



PRESSURE AND LEVEL TRANSMITTERS

For the Pulp and Paper Industry

Series 8000 "Conventional"



- ◀ "All Stainless Steel" Design ▶
- ◀ Rugged and Compact ▶
- ◀ Strong Flush Diaphragms ▶
- ◀ High Overpressures ▶
- ◀ Accuracy 0.2% ▶

Additional Features on Series 2000:

- Accuracy 0.1% ▶
- Easy calibration
without test pressure ▶
- 3 push buttons + display ▶
- 4-20 mA + HART® Protocol ▶

Series 2000 "Intelligent"



HART
COMMUNICATION PROTOCOL

DESCRIPTION

The series 8000 and 2000 are compact and robust **"All stainless steel"** pressure and level transmitters. They are designed to use in pulp and papermill applications on stock lines, refiners, screens, cleaners, tanks, etc. The "conventional" series 8000 and "intelligent" series 2000 are both fully temperature compensated and have **very strong, flush mounted diaphragms**. Series 8000 is internally adjustable on zero and span while the **"intelligent"** series 2000 is **very easy to adjust without test pressure by using the 3 push buttons and a display**, or by hand held terminal (HART®, option). All pulp and paper process connections are available.

HART® is a registered trademark of the HART Communication Foundation

Manufactured by:

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Specifications Series 8000

- Accuracy : 0.2% of adjusted span
- Measuring ranges : 0-1.45 psi to 0-1160 psi
- Output signal : 4-20 mA, 2-wire
- Adjustment : Zero and span internally
- Power supply : 12 to 36 Vdc
- Electrical connection : 1/2" NPTf, M20x1.5 or PG9
- Protection grade : Nema 4X, IP66 (Option IP68)
- Process temperature : -4°F to + 185°F (-20°C to + 85°C)
- Process connections : See Ordering Code
- Wetted parts : AISI 316L (standard), other materials on request
- Electronic housing : AISI 304 (standard), AISI 316 on request
- Vacuum and compound ranges available (specify)

Specifications can change without notice



Strong flush and flat diaphragm with code W connections (from range E and up).



Code W



Code S/N

Ordering Code Series 8000

Order code	8000-					
Order code for flanged process connection	8000-SAN-					
Adjustable range	Max. Overpressure	↑	↑	↑	↑	↑
Min. Span ... Max. Span						
0 - 1.45 to 0 - 5.8 psi (100 to 400 mbar)	93 psi (6.4 bar)	B				
0 - 5.8 to 0 - 10 psi (400 to 700 mbar)	93 psi (6.4 bar)	C				
0 - 10 to 0 - 22 psi (0.7 to 1.5 bar)	150 psi (10.5 bar)	D				
0 - 14.5 to 0 - 58 psi (1 to 4 bar)	232 psi (16 bar)	E				
0 - 36 to 0 - 145 psi (2.5 to 10 bar)	435 psi (30 bar)	F				
0 - 100 to 0 - 232 psi (7.5 to 16 bar)	870 psi (60 bar)	G				
0 - 232 to 0 - 725 psi (16 to 50 bar)	1740 psi (120 bar)	H				
0 - 580 to 0 - 1160 psi (40 to 80 bar)	2900 psi (200 bar)	I				
PROCESS CONNECTIONS:						
- Weld-on nipple diam. 33 mm. 1-inch Flush mount (equal to 1" PMC)			W			
- G1" (1" BSP) threaded connection			S			
- 1" NPT threaded connection			N			
- M 44 x1.25 threaded lock ring (equal to 1 1/2" PMC and Rosemount)			X2			
- Valmet/Satron G1" connection (fits in PASVE valve)			X12			
- Other process connections, i.e. E+H, Vega, etc. (specify)			X			
- Flanged DIN or ANSI, all sizes available (specify size) Typecode: 8000-SAN-range-			F			
OPTIONS:						
- Digital local Indicator 4 1/2 digit, programmable				I		
- Vacuum Ranges (Specify relative or absolute). Compound range available (example -1 / +1 bar)					V	
- Special versions: example: Hastelloy C Diaphragm (G7)						G



Code X2



Code X12 PASVE

Specifications Series 2000

Easy to Program



Display with 3 push buttons (Standard)



Code W

- Accuracy : 0.1% of adjusted span
- Measuring ranges : 0-1.45 psi to 0-1450 psi
- Output signal : 4-20 mA / 2-wire
HART® protocol (option)
- Adjustment : by 3 pushbuttons or H.H.T.
- Power supply : 12 - 36 Vdc
- Protection grade : Nema 4X, IP66 (Option IP68)
- Process temperature : -4°F to + 185°F (-20°C to +85°C)
- Wetted parts : AISI 316 L (standard)
- Electronic housing : AISI 304
- Process connections : See ordering code.
Many others available

Specifications can change without notice

Local Indicator

The series 2000 is delivered with 2 closed covers, so the 3 push buttons and the standard display are protected behind the cover.

A transparent cover is an option (I). Using a transparent cover allows you to use the display as a local indicator.

Adjustable points

- P101 Zero adjustment (4 mA)
- P102 Span adjustment (20 mA)
- P103 Cancel mounting position effect
- P104 Adjustment pressure unit (see conversion table)
- P105 4 - 20 mA *
20 - 4 mA * (reverse output)
- P106 Damping adjustment (0 to 25 sec)
- P107 Indication of process temperature (read out on display)
- P108 0 = CELC °C *
1 = FAHR °F
- P109 Read out on display:
0 = current (4 - 20 mA) *
1 = pressure unit
2 = percent %
- P110 Current simulation (4 - 20 mA)
- P111 Linearisation (Various tankshapes)

* = factory settings

Ordering Code Series 2000

Order code	2000-						
Order code for Flanged process connection	2000-SAN-		F				
Adjustable range	Max. Overpressure	↑	↑	↑	↑	↑	↑
Min. Span ... Max. Span							
0 - 1.45 to 0 - 5.8 psi (0.1 to 0.4 bar)	93 psi (6.4 bar)	1					
0 - 4.35 to 0 - 17.4 psi (0.3 to 1.2 bar)	150 psi (10.5 bar)	2					
0 - 14.5 to 0 - 145 psi (1 to 10 bar)	435 psi (30 bar)	3					
0 - 72.5 to 0 - 435 psi (5 to 30 bar)	1450 psi (100 bar)	4					
0 - 290 to 0 - 1450 psi (20 to 100 bar)	2900 psi (200 bar)	5					
PROCESS CONNECTIONS:							
- Weld-on nipple diam. 33 mm. 1-inch Flush mount (equal to 1" PMC)			W				
- G1" (1" BSP) threaded connection			S				
- 1" NPT threaded connection			N				
- M 44 x1.25 threaded lock ring (equal to 1 1/2" PMC and Rosemount)			X2				
- Valmet/Satron G1" connection (fits in PASVE valve)			X12				
- Other process connections, i.e. E+H, Vega, etc. (specify)			X				
- Flanged DIN or ANSI, all sizes available (specify size) Typecode: 2000-SAN-range-			F				
OPTIONS:							
- Transparent cover, display functions as a local indicator				I			
- Vacuum ranges (Specify relative or absolute) Compound ranges available (example -1 / +1 bar)					V		
- HART® Protocol						H	
- Special versions: example Hastelloy C diaphragm (G7)							G



Code S/N



Code X12 PASVE

***Series 2000-SAN with process connection Flange:**
Range 1 and 2 have a larger span with 2000-SAN series !
Range 1: 0 - 0.04 to 0 - 0.04 bar
Range 2: 0 - 0.12 to 0 - 1.2 bar



More Klay Process Instrumentation *For the Pulp and Paper Industry*



Remote electronics

Both series 8000 and 2000 are available with remote electronics. To order the codes are:
8000-cable(...m)-range-...
2000-cable(...m)-range-...
The required cable length must be specified in the order code. All ranges mentioned in this brochure on page 2 and 3 are available.



Series 8000-VALVE

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.



Extended Diaphragms

The series 8000-SAN-EXTD are flange mounted level transmitters with an extended diaphragm. The extension length and diameter must be specified, refer to Klay drawing no. 8000-61 or 2000-61. The technical specifications are equal to the series 8000/2000 mentioned in this brochure.



Applications

Series 8000 and 2000 pressure transmitters are suitable for all **pressure applications** in the pulp and paper industry, such as:

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

For tank level measurement, use our Series 8000-SAN or 2000-SAN.

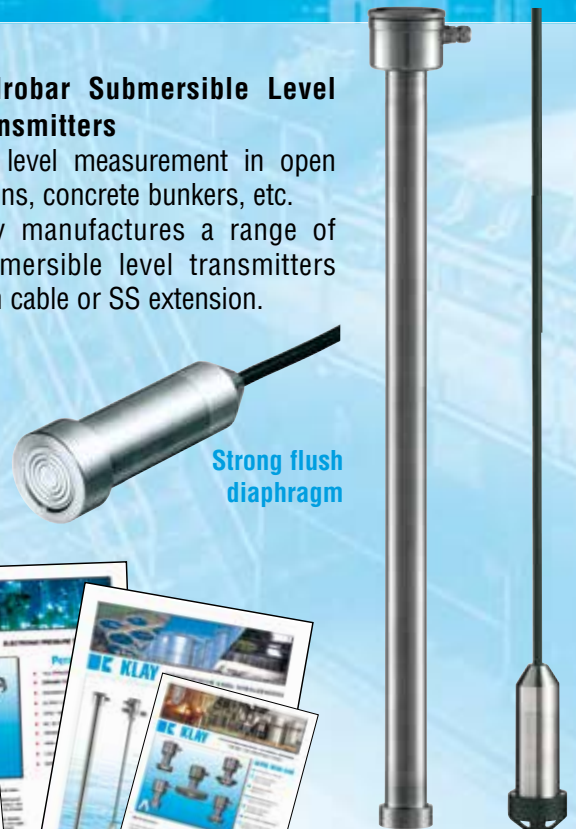
Brochures

A detailed brochure is available for all instruments on this page.



Hydrobar Submersible Level Transmitters

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



Strong flush diaphragm