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
U FM /CSA	Cl. II, III, Div.1 CSA A 20/21	Cl. I Div.1 / Zone 1	Explosion Proof / Dust Ignition Proof
E TR-CU	Zone 20 and 20/21	-	Dust Ignition Proof

For VN 1030, 2030: pos.2 0, W includes TR-CU
Pos.2 A, B, C, D includes INMETRO

pos. 3 Temperature extended shaft

- without (up to $T_{process} = 150^{\circ}\text{C}$ (302°F) at $T_{amb} < 40^{\circ}\text{C}$ (104°F) or with extended socket)
- with (up to $T_{process} = 150^{\circ}\text{C}$ (302°F) at $T_{amb} > 40^{\circ}\text{C}$ (104°F)) without extended socket)

pos. 4 Electronic module

E Relay SPDT	19..230V AC	19..55V DC	
L Relay DPDT	19..230V AC	19..55V DC	
	19..230V AC	19..36V DC	
D PNP	18..50V DC		
K 2-wire without contact	19..230V AC/DC		
M NAMUR IEC 60947-5-6	2-wire		
N 8/16mA or 4-20mA	12..5..36V* DC	2-wire	
N 8/16mA	12..5..36V DC	2-wire	

*30V intrinsic safe

Available for certificates (pos.2)										
0	W/A/E	Y/B	R/C	T/D	M	N	P	S	U	
•	•	•	•	•	•	•	•	•	•	•
•	(1)					(1)				•
•	(2)		•	•		(2)		•	•	•
•	•		•	•	•	•		•	•	•
•	•		•	•	•	•		•	•	•
•	(1)	•						•		•
•	(2)		•	•						•

(1) without pos.26 1/2
(2) with pos.26 1/2

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" (DN 50) ISO 2852		•	•
G Cap nut (only with EHEDG (pos.30), not with pos.2 C,D,R,S,T,U)		•	•
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 (starting from 0mm) per 100mm (3.94") or part thereof; min. 300mm (11.8"), max. 4000mm (157")

pos. 8 Material of process connection / extension "L"

- Stainless steel 1.4301 (304) / 1.4541 (321)
 - Stainless steel 1.4404 (316L)
- Vibrating rods polished, $R_a \leq 0,75\mu\text{m}$; Teflon coating on request

Basic type

	B				3	Z	
Position	1	2	3	4	5	6	7

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

L= mm

Order code

VN ..040 Pipe extension (screwed)

VN 1040



VN 2040



VN 5040



VN 6040



Housings VN 5040 / 6040



Food grade materials

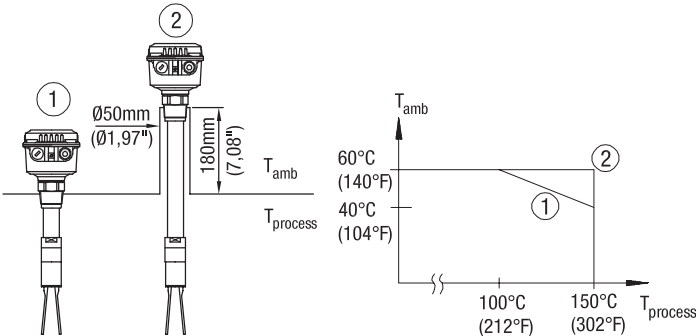
Cable entries (by default)
Depending on model selected, the following cable entries are supported (options see pos 23 on page 14):

Version:	Cable entries:
ATEX/IEC-Ex flameproof (pos.2 T,D)	M20x1.5 (1x open conduit + 1x Ex-d blind plug)
FM and CSA (pos.2 M,N,P,S,U)	NPT 1/2" tapered ANSI B1.20.1 (1x open conduit + 1x Ex-d blind plug)
All other versions	M20x1.5 (1x screwed cable gland + 1x blind plug)

Dimensions see pages 17-20

applications up to 150°C
(302°F)

- 1 without extended socket
- 2 with extended socket



VN ..040 Pipe extension (screwed)

Basic type

VN 1040		•
VN 2040		•
VN 5040		•
VN 6040		•

pos. 2 Certificate (detailed Ex-markings: see page 20)

	Dust	Gas	Protection method
0	CE	-	-
W	ATEX Zone 20 and 20/21	-	Dust Ignition Proof
Y	ATEX Zone 20 and 20/21	Zone 0 and 0/1	Intrinsic Safe / Dust Ignition Proof
R	ATEX Zone 20/21	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
T	ATEX Zone 20/21	Zone 1	Flameproof / Dust Ignition Proof
A	IEC-Ex Zone 20 and 20/21	-	Dust Ignition Proof
B	IEC-Ex Zone 20 and 20/21	Zone 0 and 0/1	Intrinsic Safe / Dust Ignition Proof
C	IEC-Ex Zone 20/21	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
D	IEC-Ex Zone 20/21	Zone 1	Flameproof / Dust Ignition Proof
M	FM /CSA -	-	General purpose
N	FM /CSA Cl. II, III, Div.1 CSA A 20/21	-	Dust Ignition Proof
P	FM /CSA Cl. II, III, Div.1 CSA A 20/21	Cl. I Div.1 / Zone 0	Intrinsic Safe / Dust Ignition Proof
S	FM /CSA Cl. II, III, Div.1 CSA A 20/21	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
U	FM /CSA Cl. II, III, Div.1 CSA A 20/21	Cl. I Div.1 / Zone 1	Explosion Proof / Dust Ignition Proof
E	TR-CU Zone 20 and 20/21	-	Dust Ignition Proof

For VN 1040, 2040: pos.2 0, W includes TR-CU
Pos.2 A, B, C, D includes INMETRO

pos. 4 Electronic module

E	Relay SPDT	19..230V AC	19..55V DC	
L	Relay DPDT	19..230V AC	19..55V DC	
		19..230V AC	19..36V DC	
D	PNP	18..50V DC		
K	2-wire without contact	19..230V AC/DC		
M	NAMUR IEC 60947-5-6	2-wire		
N	8/16mA or 4-20mA	12,5..36V* DC	2-wire	
N	8/16mA	12,5..36V DC	2-wire	

*30V intrinsic safe

Available for certificates (pos.2)										
0	W/A/E	Y/B	R/C	T/D	M	N	P	S	U	
•	•		•	•	•	•	•	•	•	•
•	•					•	•			•
			•	•					•	•
•	•		•	•	•	•	•	•	•	•
•	•									•
•	•	•								•
				•	•					•

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" (DN 50)	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	1.500mm (59")	(cuttable cable length)		•
M	4.000mm (157")	(cuttable cable length)		•

pos. 8 Material of process connection / extension "L"

- Stainless steel 1.4305 (303) / 1.4541 (321)
 - Stainless steel 1.4404 (316L)
- Vibrating rods polished, Ra ≤ 0,75µm; Teflon coating on request

Further options and accessories: see page 14-16

Basic type

	C	1		3			
--	---	---	--	---	--	--	--

Position 1 2 3 4 5 6 7 8

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

← Order code

VN ..050 Cable extension

VN 1050



VN 2050



VN 5050



VN 6050



Housings VN 5050 / 6050



Standard



d (flameproof)



de (flameproof /
increased safety)

Cable entries (by default)

Depending on model selected, the following cable entries are supported (options see pos 23 on page 14):

Version:	Cable entries:
ATEX/IEC-Ex flameproof (pos.2 T,D)	M20x1.5 (1x open conduit + 1x Ex-d blind plug)
FM and CSA (pos.2 M,N,P,S,U)	NPT 1/2" tapered ANSI B1.20.1 (1x open conduit + 1x Ex-d blind plug)
All other versions	M20x1.5 (1x screwed cable gland + 1x blind plug)

Dimensions see pages 17-20

VN ..050 Cable extension

Basic type

- VN 1050**
VN 2050
VN 5050
VN 6050

pos. 2 Certificate (detailed Ex-markings: see page 20)

	Dust	Gas	Protection method
0 CE	-	-	
W ATEX	Zone 20 and 20/21	-	Dust Ignition Proof
Y ATEX	Zone 20 and 20/21	Zone 0 and 0/1	Intrinsic Safe / Dust Ignition Proof
R ATEX	Zone 20/21	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
T ATEX	Zone 20/21	Zone 1	Flameproof / Dust Ignition Proof
A IEC-Ex	Zone 20 and 20/21	-	Dust Ignition Proof
B IEC-Ex	Zone 20 and 20/21	Zone 0 and 0/1	Intrinsic Safe / Dust Ignition Proof
C IEC-Ex	Zone 20/21	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
D IEC-Ex	Zone 20/21	Zone 1	Flameproof / Dust Ignition Proof
M FM /CSA	-	-	General purpose
N FM /CSA	Cl. II, III, Div.1	-	Dust Ignition Proof
	CSA A 20/21		
P FM /CSA	Cl. II, III, Div.1	Cl. I Div.1 / Zone 0	Intrinsic Safe / Dust Ignition Proof
	CSA A 20/21		
S FM /CSA	Cl. II, III, Div.1	Zone 1	Flameproof / Increased Safety / Dust Ignition Proof
	CSA A 20/21		
U FM /CSA	Cl. II, III, Div.1	Cl. I Div.1 / Zone 1	Explosion Proof / Dust Ignition Proof
	CSA A 20/21		
E TR-CU	Zone 20 and 20/21	-	Dust Ignition Proof

For VN 1050, 2050: pos.2 0, W includes TR-CU

Pos.2 A, B, C, D includes INMETRO

pos. 4 Electronic module

- E Relay SPDT 19..230V AC 19..55V DC
 L Relay DPDT 19..230V AC 19..55V DC
 19..230V AC 19..36V DC
 D PNP 18..50V DC
 K 2-wire without contact 19..230V AC/DC
 M NAMUR IEC 60947-5-6 2-wire
 N 8/16mA or 4-20mA 12,5..36V* DC 2-wire
 N 8/16mA 12,5..36V DC 2-wire
 *30V intrinsic safe

Available for certificates (pos.2)										
0	W/A/E	Y/B	R/C	T/D	M	N	P	S	U	
•	•		•	•	•	•		•	•	•
•					•					•
•	•		•	•		•		•	•	•
•	•		•	•	•	•		•	•	•
•		•								•
•			•	•						•
	•		•	•						•

pos. 5 Process connection

- A Thread R 1½ inch, conical DIN 2999
 B Thread NPT 1½ inch, conical ANSI B1.20.1
 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 ((starting from 0mm) per 100mm (3.94") or part thereof; min. / max. see below)

pos. 8 Material of process connection / extension "L"

- 1 Stainless steel 1.4301 (304) / 1.4541 (321)
 2 Stainless steel 1.4404 (316L) on request
 Vibrating rods polished, Ra ≤ 0,75µm; Teflon coating on request

Further options and accessories: see page 14-16

Extension "L":
 min. 750mm (29,6")
 max. 7.000mm (276") for VN 1050/5050
 max. 20.000mm (787") for VN 2050/6050
 max. 10.000mm (394") for VN 2050/6050 with pos.4M

Basic type

	D	1			3	Z	1
Position	1	2	3	4	5	6	7

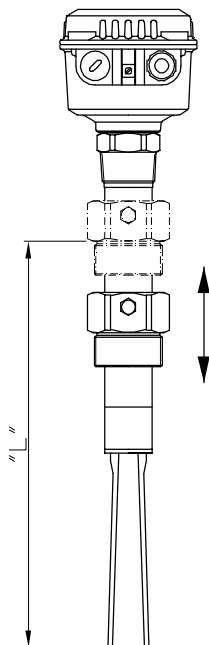
L= mm

Order code

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

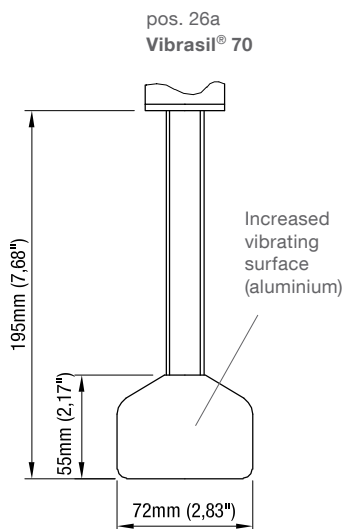
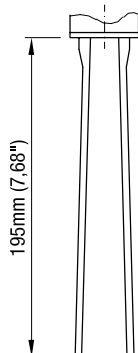
Options

pos. 25
 Sliding sleeve

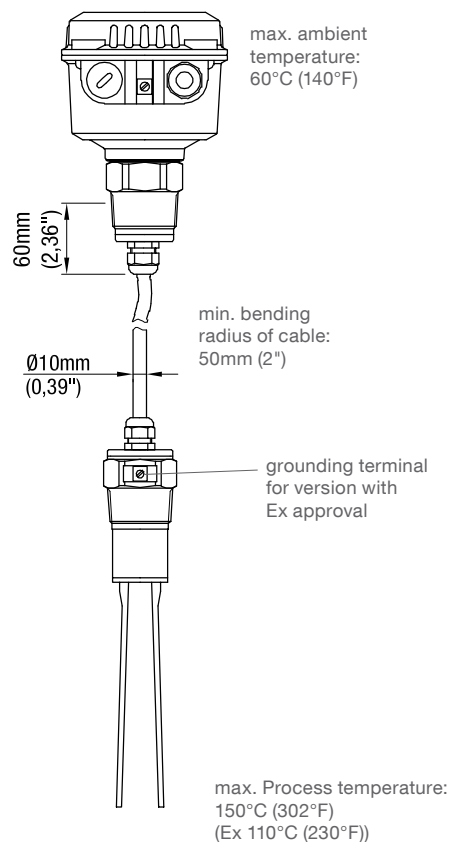


pos. 26x
 Enhanced sensitivity

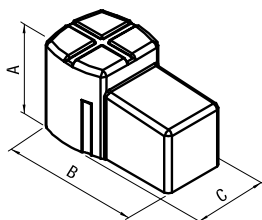
pos. 26b
 Vibrasil® 90



pos. 26 1-2
 Separate housing

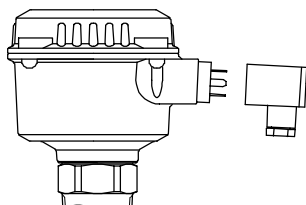


pos. 21
 Weather protection cover



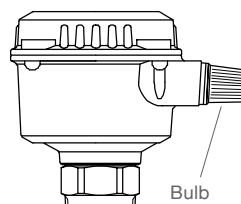
	VN 10..0	VN 50..0
	VN 20..0	VN 60..0
A	100mm (3.94")	130mm (5.12")
B	165mm (6.5")	200mm (7.87")
C	88mm (3.46")	125mm (4.92")

pos. 29
 Valve connector

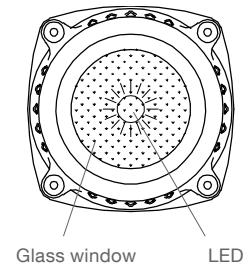


Signal lamp

pos. 27a, c
 Bulb in cable gland

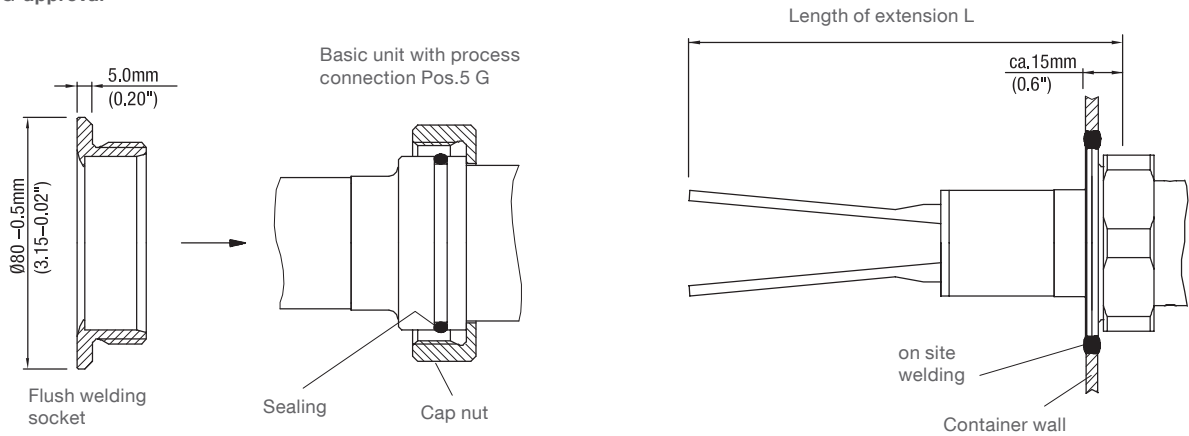


pos. 27b
 LED (glass window in lid)



Options / Accessories

Pos. 30
EHEDG-approval



NAMUR Isolating Switching Amplifier Protection method [Ex ia] IIC
(for Electronic module pos.4 M)



Terminal housing. Switchable signal output logic. Each channel has one independent output.

Channels	Signal output	Monito- ring*	Supply	Manufacturer / Type	Price
				Turck	
1	Relay (2x SPST)	x	20-125VDC, 20-250VAC	IM1-12EX-R	•
	2 transistor outputs (short-circuit proof, floating)	x		IM1-12EX-T	•
2	Relay (2x SPST)	x	20-125VDC, 20-250VAC	IM1-22EX-R	•
	2 transistor outputs (short-circuit proof, floating)	x		IM1-22EX-T	•
4	Relais (4x SPST)	x	20-125VDC, 20-250VAC	IM1-451EX-R	•
	4 transistor outputs (short-circuit proof, floating)	x		IM1-451EX-T	•

* Input circuit monitoring for wire-break, partial for short-circuit. Other types and manufacturers on request.
Partial additional monitoring signal output.

8/16mA Limit Value Monitor
(for Electronic module pos.4 N)



Limit Value Monitor Type IM43-13-R •
Input: 1 channel 4-20mA
Output: 3 Limit Value Relays for monitoring of 3 limit values of a current signal.
Terminal housing. Supply: 20-125VDC, 20-250VAC. Manufacturer: Turck.
Use in Hazardous Locations only with additional connected Isolating Transducer IM33.

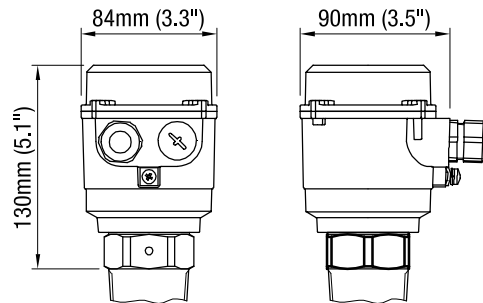
Isolating Transducer Type IM33-11Ex-Hi/24VDC (1 channel) •
Isolating Transducer Type IM33-11Ex-Hi/24VDC (2 channels) •
Protection method [Ex ia] IIC.
Terminal housing.
Input/Output: 0/4-20mA (galvanic isolated). Supply: 19-29V DC.

Dimensions

Housing versions

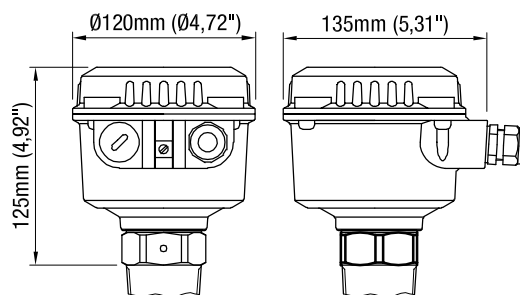
Series VN 1000 / 2000

Standard



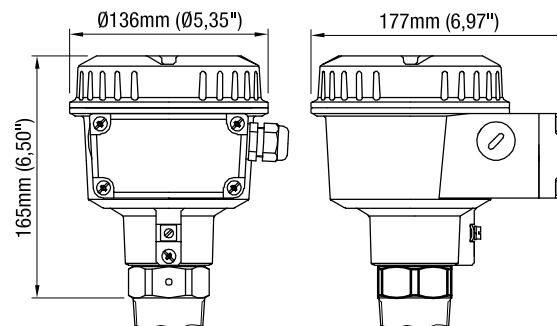
Series VN 5000 / 6000

Standard



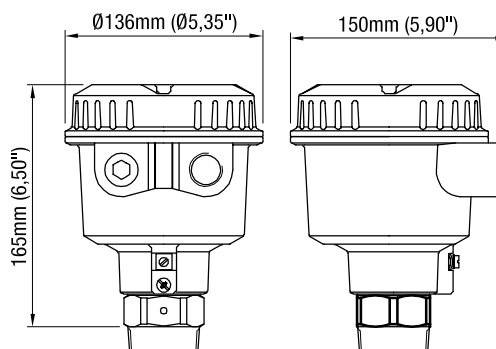
de

Explosionproof with
 increased safety
 terminal box



d

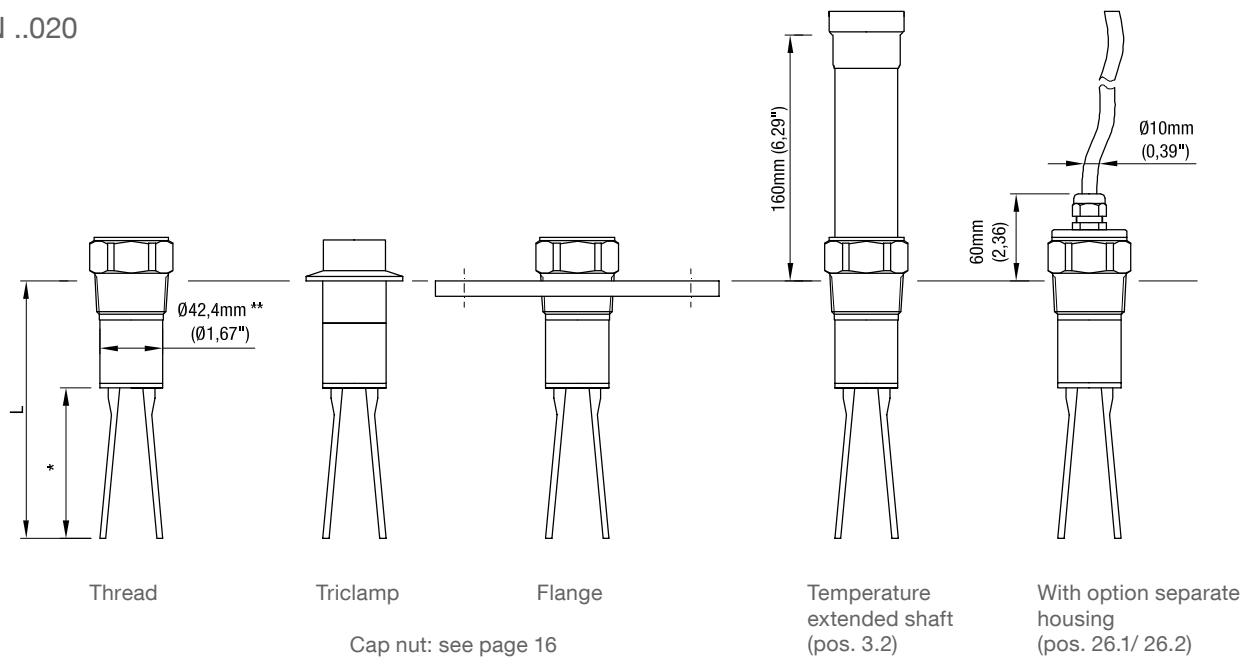
Flameproof /
 explosionproof



Dimensions

Extensions

VN ..020

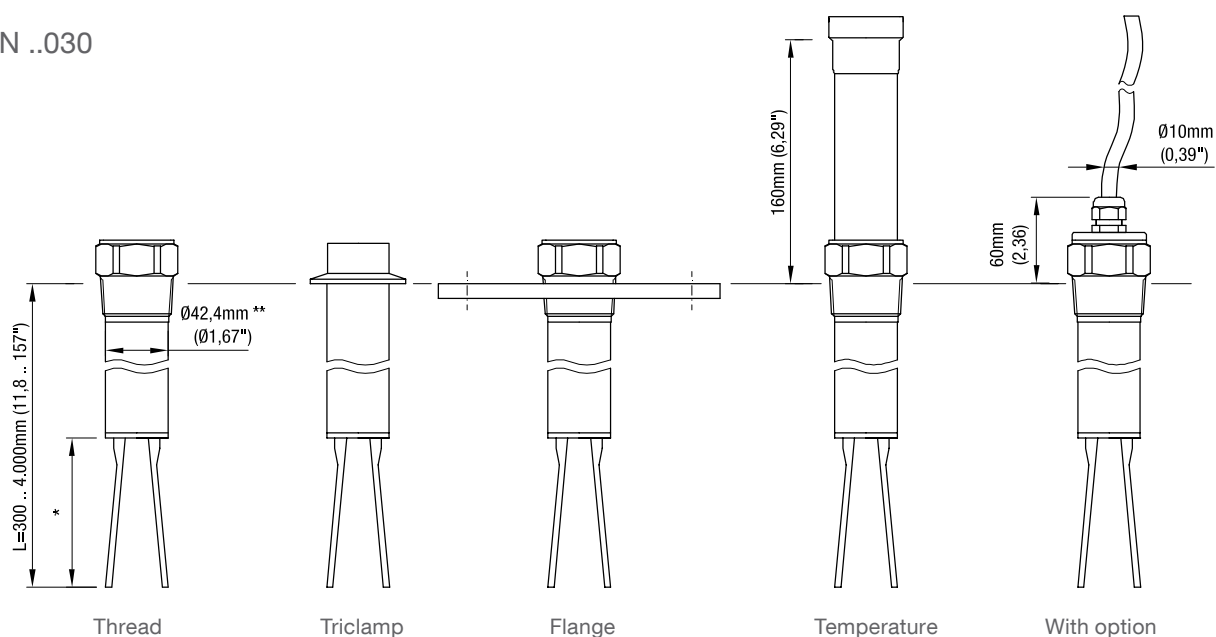


	L	
	without option	with option: Enhanced sensitivity (pos. 26x) Vibrasil® 70 (pos. 26a) Vibrasil® 90 (pos. 26b)
VN 1020 VN 5020	165mm (6.5")	
VN 2020 VN 6020	235mm (9.25")	260mm (10.24")

* see page 19 bottom right

** welding seam max. Ø43,8mm (1.72")

VN ..030

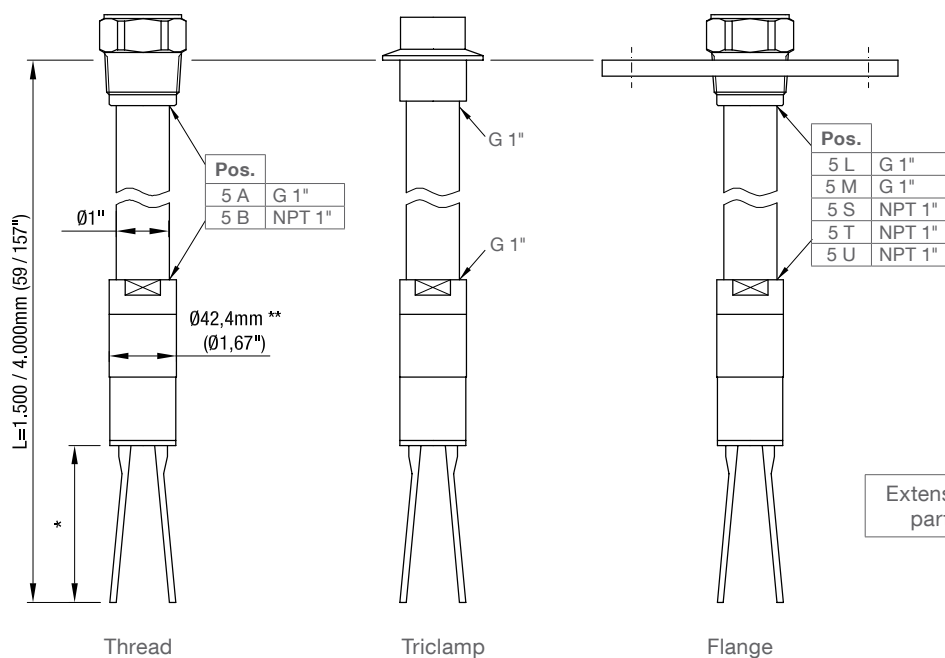


* see page 19 bottom right

** welding seam max. Ø43,8mm (1.72")

Dimensions

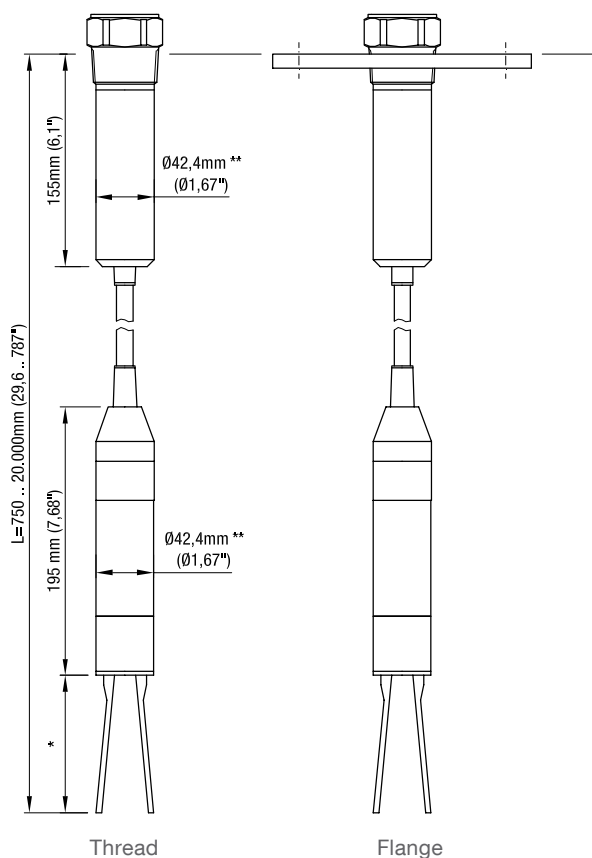
VN ..040



* see below right

** welding seam max. Ø43,8mm (1.72")

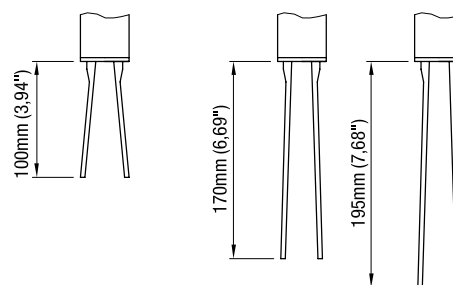
VN ..050



* Length of oscillating rods

VN 10..0
 VN 50..0

VN 20..0
 VN 60..0



with option
 Enhanced sensitivity (pos.26x)
 Vibrasil® 70 (pos.26a)
 Vibrasil® 90 (pos.26b)

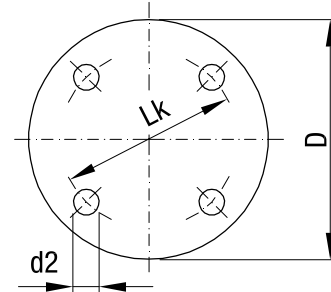
* see below right

** welding seam max. Ø43,8mm (1.72")

Dimensions / Detailed Ex-markings

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")



Detailed Ex-markings

pos. 2	Certificate	Housing
0	CE	Standard
W	ATEX II 1D Ex t IIC T! Da IP6X and 1/2D Ex t IIC T! Da/Db IP6X	Standard
Y	ATEX II 1G Ex ia IIC T! Ga and 1/2G Ex ia IIC T! Ga/Gb and ATEX II 1D Ex t IIC T! Da IP6X and 1/2D Ex t IIC T! Da/Db IP6X	Standard
R	ATEX II 2G Ex de [ia]* IIC T! Gb and 1/2D Ex t IIC T! Da/Db IP6X	de
T	ATEX II 2G Ex d [ia]* IIC T! Gb and 1/2D Ex t IIC T! Da/Db IP6X	d
A	IEC-Ex t IIC T! Da IP6X and t IIC T! Da/Db IP6X	Standard
B	IEC-Ex ia IIC T! Ga and ia IIC T! Ga/Gb IEC-Ex t IIC T! Da IP6X and t IIC T! Da/Db IP6X	Standard
C	IEC-Ex de [ia]* IIC T! Gb and t IIC T! Da/Db IP6X	de
D	IEC-Ex d [ia]* IIC T! Gb and t IIC T! Da/Db IP6X	d
M	FM / CSA general purpose	Standard
N	FM / CSA DIP Cl. II, III Div. 1 Gr. E,F,G CSA Ex DIP A20/21	Standard
P	FM / CSA IS Cl. I, II, III Div. 1 Gr. A-G FM Cl. I Zone 0 and 0/1 AEx ia IIC CSA Cl. I Zone 0 and 0/1 Ex ia IIC and CSA Ex DIP A20 and A20/21	Standard
S	FM Cl. I Zone 1 AEx de [ia]* IIC and FM / CSA Cl. II,III Div. 1 Gr. E,F,G CSA Cl. I Zone 1 Ex de [ia]* IIC and CSA Ex DIP A20/21	de
U	FM XP-IS Cl. I,II,III Div. 1 Gr. B-G* and FM Cl. I Zone 1 AEx d [ia] IIC* CSA XP-IS Cl. I,II,III Div. 1 Gr. B-G* CSA Cl. I Zone 1 Ex d [ia]* IIC and CSA Ex DIP A20/21	d
E	TR-CU DIP A20/A21 and DIP A20	Standard

* [ia] or IS is not available for versions VN ..020 without temperature extended shaft (pos. 3.1)
 (In this case no intrinsic safe connection between Electronic module and Vibrating fork is used)

Electrical installation

Universal voltage

Relay SPDT

Power supply:

19..230V 50-60Hz +10% 8VA
 19..55V DC +10% 1,5W

Signal output:

Floating relay SPDT

VN 1000/ 2000:

AC max. 253V, 4A, 500VA at $\cos \Phi = 1$

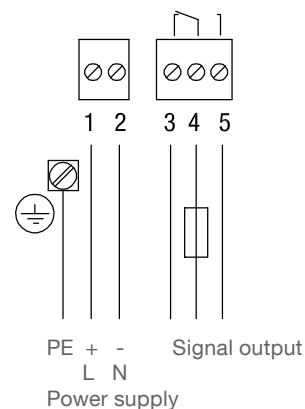
DC max. 253V, 4A, 60W

VN 5000/ 6000:

AC max. 250V, 8A, non inductive

DC max. 30V, 5A, non inductive

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



Universal voltage

Relay DPDT

Power supply::

19..230V 50-60Hz +10% 18VA
 19..55V (36V*) DC +10% 2W

Signal output:

Floating relay DPDT

VN 1000/ 2000:

AC max. 253V, 4A, 500VA at $\cos \Phi = 1$

DC max. 253V, 4A, 60W

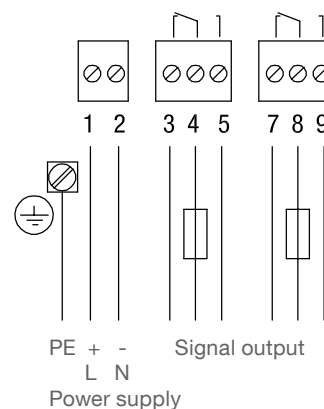
VN 5000/ 6000:

AC max. 250V, 8A, non inductive

DC max. 30V, 5A, non inductive

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

* Version with intrinsic safe connection
 between electronic module and vibration
 fork (see pos.4 in price list)



3-wire

PNP

Power supply:

18 .. 50V DC +10% 1,5W

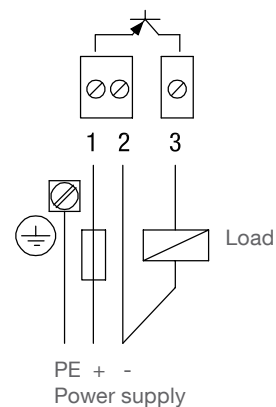
Fuse: max 4A, slow or fast, HBC, 250V

Signal output:

max. 0,4A

Load for example:

PLC, relay, contactor, bulb



Electrical installation

2-wire

without contact

Power supply:

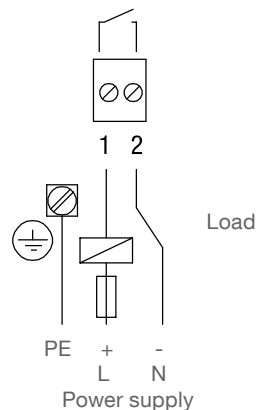
19..230V 50/60Hz +10% 1,5VA
 19..230V DC +10% 1W

Load:

min. 10mA
 max. 0,5A permanent
 (detailed ratings see
 "Technical data")

Load for example:
 relay, contactor, bulb

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



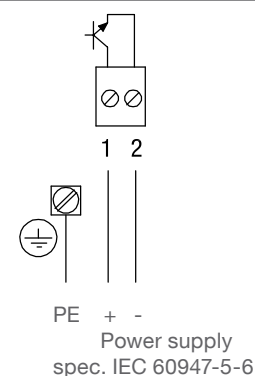
NAMUR

IEC 60947-5-6

Power supply:

ca. 7..9 V DC
 intrinsic safe
 (spec. IEC 60947-5-6)

<1mA or > 2,2mA
 (spec. IEC 60947-5-6)



8/16mA or 4-20mA

Power supply:

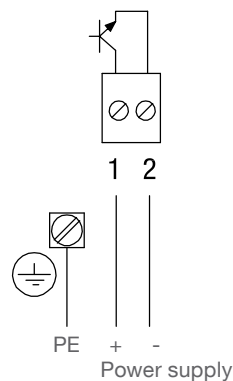
Non intrinsic safe version:
 12,5..36V DC +0%

Intrinsic safe version:
 12,5..30V DC +0%

Signal output

Setting 8/16mA:
 8mA or 16mA

Setting 4-20mA:
 Output current depends on the
 vibration amplitude of the fork: 6mA for
 dampened vibration and 20mA for full
 vibration.



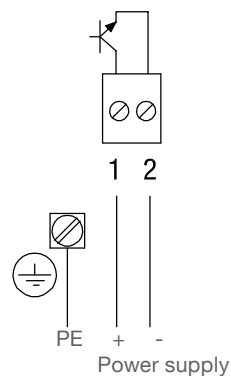
8/16mA

Power supply:

12,5..36V DC +0%

Signal output

8mA or 16mA



Spare parts

Electronic modules VN 1000 / VN 5000

Electronic module	Electronic module number	VN 1020	VN 1020 VN 1030 VN 1040 separate housing	VN 1030 VN 1040	VN 1050	VN 5020	VN 5020 temp. extended shaft	VN 5020 VN 5030 separate housing	VN 5030 VN 5040	VN 5050	Prices Electronic module
Electronic modules are used for following certificates (see pos. 2 of price list):											
Relay (SPDT) 19..230V AC 19..55V DC	pl400932	O, W, A, E	0	O, W, A, E	0	O, M, W, A, N, R, C, S, T, D, U	O, M, W, A, N	0, M	O, M, W, A, N	0, M	•
	pl400120 *		W, A, E		W, A, E	R, C, S, T, D, U	R, C, S, T, D, U	W, A, N, R, C, S, T, D, U	R, C, S, T, D, U	W, A, N, R, C, S, T, D, U	•
Relay (DPDT) 19..230V AC 19..55V DC	pl400247	O, W, A, E	0	O, W, A, E	0	O, M, W, A, N, R, C, S, T, D, U	O, M, W, A, N	0, M	O, M, W, A, N	0, M	•
	pl400052 *		W, A, E		W, A, E	R, C, S, T, D, U	R, C, S, T, D, U	W, A, N, R, C, S, T, D, U	R, C, S, T, D, U	W, A, N, R, C, S, T, D, U	•
PNP 18..50V DC	pl400246	O, W, A, E	0	O, W, A, E	0	O, M, W, A, N, R, C, S, T, D, U	O, M, W, A, N	0, M	O, M, W, A, N	0, M	•
	pl400123 *		W, A, E		W, A, E	R, C, S, T, D, U	R, C, S, T, D, U	W, A, N, R, C, S, T, D, U	R, C, S, T, D, U	W, A, N, R, C, S, T, D, U	•
2-wire without contact 19..230V AC/DC	pl400242	O, W, A, E	0	O, W, A, E	0						•
	pl400122					O, M, W, A, N, R, C, S, T, D, U	O, M, W, A, N	0, M	O, M, W, A, N	0, M	•
8/16mA 2-wire	pl400122 *		W, A, E		W, A, E	R, C, S, T, D, U	R, C, S, T, D, U	W, A, N, R, C, S, T, D, U	R, C, S, T, D, U	W, A, N, R, C, S, T, D, U	•
	pl400062 *		W, A, E		W, A, E	W, A, R, C, T, D	W, A, R, C, T, D	W, A, R, C, T, D	W, A, R, C, T, D	W, A, R, C, T, D	•
8/16mA or 4-20mA 2-wire intrinsic safe	pl400093	0	0	0	0	0	0	0	0	0	•
	pl400090 **	W, A, Y, B, E	Y, B	W, A, Y, B, E	Y, B	W, A, Y, B, R, C, T, D	W, A, Y, B	Y, B	W, A, Y, B	Y, B	•

* Intrinsic safe connection between Electronic module and Vibrating fork

** Intrinsic safe from supply and intrinsic safe between Electronic module and Vibrating fork

Electronic modules VN 2000 / VN 6000

* Intrinsic safe connection between Electronic module and Vibrating fork
** Intrinsic safe from supply and intrinsic safe between Electronic module and Vibrating fork