

Pressure and Level Transmitters



Variable area flowmeters
Vortex flowmeters
Flow controllers
Electromagnetic flowmeters
Ultrasonic flowmeters
Mass flowmeters
Level measuring instruments
Communications technology
Engineering systems & solutions
Switches, counters, displays and recorders
Heat metering
Pressure and temperature



Pressure and Level Transmitters



Stainless steel electronic housing

These transmitters are some of the first worldwide to be delivered in a stainless steel electronic housing as standard. All pressure and level transmitters are only available with stainless steel electronic housings which are very compact and solid-state.

Manufacturing diaphragms

All transmitters of both the **series 8000** and **2000** have strong flush mounted diaphragms.

All diaphragms are laser welded and helium leak tested.

Available diaphragm materials are SS316L (standard), Hasteloy C, Tantalum or Ceramic.

Temperature compensation and calibration

All pressure and level transmitters of both the conventional series 8000 and the "Intelligent" series 2000 are always completely temperature compensated.

A temperature sensor, which monitors the process temperature, is mounted directly behind the diaphragm. The output of this sensor is used to compensate temperature variations in order to provide a very accurate electronic transmitter.

Level transmitters

For level measurement on all kinds of fluids, pastes and sludges, both the series 8000-SAN (conventional) and series 2000-SAN ("Intelligent" transmitters) can be used. Both series can be delivered with many different process connections (more than 100) for all kinds of industries, such as food and beverage, pulp and paper, pharmaceutical, water and waste water, oil and gas, marine/ shipbuilding, etc.

All transmitters are fully **temperature compensated** and have strong flush mounted diaphragms.

"We can offer the right transmitter for each application".

Submersible Level transmitters

KROHNE offers a wide range of submersible level transmitters with cable or stainless steel tube extension. The conventional Hydrobar 8000 series can be delivered in a cable execution with a "fixed range" or with adjustable zero and span.

Both the conventional and "Intelligent" Hydrobar "S" series are always equipped with a strong flush mounted diaphragm and a diaphragm protection cap. All Hydrobar transmitters are fully temperature compensated and have a perfect long term stability.

The Hydrobar level transmitters can be used for a lot of applications in the water and waste water industry, pulp and paper, marine/shipbuilding and many other industries.

The "Intelligent" Hydrobar "S" series are as standard equipped with a local display and three pushbuttons for calibration. Zero and span can be calibrated very easily without test pressure.



HYDROBAR
Series 8000 Hydrobar
(conventional)

HYDROBAR "S"
Series 2000 Hydrobar "S"
"Intelligent"

Features



"Conventional" series 8000

- Stainless steel housing
- Zero/span adjustable
- Accuracy 0.2%
- Wide rangeability
- Strong diaphragms
- Many process connections
- Intrinsically safe EEx ia IIC T4



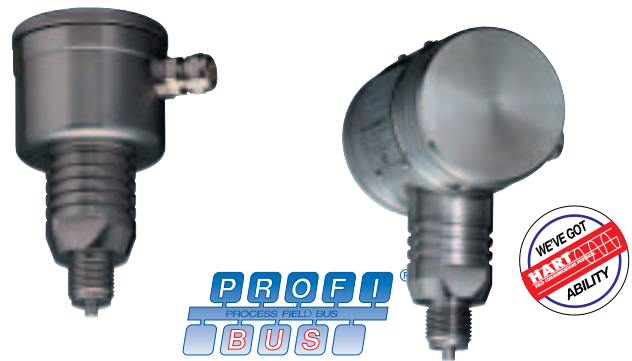
"Intelligent" series 2000

- Easy calibration without test pressure by 3 push buttons
- Accuracy 0.1 %
- All stainless design
- Wide rangeability
- Adjustable damping
- HART® protocol
- Profibus-PA



Pressure transmitters

The "Peramic" is a solid-state pressure transmitter based on a ceramic pressure cell which can withstand high overpressures. The "Peramic" can be used for all pressure applications in liquids, gases and vapours. Available process connections are G 1/2" (1/2" BSP) or 1/2" NPT. Ranges are available from 0.1 bar to 350 bar. The Peramic is also available in an intelligent version, the Peramic "S" (see right side).



Features PERAMIC®

Conventional pressure transmitter CER-8000

- Ceramic diaphragm
- Accuracy 0.2%
- Zero/span adjustable
- High overpressures
- Intrinsically safe EEx ia IIC T4



Features PERAMIC "S"

"Intelligent" pressure transmitter CER-2000

- Ceramic diaphragm
- Easy calibration without test pressure
- Accuracy 0.1 %
- High overpressures
- Adjustable damping
- HART® protocol
- Wide rangeability



All "intelligent" series 2000 transmitters can be calibrated very easily without test pressure, by 3 pushbuttons or with a Hand Held Terminal (HHT) or PC.

Pressure transmitters with flush mounted diaphragms

For pressure measurement of viscous fluids where a flush mounted diaphragm is necessary, we offer a wide range of pressure transmitters. All kinds of process connections are available for many industries. A special range is designed for the pulp and paper industry. The transmitters are solid-state all stainless with strong flush mounted diaphragms which can withstand high overpressures.

Features

Intelligent series 2000

- Strong diaphragms
- Accuracy 0.1 %
- Adjustable zero/span
- Wide rangeability
- All stainless steel
- HART® protocol
- PROFIBUS-PA
- Fully programmable



Conventional series 8000

Food/Dairy/Beverage and Brewing industry

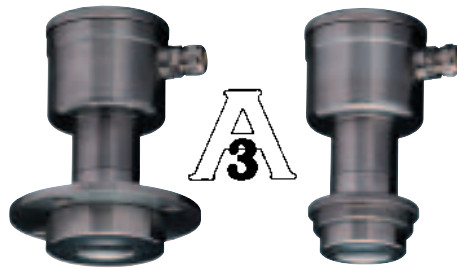
Both the conventional series **8000-SAN** and the intelligent series **2000-SAN** are designed to measure pressure and level in the Food, Dairy, Beverage and Brewing industries, and the pharmaceutical industry.

They are all stainless and suitable for CIP and SIP cleaning operations. The transmitters are fully temperature compensated. All hygienic process connections are available, many of them according to EHEDG and 3A approvals.

Features

Conventional series 8000-SAN

- Stainless steel housing
- Hygienic process connections according to **EHEDG** and **3A**
- Accuracy 0.2 %
- Zero/span adjustable
- Temperature compensated



Features

Intelligent series 2000-SAN

- Easy calibration without test pressure by 3 push buttons
- Accuracy 0.1
- All stainless design
- Hygienic process connections EHEDG and 3A
- Temperature read out
- Tank linearisation
- Profibus-PA



Specialist in "Specials"

The most creative constructions of pressure and level transmitters are already provided by us. Some of them have become a standard now, like the 3 examples below. If you ever have a special process

connection and you need to replace this existing transmitter, do not forget to ask the "specialist in specials".

Series 8000-SAN-HT

For high temperature applications we offer the series 8000-SAN with special cooling fins or with separated electronics. Max. process temperature 250 °C.



Series 8000-SAN-EXTD

The series 8000-SAN-EXTD are flange mounted level transmitters with an extended diaphragm. The extension length and diameter must be specified, always refer to our drawing no. 8000-61. The technical specifications are equal to the series 8000 mentioned in this brochure.



Brochures

Detailed technical brochures are available of all described instruments. Please do not hesitate to contact us for more information.

Approvals

Many approvals/certificates are available for several transmitters and industries. If your required approval/certificate is not mentioned, please contact us.

For example:

- Intrinsically safe (ATEX II 1G EEx ia IIC T4)
- HART® protocol
- PROFIBUS PA
- 3A Sanitary Standard (Food & Beverage)
- Lloyd's register, Veritas, GL, DNV (Marine/Shipbuilding)

Series 8000-VALVE

The series 8000-VALVE permits **flush** installation of the diaphragm and a transmitter that can be removed **without** shutting down the process. A detailed brochure is available.



Available for version 2000, too.