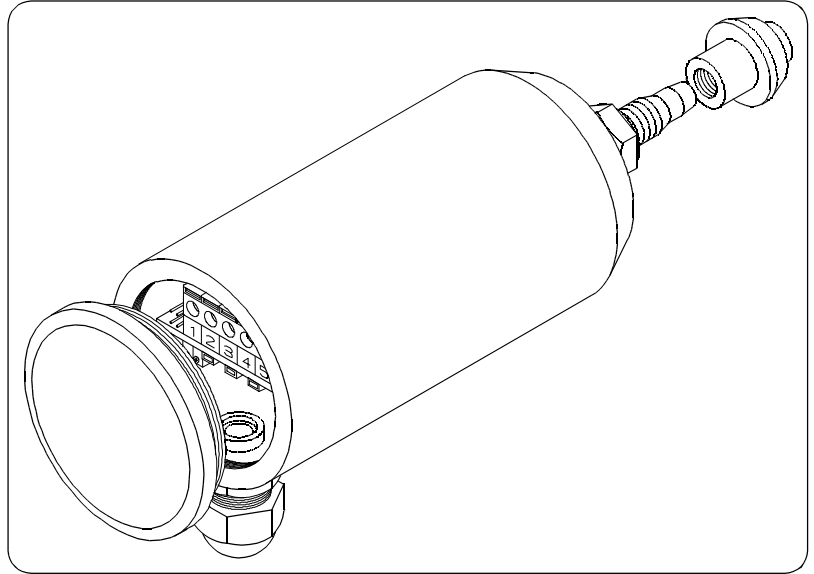


## Description

The gas bubble sensor type **GBD1** is a compact sensor with integrated electronics; it is used to detect roughly and finely divided gas bubbles in conductive liquids. This makes it possible to detect and to avoid errors during volume measurement or dosing, resulting from air or gas inclusion. The bubble detection is independent of the measuring medium's turbidity.

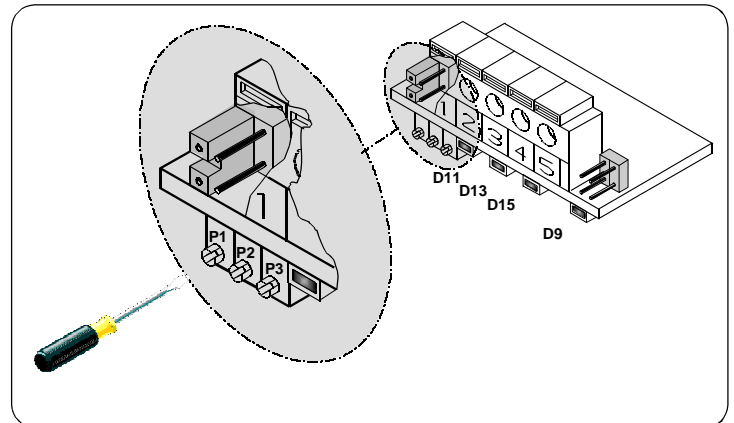


The sensor type **GBD1** is provided with 3 active pulse and digital outputs :

- pulse output, quasi-proportional to bubble inclusion
- digital output for bubble message
- digital output for full pipe message

Each of the 3 outputs has got an LED and can be adjusted to the operating conditions in question via incorporated trimming potentiometer.

The product conductivity is set between 0,1...10 mS/cm in 5 ranges by means of a jumper.



Design and materials of the gas bubble sensor correspond to the special requirements of the foodstuff, beverage and pharmaceutical industries. The housing is made of stainless steel and to be incorporated directly into the pipeline or into a Varivent housing by means of a welding sleeve. The sealing with regard to the measuring medium is effected via a conical nipple of highly heat-resistant material PEEK and meets the hygienic requirements as per EHEDG. The direct installation at the measuring point reduces the mounting expenditures and increases the resistance to interference. The active, short circuit proof output signals and the large range of power supply of 10...30 V DC allow a direct and easy connection to the SPS.

## Special Features

- bubble detection independent of liquid turbidity
- device ready for connection
- incorporation acc. to hygienic requirements
- simple welding due to collar sleeve
- supply voltage 10...30 DC
- active, short circuit proof outputs
- adjustable sensitivity
- direct connection to SPS possible

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**Gas bubble sensor**  
**GBD1**

**D 24.80 E**

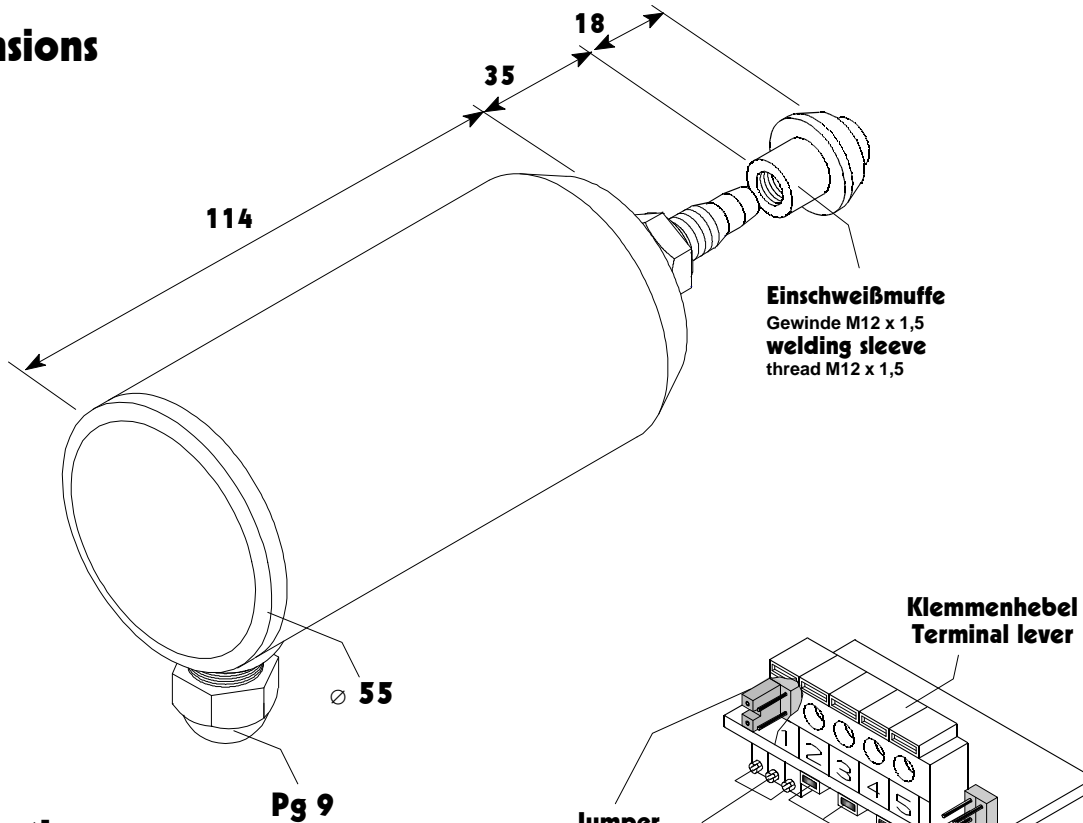
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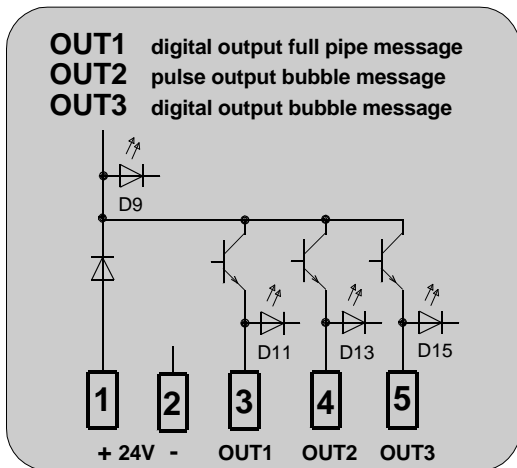
# Technical Data

<b>Housing material</b>	stainless steel V2A 1.4305
<b>Sealing</b>	PEEK
<b>Protective type</b>	IP 65
<b>Mounting type</b>	thread M12 x 1.5; collar sleeve 25 mm; free of clearance volume
<b>Mounting depth</b>	8 mm
<b>Operating temperature</b>	
Connecting head	0 ... +55°C
Sensor point	-50 ... +120°C
<b>Operating pressure</b>	10 bars max.
<b>Connection</b>	outside Pg9, inside 5-pole terminal
<b>Auxiliary voltage <math>U_b</math></b>	10 ... 30V DC, keyed
<b>Power consumption</b>	65 mA at 24V, 135 mA at 12V; without outputs
<b>Outputs</b>	active outputs, $U_b$ - 1,5V, 330mA max., short circuit proof
<b>Sensitivity</b>	continuously adjustable per output

## Dimensions



## Connections



conductivity range mS/cm	setting of jumper
0,1 - 0,5	without jumper
0,5 - 1,0	J4
1,0 - 2,0	J3
2,0 - 5,0	J2
5,0 - 10,0	J1