A Higher Level of Performance

Data Sheet

Series 8000

Pressure and Level Transmitters >

For more information, please visit >
www.hawkmeasure.com

8000-SAN Cable with separate electronics

Description

Pressure and level transmitters for all industries (Series 8000)

The Series 8000 is a complete line of “All Stainless Steel“ pressure and level transmitters for all industrial applications.

The compact and robust stainless steel housing is ideal for hygienic applications but also for harsh aggressive ambient conditions. The transmitters are fully temperature compensated. The Series 8000-SAN are both CIP and SIP cleanable and they fully meet the needs of the food and beverage, chemical, pharmaceutical and pulp & paper industries. Both series 8000 and 8000-SAN are equipped with **very strong flush mounted diaphragms**.

In order to be fully compatible with the process they are monitoring, all series 8000 units offer a wide range of process connections and a choice of wetted parts materials. All versions enjoy ATEX approval for Intrinsic Safe applications.

Features

- Compact and robust
- Stainless steel housing
- Output 4-20mA / 2-wire
- Zero and span adjustable
- Very strong flush mounted diaphragms
- Large rangeability
- Local indicator (Option)
- ATEX II 1G Ex ia IIC T4 Ga

Description

The series 8000 pressure transmitter has 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 very strong, flush mounted diaphragms. Zero and span are internally adjustable over wide ranges. The series 8000 with G1" process connection are frequently used for Pressure applications in the shipbuilding industry. Various Marine Type Approvals are available.

Specifications

Accuracy:	0,2% of adjusted span
Measuring ranges:	0 - 0,1 bar to 0 - 80 bar
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 (IP68: option)
Process temperature:	-20 ºC to +80 ºC
Ambient temperature:	-30 °C to +70 °C
Wetted parts:	AISI 316L (standard)
Electronics housing:	AISI 304
Process connections:	See below. Also available: E+H, Vega, Rosemount connections. Specify X code (Detailed X code list available)

Process connections

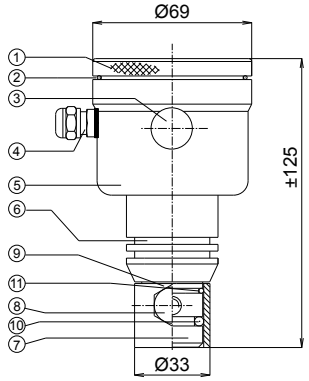
Code: W
Weld-on nipple diam 33 mm.
(Pulp and paper industry)

Code: X12
PASVE connection

Code: S
1" BSP (G1")

Dimensions (mm)

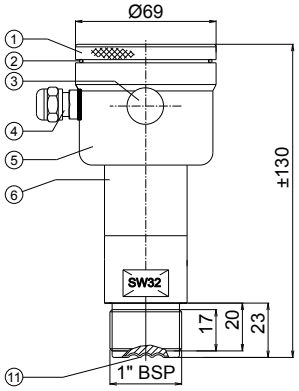
Code W



Parts description W

1 Cover	AISI 304
2 O-ring	EPDM
3 Venting	PA
4 PG9 cable gland	
5 Electronics housing	AISI 304
6 Extension	AISI 304
7 Diaphragm and ring	AISI 316L
8 M8 Bolt	AISI 304
9 Weld on nipple, ø33 mm	AISI 316L
10 O-ring	Viton
11 O-ring (Code W)	Viton
11 Diaphragm (Code S)	AISI 316L

Code S



Description

The 8000-SAN series are designed for all pressure and level applications in the food and beverage, chemical and pharmaceutical industries. All hygienic process connections are available, most of them are EHEDG or 3-A certified. The transmitters are fully temperature compensated and have very strong 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 - 0,1 bar to 0 - 80 bar
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 (IP68: option)
Process temperature:	-20 ºC to +100 ºC (145 ºC / 45 min)
Ambient temperature:	-30 °C to + 70 °C
Wetted parts:	AISI 316L (standard)
Electronics 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 electronics housing, type: 8000-SAN-CABLE.

Process connections

*More than 40 different process connections available (Tri-clamp, SMS, IDF, 1 ½" BSP, Varivent, etc.

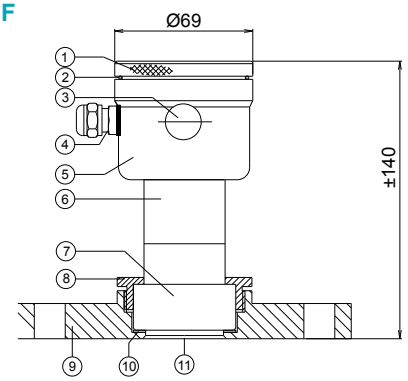
Code: M
Milkcoupling
(DN 25, 40 or 50)

Code: F
Flange
(DIN, ANSI or JIS)

Code: W
Weld-on nipple
diam. 85 mm

Dimensions (mm)

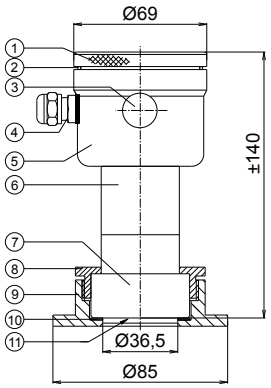
Code F



Parts description W

1 Cover	AISI 304
2 O-ring	EPDM
3 Venting	PA
4 PG9 Cable gland	
5 Electronics housing	AISI 304
6 Extension	AISI 304
7 Pressure sensor	
8 Lockring	AISI 304
9 Weld on nipple or flange	AISI 316L
10 Packing ring	PTFE
11 Flush diaphragm	AISI 316L

Code W



Description

The ’Peramic , series CER-8000, is a ’all stainless’ pressure transmitter based on a ceramic measuring cell. The CER-8000 is fully temperature compensated and is made for all pressure applications in clean liquids, gases and vapours. The ceramic measuring cell can withstand high overpressures and is sealed by an o-ring (viton as standard, other materials on request). Zero and span are internally adjustable over wide ranges.

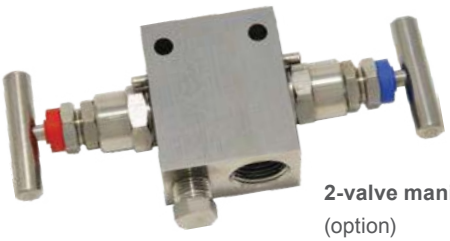
Specifications

Accuracy:	0,2% of adjusted span	Ambient temperature:	-30 °C to +70 °C
Measuring ranges:	0 - 0,2 bar to 0 - 350 bar	Pressure Sensor:	Ceramic Al2O3 / 96%)
Output signal:	4 - 20 mA / 2-wire	Sensor sealing:	Viton o-ring (standard) other materials on request
Adjustment:	Zero and Span internally	Other wetted parts:	AISI 316 (standard)
Power supply:	12 - 36 Vdc (ATEX: 13 - 26.5 Vdc)	Electronics housing:	AISI 304
Protection grade:	IP66 (IP68: option)	Process connections:	½” BSPm or ½” NPTm
Process temperature:	-20 ºC to +80 ºC		

Process connections

Code: R
1/2” BSP
(DIN 16288)

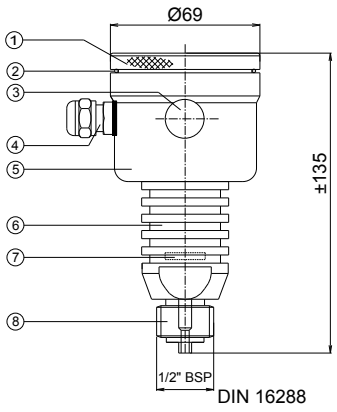
Syphon pipe
(option)



2-valve manifold
(option)

Dimensions (mm)

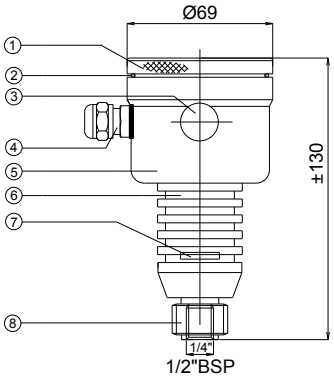
Code R



Parts description W

1 Cover	AISI 304
2 O-ring	EPDM
3 Venting	PA
4 PG9 Cable gland	
5 Electronics housing	AISI 304
6 Foot with cooling fins	AISI 316
7 Ceramic Sensor	Al2O3 (96%)
8 Process connection	AISI 316

Code S



Local Indicator

On all models, mentioned in this brochure, a digital local indicator is available (option). This 3½ digit indicator is adjustable and also available in ATEX Ex ia version (not adjustable).

Active temperature compensation

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

Klay Flush Diaphragm Technology

All transmitters from series 8000 and 8000-SAN are equipped with the unique Klay Flush Diaphragm Technology including 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 and do 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 (option). For more information a detailed brochure is available.

8000-SAN-Cable

This version has been developed for applications where space does not allow easy adjustment of a compact model and for applications with a process temperature above 95ºC continuously with a max. temperature of 140ºC. 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 3 m. (Specify cable length in order code). In case of **high temperature**, this cable model can go up to 280ºC continuously, specify **HT** in order code (Only 8000-SAN-Cable types).

8000-SAN Cable with separate electronics

Compact electronics in a Stainless Steel Housing

The electronic transmitters from 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 from 13 - 26,5 Vdc. Maximum values: U = 26,5 Vdc, i I= 110 mA, P = 0,9W, L = 1mH and C = 1nF.

For **High Temperature Applications** where the process temperature is continuously above 100ºC, 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 180ºC and with separation by a cable between process connection and electronics housing (Type: 8000-SANCable- HT) we can go up to 280ºC continuously! The HT option is only available on series 8000-SAN (except ranges B and C).

Series 8000

Series 8000	Order code basic transmitter	Series 8000						
	Order code with cable	Series 8000-Cable (....m)						
Ranges (bar)	Maximum overpressure (bar)	Adjustable span range (bar)	↑	↑	↑	↑	↑	↑
0 - 0,1 ...0,4	6,4	0 - 0,1 to 0 - 0,4	B					
0 - 0,4 ...0,7	6,4	0 - 0,4 to 0 - 0,7	C					
0 - 0,7 ...1,5	10,5	0 - 0,7 to 0 - 1,5	D					
0 - 1 ...4	16	0 - 1 to 0 - 4	E					
0 - 2,5 ...10	30	0 - 2,5 to 0 - 10	F					
0 - 7,5 ...16	60	0 - 7,5 to 0 - 16	G					
0 - 16 ...50	120	0 - 16 to 0 - 50	H					
0 - 40 ...80	200	0 - 40 to 0 - 80	I					
PROCESS CONNECTIONS:								
• Weld-on nipple diam. 33 mm (flush diaphragm / pulp & paper)				W				
• G1" (1" BSP) threaded connection (flush diaphragm)				S				
• PASVE 1" connection (Satron / Valmet)				X12				
• Other connections: i.e. PMC (X2), Valcom, Vega etc (specify X code)				X..				
OPTIONS:								
• Digital local indicator 3½ digit adjustable (Exi not adjustable)					I			
• Vacuum Ranges (Specify Relative or absolute) Compound ranges available (example -1 / + 1bar)						V		
• Intrinsically safe: ATEX Ex II1G Ex ia IIC T4 Ga							Ex	
• Special versions: Example: Diaphragm Hastelloy C (Code G7). Detailed accessories list available								G..

Series 8000-SAN

Series 8000-SAN	Order code basic transmitter	Series 8000-SAN						
	Order code with cable	Series 8000-SAN Cable (....m)						
Ranges (bar)	Maximum overpressure (bar)	Adjustable span range (bar)	↑	↑	↑	↑	↑	↑
0 - 0,1 ...0,4	6,4	0 - 0,1 to 0 - 0,4	B					
0 - 0,4 ...0,7	6,4	0 - 0,4 to 0 - 0,7	C					
0 - 0,7 ...1,5	10,5	0 - 0,7 to 0 - 1,5	D					
0 - 1 ...4	16	0 - 1 to 0 - 4	E					
0 - 2,5 ...10	30	0 - 2,5 to 0 - 10	F					
0 - 7,5 ...16	60	0 - 7,5 to 0 - 16	G					
0 - 16 ...50	120	0 - 16 to 0 - 50	H					
0 - 40 ...80	200	0 - 40 to 0 - 80	I					
PROCESS CONNECTIONS:								
• Milk coupling DIN 11851, DN 25 (only ranges E till I), DN 40, DN 50 all ranges (specify size)				M..				
• Hygienic weld-on nipple diam 85 mm (other diameters on request)				W..				
• Tri-clamp 1", 1 ½" or 2" (specify size)				L..				
• Flange: DN 40, 50 or 80 (DIN) or 1", 2", 3" (ANSI) (specify size)				F..				
• Other connections: G1½"(X3), Varivent (X4), IDF(X5), DRD(X7), SMS(X9) etc (specify X code)				X..				
OPTIONS:								
• Digital local indicator 3½ digit adjustable (Exi not adjustable)					I			
• Vacuum Ranges (Specify relative of absolute). Compound ranges available (example -1 / +1 bar)						V		
• Intrinsically safe: ATEX Ex II1G 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), Gold plated diaphragm (Code G16). Detailed accessories list available								G..

Ordering Codes

Series CER-8000 - Peramic

CER-8000

CER-8000	Order code basic transmitter	Series CER-8000						
Ranges (bar)	**Maximum overpressure (bar)**	**Adjustable span range (bar)**	↑	↑	↑	↑	↑	↑
0 - 0,2 ...0,8	6	0 - 0,2 to 0 - 0,8	C					
0 - 0,8 ...1,6	12	0 - 0,8 to 0 - 1,6	D					
0 - 1,6 ...4	20	0 - 1,6 to 0 - 4	E					
0 - 2,5 ...10	50	0 - 2,5 to 0 - 10	F					
0 - 10 ...40	120	0 - 10 to 0 - 40	G					
0 - 40 ...150	350	0 - 40 to 0 - 150	H					
0 - 100 ...350	600	0 - 100 to 0 - 350	I					
PROCESS CONNECTIONS:								
• G ½" (½" BSP) manometer (gauge) connection DIN 16288				R				
• G ½" (male) and G ¼" (female)				S				
• ½" NPT (male) and ¼" NPT (female)				N				
OPTIONS:								
• Digital local indicator 3½ digit adjustable (Exi not adjustable)					I			
• Vacuum Ranges (Specify relative of absolute). Compound ranges available (example -1 / +1 bar)						V		
• Intrinsically safe: ATEX Ex II1G Ex ia IIC T4 Ga							Ex	
• Special versions: Detailed accessories list available								G..

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Additional product warranty and application guarantees upon request.
Technical data subject to change without notice.

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