



## 'INTELLIGENT' PRESSURE AND LEVEL TRANSMITTERS "All Stainless Steel"



### Series 9000

- ▶ **ALL STAINLESS HOUSING**
- ▶ **EASY CALIBRATION** WITHOUT TESTPRESSURE BY 3 PUSHBUTTONS AND DISPLAY
- ▶ **ACCURACY: 0.2% (OPTION: 0.1%)**
- ▶ **TURN DOWN 4:1**
- ▶ **ACTIVE TEMPERATURE COMPENSATION**
- ▶ **ALL INDUSTRIAL PROCESS CONNECTIONS**
- ▶ **OPTION: HART PROTOCOL**



### Description

The series 9000 is a complete line of Pressure and Level transmitters with a **Stainless steel electronics housing**. The calibration / programming can be done very easy without testpressure by using the **3 pushbuttons and display**. The display can indicate a number of chosen engineering units. The series 9000 is fully temperature compensated and more than 40 different process connections with flush diaphragm are available. Many process connections from other brands are available for easy retrofit in existing tanks. HART® Protocol is available as an option.



Stainless steel electronics housing

HART is a registered trademark of the HART Communication Foundation.

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# Series 9000

## Specifications

Accuracy	: 0.2% of adjusted span
Ranges	: 0-100 mBar to 0 – 80 bar
Turn down	: 4:1
<b>Adjustment</b>	<b>: by 3 pushbuttons and local display without test pressure</b>
Output	: 4-20 mA (option: HART Protocol)
Supply	: 12 – 36 Vdc
Electrical connection	: PG 9 (Option: M20 or ½”NPTf)
Protection	: IP66 (option: IP68)
Process temperature	: -20°C to 80°C (option: 100°C)
Ambient temperature	: -20°C to 70°C
Material wetted parts	: AISI 316L (option: Hastelloy C )
Electronic housing	: AISI 304 (option: AISI 316)
Process connections	: See ordercode on page 4

## DESCRIPTION SERIES 9000:

The series 9000 are designed for pressure measurement in the Pulp & paper industry and similar industries where clogging is a problem. The process connections from series 9000 are smaller than from 9000-SAN series and ideal for pressure measurement on pipelines.

**The flush diaphragms are small and very strong**, and are based on the Klay Flush Diaphragm technology.

## Pressure Spike protection

All Klay pressure transmitters from series 9000 with a range > 1 bar are carried out with one or two internal pressure dampers to protect the sensor against pressure spikes.



Code S



Code W33

## Adjustable points

P101	Zero adjustment (ZERO / 4 mA)
P102	Span adjustment (SPAN / 20 mA)
P103	Cancel mounting position effect
P104	Adjustment pressure unit
P105	Output 4-20 mA* or 20-4 mA
P106	Damping adjustment (0 - 25 sec.)
P107	Temperature read out: CELC* °C or FAHR F
P108	Device setup
P109	Read out on display: Current, pressure unit, temp. or %.

\*= Factory setting

*Easy Programmable*



*Display with 3 pushbuttons (Standard)*

The series 9000 will as standard be delivered with 2 closed covers, so the 3 pushbuttons and the standard display are behind the cover.

A transparent cover can be delivered as an option (I). In that case you can use the display as a local indicator.

# Series 9000 SAN

## Specifications

Accuracy	: 0.2% of adjusted span
Ranges	: 0-40 mBar to 0 – 80 bar
Turn down	: 4:1
<b>Adjustment</b>	<b>: by 3 pushbuttons and local display without testpressure</b>
Output	: 4-20 mA (option: HART Protocol)
Supply	: 12 – 36 Vdc
Electrical connection	: PG9 (Option: M20 or ½”NPTf)
Protection	: IP66 (option: IP68)
Process temperature	: -20°C to 100°C (145°C / 45 min)
Ambient temperature	: -20°C to 70°C
Material wetted parts	: AISI 316L (option: Hastelloy C or Tantalum )
Electronic housing	: AISI 304 (option: AISI 316)
Process connections	: <b>More than 40!</b> See ordercode on page 4



Code X1

## DESCRIPTION SERIES 9000-SAN:

The series 9000-SAN are designed for pressure and level measurement in the Food & dairy, chemical and pharmaceutical industries.

All hygienic process connections are available (more than 40!) and all are according to the EHEDG, 3A and FDA regulations.

**Our transmitters are EHEDG and 3A certified.**

The transmitters are fully temperature compensated and have very strong flush mounted diaphragms. They are both CIP and SIP cleanable.



Code W

## Active Temperature Compensation:

All Klay transmitters with a flush diaphragm are equipped with the unique **Klay Flush Diaphragm Technology**.

These transmitters are fully temperature compensated. (Detailed brochure available).



## Separate (remote) electronics

Series 9000 and 9000-SAN are both available with remote electronics.

Type: **9000-SAN-Cable(...m)-range-...**

Always specify the cable length, range and process connection. (See ordercode on page 4).

## Improved Klay connection, EHEDG certified:

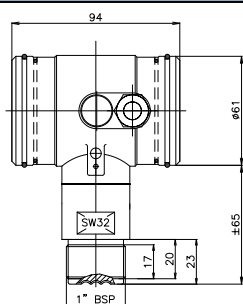
The specific Klay Hygienic process connection code W(85) is now also available in a new improved EHEDG certified version. In that case the diaphragm is fully flush with the inside tankwall and has an o-ring sealing. It can also be installed in existing Klay W85 weld on nipples! Add option code **G150** at the end of the ordercode in combination with code W(85)



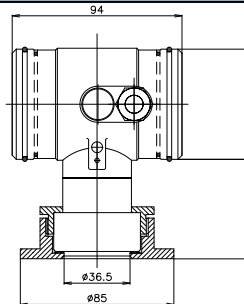
Code W85 with option G150

# Ordering codes Series 9000 and 9000-SAN

<b>SERIES 9000</b>				Orderingcode for standard transmitter: <b>9000 -</b>					
(info on page 2)				Orderingcode with cable: <b>9000-Cable ( ....m) -</b>					
Adjustable span range:		Max. overpressure (bar)			▲	▲	▲	▲	▲
0 - 0,1	to	0 - 0,4	bar	6.4	B				
0 - 0,4	to	0 - 1,6	bar	10.5	D				
0 - 1	to	0 - 4	bar	16	E				
0 - 2	to	0 - 10	bar	30	F				
0 - 6	to	0 - 24	bar	100	G				
0 - 20	to	0 - 80	bar	200	H				
PROCESS CONNECTIONS:									
- Weld-on nipple diam. 33 mm. (flush diaphragm / pulp & paper)					W				
- G1" (1" BSP) threaded connection (flush diaphragm)					S				
- M44 x 1,25 (PMC, Rosemount, Vega)					X2				
- PASVE 1" connection (Valmet/Satron)					X12				
- Other process connections, specify X code (Ask for Klay X code list)					X..				
OPTIONS:									
- Transparent cover, display functions as local indicator						I			
- Vacuum Ranges (Specify Relative or absolute) Compound ranges available (example -1 / +1 bar)							V		
- HART® Protocol (HART5 / HART7)									H



9000 - code S



9000-SAN - code W85

<b>SERIES 9000-SAN</b>				Orderingcode for standard transmitter: <b>9000-SAN -</b>						
(info on page 3)				Orderingcode with cable: <b>9000-SAN-Cable(....m) -</b>						
Adjustable span range:		Max. overpressure (bar)			▲	▲	▲	▲	▲	▲
0 - 0,04	to	0 - 0,1	bar	3	A					
0 - 0,1	to	0 - 0,4	bar	6,4	B					
0 - 0,4	to	0 - 1,6	bar	10,5	D					
0 - 1	to	0 - 4	bar	16	E					
0 - 2	to	0 - 10	bar	30	F					
0 - 6	to	0 - 24	bar	100	G					
0 - 20	to	0 - 80	bar	200	H					
PROCESS CONNECTIONS:										
- Milk coupling DIN 11851, DN 25 (only ranges 30 and 40), DN 40, DN 50 (all ranges)					M..					
- Hygenic weld-on nipple diam. 85 mm (tank mounting) or diam. 48 mm (pipe mounting) specify W85 or W48					W..					
- Tri-clamp 1 1/2", 2" or 3" (specify)					L..					
- Flange: DN 25, 40, 50 or 80 (DIN) or 1 1/2", 2" or 3" (ANSI) (specify size)					F..					
- Universal adapter E+H					X1					
- 1 1/2" BSP threaded connection					X3					
- Varivent connection (GEA)					X4					
- 2" IDF coupling					X5					
- DRD					X7					
- SMS 1 1/2" or 2" (specify size)					X9					
- Other process connections, specify X code (Ask for Klay X code list)					X..					
OPTIONS:										
- Transparent cover, display functions as local indicator						I				
- Vacuum Ranges (Specify Relative or absolute) Compound ranges available (example -1 / +1 bar)							V			
- High Temperature version with cooling fins. Always specify Process Temperature								HT		
- HART® Protocol (HART5 / HART7)										H
- Process connection W, EHEDG certified with full 'Flush' diaphragm and o-ring sealing										G150

We reserve the right for technical modifications without prior notice.