STÜBBE

NIS LEVEL SWITCH
DATASHEET

PVC-U PP

Characteristics

- 1 to 4 switching points
- diaphragm pressure switch without medium contact
- pressure transmission by air
- low switching pressure
- corrosion resistant materials
- for unpressurised containers and pits
- process automation, e.g. as an optical or acoustic signal
- potential-free switching contacts
- does not require a power supply

Use	- Chemical plant manufacture - Industrial plants
Application	- for monitoring fluid levels in pressureless containers or open pits - as a signal transmitter when the level falls below as well as exceeds a specified filling level
Measuring category	- pressure
Connection	- socket end for solvent welding DIN ISO (PVC-U), d 32 - fusion socket end DIN ISO (PP), d 32
Tauchrohr	- A: without immersion tube - B: with 1,5m immersion tube - C: with 2m immersion tube - D: with 3m immersion tube - E: with 4m immersion tube
Flow medium	- Neutral and aggressive fluid or gaseous media, provided that the valve components coming into contact with the media are resistant at the operating temperature in accordance with the STÜBBE resistance guide.
STÜBBE resistance guide	- www.stuebbe.com/pdf_resistance/300051.pdf
Function	- The level switch NIS contains 1 to 4 diaphragm pressure switches and the same number of immersion tubes connected to them. When the fluid level rises, the air in the immersion tubes is compressed. At a pressure increase of max. 10 mbar (level difference of 100 mm H2O), the diaphragm activates a snap-action switch. If the level drops by a maximum of 50 mm, the air pressure in the immersion tube drops and a reset occurs.
Housing material (with medium contact)	- PVC-U - PP
Material sealing element (in contact with medium)	- EPDM - FPM
Fluid temperature	- PP: up to 90°C - PVC-U: up to 60°C
Colours	- Casing: PVC-U, grey RAL 7011 - Casing: PP, grey RAL 7032
Mounting position	- vertical
Installation	- The level switch can be mounted on unpressurised containers by means of the 2 threads on the lower part of the housing, or as an accessory by means of a flange or retaining plate. For the respective switching point, the fitter must drill an 8 mm hole in the immersion tube that is 100 mm below the desired switching point.

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Diaphragm pressure switch	- Diaphragm: EPDM - Diaphragm: FPM - Switching pressure: 100 mm WC = approx. 10 mbar - Reset pressure: 50 mm WC = approx. 5 mbar - Pressure load of switches: max. 0.5 bar - Switching tolerance: ±10% of respective switching pressure, but min. ±7.5 mm WC = approx. 0.75 mbar
Electrical switching capacity	- max. values at resistive load - AgNi contacts 6A / 250 V AC - AgNi contacts 2A / 24 V DC - Minimum switching current for the proper function of the contacts: 100 mA.
Electrical connection	- AMP flat plug 6.3 x 0.8 according to DIN 46244 - Screwed cable gland PG 16 - Type of Protection IP 65
Application limits	- Medium must not tend to crystallise or stick together - The NIS is not approved as an overfill prevention system as per §19 WHG (Federal Water Act)!
Limitation of accuracy due to	- Air absorption capacity of most liquids. Ventilate immersion tubes at certain intervals to avoid switching point shifts!
Accessories	- Mounting plate - Mounting-flange

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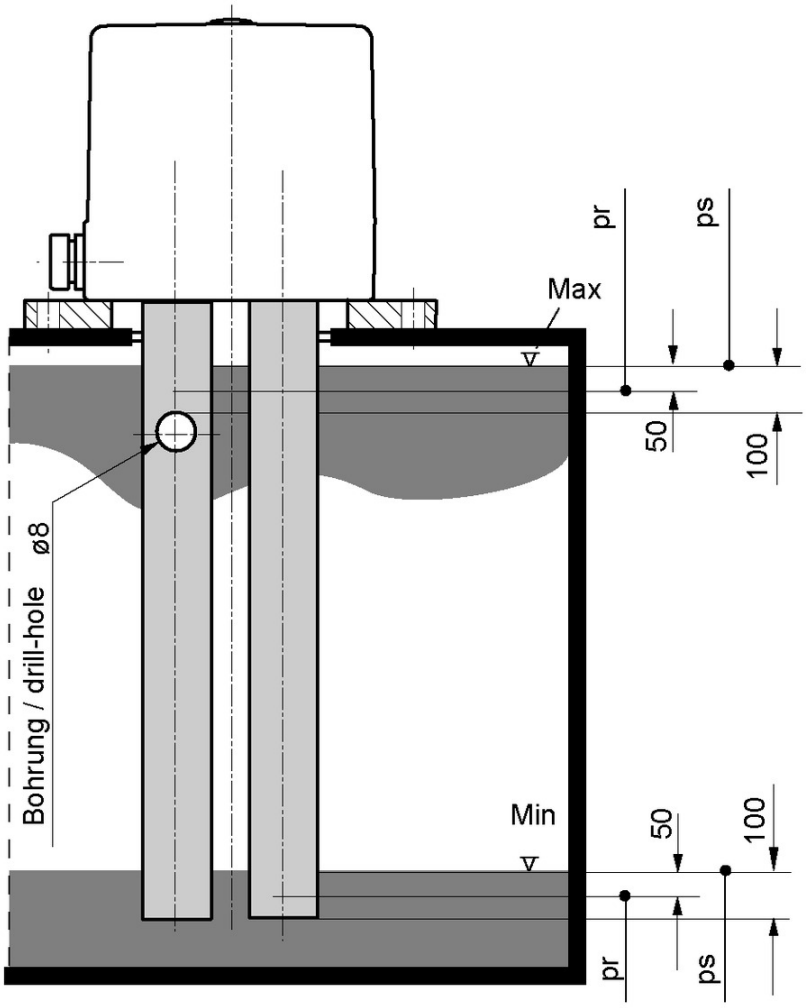
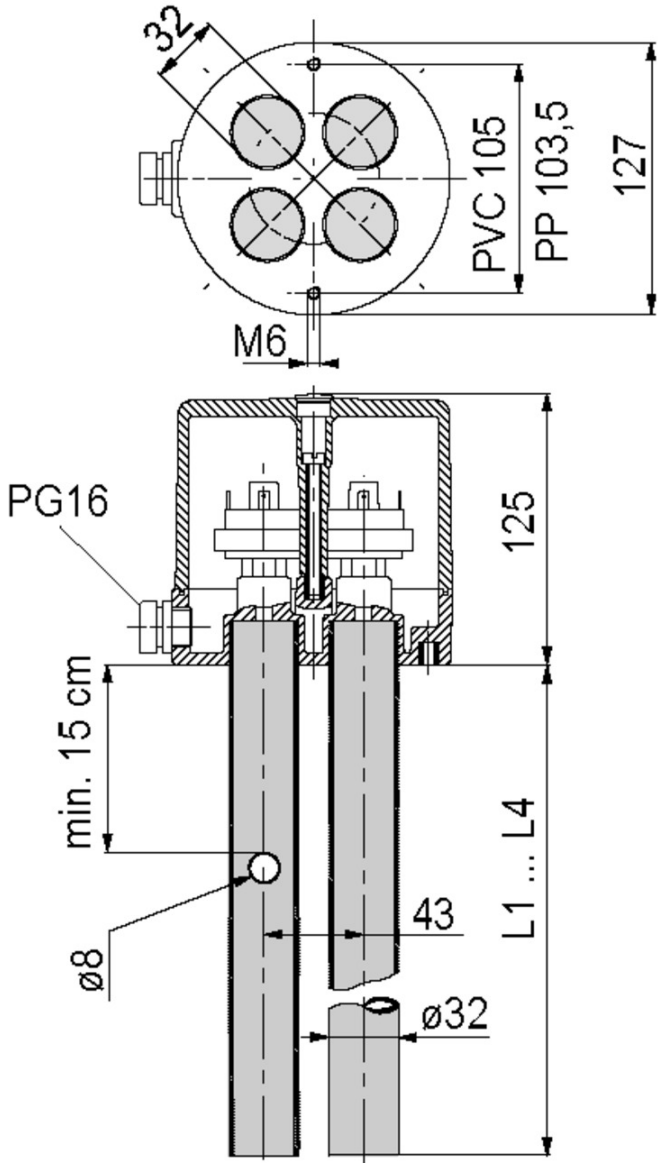
Switching points



ps = switching point during filling
pr = switching point at emptying

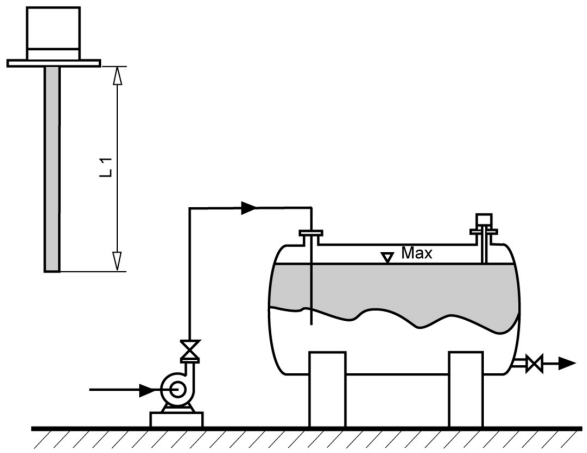
Standard



d	32	32	32	32
NIS	**NIS 1**	**NIS 2**	**NIS 3**	**NIS 4**
d	32	32	32	32
d1	32	32	32	32
L	0	0	0	0
L1	1500	1500	1500	1500
L2	2000	2000	2000	2000
L3	3000	3000	3000	3000
L4	4000	4000	4000	4000

all dimensions in mm

NIS 1



L1 switches the pump off when the maximum fill level (Max) is reached.

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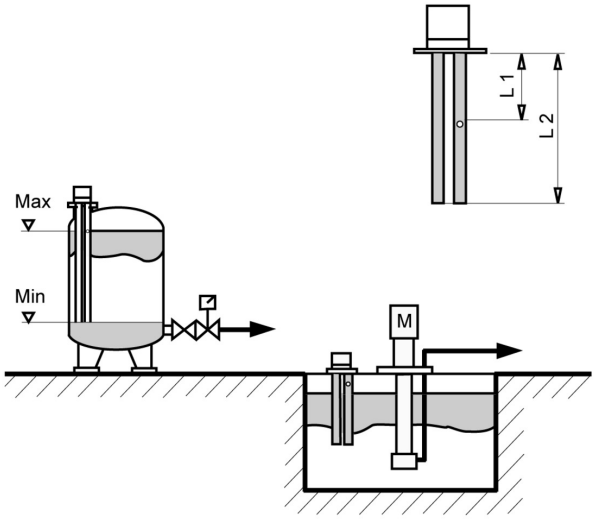
NIS 2



L1 switches the submersible pump on when the maximum fill level is reached.
L2 switches the submersible pump off when the minimum fill level is reached.
On the vessel, the shut-off valve is opened at (Max) fill level and closed at (Min) fill level.

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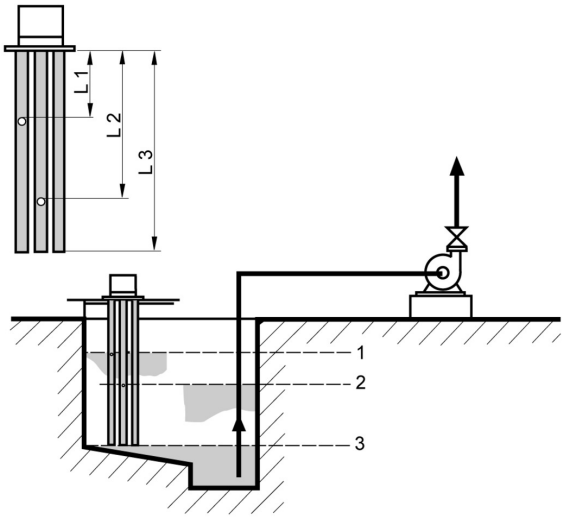
NIS 3



L1 outputs a warning signal when the fill level 1 is reached.
L2 switches the pump on when the fill level 2 is reached.
L3 switches the pump off when the fill level 3 is reached.

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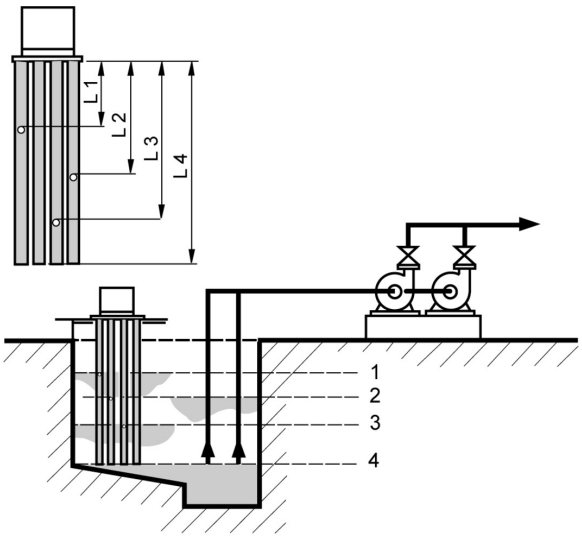
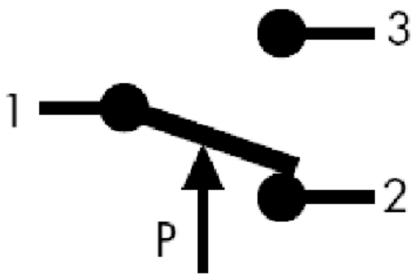
NIS 4



L1 outputs a warning signal when the fill level 1 is reached.
L2 switches both pumps on when the fill level 2 is reached.
L3 switches one pump on when the fill level 3 is reached.
L4 switches both pumps off when the fill level 4 is reached.

circuit diagram



	designation
1	COM
2	NC
3	NO
P	Pressure in the immersion tube

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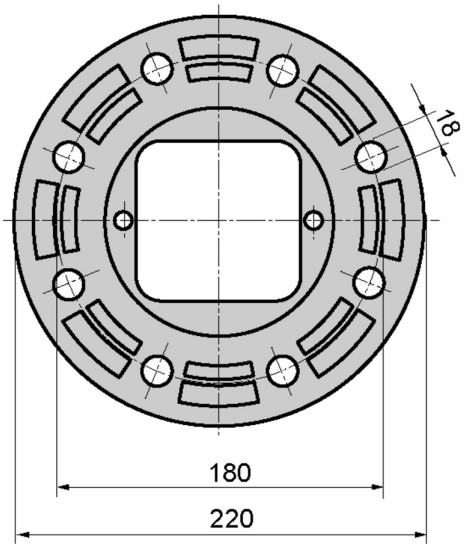
Accessories flange



Ident PVC-U = 50994
Ident PP = 50997

flange with mounting screws

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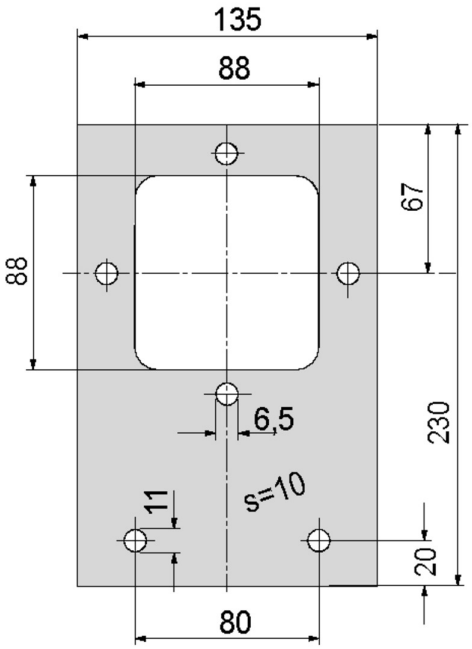
Accessories



Ident PVC-U = 62142
Ident PP = 62143

plate with mounting screws

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