

## Level switch NIS



### Advantage

- 1 to 4 switching points
- diaphragm pressure switch without medium contact
- pressure transmission by air
- low switching pressure
- corrosion resistant materials
- process automation, e.g. as an optical or acoustic signal

### Application

- chemical plants
- industrial plants

### Utilisation

- for monitoring fluid levels in pressureless containers or open pits
- for signalling if the level exceeds or falls below a set filling level

### Attention

- The NIS is not approved as an overflow prevention system as per §19 WHG (Federal Water Act)!
- Due to the air absorption properties of most fluids, aerate the immersion tubes at regular intervals to prevent any displacement of the switching points.

### 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 H<sub>2</sub>O), 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.

### Flow Media

- Neutral and aggressive fluids free of solid particles, provided that the valve components coming into contact with the fluids are resistant at the operating temperature in accordance with the ASV resistance guide.

### Fluid Temperature

- PVC-U: 0 to +60°C
- PP: 0 to +90°C

### Body

- PVC-U
- PP

### 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

### Electric 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
- cable screw connection PG 16
- protection type IP 65

### Connection

- socket end for solvent welding DIN ISO (PVC-U), d 32
- fusion socket end DIN ISO (PP), d 32

### Immersion Tube

- 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
- Length: >4 m on request!

### Mounting

- vertical

### Installation

- The level switch can be installed onto the non-pressurised container by means of two female threads or optionally by a flange or fixation plate, both of which are available as accessory. The switching points can be determined by drilling an 8 mm hole into the tube which needs to be 100mm lower on the tube as the required switching level. These holes have to be drilled by the installing assembly worker.

### Colour

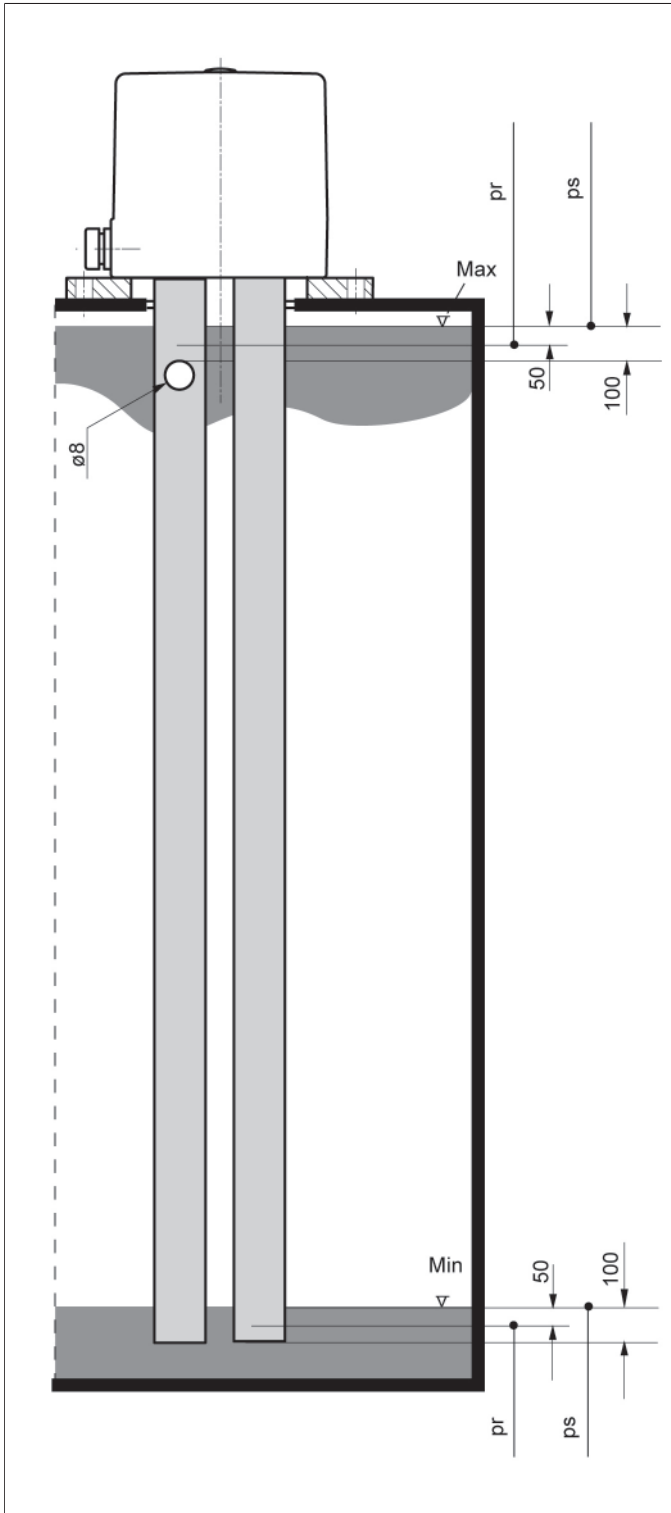
- body: PVC-U, grey, RAL 7011
- body: PP, grey, RAL 7032

### Accessories

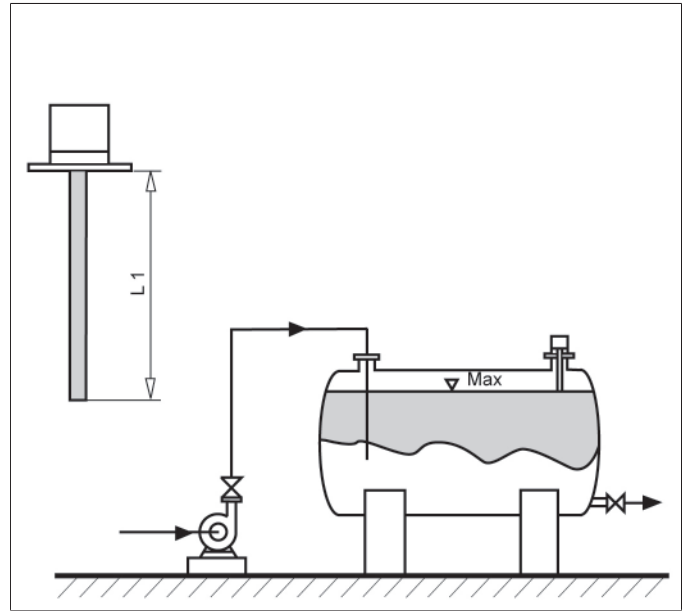
- Mounting plate
- Mounting-flange

## Level measurement, Level switch NIS

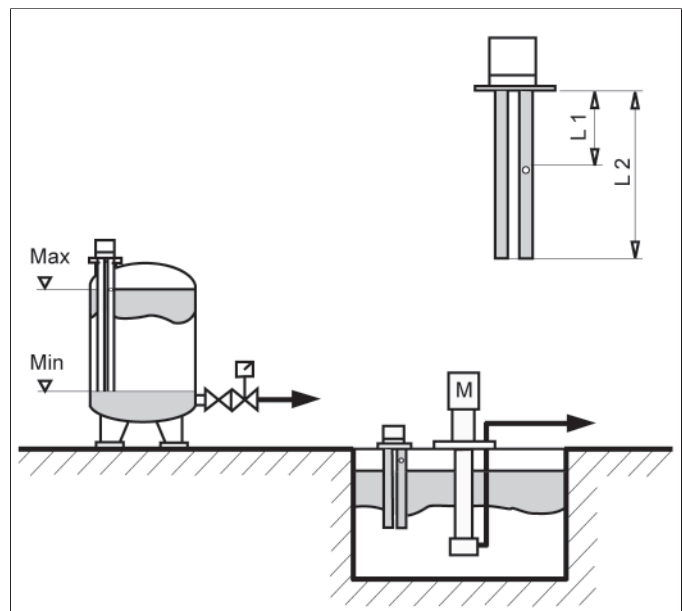
### Switching points



### NIS 1

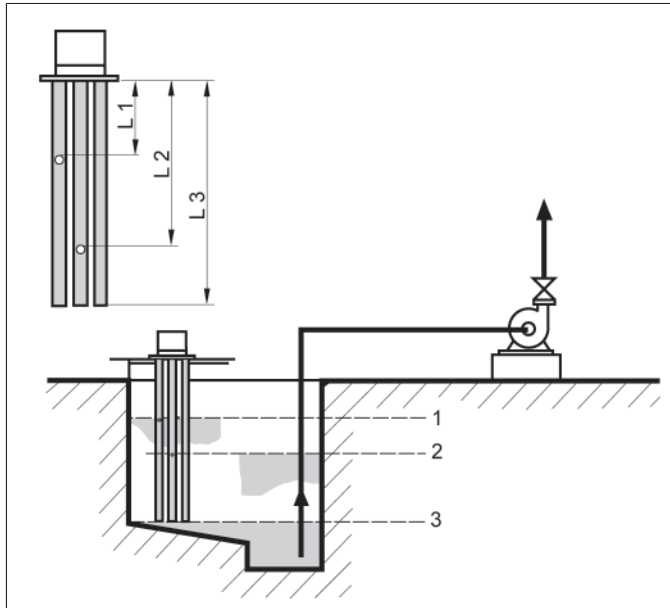


### NIS 2

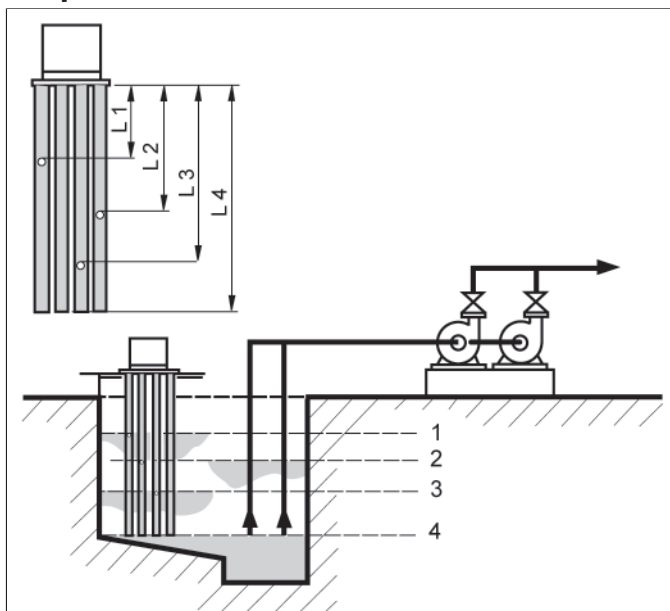


## Level measurement, Level switch NIS

### NIS 3



### NIS 4

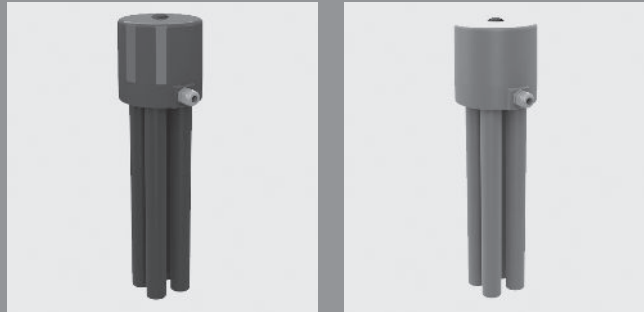


#### Operating note

Safe operation of the valve can only be ensured if it is properly installed, operated, serviced or repaired by qualified personnel according to its intended use while observing the accident prevention regulations, safety regulations, relevant standards, directives/technical regulations or codes of practice such as e.g. DIN, DIN EN, DIN ISO and DVS\*. \*DVS = German Welding Society

The intended use includes adhering to specified limit values for pressure and temperature, as well as checking the resistance. This requires all components coming into contact with the medium to be "resistant" in accordance with the ASV resistance guide.

## Level measurement, Level switch NIS



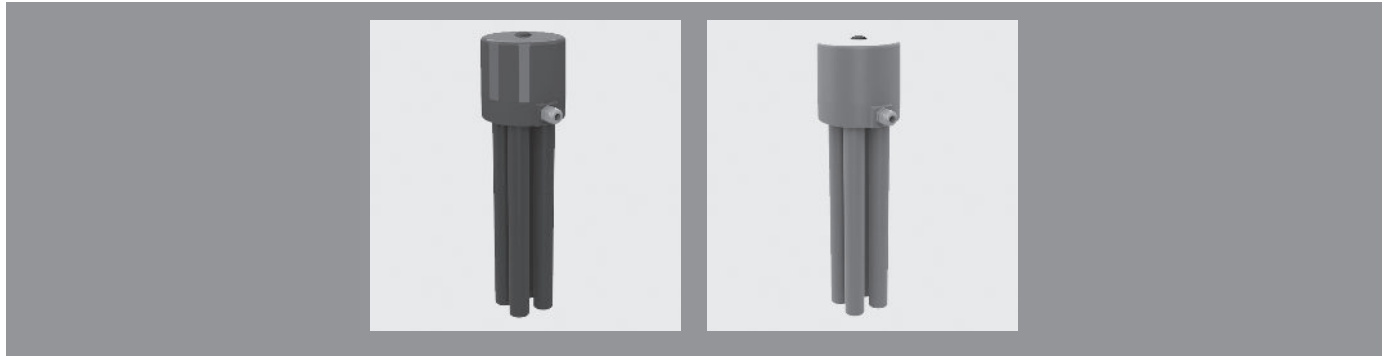
<b>body PVC-U</b>		<b>A</b>				
size pressure range	d(mm)		32	32	32	32
	L(mm)		0	0	0	0
	version		NIS 1	NIS 2	NIS 3	NIS 4
Connection	sealing	ident No.				
PVC-U socket end DIN ISO	EPDM		62134	62135	62136	62137
	FPM		52432	52431	52430	52429

<b>body PVC-U</b>		<b>B</b>				
size pressure range	d(mm)		32	32	32	32
	L1(mm)		1,500	1,500	1,500	1,500
	version		NIS 1	NIS 2	NIS 3	NIS 4
Connection	sealing	ident No.				
PVC-U socket end DIN ISO	EPDM		142107	142112	142117	142122
	FPM		142127	142132	142137	142142

<b>body PVC-U</b>		<b>C</b>				
size pressure range	d(mm)		32	32	32	32
	L2(mm)		2,000	2,000	2,000	2,000
	version		NIS 1	NIS 2	NIS 3	NIS 4
Connection	sealing	ident No.				
PVC-U socket end DIN ISO	EPDM		142108	142113	142118	142123
	FPM		142128	142133	142138	142143

<b>body PVC-U</b>		<b>D</b>				
size pressure range	d(mm)		32	32	32	32
	L3(mm)		3,000	3,000	3,000	3,000
	version		NIS 1	NIS 2	NIS 3	NIS 4
Connection	sealing	ident No.				
PVC-U socket end DIN ISO	EPDM		142109	142114	142119	142124
	FPM		142129	142134	142139	142144

## Level measurement, Level switch NIS



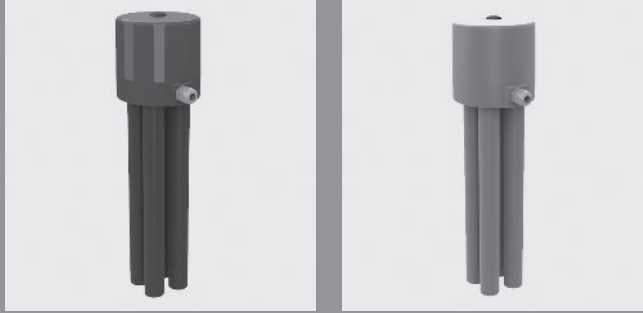
<b>body PVC-U</b>		<b>E</b>				
<i>size</i>	d(mm)		32	32	32	32
	<i>pressure range</i>	version	NIS 1	NIS 2	NIS 3	NIS 4
	L4(mm)		4,000	4,000	4,000	4,000
<i>Connection</i>	<i>sealing</i>	<i>ident No.</i>				
PVC-U socket end DIN ISO	EPDM	142110	142115	142120	142125	
	FPM	142130	142135	142140	142145	

<b>body PP</b>		<b>A</b>				
<i>size</i>	d(mm)		32	32	32	32
	<i>pressure range</i>	L(mm)	0	0	0	0
	version		NIS 1	NIS 2	NIS 3	NIS 4
<i>Connection</i>	<i>sealing</i>	<i>ident No.</i>				
PP socket end DIN ISO	EPDM	62138	62139	62140	62141	
	FPM	52433	52434	52435	52436	

<b>body PP</b>		<b>B</b>				
<i>size</i>	d(mm)		32	32	32	32
	<i>pressure range</i>	L1(mm)	1,500	1,500	1,500	1,500
	version		NIS 1	NIS 2	NIS 3	NIS 4
<i>Connection</i>	<i>sealing</i>	<i>ident No.</i>				
PP socket end DIN ISO	EPDM	142147	142152	142157	142162	
	FPM	142167	142172	142177	142182	

<b>body PP</b>		<b>C</b>				
<i>size</i>	d(mm)		32	32	32	32
	<i>pressure range</i>	L2(mm)	2,000	2,000	2,000	2,000
	version		NIS 1	NIS 2	NIS 3	NIS 4
<i>Connection</i>	<i>sealing</i>	<i>ident No.</i>				
PP socket end DIN ISO	EPDM	142148	142153	142158	142163	
	FPM	142168	142173	142178	142183	

## Level measurement, Level switch NIS

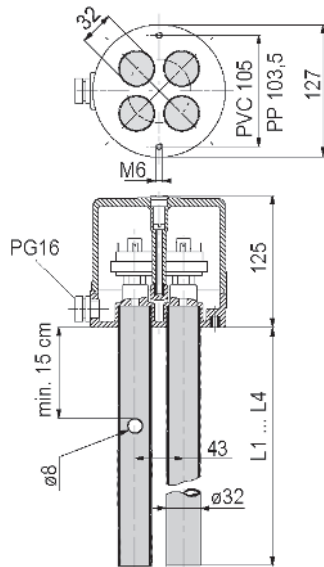


<b>body PP</b>		<b>D</b>				
<i>size</i>	d(mm)		32	32	32	32
	<i>pressure range</i>	L3(mm)	3,000	3,000	3,000	3,000
	version		NIS 1	NIS 2	NIS 3	NIS 4
<i>Connection</i>	<i>sealing</i>	<i>ident No.</i>				
	PP	EPDM	142149	142154	142159	142164
socket end DIN ISO	FPM		142169	142174	142179	142184

<b>body PP</b>		<b>E</b>				
<i>size</i>	d(mm)		32	32	32	32
	<i>pressure range</i>	version	NIS 1	NIS 2	NIS 3	NIS 4
	L4(mm)		4,000	4,000	4,000	4,000
<i>Connection</i>	<i>sealing</i>	<i>ident No.</i>				
	PP	EPDM	142150	142155	142160	142165
socket end DIN ISO	FPM		142170	142175	142180	142185

# Level measurement, Level switch NIS

## Standard

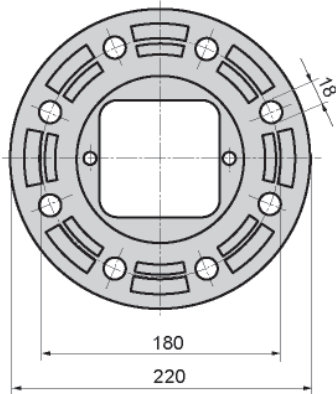


## dimensions

d(mm)	32	32	32	32
version	NIS 1	NIS 2	NIS 3	NIS 4
dimensions(mm)				
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

## Accessories

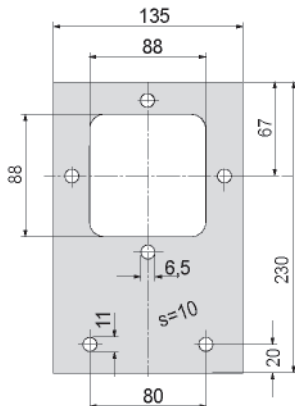
flange with mounting screws



Ident PVC-U = 50994  
 Ident PP = 50997

## Accessories

plate with mounting screws



Ident PVC-U = 62142  
 Ident PP = 62143

