



Capacitive LEVELTEC Level Probe

Series LEVELTEC S
 LEVELTEC L
 LEVELTEC LR



Operating Instructions

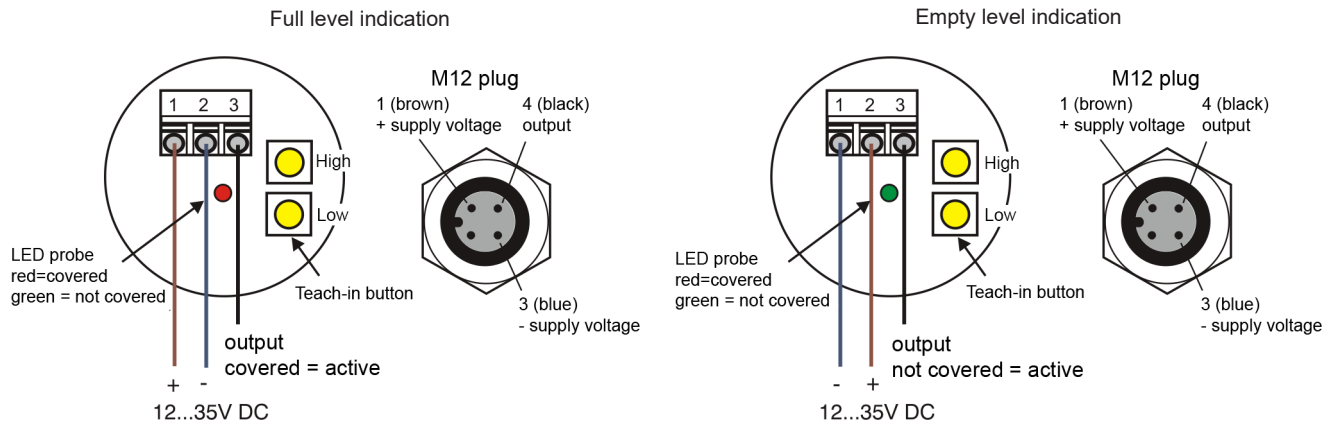
English

N - TI200

Version 1.0

1 Connection

ELECTRIC CONNECTION



2 Sensitivity Matching for Models LEVELTEC Using Teach-in Key

The factory setting of the capacitive Leveltec level probe is a DC value of about $\epsilon 25$ to reliably detect fluids with a water content of 20% or more.

For the following media / applications we recommend, however, to adjust the sensitivity level:

- media with a very low DC value (e.g., fruit juice concentrates, sugar solutions, edible oils, or other fluids with little or no water content);
- viscous or adhesive media; or
- if the factory setting fails to achieve reliable switching behaviour.

Press the teach-in buttons to optimally adjust the sensitivity of the Leveltec level probe to your application!

3 Sensitivity Adjustment Using Teach-in Key

Please follow these instruction for successful teach-in:

3.1 *Teach-in with installed level probe*

1. Make sure that the coupling part (PEEK) of the installed level probe is fully covered by the medium to be detected.
2. The level probe's supply voltage is connected.
3. Press the teach-in button "High" and keep it pressed for about 3 seconds.
4. Teach-in is completed and the LED probe should now light up red (i.e., the sensor is covered).
5. The sensitivity setting is retained even after the supply voltage is switched off and can be repeated at any time as described above.

3.2 *Teach-in with uninstalled level probe*

1. Get a container filled with the medium to be detected (100ml or more).
2. Turn a hygienic weld-in lug (e.g., TEM1FTP16) towards the level probe.
3. Connect the level probe to the supply voltage (12–35VDC).
4. Dip the tip of the level probe into the medium until the front of the weld-in lug is completely covered by the medium.
5. Press the teach-in button "High" (when submerged) and keep it pressed for about 3 seconds.
6. Teach-in is completed and the LED probe should light up in red when submerged and in green when not submerged.
7. The sensitivity setting is retained even after the supply voltage is switched off and can be repeated at any time as described above.

3.3 *Teach-in the switch-off status*

The switch-off status can be set with the additional Teach-in "Low" button.

1. Make sure that the probe tip comes into full contact with the medium. If the LED does not light up red, then first follow the instructions of chapter 3.1. resp. 3.2.
2. Afterwards, make sure that the probe tip is not covered by the medium to be detected. Now there should only be a few buildups on the probe tip.
3. If the LED is green, no further setting is required.
4. If the LED lights up red, press the Teach-in button "Low" and hold it down for approx. 3 seconds
5. The Teach-in "Low" has been carried out. The LED should light up green.
6. The sensitivity setting is retained even after the supply voltage is switched off and can be repeated at any time according to this scheme.



The device must not be used in hazardous areas.

TECHNICAL DATA

General details	
Device type/measuring principle	LEVELTEC / capacitive for detection of liquid media
Output	
Output signal	active, 50mA max. (PNP), short-circuit-proof
Switching function	Full/empty level indication specified by polarity of the auxiliary voltage, constant indication by 2-colour LED
Time delay	0.1 s non-adjustable
Electronics	
Version	Standard version, set to a dielectric constant (D_c value), factory setting $\epsilon=25$ Parametrised by pressing on teach-in key „HIGH“ (3...4 seconds) in the device, probe must be covered
Auxiliary energy resources	
Supply voltage	12...36 V DC, max. 45 mA (bei 24 V DC) without switching load
Immunity to interference	CE-conformity is fulfilled
Conditions of use	
Installation position	see installation instructions
Setting	Press and hold teach-in „HIGH“ key for approx. 3 seconds; probe must be covered when settings are created Press teach-in key „LOW“ for approx. 3 seconds. Probe should be covered by adhesives.
Medium temperature	-20...+100°C, short duration 140°C for max. 30 min
Ambient storage temperature	-20...+65°C
Max. operating pressure	10bar (with TEM1FTP16 weld-in socket)
Protection class acc. to EN60529	IP 67 and IP 69K with M12-plug and mating plug
Construction	
Electrical connection	M16x1.5 cable screw connection – nickel-plated brass, or M12x1 plug-in connector, nickel-plated brass (stainless steel available on request)
Tightening torque	max. 5-10Nm (during initial assembly)
Process connection	- G1/2" with elastomer-free sealing cone (TP16)
Materials	- Field housing / lid: CrNiSt 1.4301 (304) - Housing seal: FKM - Process connection/extension tube: CrNiSt 1.4305 - Messspitze: PEEK
Accessories	
Process connection adapter	see ordering information

DIMENSIONAL DRAWINGS (dimensions in mm)

