



## PRESSURE AND LEVEL TRANSMITTERS

For the Pulp and Paper Industry

# SERIES 8000



*Level transmitter with extended diaphragm*



*Level transmitter with special ball-valve*

- "All Stainless" Design
- Flush mounted Diaphragms
- Rugged and Compact
- Strong Diaphragms
- High overpressures
- Accuracy 0,2%

### DESCRIPTION

The series 8000 Pressure transmitter is designed for reliable pressure measurement in the Pulp and Paper industry.

The small size and **rugged Stainless steel housing** make it ideal for paper mill applications on stock lines,

refiners, screens, cleaners, vacuum boxes and tanks. The transmitters have a **strong flush mounted diaphragm** and can withstand high overpressures. Zero and span are adjustable in wide ranges. All common process connections are available.



# Specifications

Measuring ranges	: 0,1 bar to 50 bar
Output signal	: 4-20 mA, 2-wire
Adjustment	: Zero and span internally
Overall accuracy	: 0,2% of adjusted span
Power supply	: 13 to 40 VDC
Electrical connection	: PG9/V2" NPT/M20
External load (max.)	: 550 Ohms/24 V to 1250 Ohms/40 VDC
Protection grade	: IP66
Process temperature	: -20°C to +80°C
Ambient temperature	: -20°C to +65°C
Temperature sensitivity	: +/- 0,015%/K
Process connections	: See Ordering Code
Wetted parts	: AISI 316 (standard) other materials on request
Electronic housing	: AISI 304 (standard) other materials on request
Zero elevation/suppression available (specify)	
Vacuum and compound ranges available (specify)	

Specifications can change without notice



Model 8000-Range-W  
with diam 33 mm weld-on nipple.

## How to choose the right range?


When you choose the range, *take the range with the highest overpressure.*

**Example 1:** Your calibrated range must be 0-3 bar. Now you can choose between our range E or F. Both ranges can be calibrated at 0-3 bar (E = 1-4 bar and F = 2,5-10 bar). In this case take range F because it can withstand a much higher

overpressure (30 bar) against range E (16 bar). *By doing this, the lifetime of the transmitter will be much longer.*

**Example 2:** Your calibrated range must be 0-10 bar. Choose between range F (2,5-10 bar) or G (7,5-16 bar). Take range G because the overpressure for range G is 80 bar and overpressure range F is 30 bar.

# Ordering Code

Order code			SERIES 8000-				
Order code for Flanged process connection			8000-SAN-				
measuring range bar	max. overpressure bar	adjustable span-range bar min. - max.					
0 - 0,1 ...0,4	6,4	0 - 0,1 / 0 - 0,4	B				
0 - 0,4 ...0,7	6,4	0 - 0,4 / 0 - 0,7	C				
0 - 0,7 ...1,5	10,5	0 - 0,7 / 0 - 1,5	D				
0 - 1 ...4	16	0 - 1 / 0 - 4	E				
0 - 2,5 ...10	30	0 - 2,5 / 0 - 10	F				
0 - 7,5 ...16	80	0 - 7,5 / 0 - 16	G				
0 - 16 ...50	120	0 - 16 / 0 - 50	H				
PROCESS CONNECTIONS:							
- Weld-on nipple diam. 33 mm (flush diaphragm)(equal to 1" PMC)				W			
- G1" (1" BSP) threaded connection				S			
- 1" NPT threaded connection				N			
- M 44 x1.25 with lock ring (equal to PMC, Vega, Rosemount)				X2			
- Valmet/Satron G1" connection (fits in PASVE valve)				X12			
- Other process connections, i.e. Valcom, etc. (specify)				X			
- Flanged DIN or ANSI, all sizes available (specify size)			Typecode: 8000-SAN-range-	F			
OPTIONS:							
- Digital local Indicator 3 1/2 digit, programmable				I			
- Vacuum Ranges (Specify relative or absolute). Compound range available (example -1 / +1 bar)					V		
- Intrinsically safe: ATEX  II 1 G EEx ia IIC T4						Ex	
- Special versions: Other wetted parts; example: Hasteloy C Diaphragm.							G



## General Information



*Topview with  
local indicator  
(option).*

*Strong flush and  
flat diaphragm  
with code W  
connections  
(from 1 bar  
and up).*



### Active Temperature compensation:

The series 8000 are all fully temperature compensated. A temperature sensor, which monitors the process temperature, is mounted directly behind the diaphragm.

### Zero/span adjustability:

All transmitters from series 8000 are internally adjustable on zero and span over wide ranges.

### Stainless steel electronics housing:

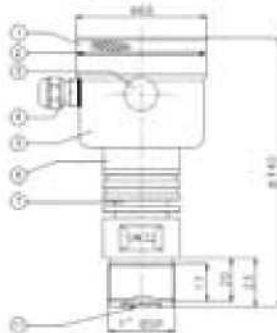
The electronics housing from series 8000 transmitters are standard made out of stainless steel. This creates a very compact and rugged transmitter suitable for many heavy industries.

Standard protection grade IP 66, optional IP 68.

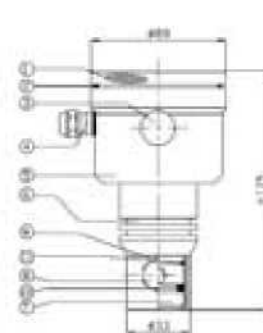
### Parts description

1. Cover	AISI 304
2. O-ring	EPDM
3. Venting	PA
4. Cable entry	PA
5. Electronic housing	AISI 304
6. Foot/cooling fins	AISI 304
7. Diaphragm flush	AISI 316
8. M8 lock screw	AISI 304
9. Weld-on nipple	AISI 316
10. O-ring	Viton
11. O-ring	Viton

### Code S



### Code W



## Applications

The series 8000 pressure transmitters are suitable for all pressure applications in the Pulp and paper industry, like on:

- stock lines
- refiners
- screens
- cleaners
- vacuum boxes, etc.

For Level applications, see description below.



## Level transmitters

Klay Instruments manufactures a wide range of hydrostatic Level transmitters series 8000-SAN with flush diaphragm for various applications.

These series 8000-SAN are fully temperature compensated and can also be adjusted on zero and span over wide ranges. All common process connections are available, like Flanges (DIN or ANSI sizes), G1 $\frac{1}{2}$ " threaded connections, etc.

Both series 8000 and 8000-SAN are available in "Intelligent" execution, our series 2000. See information on page 4. A detailed brochure is available for all versions.



# More Klay Process Instrumentation

For Pulp and Paper Industry



## Series 8000-VALVE

The series 8000-Valve is a combination of a level transmitter and a special ball-valve. The design permits **flush installation** of the diaphragm and a transmitter which can be removed without shutting down the process. Process connections are DIN or ANSI size Flanges, G 1 1/2" threaded connection or a special weld on nipple.

## "INTELLIGENT" Pressure/Level Transmitters



The series 2000 is a complete range of "Intelligent" Pressure and Level Transmitters. Zero and span can be calibrated very easily by 3 pushbuttons and a local display, without test pressure or by HART® HHT or PC. All process connections from series 8000 are also available for series 2000 transmitters (more than 40).

- Easy calibration without test pressure by 3 push buttons and display
- Accuracy 0,1%
- "All Stainless" design
- Wide rangeability
- Adjustable damping
- HART® Protocol
- Profibus PA



## Extended Diaphragms

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 Klay drawing no. 8000-61.

The technical specifications are equal to the series 8000 mentioned in this brochure.



## Pressure transmitter

The "Peramic" is a Pressure transmitter with a ceramic sensor and a G1/2" (1/2" BSP) or 1/2"NPT process connection. These series CER-8000 are designed for pressure measurement on clean fluids, gases and vapours.



## Brochures

A detailed brochure is available from all mentioned instruments on this page.



## Submersible level transmitter

For level measurement in open basins, concrete bunkers, etc.. Klay manufactures a range of submersible leveltransmitters with cable or SS extension, series "Hydrobar"



Strong flush diaphragm

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