



Rotating Vane Level Monitor for Bulks



measuring
•
monitoring
•
analysing

NIR



- Probe length up to max. 4000 mm
- p_{\max} : -0.5...+0.5 bar; t_{\max} : 80°C
- Process connection:
G 1 male thread, G 1 ½ male thread,
thread, flange and welding-in adapter
- Contact max. 250 V_{AC}, 2 A, max. 50 W
- For min-/max position,
installation horizontal and vertical,
various rotating vanes
- Grain size up to max. 50 mm,
bulk density min. 0.1 kg/L
- Suitable for ATEX applications



Level

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Description

The KOBOLD rotating vane level monitors model NIR can be delivered in various models and thus cover a broad range of different applications.

Independent of humidity and conductivity of the medium, they reliably monitor the minimum or maximum filling level in silos and tanks. Different paddle types are available for adaption to the bulk density. The monitors are installed lateral or from the top. When installing them from the top, the neck pipe can be delivered up to a length of 4 meters.

An ATEX certified version is available for the use in environments with dust explosion hazard.

Operation

A synchronous motor drives a rotating vane that is extended into the tank by means of a shaft. As soon as the bulk reaches the rotating vane, its rotation is blocked. The restoring force moves the pivoted motor away from its original position. Hereby, a microswitch is actuated, which gives out an alarm signal. A second micro switch turns off the motor. If the filling level decreases, the rotating vane is released again and the force of a spring pulls the motor back to its original position. The motor gets turned on again, and the working contact is switched back.

Applications

- Various bulk materials
- Cereal
- Flour
- Granulated plastic
- Cement
- Sand
- Cacao
- Sugar

Technical Details

Measuring principle:	rotating vane
Installation lengths:	189 mm with standard neck pipe 324 mm with neck pipe length 200 mm (reinforced for horizontal mounting) max. 4000 mm with special neck pipe length
Medium temperature:	max. -20...+80 °C
Ambient temperature:	-20...+60 °C
Max. pressure:	-0.5...+0.5 bar
Max. grain size:	50 mm
Min. bulk density:	0.1 kg/L

Materials

Housing: polycarbonate, fibreglass-reinforced
ATEX: aluminium grey

Connection ,
neck pipe and vane: stainless steel 1.4305

Process connection:
at NIR-720, NIR-722,
NIR-E20, NIR-E22:
standard, G 1 male,
adapter for thread G 1 ½ and G 1 ¼,
circular flange Ø 110 mm, 200 mm
and weld-in sleeve,
external Ø 40 mm

at NIR-72L and NIR-E2L:
thread G 1 ½ male,
circular flange Ø 110 mm, 200 mm

Mounting position:
at NIR-720,
NIR-722, NIR-E20
and NIR-E22
horizontal and vertical

at NIR-72L
and NIR-E2L
only vertical

Supply voltage: 24 V_{DC}, 24 V_{AC}, 48 V_{AC},
110 V_{AC}, 230 V_{AC}, 50/60 Hz

Power input: 3.5 VA (bei AC)
3 W (bei DC)

Electr. connection: via 1 (2) cable gland
M20 x 1.5

Contact: relay output (changeover contact)

Electrical
switching values: max. 250 V_{AC}, 2 A

Protection: IP 65

ATEX:  II 1/2 D T 85 °C IP 65

Order Details (Example: NIR-72 0 0 0 G6 0)

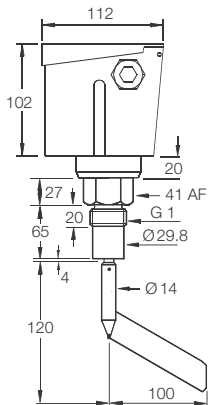
Model	Neck pipe length*	Axis length	Paddle	Mechanical connection**	Supply
NIR-72... standard NIR-E2... ATEX	0 = standard 2 = 200 mm (reinforced design for horizontal mounting)	0 = standard 4* = special length max. 500 mm (only for vertical mounting)	N = standard V = flap version X = cruciform (only with connection F2)	G6 = G 1 G7 = G 1¼ G8 = G 1½ F1 = flange 110 mm F2 = flange 200 mm S6 = welding sleeve	0 = 230 V _{AC} 4 = 110 V _{AC} 2 = 24 V _{AC} 5 = 48 V _{AC} 3 = 24 V _{DC}
	L* = special length with extended neck pipe max. 4000 mm	0 = standard		G8 = G 1½ F1 = flange 110 mm F2 = flange 200 mm	

* Please specify length of neck pipe »L« and the extension of the axis length in writing.

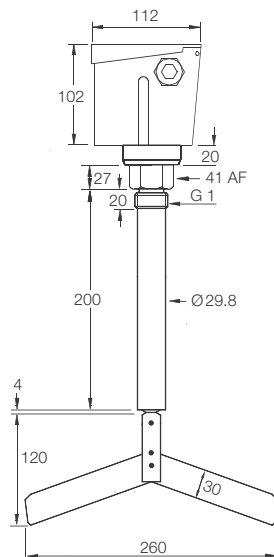
** Please fit the connection type to the diameter of the paddle.

Dimensions Standard Version

NIR-720

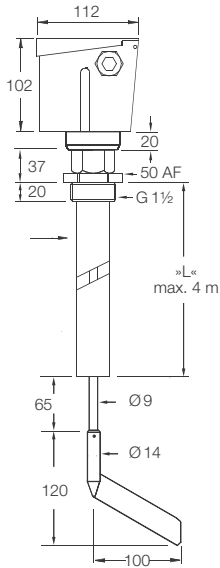


NIR-722

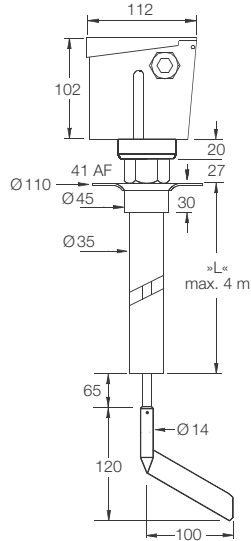


Dimensions with Reinforced Neck Pipe

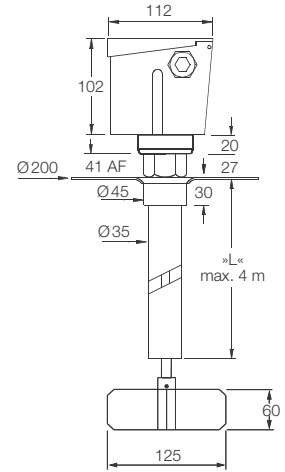
NIR-72L0 NG8...



NIR-72L0 NF1...

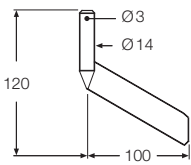


NIR-72L0 XF2...

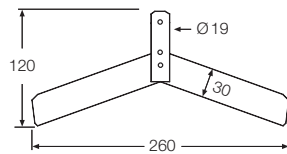


Spare Parts/Accessories

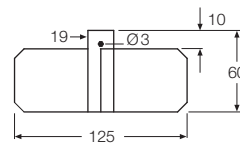
Vane type: N



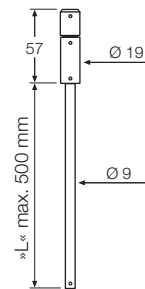
Vane type: V



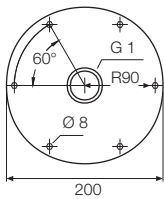
Vane type: X



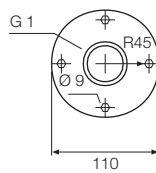
Extended shaft (only for vertical mounting)



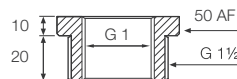
Flange type: F2



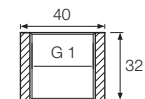
Flange type: F1



**Thread adapter
G 1½: G 8**



Welding sleeve: S1





Spare Parts/Accessories Model NMZ for Level Monitor NIR

Model	Design	Adapter type, vane, axis extension	Specials
NMZ	A = installation adapter (for NIR-720 and NIR-722)	G7 = stainless steel thread adapter for G 1¼ thread G8 = stainless steel thread adapter for G 1½ thread F1 = stainless steel circular flange for thread, Ø 110 mm F2 = stainless steel circular flange for thread, Ø 200 mm S6 = stainless steel welding sleeve, external Ø 40 mm	0 = without Y = version acc. to description
	D = vane type cruciform or extended shaft	N0 = single vane V0 = double vane X0 = vane type cruciform A0* = extended shaft for vertical mounting, max. 500 mm	

* only with NIR-720 and NIR-722, please specify the special length in writing.