

A Higher Level of Performance



Data Sheet

Series 3000

Intelligent Pressure and Level Transmitters
Capacitive Ceramic Sensor



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

Overview

Series 3000



Description

“Intelligent” Pressure and Level Transmitters (Series 3000)

The series 3000 is a complete line of Pressure and level transmitters with a Flush mounted **Capacitive Ceramic sensor**. The range adjustment and programming can be done very easily without a test pressure by using **3 push buttons and the display**. The display can indicate a number of chosen engineering units. Zero and span are very easy adjustable without test pressure. Besides that a signal damping and a current simulation are adjustable. The series 3000 is temperature compensated and is available in the most common industrial process connections. HART protocol is available as an option.

Specifications

Accuracy :	0.2% of adjusted span (option 0.1%)
Ranges :	0-100 mbar to 0 – 50 bar
Turn down :	10:1
Adjustment :	by 3 pushbuttons and local display without test pressure
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
Material sensor :	Ceramic (Al ₂ O ₃) 99,9%
Sensor Sealing:	Viton (standard) other o-ring on request
Material other wetted parts :	AISI 316L (option: Hastelloy C)
Electronic housing :	AISI 304 (option: AISI 316)
Process connections :	See order code at page 4

Adjustable points

P101	Zero adjustment (ZERO / 4 mA)
P102	Span adjustment (SPAN / 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 - 25 sec.)
P107	Language: 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 tank shapes)

*= Factory setting

Features

- All stainless housing
- Easy calibration without test pressure by pushbuttons and display
- Accuracy: 0.2% (Option: 0.1%)
- Turn down 10:1
- Active temperature compensation
- All industrial process connections
- Option: HART® Protocol



Specifications

Series 3000-SAN



Specifications

Accuracy :	0.2% of adjusted span (option 0.1%)
Ranges :	0-100 mbar to 0 – 50 bar
Turn down :	10:1
Adjustment :	by 3 pushbuttons and local display without test pressure
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 100°C (140°C / 30min.)
Material sensor :	Ceramic (Al ₂ O ₃) 99,9%
Sensor Sealing:	Viton (standard) other o-ring on request
Material other wetted parts :	AISI 316L (option: Hastelloy C)
Electronic housing :	AISI 304 (option: AISI 316)
Process connections :	More than 40! See order code at page 4



Strong and polished ceramic sensor

Flanged pressure / level transmitters with ceramic sensor

The series 3000-SAN is available as a flanged Pressure / level transmitter. All DIN and ANSI flange sizes are available. Please specify size in the order code mentioned on page 4.

Food industry

Our Series 3000-SAN is available with all hygienic process connections for the Food industry (acc. to EHEDG and 3A). The Series 3000-SAN is completely temperature compensated. We also manufacture various lines of Pressure and Level transmitters with strong and hygienic SS316L flush diaphragms using the HAWK Flush Diaphragm Technology. These transmitters **series 2000-SAN, 4000-SAN and 8000-SAN are all EHEDG and 3A certified.**

For ranges above 50 bar, please also ask for one of our other Transmitter lines: series 2000, 4000 or 8000. See page 4 for a short overview.

IP 68 transmitters

Our HAWK Pressure and Level transmitters are also available in an IP68 version. This can be either the series 3000 in a remote version or our type HydroCer with all electronics compact mounted in the sensor part. All process connections are available in this execution, see below as an example our IP68 Flanged level transmitter.

Type: HydroCer-I-Cable(..m)-range-(Process connection code.)

Always mention cable length, range and code for process connection.



Code W



W33



IP68 Solution

Ordering Codes

Series 4000



Ordering codes Series 3000 and 3000-SAN

SERIES 3000	Ordering code standard transmitter: 3000 -				
	Ordering code with cable: 3000-SAN				
Adjustable span range (min. max.)	Max. overpressure (bar)		↑	↑	↑
0 - 0.1 to 0 - 1 bar	6 bar	1	↑	↑	↑
0 - 0.2 to 0 - 2 bar	12 bar	2			
0 - 0.5 to 0 - 5 bar	25 bar	3			
0 - 2 to 0 - 20 bar	45 bar	4			
0 - 5 to 0 - 50 bar	80 bar	5			
PROCESS CONNECTIONS SERIES 3000					
G1" (1" BSP) threaded connection			S		
1" NPT threaded connection			N		
Weld on nipple, diameter 33 mm (for Pressure on pipelines in Pulp & Paper)			W33		
M44 x 1.25 (Equal to Vega, Rosemount, PMC) (Pulp & Paper)			X12		
PASVE 1" connection (Satron / Valmet)			X12		
PROCESS CONNECTIONS SERIES 3000-SAN					
HAWK Weld-on nipple (diameter 85 mm) for tank mounting. Other diameters on request			W85		
Flange DIN DN 25, 40, 50 or 80 or ANSI 11/2", 2" or 3" (Specify size)			F..		
Tri-clamp 11/2" , 2" or 3 " (Specify size)			L..		
Milk coupling DIN 11851, DN 25 DN40 or DN50 (Specify size)			M..		
G11/2" (11/2"BSP) threaded connection			X3		
Varivent connection (GEA)			X4		
Vega 'LA' DN40			X132		
11/2" NPT threaded connection			X20		
IFM Sanitary G1" (1"BSP) threaded connection			X117		
Other process connections, specify X code (Ask for Klay X code list)			X..		
O-RING MATERIAL, SENSOR SEALING					
Viton (FKM) Standard			S		
EPDM			E		
Kalrez FFKM			K		
OPTIONS:					
Transparent cover, display functions as a local indicator			I		
HART Protocol (Hart 7)				H	
Vacuum ranges (specify Relative V(r) or Absolute V(a). Specify Calibrated range (example: -1 to +1 bar)					V
Other span range (lower range or wider span) please consult factory					G19

Transmitter Overview			
Type	8000	2000	4000
Process Connections	- Hygienic connection (More than 40!) Flush mounted diaphragms - Pulp & paper process connections - Flanges DIN and ANSI sizes - Threaded connections: G1/2" , G1" , G11/2" and G2" (Also available in NPT threads)		
Accuracy	0.2%	0.1%	0.075%
Turn down	4 : 1	10 : 1	20 : 1
Span min max	0.1 350 bar	0.04 700 bar	0.04 100 bar
Output	4 - 20 mA	4 - 20 mA + 	4 - 20 mA + 
Diaphragm material	Flush diaphragm materials: SSL316L (standard) , Hastelloy C, Titanium, Tantalum,		
Approvals	Ex: ATEX  and IECEx II 1G Ex ia IIC T4 Food: EHEDG and 3A		

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