

Bivalent Pressure Transmitter observing measurement by itself

First pressure transmitter with two separate pressure cells to observe one another



optional temperature sensor

The level probe that observes data by itself

The bivalent pressure transmitter is a cost-efficient and space-saving probe with two separate pressure cells for level measurement in surface water and ground water. In combination with a Q-Log Mini data logger

you will have a complete measurement system that will observe itself. If the two separate measurement values drift apart the system will automatically alarm the user via E-Mail or SMS. This way service intervals can be elongated.

Bivalent pressure transmitter

- 2 independent long term stable ceramic pressure cells
- 2 micro controller for process of measurements and temperature compensation
- In combination with a **Q-LOG Mini** data logger the system will alarm the user by E-Mail or SMS if the two cells drift apart .
- Big diameter cells garanty reliable measurement.
- Reliable and rugged stainless steel body
- Diameter 44,5 mm to be used with 2" gauging pipe
- Output signal von 4 - 20 mA
- Optional with temperature sensor

The probe is equipped with ceramic pressure cells to garanty level measurement with high

accuracy and long term stability in varies applications. The two ceramic pressure cells of the bivalent probe are extremely robust against mechanical impact just as abrasion and overload conditions. Big diameter pressure cells enable measurement even under severe ambient conditions.

The modular body setup of the probe has proven very practical and enables to exchange single components. The weight of the stainless steel body allows for easy positioning / suspending of the probe. The cable routeing is double sealed.

The probe is equipped with one low powered micro controller for each of the two pressure probes. The micro controllers process pressure measurement and also control temperature inside the measurement cells for active temperature compensation. Output signal is a 4-20 mA /2-conductor signal. An optional temperature sensor measures the ambient temperature.

With a complete set of accessories, just a display- and supply units or suspension clamp the bivalent pressure transmitter is prepared for varies applications.

Technical Data

Material pressure cell module

Ceramic Al₂O₃ 96%

Optional ceramic Al₂O₃ 99,9% (only for 0,16 bar, 0,4 bar and 1 bar)

Input range pressure cell

Norminal pressure P _N rel. [bar]	0,06	0,16	0,4	1	2	5	
Allowable over pressure P _{max} [bar]	2	4	6	8	15	25	

Output signal / Hilfsenergie

2-conductor sensor 4-20 mA / U_B = 9 ... 36 V

Allow. resistance R_{max} = [(U_B - U_{B min}) / 0,02] Ω

Signal condition

Accuracy	< ± 0,1 % URV
Measurement rate	5 Hz
Long term stability	< ± 0,1 % URV / year

Temperature drift (Zero point and term)

Temperature drift for zero point and term in compensated range	< ± 0,1 % URV / year -20 ... 80 °C
--	---------------------------------------

Ambient conditions / temperature

Medium	-40 ... 125 °C
Elektronic / ambient	-20 ... 80 °C
Storage	-40 ... 125 °C

Connection

Sensor 1:	
supply +	red
supply -	blue
Sensor 2:	
supply +	white
supply -	yellow

Missellaneous

Life span	>100 x 10 ⁶ cycles
Sealing	flange sealing, material FKM (other on inquiry)
Material probe body	1.4301 (A)

Bivalent PS 0608_Engl

Quantum Hydrometrie GmbH • Zossener Straße 55 • 10961 Berlin • Germany
Telefon +49 (30) 6981 10 - 0 • Fax - 99 • www.quantum-hydrometrie.com