

# Continuous level transmitter NIVOMAT FS 2



## SAFETY INSTRUCTIONS

- Installation, commissioning and maintenance may only be performed by qualified personnel!
- Only connect the device to the voltage specified in the technical data and on the type label!

## DESCRIPTION

The NIVOMAT FS 2 level probe works on the principle of a magnetic float that is guided on a vertical tube. Changes in the fill level move the float in a vertical direction. The solenoid switches monostable reed contacts with resistors built into the tube. This creates a resistance chain analogue to the fill level. The transmitter generates a 4...20mA signal from the change in resistance.

## AREA OF APPLICATION

The NIVOMAT FS 2 level probe is used as a measuring sensor for quasi-continuous level indication of liquid tank contents, e.g:

- Process water, cooling water, acids, alkalis
- Oil and fuel
- Condensate
- Chemicals
- Galvanic baths

Ensure that the float and standpipe material is resistant to the respective filling medium.

Only use for low-viscosity and low-solids liquids that do not tend to stick together, resinify or crystallise. Solids must not be magnetisable.

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Continuous level transmitter  
**NIVOMAT FS 2**

28-04-2025

M-550.06-EN-AA

**LEV**

**550-06 /1**

## TECHNICAL DATA

Materials	Stainless steel 316L, PVC, PE, PP, PVDF
Float materials	Stainless steel 316L, PP, PVDF
Float diameter	Stainless steel: 92.5 / 52.5mm PP: 52.5mm PVDF: 76mm
Minimum density of the medium	Stainless steel: 0.75kg/dm <sup>3</sup> or 0.85kg/dm <sup>3</sup> PVC/PE/PP/PVDF: 0.85kg/dm <sup>3</sup>
Float stainless steel	$\rho=0.75\text{kg/dm}^3$ - Ø92.5x110 $\rho=0.85\text{kg/dm}^3$ - Ø52.5x90
Float PP	$\rho=0.85\text{kg/dm}^3$ - Ø52.5x70
Float PVDF	$\rho=0.85\text{kg/dm}^3$ - Ø76x70
Resolution	FS 21: 10mm
Supply voltage	12...28V
Output current	4...20mA, two-wire
Ambient temperature	-20...+60 °C
Max. Viscosity	90...100cSt
Max. operating pressure	Stainless steel: 25bar Plastic: 2bar
Media temperature *)	Stainless steel: -20...+90 °C or PVC: +5...+60 °C (PP float) PVC: +5...+60 °C (PP float) PVDF: -5...+80 °C
Connection head	Polycarbonate, protection class IP65 Aluminium (optional, for stainless steel version)
Cable gland	Polyamide M16x1.5

\*) depending on the chemical resistance: see resistance tables or contact us

**CE mark: The device fulfils the legal requirements of the applicable EU directives**

## STORAGE INSTRUCTIONS

FS probes with a plastic tube must be stored in such a way that it cannot bend. If necessary, the float must be removed.

## MOUNTING

The level probe is attached using a flange or threaded connection suitable for tubes.

### Installation procedure:

- Loosen the retaining nut at the lower end of the tube
- Remove the float
- Guide the standpipe through the container opening
- Attach the float with the 'TOP' mark to the standpipe
- Screw the nut back on. Do not forget the spring washer for the stainless steel version

### Please note!

- Only install vertically
- the float must not touch the tank wall or other fixtures during operation
- Do not bend the tube during installation or operation. In the event of strong cross flows (e.g. due to agitators), provide a flap, protective wall, guide or similar in the tank
- Protect the probe from strong vibrations or shocks
- Maintain a lateral distance of 10 cm from steel parts



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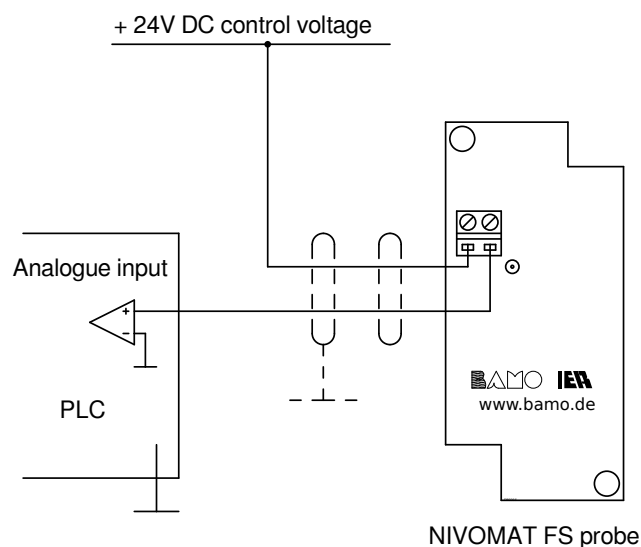
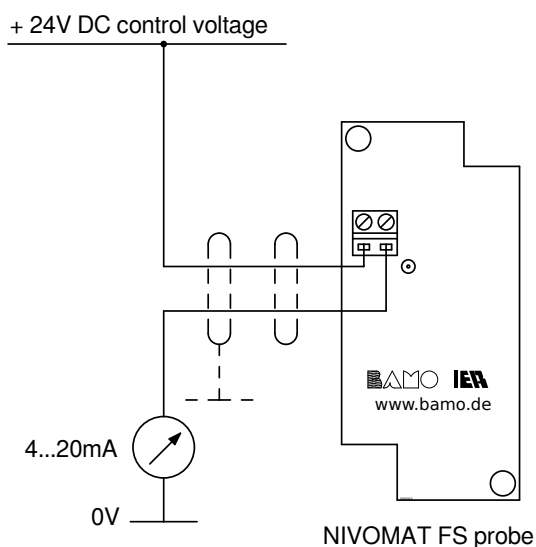
**LEV**

**550-06 /2**

## ELECTRICAL CONNECTION

- Use shielded cables with a minimum cross-section of 0.5mm<sup>2</sup>
- Observe max. cable length
- Comply with EMC regulations.

Supply voltage: 12...28V DC  
Output current: 4...20mA



### Note:

The signal cable can be connected to the FS probes in any way; it is not necessary to pay attention to the correct polarity. Only the measuring device/PLC input must be connected with the correct polarity.

## COMMISSIONING

At the start of commissioning, the NIVOMAT FS 2 level probe should be checked with an ammeter to ensure that an output current of between 4...20mA is flowing.

To do this, the float is slowly guided along the guide tube.

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**550-06/3**