



Capacitive Level Meter for Liquids



measuring
•
monitoring
•
analysing



- Probe lengths up to 4000 mm
- Measuring accuracy: ± 2 mm
- t_{max} : 90/125 °C · p_{max} : 10 bar
- Mech. connection:
G 1 male, G 2 male (PVDF version),
thread, flange and weld-in adapter
- Level indicator in percent, 4-20 mA
- Four devices for various
applications
- For ATEX applications



N2

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Model:
NMC



Description

The KOBOLD capacitive level indicators type NMC serve to measure liquid levels in tanks. They consist of a measuring probe and a connecting head with a plug-in evaluation module. Depending on the operating conditions, different probes are available:

- single probe for standard applications
- double probe with PVDF connection for non metallic tanks and at the same time aggressive medias
- single probe with external reference tube for non metallic tanks or media with very low dielectric constant
and
- single probe with a split connecting head for liquid temperatures of up to 125 °C.

The devices do not have any mechanically moving parts and therefore hardly any mechanical wear. The plug-in evaluation module can be changed easily so that the devices are really easy to maintain.

Working principle

The measuring system is based on the capacitive measuring method. The measuring probe and the tank wall or the second electrode respectively form the plates of a capacitor, the medium in the tank is the dielectric fluid. The capacity depends on the medium. The more the medium touches the measuring probe, the higher the capacity. This change is detected by the plug-in evaluation module and transformed in a percentage display or a 4-20 mA signal.

Fields of application

- Water or waterlike liquids
- Liquid food
- Chemical and aggressive liquids
- Oil
- Pharmaceutical liquids

Technical Details

Measuring principle:	capacitive (for liquids up to 1000 pF)
Probe length:	265...4000 mm (shorter versions on request)
Accuracy:	± 2 mm
Medium temperature:	max. 90 °C, up to max. 125 °C for model NMC-H
Ambient temperature:	-10...+60 °C
Max. pressure:	PN 10
Materials:	housing: Polycarbonate, aluminium in case of ATEX connection: stainless steel 1.4305 (model NMC-N, NMC-H, NMC-T) PVDF (model NMC-S) probe: stainless steel with PTFE coating for model NMC-N and NMC-H PVDF-coating in case of model NMC-S stainless steel probe 1.4305 with internal sensor (st. steel with PTFE coating) for model NMC-T
Mech. connection:	G 1 male in case of model NMC-N, NMC-H, NMC-T G 2 male in case of model NMC-S
Adapter:	for model NMC-N, NMC-H, NMC-T: thread G 1 1/4, G 1 1/2 circular flange Ø 110 mm, 200 mm welding-in sleeve Ø external 40 mm
Display:	4-line LCD, alphanumeric, display of % and mA
Supply voltage:	10...35 V _{DC}
Electr. connection:	via 1 (2) cable gland M20
Output:	4-20 mA, two-wire
Protection:	IP 65
ATEX:	Ⓔ II 1/2 GD Ex ia IIC T4

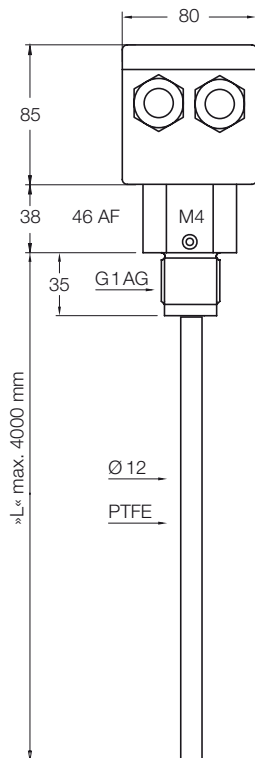
Order Details (Example: NMC-N 1 2G6 0 3)

Version	Probe length*	Mechanical connection	ATEX	Supply
NMC-N	...1 = up to 1 meter	2G6 = G 1, st. steel	0 = without E = ATEX	3 = 10...35 V _{DC}
NMC-H	...2 = up to 2 meter			
NMC-T	...3 = up to 3 meter			
NMC-S	...4 = up to 4 meter	9G9 = G 2, PVDF		

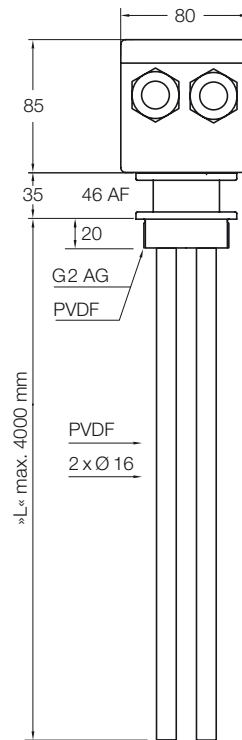
* Please specify specific application length »L« in writing

Dimensions

NMC-N



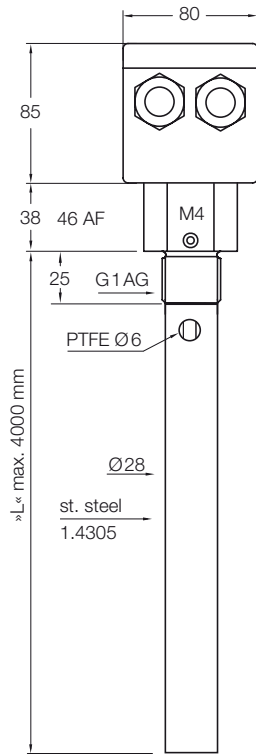
NMC-S



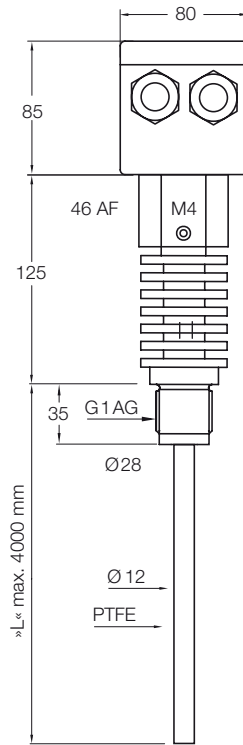
N2

Dimensions

NMC-T

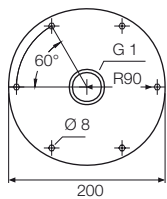


NMC-H

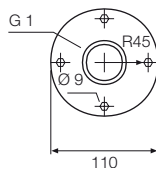


Spare parts and accessories

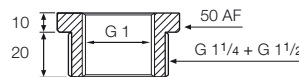
Flange type: F2



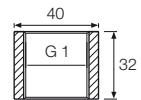
Flange type: F1



Thread adapter for G 1 1/4 and G 1 1/2



Welding sleeve



Spare parts/Accessories Model NMZ for capacitive level monitors NMC-N, NNC-T, NMC-H

Model	Design	Adapter type	Specials
NMZ	A = Installation adapter (only for NMC-N, NMC-T, NMC-H)	<p>G7 = stainless steel thread adapter for G 1 1/4</p> <p>G8 = stainless steel thread adapter for G 1 1/2</p> <p>F1 = stainless steel round flange, Ø 110 mm</p> <p>F2 = st. steel round flange for thread, Ø 200 mm</p> <p>S6 = st. steel welding sleeve, external Ø 40 m</p>	<p>0 = without</p> <p>Y = version according to description</p>