Pressure sensors

for gas and liquid pressure



PW3 RF Art.No.: 69.25.xx*

Water pressure sensor for level measurement with mechanical solid body and geomembrane filter to protect against suspended particles

30x225 mm Diameter Ø/Dimension: Weight: 670 g Filter type: Geomembrane 28 cm^2 Filter area: Material: V4A 1.4571 Protection class: IP 68



PW4 RF Art.No.: 69.15.xx*

Water pressure sensor for level measurement with mechanical solid body and geomembrane filter with maximum filter area







Diameter Ø/Dimension: 40x230 mm 880 g Weight: Filter type: Geomembrane Material: V4A 1.4571 Filter area: 57 cm² Protection class: IP 68 Protection class:



PF3 S Art.No.: 69.28.xx*

Gas and liquid pressure sensor connected to bulkhead plates with hydraulic union

Diameter Ø/Dimension:

Internal connection bore:

External connection:

Protection class:

Weight:

Material:



30x230 mm
640 g
EO SV6S



IP 68



PW3 SF Art.No.: 69.26.xx*

Water pressure sensor for level measurement with mechanical pre-filter and replaceable geomembrane filter for suspended particles





PF3 P

Gas and liquid pressure sensor with pressure gauge union and vent screw for sensor pre-chamber



Diameter Ø	/Dimension:	30x200 mn
Weight:		650 ફ
External co	nnection:	1/2 Zo
Internal cor	nection bore:	3 mn
Material:		V4A 1.457
Protection of	class:	IP 68



Art.No.: 69.51.xx* PW22 SW

Water level sensor for well and level loggers with mechanical pre-filter made of plastic with limited service life



Diameter Ø/Dimension:	22x1170 mm
Weight:	240 g
Filter type:	Plastic
Material:	V4A 1.4571
Filter area:	2 cm ²
Protection class:	IP 68
Particle size protection:	Up to 1.0 mm

Pressure sensors

for pore water



PP4 RS E Art.No.: 69.10.xx*

Pore water pressure sensor with ring filter made of sintered metal with threaded connection for press-in sleeve

Diameter Ø/Dimension:*:

Weight*:

Material:

Filter type:

Filter area:

Protection class:







V4A 1.4571 57 cm² IP 68 * (with press-in sleeve)



Diameter Ø/Dimension:



PP4 RS Art.No.: 69.12.xx*

Pore water pressure sensor with ring filter made of sintered metal and maximum external diameter of 40 mm





40x230 mm 920 g Weight: Sintered metal V4A 1.4571 57 cm²



PP3 RS

Pore water pressure sensor with small ring filter and maximum external diameter of 30 mm











Art.No.: 69.22.xx* PP3 SS

Pore water pressure sensor with end face filter made of sintered metal







Diameter Ø/Dimension:	30x160 mm
Weight:	450 g
Filter type:	Sintered metal
Material:	V4A 1.4571
Filter area:	5,5 cm ²
Protection class:	IP 68



Art.No.: 69.23.xx* PP3 SK

mV. mA VW LVW

30x160 mm

V4A 1.4571

450 g

Ceramic

5,5 cm²

IP 68

Pore water pressure sensor with ceramic end face filter for cohesive soils

Diameter Ø/Dimension:

Weight:

Filter type:

Filter area:

Protection class:

Material:

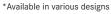


PP22 SS

Lightweight pore water pressure sensor with diameter of 22 mm and fully encapsulated



Diameter Ø/Dimension:	22x160 mm
Weight:	250 g
Filter type:	Sintered metal
Material:	V4A 1.4571
Filter area:	2 cm ²
Protection class:	IP 68



Technical data / variants

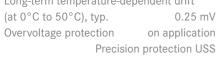
Pore water, gas and liquid pressure sensors



Art.No.: 69.xx.01

AU PIEZORESISTIVE PRESSURE SENSOR. 4-CONDUCTOR SYSTEM

Supply Constant current 1 mA Optional supply 4 mA or 10 VDC 0 - 250 mV Output signal Overload protection (1 – 50 bar) 50% f.s. Linearity incl. hysteresis < 0.5% f.s. Linearity incl. hysteresis (opt.) < 0.1% f.s. 0.025 mV/K Thermal zero drift Operating temperature range +5 to +80 °C Storage temperature range (dry) -40 to +100 °C Long-term temperature-dependent drift





Art.No.:69.xx.02

AI PIEZORESISTIVE PRESSURE SENSOR AS ABOVE WITH BUILT-IN AMPLIFIER AND OPTIONAL TEMPERATURE SENSOR

Supply 15 to 30 V 4 - 20 mA Output signal Overload protection (1 – 50 bar) 50 % f.s. Linearity incl. hysteresis < 0.5 % f.s. Linearity incl. hysteresis (opt.) < 0.1 % f.s. Operating temperature range +5 to +60 °C Storage temperature range -15 to +100 °C Temperature coefficient < 0.01 %/°C f.s. Burden (Us-9V): 20 mA Initialisation time after witching on 6 seconds Overvoltage protection integrated precision protection

With optional AD 590 temperature sensor, output signal 1 µA/K

AU AND AI

PRESSURE AND MEASURING RANGES

0 - 0.1, 0 - 0.2, 0 - 0.5, 0 - 0.5, 0 - 1, 0 - 2, 0 - 5 , 0 - 10, 0 - 20, 0 - 50, 0 - 100, 0 - 200 and 0 - 400 bar



LVW Art.No.: 69.xx.04

0+017000

VW

PRESSURE SENSOR WITH LVW VIBRATING WIRE TECHNOLOGY

Overload protection of measuring range 50 % \pm 0.5 % f.s. Linearity incl. hysteresis Linearity incl. hyster. (opt.) \pm 0.1 % f.s. Resolution (f.s.) ± 0.02 % Thermal zero drift < 0.03 %/°C

SENSOR-SPECIFIC SPECIFICATIONS

remperature range	0 10 +/0 0	
Current consumption	Pulse excitation	
Operating frequency	0.7 kHz - 1 kHz	
Supply, pulse triggering	60 V	
Coil resistance at 20°C	480 Ω	
Thermistor resistance at 25°C		
$3~\text{k}\Omega$ inductance	42 mH	
Capacitance	135 nF	
Line resistance at 5 V	150 Ω	
Overvoltage protection	on application	
coarse protection USS 0; Lightning		
protection element gas arrester		

Art.No.: 69.xx.03 PRESSURE SENSOR WITH VW VIBRATING WIRE TECHNOLOGY

Overload protection of measuring range 50 % Linearity incl. hysteresis ± 0.5 % f.s. Linearity incl. hyster. (opt.) \pm 0,1 % f.s. Resolution (f.s.) \pm 0,02 %*1 < 0,02 %/°C*1 Thermal zero drift

SENSOR-SPECIFIC SPECIFICATIONS

Temperature range -20 to +80 °C Current consumption Pulse excitation Operating frequency 2 kHz - 3,3 kHz 60 V Supply, pulse triggering Ex protection option*2 Ex ib IIB T4 EEx ib IIB BTI on application Overvoltage protection coarse protection USS 0; Lightning protection element Lightning protection element gas arrester

VW AND LVW

-0.5 bis +0.4, +0.7, +1.7, +3.5, +5.0, +7.0,

Add-ons and finishes

Resistance to seawater and brackish water 1.4439 or similar

Environmental protection: Gel pad to protect the membrane against aggressive chemicals and extreme pH values

Climate tested: If required, we can prepare a temperature test for your batch or individual sensor to provide a precise temperature quotient for your evaluation.

* PW4 RF only: With additional M36x1.5 union for press-in sleeve

All of our sensors are calibrated in defined environmental parameters. This calibration result is included with the actual device in the form of a comprehensive calibration sheet. More extensive calibrations can be arranged at any time.



Overview of cable types

- 1. PE
- 2. PUR
- 3. PE without intersheath
- 4. PVC
- 5. High-temperature cable
- 6. NYY-J power cable

Further designs on request.

Quality labels

HIGH QUALITY SENSORS Standard product line. High quality and attractively priced

INTELLIGENCE SENSORS With controller technology, self-compensation and direct display

QUALITY QUANTITY QUOTE Range of sensors for major customers with communicated quality/quantity quote



Standard 0-250 mV / extended 0-1 V CURRENT OUTPUT

Standard 4-20 mA / extended 0-20 mA VIBRATING WIRE Operating frequency 2.0 -3.3 kHz LONG VIBRATING WIRE

Operating frequency 0.7 -1 kHz FIBRE OPTIC

Glass fibre measurement system WIRELESS Wireless data transmission CONTROLLER ••• Digital chain instrumentation

PRODUCT INNOVATION



PRESSURE AND MEASURING RANGES

+10, +20, +35, +70, +100, +200, +350, +500 and 750 bar, negative pressures standard up to -0.5 bar

^{*1} Deviation during operation at high temperatures on request

^{*2} The cable data needs to be taken into account for Ex versions