

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 > 20 g/l (1.25 lb/ft³)
- 4 sensitivity settings selectable
- ATEX, UKEX, IEC-Ex, INMETRO, FM, TR-CU, KC, CCC approvals (DustEx)
- 1935/2004/EC Food grade materials
- 2011/65/EU RoHS conform

Approvals	CE/ UKCA	
	ATEX/ UKEX/ IEC-Ex/ INMETRO/ KC/ CCC	Zone 20/21 (Dust Ignition Proof)
	FM/ FMc	Ordinary Locations Cl. II, III Div. 1 (Dust Ignition Proof)
	TR-CU	Ordinary Locations Zone 20/21 (Dust Ignition Proof)
Electro-nics	Relay DPDT	21 .. 230 V AC 22 .. 45 V DC ±10%
	PNP	20 .. 40 V DC ±10%

Materials inside process: Food grade

Cable entries (by default)

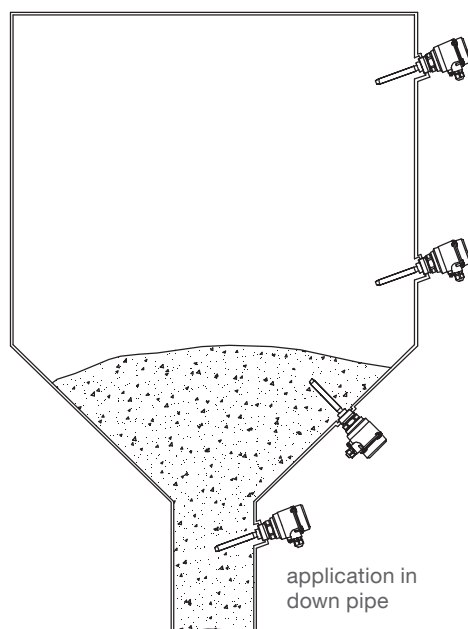
Depending on model selected the following cable entries are supported:

Version:	Cable entries:
FM and CSA (pos.2 M,N)	NPT ½" tapered ANSI B1.20.1 (1x open conduit + 1x blind plug)
All other versions	M20 x 1.5 (1x cable gland + 1x blind plug)

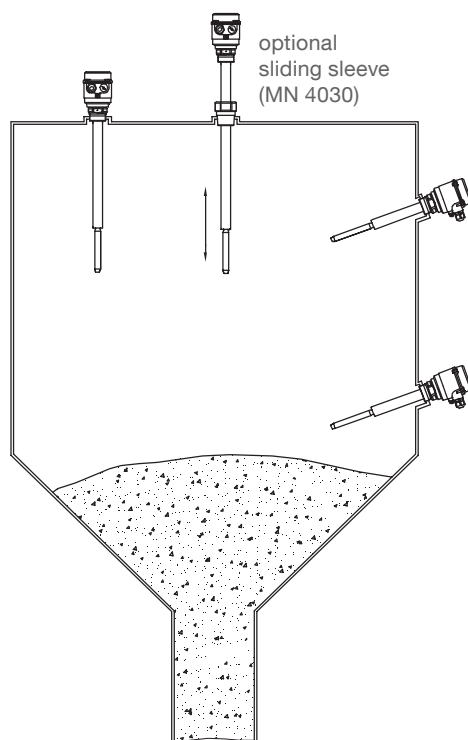
Applications

Detection of solids

MN 4020



MN 4030
 MN 4040



MN 4020 Short extension length

MN 4020	Length of extension	160 mm (6.3")
	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	1.4305 (303)/ 1.4541 (321) or 1.4404 (316L) (food grade)

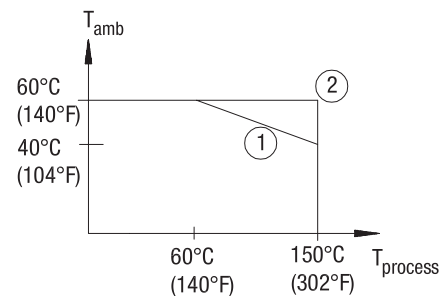
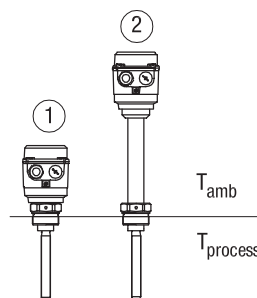
¹ The listed or higher-quality corrosion-resistant materials can be used.
 Filler materials are not listed.



pos.3
 Temperature extended shaft

Application up to 150°C (302°F)

- 1 without
- 2 with



MN 4030 Pipe extension

MN 4030	Length of extension	200 .. 4,000 mm (7.9 .. 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	1.4305 (303)/ 1.4541 (321) or 1.4404 (316L) (food grade)

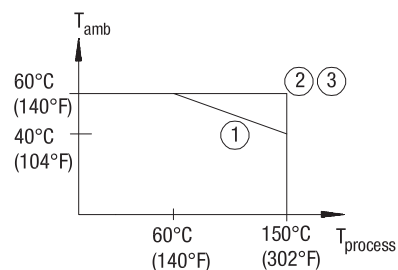
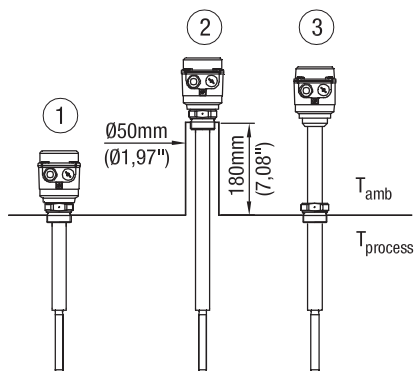
¹ The listed or higher-quality corrosion-resistant materials can be used. Filler materials are not listed.



pos.3
 Temperature extended shaft

Application up to 150°C (302°F)

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



MN 4040 Pipe extension (screwed)

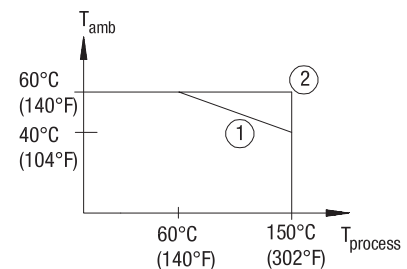
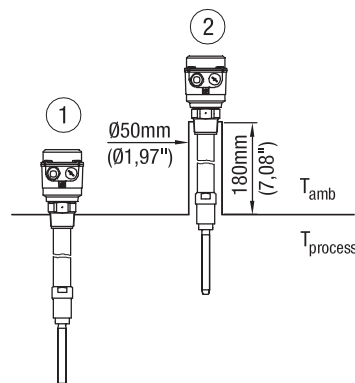
MN 4040	Length of extension	max. 1,500 mm (59") or 4,000 mm (157")
	Ambient temperature	-40 .. +60°C (-40 .. +140°F)
	Process temperature	-40 .. +150°C (-40 .. +302°F)
	Process pressure	-1 .. +16 bar (-14.5 .. +232 psi)
	Process connection material/ Extension ¹	1.4305 (303)/1.4541 (321) or 1.4404 (316L) (food grade)

¹ The listed or higher-quality corrosion-resistant materials can be used. Filler materials are not listed.



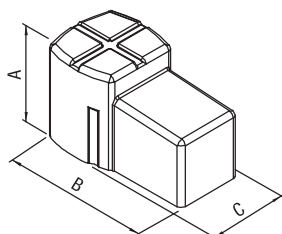
Application up to 150°C (302°F)

- 1 without extended socket
- 2 with extended socket



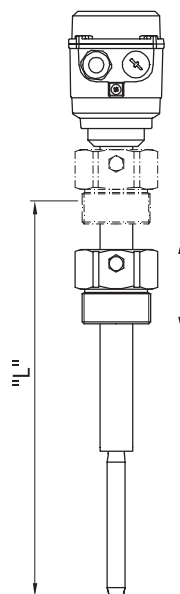
Options

pos.21
Weather protection cover



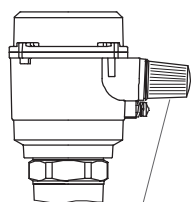
A	100 mm (3.94")
B	165 mm (6.5")
C	88 mm (3.46")

pos.25
Sliding sleeve



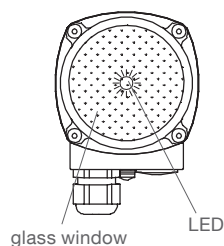
Signal lamp

pos.27 a,c,2,3,4
LED/ NivoLED mounted in cable entry



LED/ NivoLED

pos.27 b
LED (glass window in lid)

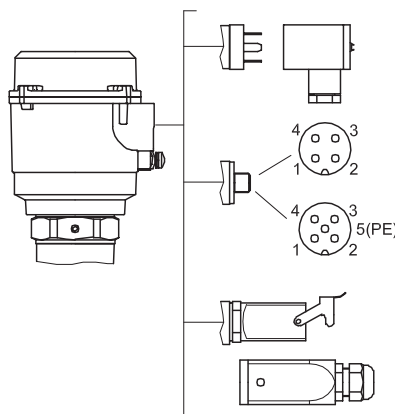


glass window

LED

Connection of the wires to the internal terminals of the unit refer to documentation "Plugs and Signal lamps - Connecting diagram".

Plug



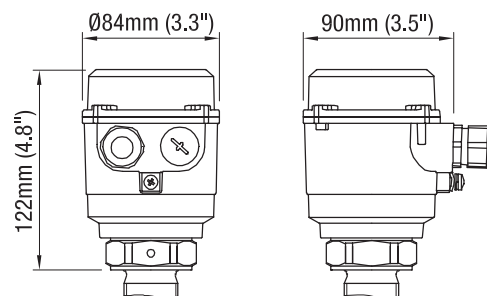
pos.29 x
Valve connector
 max. 230 V
 Enclosure plastic
 Protection IP65
 $-40\text{ °C} \leq T_a \leq +125\text{ °C}$

pos.29 a,b
Plug M12
 max. 25 V (4-pole), 60 V (5-pole)
 Enclosure brass
 Protection IP66
 $-25\text{ °C} \leq T_a \leq +80\text{ °C}$

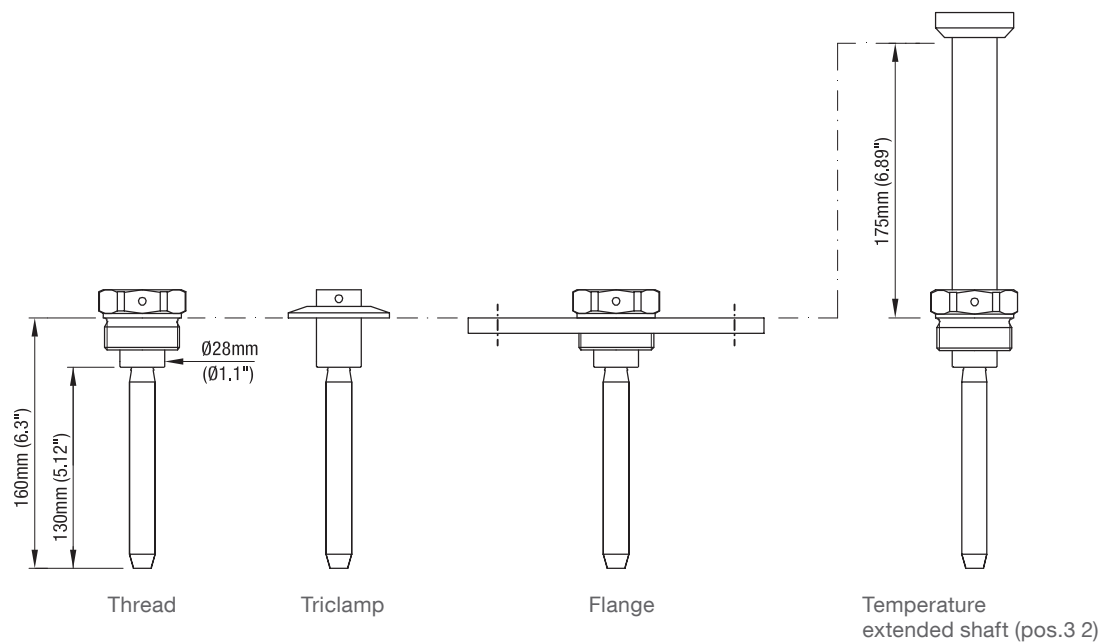
pos.29 c
Plug Han 4A
 max. 230 V
 Enclosure zinc
 Protection IP65
 $-40\text{ °C} \leq T_a \leq +125\text{ °C}$

Connection of the plug wires to the internal terminals of the unit refer to documentation "Plugs and Signal lamps - Connecting diagram".

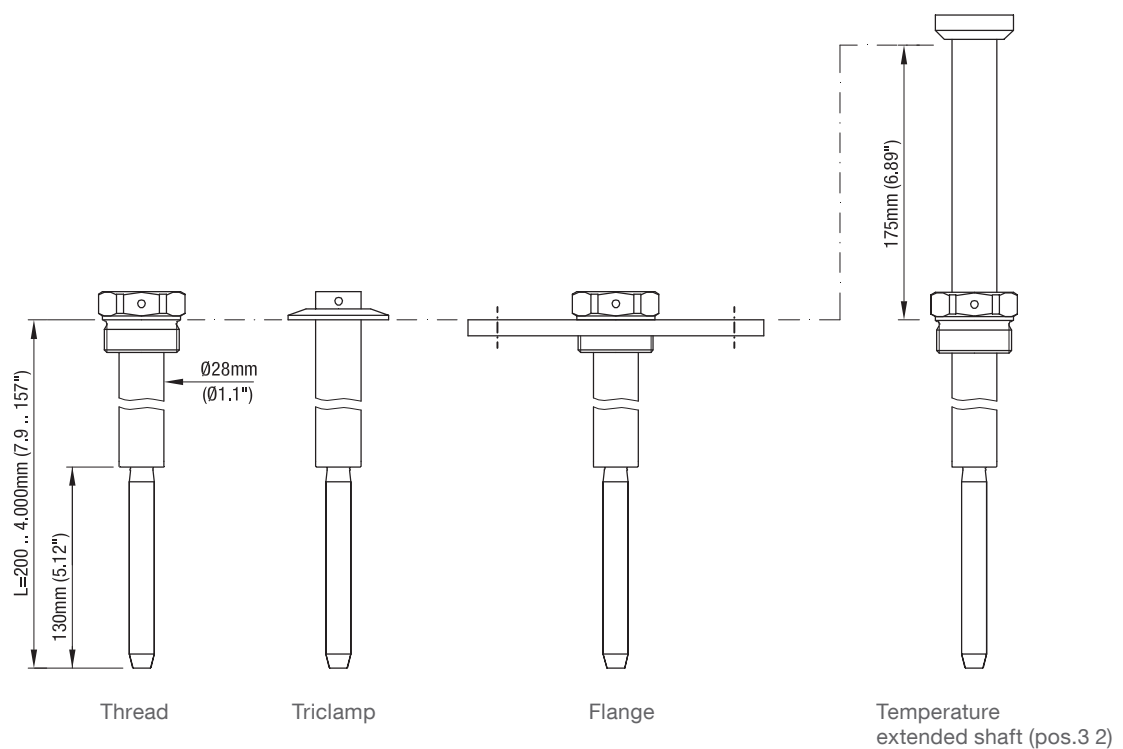
Dimensions



MN 4020

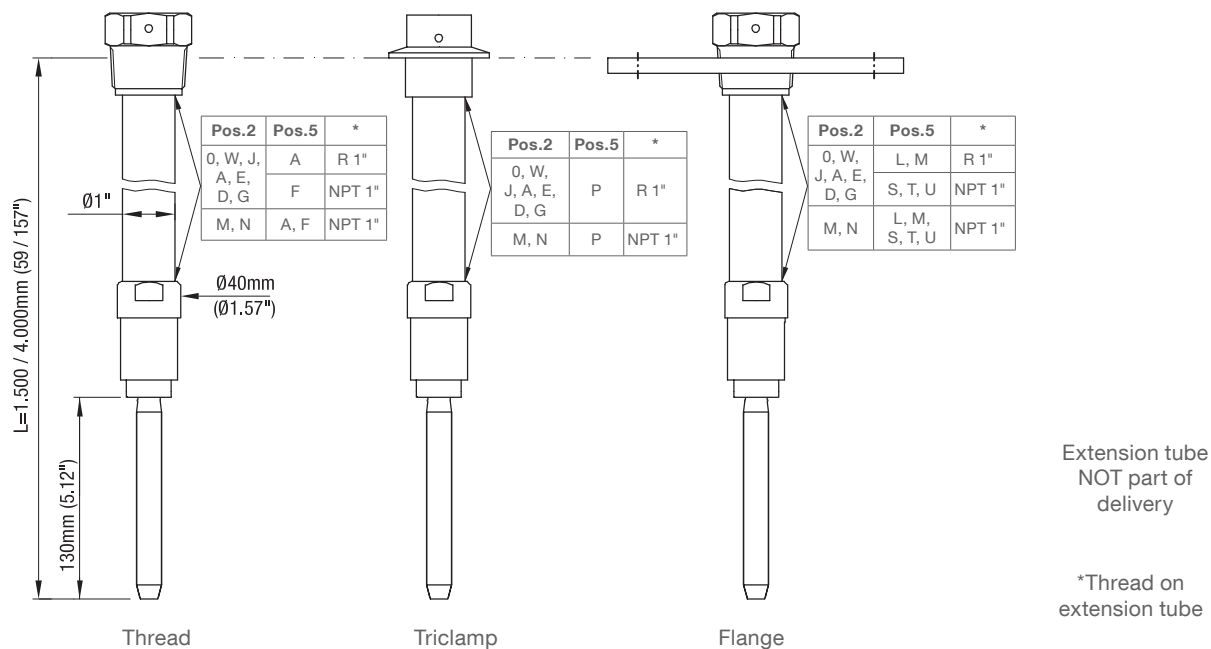


MN 4030



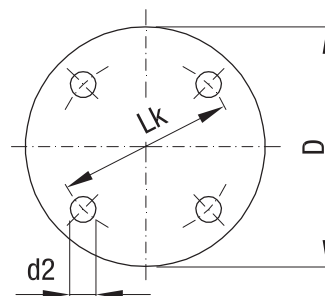
Dimensions / Spare parts

MN 4040



Flanges

code	type	number of holes	d2	Lk	D	T (thickness)
L	flange DN100 PN6	4	18 mm (0.71")	170 mm (6.69")	210 mm (8.27")	16 mm (0.63")
M	flange DN100 PN16	8	18 mm (0.71")	180 mm (7.09")	220 mm (8.66")	20 mm (0.79")
S	flange 2" 150lbs	4	19.1 mm (0.75")	120.7 mm (4.75")	152.4 mm (6.01")	19.1 mm (0.75")
T	flange 3" 150lbs	4	19.1 mm (0.75")	152.4 mm (6.0")	190.5 mm (7.5")	23.9 mm (0.94")
U	flange 4" 150lbs	8	19.1 mm (0.75")	190.5 mm (7.5")	228.6 mm (9.0")	23.9 mm (0.94")



Electrical installation

Universal voltage

Relay DPDT

Power supply:

21 .. 230 V 50 - 60 Hz $\pm 10\%^*$ 22 VA
 22 .. 45 V DC $\pm 10\%^*$ 2 W
 *incl. $\pm 10\%$ of EN 61010

Fuse on power supply:

max. 10 A, fast or slow, HBC, 250 V

Signal output:

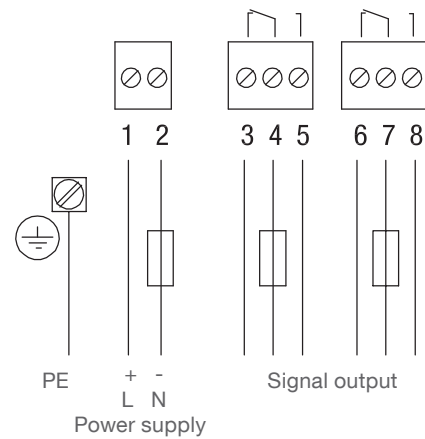
Floating relay DPDT

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



3-wire

PNP

Power supply:

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

Fuse:

max. 4 A, fast or slow, 250 V

Signal output:

max. 0.4 A

Output voltage equal to input voltage, drop < 2.5 V

Load for example:

PLC, relay, contactor, bulb

