

Water level / well probe Tank contents measuring probe



FOR SIMPLE AND INEXPENSIVE
APPLICATIONS

GBS 01

Water level / well probe

General:

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

GBS 02

Tank contents measuring probe, for difficult measuring conditions

General:

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.

Description:

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 is the lateral flow resistance, which prevents media ingress. Therefore only the cable has to be replaced in case of a corresponding defect.

Specification:

Measuring ranges:	0.1 bar (100 mbar) to 10 bar = 1 to 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 GBS02)
Permissible impedance:	4-20 mA: $R_L [Ω] < (U_V [V] - 10 V) / 0.02 A$
Permissible load:	0-10 V: $R_L [Ω] > 100 kΩ$
Auxiliary energy:	10 ... 30 V DC (14 ... 30 V DC at 0-10 V)
Accuracy:	accuracy (% of span):
GBS01:	≤ 0.5 setting of cut-off point) resp. ≤ 0.25 (BFSL)
GBS02:	accuracy (% of span):
	≤ 0.25 (setting of cut-off point) resp. ≤ 0.125 (BFSL);
	(at 0.1 bar: ≤ 0.5 setting of cut-off point) resp. ≤ 0.25 (BFSL))
Hysteresis (% of span):	≤ 0.1
Repeatability (% of span):	≤ 0.05
Stability per year (% of span):	≤ 0.2 (at reference conditions)
Operating temperature:	-10 ... +50 °C (GBS01) or -10 ... +85 °C (GBS02)
Temperature coefficient (% of span):	≤ 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 (GBS01), approx. 147 mm (GBS02), cable Ø approx. 7.5 mm
Electric connection:	10 m stationary casted PUR cable (GBS01) resp. FEP-cable (GBS02). Glass-fibre screen protects cable against tearing. (Extra long cable against upcharge - please specify when ordering)

Options GBS01:

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

Options GBS02:

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

output signal 0-10 V

lightning protection,  -protection, meas. range 16 and 25 bar

Inline compressed air flowmeter for compressed air consumption measurements



GEE 771C-DN15

Flowmeter with DN15 sensor and assembly ball valve DN15

GEE 771C-DN20

Flowmeter with DN20 sensor and assembly ball valve DN20

GEE 771C-DN25

Flowmeter with DN25 sensor and assembly ball valve DN25

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)

Description:

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, CO₂, 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

Specification:

Measuring unit:	Volume flow acc. to DIN1343
Measuring range:	DN15: 0.32 ... 63 Nm ³ /h
	DN20: 0.57 ... 113 Nm ³ /h
	DN25: 0.90 ... 176 Nm ³ /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
Power 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:

Assembly ball valve DN15

GEE-KH-DN20:

Assembly ball valve DN20

GEE-KH-DN25:

Assembly ball valve DN25

GEE-AK-2m:

Connection cable transmitter ↔ sensor, 2 m