

## WATER LEVEL / WELL PROBE TANK CONTENTS MEASURING PROBE



FOR SIMPLE AND INEXPENSIVE APPLICATIONS



## GBS 01

Art. no. 603059

Water level / well probe

## Application:

Suitable for permanent level measuring in tanks, rivers, lakes, drinking-water wells, drilling holes, waste water plants...

## GBS 02

Art. no. 603146

Tank contents measuring probe for difficult measuring conditions

## General:

Piezoresistive pressure sensor with temperature compensation. Welded, non-corrosive design with integral and additionally sealed water-proof connecting cable. The pressure compensation is done via a cable-integrated air path to the atmosphere. A special feature of GBS 02 is the lateral flow resistance, which prevents media ingress.

## Application:

For measuring the level of fuel and other aggressive media. The sensor is highly precise, insensitive to lateral flow and offers optionally lightning protection and other output signals (e.g. 0 ... 10 V). For measuring of gasoline please order Ex-design.

## Specifications:

Measuring ranges:	0.1 bar (100 mbar) ... 10 bar = 1 ... 100 m water column
Available ranges:	0.1, 0.25, 0.4, 0.6, 1, 1.6, 2.5, 4, 6, 10
Overload (bar):	1 2 2 3 5 8 8 10 10 10
Output signal:	4 ... 20 mA (option: 0 ... 10 V only for GBS 02)
Permissible impedance:	4 ... 20 mA: $R_x [\Omega] < (U_{V[V]} - 10 V) / 0.02 A$
Permissible load:	0 ... 10 V: $R_L [\Omega] > 100 \text{ k}\Omega$
Auxiliary energy:	10 ... 30 V DC (14 ... 30 V DC at 0 ... 10 V)
Accuracy:	accuracy (% of span): GBS 01: $\leq 0.5$ setting of cut-off point resp. $\leq 0.25$ (BFSL)
GBS 02:	accuracy (% of span): $\leq 0.25$ (setting of cut-off point) resp. $\leq 0.125$ (BFSL); (at 0.1 bar: $\leq 0.5$ setting of cut-off point) resp. $\leq 0.25$ (BFSL)
Hysteresis (% of span):	$\leq 0.1$
Repeatability (% of span):	$\leq 0.05$
Stability per year (% of span):	$\leq 0.2$ (at reference conditions)
Operating temperature:	-10 ... +50 °C (GBS 01) or -10 ... +85 °C (GBS 02)
Temperature coefficient (% of span):	$\leq 0.02 / K$ (for meas. range $> 0.4$ bar)
Filling:	KN77, food safe
Housing:	chromium-nickel alloy 1.4571. Male thread G 1/2" accessible after removal of plastic protection cap.
Probe dimensions:	Ø 27 mm, length of metal body: approx. 100 mm (GBS 01), approx. 147 mm (GBS 02), cable Ø approx. 7.5 mm
Connection:	10 m stationary casted PUR cable (GBS 01) resp. FEP-cable (GBS 02), loose ends. Glass-fibre screen protects cable against tearing. (Extra long cable against upcharge - please specify when ordering)

## Options GBS 01:

extra long connection cable (PUR)  
till max. 300 m

## Options GBS 02:

extra long connection cable (FEP, teflon)  
till max. 100 m

Output signal 0 ... 10 V

Lightning protection, Ex-protection, meas. range 16 and 25 bar

## INLINE COMPRESSED AIR FLOWMETER FOR COMPRESSED AIR CONSUMPTION MEASUREMENTS



## GEE 771C-DN15

Art. no. 602917

Flowmeter with DN15 sensor and assembly ball valve DN15

## GEE 771C-DN20

Art. no. 602918

Flowmeter with DN20 sensor and assembly ball valve DN20

## GEE 771C-DN25

Art. no. 602919

Flowmeter with DN25 sensor and assembly ball valve DN25

## General:

The inline flowmeter is based on the thermal mass flow measuring principle and is well suited for flow measurements in pipes DN15 till DN25. It allows measuring the consumption of compressed air (optionally also nitrogen, CO<sub>2</sub>, oxygen, helium or other non-corrosive, incombustible gases).

The device sets standards in terms of accuracy and repeatability, its unique mounting concept as well as its close-to-application adjustment at a pressure of 7 bar.

The mounting in a measurement assembly ensures easy installation and removal of the sensor for regular calibration and assures at the same time an exact and reproducible positioning of the flow sensor in the pipe. There are two signal outputs to read-out the measured values. Depending on the application the outputs can be configured as analog output (current or voltage), switching output or pulse output for consumption measurement.

## Configuration software

The flow meter can be configured to its desired use by means of its integrated USB interface and a software included in shipping.

Functions of the software:

- configuration of outputs (range / switching points)
- 2 point adjustment for flow and temperature
- read-out of consumption meter
- reset of min-/max- values and consumption meter

## Application:

**Leakage detection:** Consumption of compressed air despite of shut-down installations is a serious hint for a leak in one of the pipes (even a 1.5 mm sized hole can already yet energy costs of € 1.500!).

**Improvement in efficiency:** Compressed air is one of the most expensive form of energy in many plants! Therefore the knowledge about the consumption is essential for the application of an energy management system (e.g. acc. to DIN50001)

## Specifications:

Measuring unit:	Volume flow acc. to DIN1343
Measuring ranges:	DN15: 0.32 ... 63 Nm <sup>3</sup> /h DN20: 0.57 ... 113 Nm <sup>3</sup> /h DN25: 0.90 ... 176 Nm <sup>3</sup> /h
Meas. range temperature:	-20 ... +80 °C
Output 1:	Analog output 0(4) ... 20 mA or 0 ... 10 V
Output 2:	Pulse output or switching output
Voltage supply:	18 ... 30 V AC/DC, max. 200 mA
Working temperature:	-20 ... +60 °C
Media temperature:	-20 ... +80 °C
Working pressure:	max. 16 bar

## Accessories and spare parts:

## GEE-KH-DN15

Art. no. 604559

Assembly ball valve DN15

## GEE-KH-DN20

Art. no. 604560

Assembly ball valve DN20

## GEE-KH-DN25

Art. no. 607966

Assembly ball valve DN25

## GEE-AK-2m

Art. no. 607967

Connection cable transmitter ↔ sensor, 2 m