

Data sheet

NC56 | Capacitive filling level probe

The capacitive filling level probe NC56 serves to measure tank filling levels in plastic and metal tanks containing

- Fresh water
- Waste water, faeces
- Diesel fuel
- Extinguishing foam

Filling level heights of between 400 - 2000 mm can be measured.

Design and mode of operation

An AC voltage signal is exerted onto two metal rods held at a defined distance to each other. When dipped into fluids, these metal rods become a capacitor within an electrical circuit.

The capacitive values of this capacitor are primarily determined via the filling level height and the resulting change in the dielectrics.

Electronics integrated into the device convert these capacity changes into linear electrical uniform signals 0...20 mA / 4...20 mA / 0...10 V DC / 0...5 V DC / 1...5 V DC / 2...10 V DC um.

Important features

- Sturdy device, IP67
- Integrated electronics
- very simple comparison
- e-approval

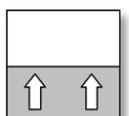
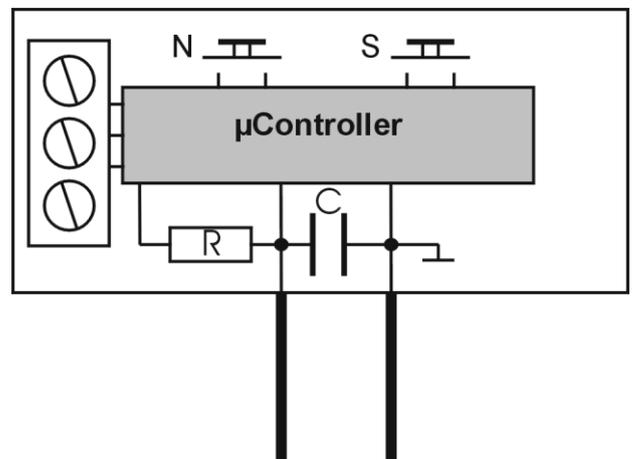
Areas of Application

The capacitive filling level probe NC56 with an electrical output is suitable for various measuring tasks in the following areas:

- Procedural engineering
- Process technology
- Environmental technology
- Automotive engineering
- Ship technology



Function Diagram



Technical data

General points

Measuring procedure	capacitive measurement
for tank heights	400-2000 mm (other lengths available on request)
Operating pressure	max. 10 bar
Temperature	max. 80°C (environment and medium)
Number of electrodes	2 (for Diesel 3)
Threaded connection	G 1¼", for protective tube version G2"
Type of protection	IP 67

Electrical data

Operating voltage	9 - 32 V DC	9 - 32 V DC	12 - 32 V DC	12 - 32 V DC	12 - 32 V DC
Current draw (without signal)	ca. 30 mA	ca. 30 mA	ca. 30 mA	ca. 30 mA	ca. 30 mA
Output signal	0 - 20 mA	4 - 20 mA	0 - 10 V DC	0/1 - 5 V linear	2 - 10 V linear
Apparent ohmic resistance	$(U_B - 9 V) / 20$ mA	$(U_B - 9 V) / 20$ mA	> 5 kΩ	> 5 kΩ	> 5 kΩ

U_B = Operating voltage

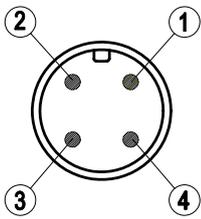
Electrical connection

4-pin M12 connector (male)

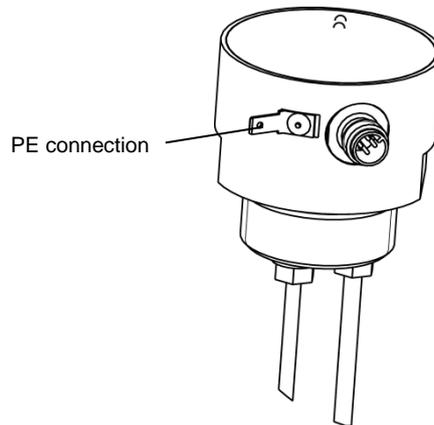
Materials

Housing	Plastic
Media-contacting	Stainless steel 1.4404, ECTFE, shrink hose (polyolefin)
Authorization	e-approval acc. to 72/245/EEC, 95/54/EEC Approval no.: e13*72/245*95/54*2182*00

Electrical connection

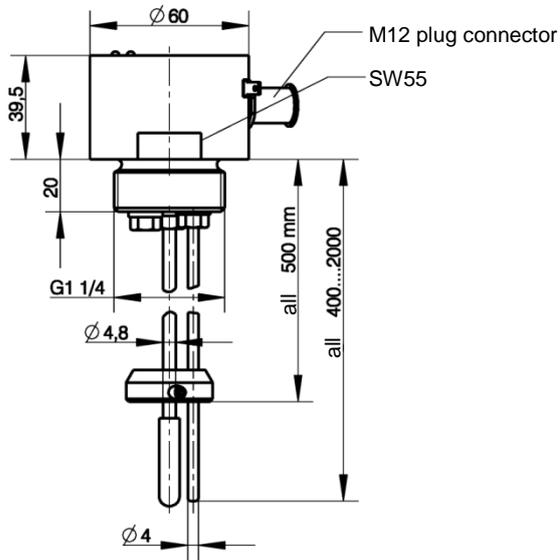


BR	WS	BL	SW
1	2	3	4
Power supply	n.c.	Power supply -	Signal +Sig

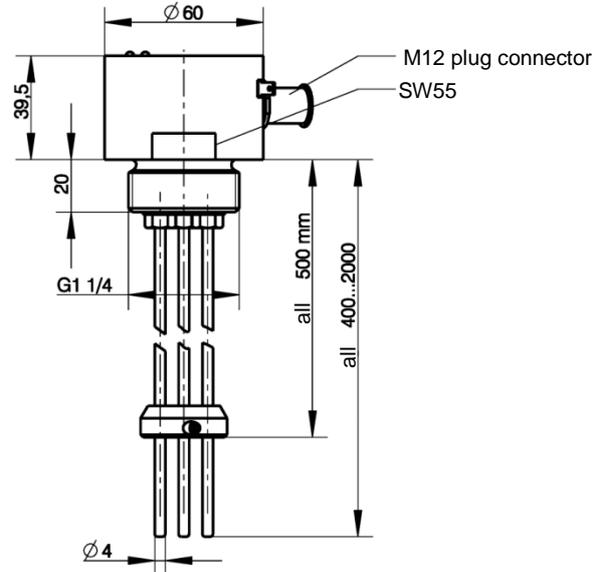


Dimensional drawings

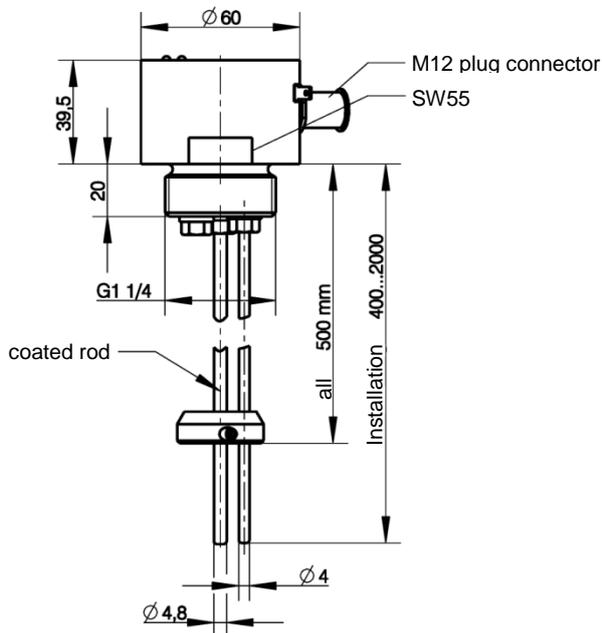
Probe for water



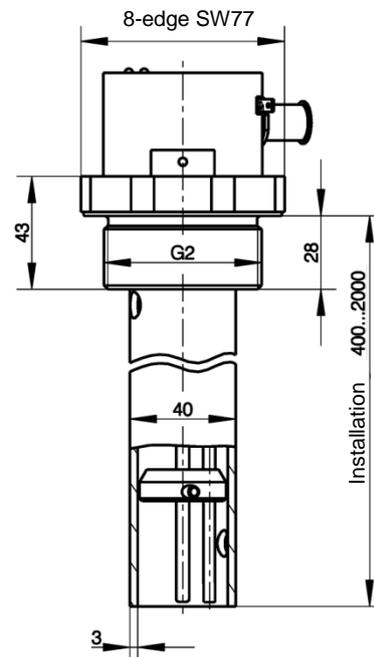
Probe for diesel, heating oil



Probe for extinguishing foam / waste



Protection



Order Codes

Level probe

Type NC56

								2	0	1	1
--	--	--	--	--	--	--	--	---	---	---	---

Design

- Water/waste water
(1 rod shrink hose / 1 rod bare, 1.4404)> 2
- Diesel
(3 rods bare, 1.4404)> 3
- Faeces
(1 rod ECTFE-coated / 1 rod bare, 1.4404).....> 4
- Extinguishing foam agent
(1 rod ECTFE-coated / 1 rod bare, 1.44.04).....> 5
- Rope probe with weight, for metal tanks
(1 stainless steel cable as electrode)> S
- Chemicals
(2 rods ECTFE coated)> 6

Casing material / connection

- Plastic casing G1/4 for external applications> 0
- Plastic casing including protection tube G2
For external applications.....> P
- Plastic casing including protection tube G2
For external applications and boreholes for suction vehicles
only for model 4 (faeces)> G

Installation length (from sealing surface)

- From 400 – 2000 mm / graduation 50 mm> 0 4 0 0
->
->
->
-> 2 0 0 0

Installation length (from sealing surface)

- 0 – 20 mA 3-WIRE (Standard)> A
- 0 – 10 V DC 3-WIRE (Standard)> C
- 1 – 5 V DC linear 3-wire.....> D
- 4 – 20 mA 3-WIRE (Standard)> P
- 0 – 5 V DC linear (three-wire voltage).....> U
- 2 – 10 V DC linear (three-wire voltage).....> Z

Operating voltage

- 9 – 32 V DC (only for current output)> E
- 12 – 32 V DC (only for voltage output)> F

Version

- 2011> 2011

