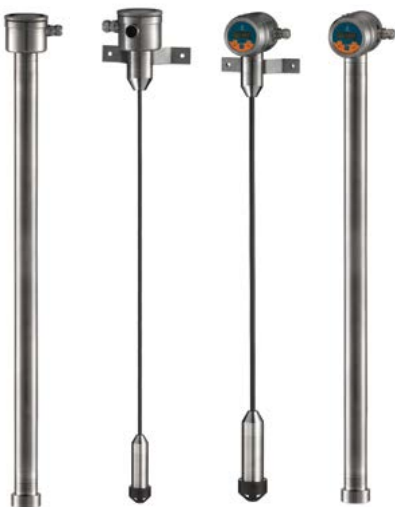


A Higher Level of Performance



Data Sheet

Hydrobar Level Transmitters



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



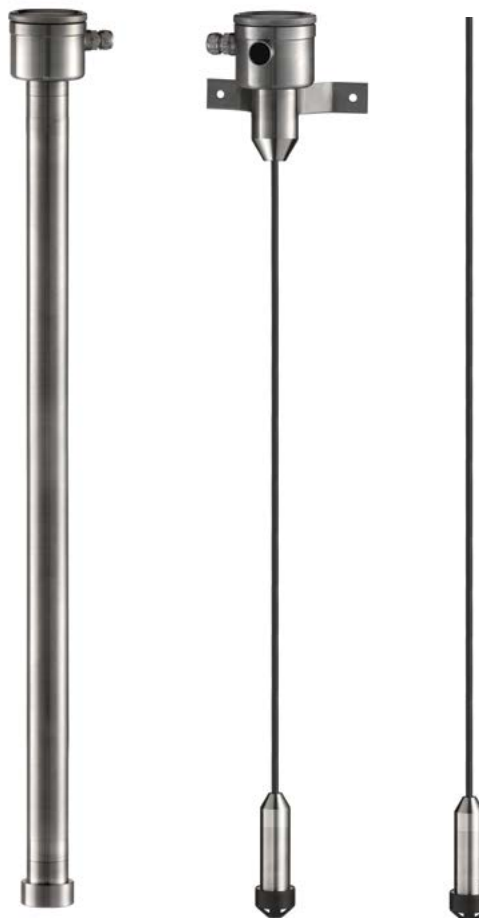
Description

Submersible level transmitters

The “Hydrobar” series are submersible level transmitters with a cable or SS tube extension, to measure the level in waterworks, deep wells, underground tanks, concrete bunkers, etc.

The “Hydrobar” transmitters are available as fixed range (type FR units), or with adjustable zero and span.

All transmitters are fully temperature compensated, and are equipped with strong flush mounted diaphragms who are laser welded, this results in a **perfect long term stability**.



Series Hydrobar

Type Code:

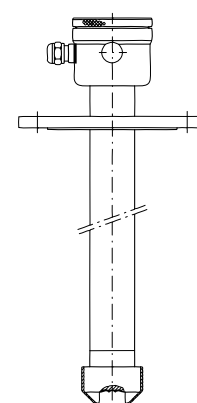
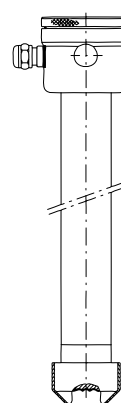
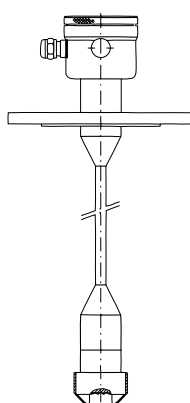
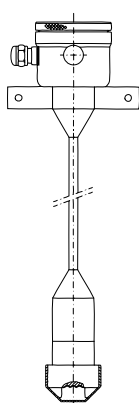
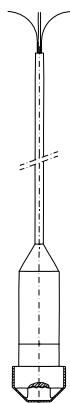
Hydrobar-Cable-FR

Hydrobar-Cable


Hydrobar-Cable-F

Hydrobar-EXTD

Hydrobar-EXTD-F



Features

- Accuracy 0.2%
- Strong diaphragms
- Perfect long term stability (<0.1% / year)
- Temperature compensated
- Zero / span adjustable
- Intrinsically safe ATEX  II 1 G Ex ia IIC T4 Ga

Overview

Hydrobar 'S'



Description

“Intelligent” level transmitters (Hydrobar - Metal Hydrostatic)

The Series “2000 - Hydrobar” is a complete range of microprocessor based **submersible level transmitters** for top mounting, with a local display and adjustment by three push buttons. **Zero and span can be calibrated very easy without test pressure.**

The display which can indicate a number of chosen engineering units is also used during programming. Process temperatures can be indicated and damping times adjusted from 0 to 25 secs. A 4-20 mA Current Simulation can be performed.

Also a tanklinearization can be done. The Intelligent Series 2000 - Hydrobar are fully temperature compensated, and are equipped with strong flush diaphragms which are laser welded, this results in a **perfect long term stability.**


HART® is a registered trademark of the HART Communication Foundation



Display with 3 push buttons (Standard)



Features

- Microprocessor based
- Easy calibration without test pressure by 3 push buttons
- Accuracy 0.1%
- 4-20mA and HART® Protocol
- “All Stainless” Design
- Wide rangeability
- Local display
- Adjustable damping
- Intrinsically safe ATEX  II 1 G Ex ia IIC T4 Ga



Calibration

The standard Series 2000 Transmitter is always equipped with a display and 3 push buttons for easy calibration. Both the measured and the calibrated value can be read locally. A full calibration can be completed using the three push buttons or with the optional handheld terminal (HART®), or by PC with special software.

Zero and span can be calibrated very easy, without test pressure, also in vacuum ranges. Linearisation can be made for horizontal tanks (P111). For all other adjustable points see table right. The series 2000 will as standard be delivered with 2 closed covers, so the 3 push buttons and the standard display are behind the cover. A transparent cover can be delivered as an option. In that case you can use the display as a local indicator.

Adjustable points

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

Temperature compensation

All "2000 - Hydrobar" level transmitters are fully temperature compensated. A temperature sensor, which monitors the process temperature, is mounted directly behind the diaphragm. The output of this sensor is used to compensate the transmitter for temperature variations.

RFI/EMC/CE

We manufacture all pressure- and level transmitters according to the new RFI/EMC and CE rules. All transmitters are equipped with RFI filters as standard.

Intrinsic safe certificate

The Hydrobar series are available with the Intrinsic safe certificate acc. to ATEX II 1G Ex ia IIC T4 Ga

HART® Protocol

The complete "2000 - Hydrobar" series is available with HART® Protocol output (option).

Specifications

- Accuracy: 0,1% of adjusted span
 - Measuring ranges: 0,04 bar to 0-4 bar
 - Output signal: 4 - 20 mA / 2-wire, HART® protocol (option)
 - Adjustment: by 3 push buttons or H.H.T. (HART®)
 - Power supply: 12 to 36 Vdc (Exi: 13-26,5 Vdc)
 - Electrical connection: PG9, 1/2" NPT or M20
 - External load: 600 Ohm/24V to 1400 Ohm/40Vdc
 - Protection grade: IP68 (cable/SS tube), IP66 (electr. housing)
 - Process temperature: - 10°C to +70°C
 - Temperature sensitivity: ±0,015% / K
 - Electronic housing: AISI 304
 - Wetted parts: AISI 316 (standard)
 - Material cable: Polyethylene (option: Hytrel or PTFE)
- Specifications can change without notice*

Accessories

- Cable clamp for Hydrobar-cable
- Wall mounting bracket for SS tube extension
- Extra cable length (standard 3 m, max 100 m)
- Extra SS tube length (standard 2 m, max 4 m)
- Other cable material (Hytrel or PTFE) (specify)
- Other diaphragm materials (specify)

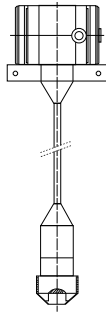




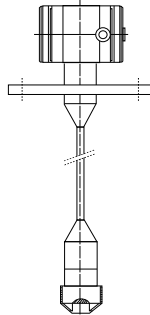
Application

The 2000-Hydrobar submersible level transmitters can be used in fluids, like: water, waste water, pulp, mud, chemicals etc. For the following industries: water and waste water industry, marine / shipbuilding, pulp and paper, others.

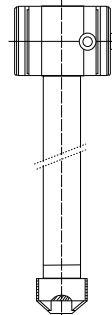
Hydrobar-Cable



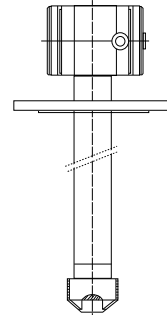
Hydrobar-Cable-F



Hydrobar-EXTD



Hydrobar-EXTD-F



Ordering Information

Order code cable extension:*		2000 - Hydrobar-cable (length)							
Order code SS extension:*		2000 - Hydrobar-EXTD (length)							
Ranges (bar)	Maximum overpressure (bar)	Adjustable span range (bar)		↑	↑	↑	↑	↑	↑
0 – 0,04...0,4	6,4	0 – 0,04 to 0 – 0,4		1	↑	↑	↑	↑	↑
0 – 0,12...1,2	10,5	0 – 0,12 to 0 – 1,2		2					
0 – 1...4	30	0 – 1 to 0 – 4		3					
• Mounting connection: Flange DIN or ANSI (specify size)					F				
• Special mounting connections: Example 2" BSP (specify)					X				
OPTIONS									
• Transparent cover, display functions as local indicator						I			
• Intrinsically safe: ATEX II1G Ex ia IIc T4 Ga							EX		
• HART® Protocol								H	
• SPECIALS: Other wetted parts or other cable material (specify)									G

* Always specify cable length and calibration at order code.







HAWK, Since 1988

Hawk Measurement Systems Pty Ltd (HAWK) was established in 1988. It's founding members saw the universal requirement of various industries requiring improved process control and efficiency in their operations.

We Can Help

HAWK understands the difficulties customers face when seeking accurate level measurement. Every application is different, involving a multitude of environmental factors. This is where HAWK excels. Our aim is to ensure that customers feel comfortable with our technology, and are provided with long term and reliable solutions. We believe that a combination of application and product expertise, as well as forward thinking and proactive support policies are the foundation of successful customer-supplier relationships.

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For more information and global representatives: www.hawkmeasure.com

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

Progressive Technical Support

HAWK believes that the future of the Level Measurement Industry revolves around the quality of pre and post sales - support. Our aim is for all sales & support staff to be product experts, and more importantly application experts making our customers applications as efficient and consistent as possible.

Knowledge Sharing

HAWK believes that knowledge sharing is key to creating long term relationships. Empowering our customers and our worldwide distribution network, whilst being available at all times to lend a helping hand, is the perfect recipe for long term solutions and relationships. HAWK openly extends an invitation to share our 25 years of level measurement experience, and ensure that your day to day processes are efficient, understood, and always working.

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