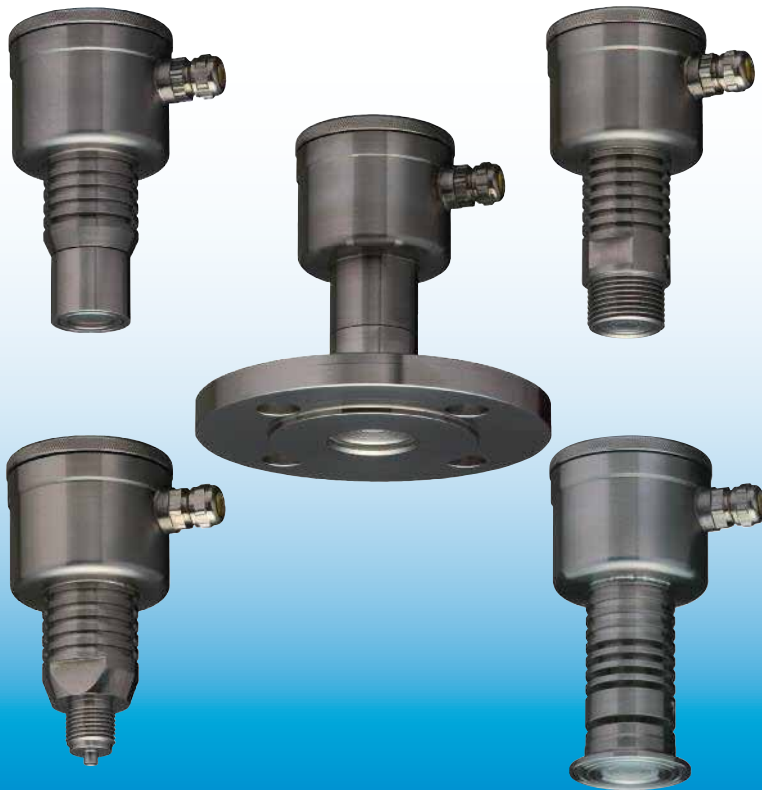




PRESSURE AND LEVEL TRANSMITTERS

FOR ALL INDUSTRIES Series 8000



- Compact and robust design
- Stainless steel housing
- Output 4-20 mA / 2-wire
- Zero and span adjustable
- Strong, laser welded, flush mounted diaphragms
- Large rangeability
- Optional local indicator
- ATEX II 1G Ex ia IIC T4 Ga

Description

Series 8000 which includes Series 8000-SAN and CER-8000 are a complete line of all stainless steel pressure and level transmitters for all industrial applications.

All series have a compact and robust stainless steel housing which is ideal not only for hygienic applications but also for harsh aggressive ambient conditions. The transmitters are fully temperature compensated. Series 8000-SAN is both CIP and SIP cleanable and they meet the needs of the food, beverage, chemical, pharmaceutical and pulp and paper industries. All series are equipped with strong, laser-welded, flush mounted diaphragms.

In order to be fully compatible with the process they are monitoring, all series offer a wide range of process connections and a choice of wetted parts materials. All versions are ATEX approved for intrinsically safe applications.



8000-SAN cable
w/separate electronics

Manufactured by:

 **KLAY-INSTRUMENTS B.V.**

Nijverheidsweg 5
P.O. Box 13
Tel. +31-521-591550

7991 CZ DWINGELOO
7990 AA DWINGELOO
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E-mail: info@klay.nl
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Series 8000

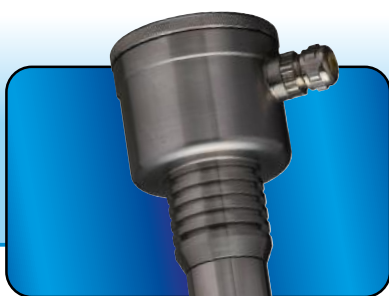
Description

Series 8000 pressure transmitters have been specially designed for measuring pressure in **pulp and paper mills** and similar industries where plugging is a problem. The transmitters are fully temperature compensated and have strong, laser welded, flush mounted diaphragms. Zero and span are internally adjustable over wide ranges. Series 8000 with G1" process connection are often used for pressure applications in the shipbuilding industry. Several marine approvals are available.

Specifications

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 - 36 Vdc (ATEX: 13 - 26.5 Vdc)
Protection grade:	IP66 (IP 68 optional)
Process temperature:	-4°F to + 176°F
Ambient temperature:	-22°F to + 158°F
Wetted parts:	AISI 316L (standard)
Electronic housing:	AISI 304
Process connections:	See below. Also available: E+H, Vega, Rosemount connections. Specify X code, complete X code list available

Process Connections



Code: W
(1" Flush Mount)
(Pulp and paper industry)



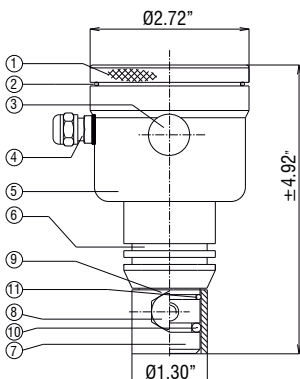
Code: X12
PASVE connection



Code N: (1" NPT)
Code S: (1" BSP)

Dimensions (inches)

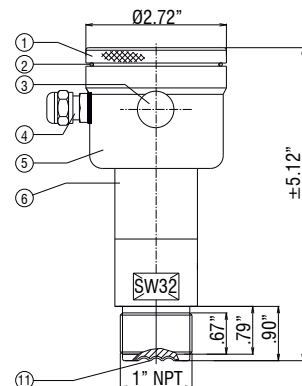
Code W



Parts Description W and N

1. Cover.....AISI 304
2. O-ring.....EPDM
3. Venting.....PA
4. 1/2" NPTf cable entry
5. Electronics housing.....AISI 304
6. Extension.....AISI 304
7. Diaphragm and ring.....AISI 316L
8. M8 Bolt.....AISI 304
9. Weld on nipple, $\varnothing 1.30"$. . .AISI 316L
10. O-ring.....Viton
11. O-ring (Code W)Viton
11. Diaphragm (Code N)AISI 316L

Code N



See back page for ordering code and ranges.

Series 8000-SAN

Description

Series 8000-SAN are designed for all pressure and level applications in the food, beverage, chemical and pharmaceutical industries. All hygienic process connections are available most of them are 3-A or EHEDG certified. The transmitters are fully temperature compensated and have strong, laser welded, flush mounted diaphragms. They are both CIP and SIP cleanable. Zero and span are internally adjustable over wide ranges.

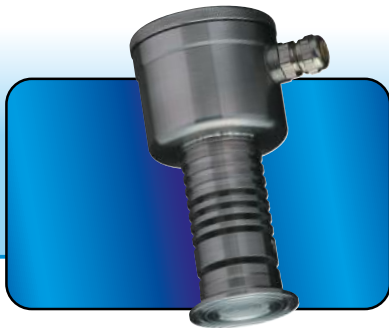
Specifications

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 - 36 Vdc (ATEX: 13 - 26.5 Vdc)
Protection grade:	IP66 (IP 68 optional)
Process temperature:	-4°F to + 212°F (293°F / 45 min)
Ambient temperature:	-22°F to + 158°F
Wetted parts:	AISI 316L (standard)
Electronic housing:	AISI 304
Process connections:	All industrial process connections available (more than 40*)

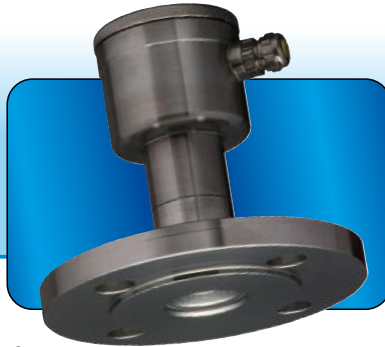
Also available with separate remote electronics, vented cable between process connection and SS electronic housing, Model 8000-SAN-CABLE.

Process Connections

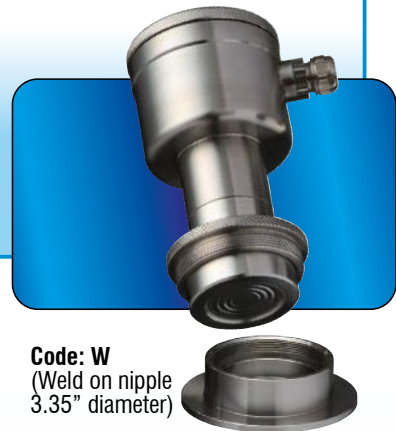
***More than 40 different process connections are available: Tri-clamp, SMS, IDF, 1-1/2" BSP, Varivent, etc.**



Code: L - Tri Clamp
(1-1/2" or 2")



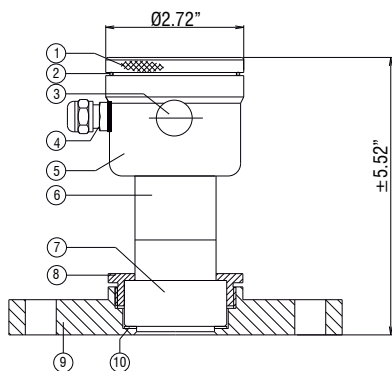
Code: F - Flange
(ANSI, DIN, JIS)



Code: W
(Weld on nipple
3.35" diameter)

Dimensions (inches)

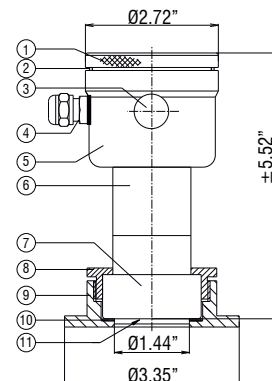
Code F



Parts Description F and W

1. Cover.....AISI 304
2. O-ring.....EPDM
3. Venting.....PA
4. 1/2" NPTf cable entry
5. Electronics housing.....AISI 304
6. Extension.....AISI 304
7. Pressure sensor
8. Lock ring.....AISI 304
9. Weld on nipple or flange .AISI 316L
10. Packing ring.....PTFE
11. Flush diaphragm.....AISI 316L

Code W



See back page for ordering code and ranges.

Series CER-8000 - Peramic

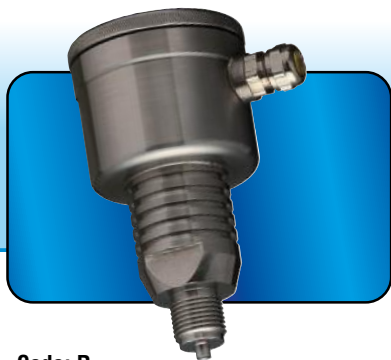
Description

Series CER-8000 - Peramic is an all stainless steel pressure transmitter based on a ceramic measuring cell. The CER-8000 - Peramic are designed for all pressure applications in clean liquids, gases and vapours. The ceramic measuring cell can withstand high overpressures and is sealed by a standard supplied Viton® o-ring. Other o-rings material types are available. Zero and span are internally adjustable over wide ranges.

Specifications

Accuracy:	0.2% of adjusted span
Measuring ranges:	0-2.90 psi to 0-5075 psi
Output signal:	4-20 mA / 2-wire
Adjustment:	Zero and span internally
Power supply:	12 - 36 Vdc (ATEX: 13 - 26.5 Vdc)
Protection grade:	IP66 (IP 68 optional)
Process temperature:	-4°F to + 176°F
Ambient temperature:	-22°F to + 158°F
Pressure sensor:	Ceramic AL ₂ O ₃ / 96%
Sensor sealing:	Viton® (Other materials on request)
Wetted parts:	AISI 316L (standard)
Electronic housing:	AISI 304
Process connections:	1/2" NPTm or 1/2" BSPm

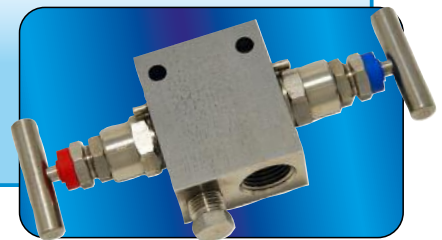
Process Connections



Code: R
(1/2" BSP (Din 16288))



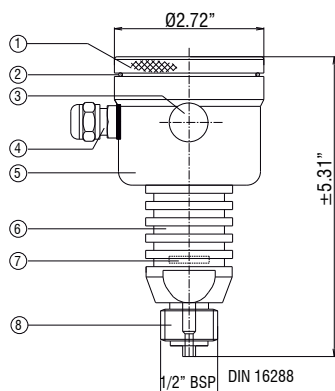
Syphon pipe
(option)



2-valve manifold
(option)

Dimensions (inches)

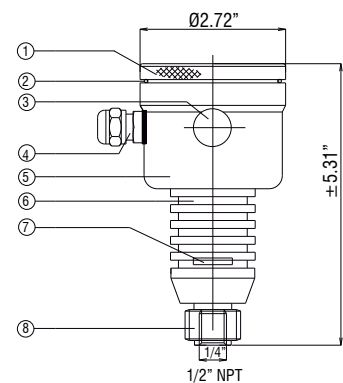
Code R



Parts Description R and N

1. Cover.....AISI 304
2. O-ring.....EPDM
3. Venting.....PA
4. 1/2" NPTf cable entry
5. Electronics housing.....AISI 304
6. Foot with cooling fins....AISI 316
7. Ceramic sensor.....AL₂O₃ / 96%
8. Process connection.....AISI 316

Code N



See back page for ordering code and ranges.

General Information

Local Indicator

An optional digital local indicator is available for all models in this brochure. This 3½ digit indicator is adjustable and also available in ATEX Ex ia version which is not adjustable.



Active Temperature Compensation

All Klay transmitters are fully temperature compensated. A temperature sensor, which monitors the process temperature, is mounted behind the diaphragm. The output of this sensor is used to compensate the transmitter on process temperature variations.

Klay Flush Diaphragm Technology

Series 8000 and 8000-SAN transmitters are equipped with our unique Flush Diaphragm Technology which includes active temperature compensation. The diaphragms are laser welded and helium tested (gas tight) and therefore hermetically sealed. The diaphragms are extremely strong and standard polished. They have a backup system equal to the diaphragm structure which results in a minimum oil filling. The standard material used for our flush diaphragms is AISI 316 L but other materials such as Hastelloy C, Tantalum or gold plating can be supplied on request.



8000-SAN-Cable

This version has been developed for applications where space does not allow for easy adjustment of a compact model and for applications with a process temperature continuously above 203°F up to a max. temperature of 284°F. The pressure sensor and electronics housing are physically separated but are joined by a “vented” cable. The zero and span can easily be set at a convenient mounting area while the actual sensor is measuring at the desired point. The standard cable length is 9.8 feet. Cable length must be specified in order code. In case of high temperature, this cable model can continuously go up to 536°F, specify HT in order code. Only available with 8000-SAN-Cable types.



8000-SAN Cable with separate electronics

Compact Electronics in a Stainless Steel Housing

The electronic transmitters from Klay Instruments contain a minimum number of electronic components. The signal conditioning is performed by a single integrated circuit which provides a very linear output. The electronics are mounted in a compact and robust stainless steel housing.

Certificates and Options

ATEX Intrinsic Safety

All transmitters mentioned in this brochure are certified for use in hazardous areas according to ATEX II 1 G Ex ia IIC T4 Ga. Use only a certified power supply form 13-26.5 Vdc. Maximum values: $U_i = 26.5$ Vdc, $I_i = 110$ mA, $P_i = 0.9$ W, $L_i = 1$ mH and $C_i = 1$ nF.

High Temperature Applications

Where the process temperature is continuously above 212°F, we manufacture transmitters with cooling fins to reduce the temperature, Series 8000-SAN with HT option. With a compact 8000-SAN transmitter with option HT we can go up to 356°F and with separation by a cable between the process connection and electronics housing, Series 8000-SAN-CABLE-HT, we can continuously go up to 536°F. The HT option is only available on Series 8000-SAN, except for ranges B and C.

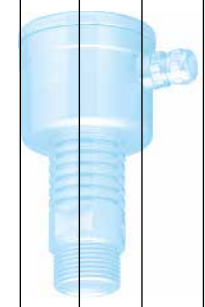


8000-SAN HT

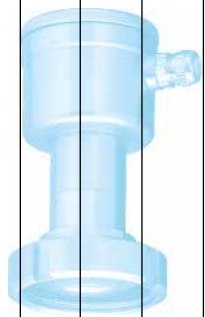


Ordering Codes: Series 8000, 8000-SAN and CER 8000

Series 8000		Order code basic transmitter	SERIES 8000					
		Order code with cable	SERIES 8000-Cable (....ft)					
Ranges (psi)	Maximum Overpressure (psi)	Adjustable Span Range (psi)	↑					
0 - 1.45 ...5.8	93	0 - 1.45 to 0 - 5.8	B					
0 - 5.8 ...10.15	93	0 - 5.8 to 0 - 10.15	C					
0 - 10.15 ...21.75	150	0 - 10.15 to 0 - 21.75	D					
0 - 14.5 ...58	232	0 - 14.5 to 0 - 58	E					
0 - 36 ...145	435	0 - 36 to 0 - 145	F					
0 - 100 ...232	870	0 - 100 to 0 - 232	G					
0 - 232 ...725	1740	0 - 232 to 0 - 725	H					
0 - 580 ...1160	2900	0 - 580 to 0 - 1160	I					
Process Connections:				W				
•Weld-on nipple diameter 1.30" (One-inch flush mount / pulp and paper)				S				
•G1" (1" BSP) threaded connection (flush diaphragm)				X12				
•PASVE 1" connection (Satron, Valmet)				X				
•Other connections: i.e. PMC (X2), Valcom, Vega, etc. (specify X code)								
Options:				I				
•Adjustable digital local indicator 3.5" (Exi not adjustable)								
•Vacuum ranges (specify relative or absolute). Compound ranges available (example -14.5 to + 14.5 psi)				V				
•Intrinsically safe ATEX II 1G Ex ia IIC T4 Ga							Ex	
•Special versions - Example: Diaphragm Hastelloy C (Code G7). Detailed accessories list available.								G..



Series 8000 - SAN		Order code basic transmitter	SERIES 8000-SAN					
		Order code with cable	SERIES 8000-SAN-Cable (....ft)					
Ranges (psi)	Maximum Overpressure (psi)	Adjustable Span Range (psi)	↑					
0 - 1.45 ...5.8	93	0 - 1.45 to 0 - 5.8	B					
0 - 5.8 ...10.15	93	0 - 5.8 to 0 - 10.15	C					
0 - 10.15 ...21.75	150	0 - 10.15 to 0 - 21.75	D					
0 - 14.5 ...58	232	0 - 14.5 to 0 - 58	E					
0 - 36 ...145	435	0 - 36 to 0 - 145	F					
0 - 100 ...232	870	0 - 100 to 0 - 232	G					
0 - 232 ...725	1740	0 - 232 to 0 - 725	H					
0 - 580 ...1160	2900	0 - 580 to 0 - 1160	I					
Process Connections:				M				
•Milk coupling DIN 11851, DN 25 (only ranges E till I), DN40, DN50 all ranges (specify size)				W				
•Hygienic weld-on nipple diameter 3.35" (other diameters on request)				L				
•Tri-clamp 1", 1-1/2", 2" (specify size)				F				
•Flange: DN40, DN50, or DN80 or ANSI 1", 2", 3" (specify size)				X				
•Other connections: E+H (X1), Varivent (X4), IDF (X5), DRD (X7), 11/2"NPT (X20), etc. (Specify X code)								
Options:				I				
•Adjustable digital local indicator 3.5" (Exi not adjustable)								
•Vacuum ranges (specify relative or absolute). Compound ranges available (example -14.5 to + 14.5 psi)				V				
•Intrinsically safe ATEX II 1G Ex ia IIC T4 Ga							Ex	
•High temperature version with cooling fins. Always specify process temperature								HT
•Special versions - Example: Diaphragm Hastelloy C (Code G7). Detailed accessories list available.								G..



CER-8000		Order code basic transmitter	SERIES CER-8000					
		Order code with cable	SERIES CER-8000-Cable (....ft)					
Ranges (psi)	Maximum Overpressure (psi)	Adjustable Span Range (psi)	↑					
0 - 2.9 ... 11.6	87	0 - 2.9 to 0 - 11.6	C					
0 - 11.6 ...23.2	174	0 - 11.6 to 0 - 23.2	D					
0 - 23.2 ... 58	290	0 - 23.2 to 0 - 58	E					
0 - 36 ... 145	725	0 - 36 to 0 - 145	F					
0 - 145 ... 580	1740	0 - 145 to 0 - 580	G					
0 - 580 ... 2175	5075	0 - 580 to 0 - 2175	H					
0 - 1450 ... 5075	8700	0 - 1450 to 0 - 5075	I					
Process Connections:				R				
•G 1/2" (1/2" BSP), manometer (gauge) connection DIN 16288				S				
•G 1/2" male and G 1/4" female				N				
•1/2" NPT male and 1/4" NPT female								
Options:				I				
•Adjustable digital local indicator 3.5" (Exi not adjustable)								
•Vacuum ranges (specify relative or absolute). Compound ranges available (example -14.5 to + 14.5 psi)				V				
•Intrinsically safe ATEX II 1G Ex ia IIC T4 Ga							Ex	
•Special versions - Detailed accessories list available								G..

