

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](http://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
<b>Adjustment :</b>	<b>by 3 pushbuttons and local display without test pressure</b>
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 <sub>2</sub> O <sub>3</sub> ) 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
<b>Adjustment :</b>	<b>by 3 pushbuttons and local display without test pressure</b>
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 <sub>2</sub> O <sub>3</sub> ) 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

## 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.



*Strong and polished ceramic sensor*



*Code W*



*W33*



*IP68 Solution*







# Ordering Codes

Series 4000



## Ordering codes Series 3000 and 3000-SAN

<b>SERIES 3000</b>	Ordering code standard transmitter: <b>3000 -</b>				
	Ordering code with cable: <b>3000-SAN</b>				
<b>Adjustable span range (min. .... max.)</b>	<b>Max. overpressure (bar)</b>				
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			
<b>PROCESS CONNECTIONS SERIES 3000</b>					
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			
<b>PROCESS CONNECTIONS SERIES 3000-SAN</b>					
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..			
<b>O-RING MATERIAL, SENSOR SEALING</b>					
Viton (FKM) Standard		S			
EPDM		E			
Kalrez FFKM		K			
<b>OPTIONS:</b>					
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

<b>Transmitter Overview</b>			
<b>Type</b>	<b>8000</b>	<b>2000</b>	<b>4000</b>
<b>Process Connections</b>	<ul style="list-style-type: none"> <li>- Hygienic connection (More than 40!) Flush mounted diaphragms</li> <li>- Pulp &amp; paper process connections</li> <li>- Flanges DIN and ANSI sizes</li> <li>- Threaded connections: G1/2", G1", G11/2" and G2" (Also available in NPT threads)</li> </ul>		
<b>Accuracy</b>	0.2%	0.1%	0.075%
<b>Turn down</b>	4 : 1	10 : 1	20 : 1
<b>Span min .... max</b>	0.1 ..... 350 bar	0.04 ..... 700 bar	0.04 ..... 100 bar
<b>Output</b>	4 - 20 mA	4 - 20 mA + 	4 - 20 mA + 
<b>Diaphragm material</b>	Flush diaphragm materials: SSL316L (standard), Hastelloy C, Titanium, Tantalum,		
<b>Approvals</b>	Ex: ATEX  and IECEx II 1G Ex ia IIC T4 Food: EHEDG and 3A		

### Hawk Measurement Systems (Head Office)

15 - 17 Maurice Court, Nunawading VIC 3131, AUSTRALIA  
 Phone: +61 3 9873 4750 | Fax: +61 3 9873 4538  
 info@hawk.com.au

### Hawk Measurement

90 Glenn Street, Suite 100B, Lawrence, MA 01843, USA  
 Phone: +1 888 HAWKLEVEL (1-888-429-5538) / +1 978 304 3000  
 Fax: +1 978 304 1462  
 info@hawkmeasure.com

For more information and global representatives: [www.hawkmeasure.com](http://www.hawkmeasure.com)

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