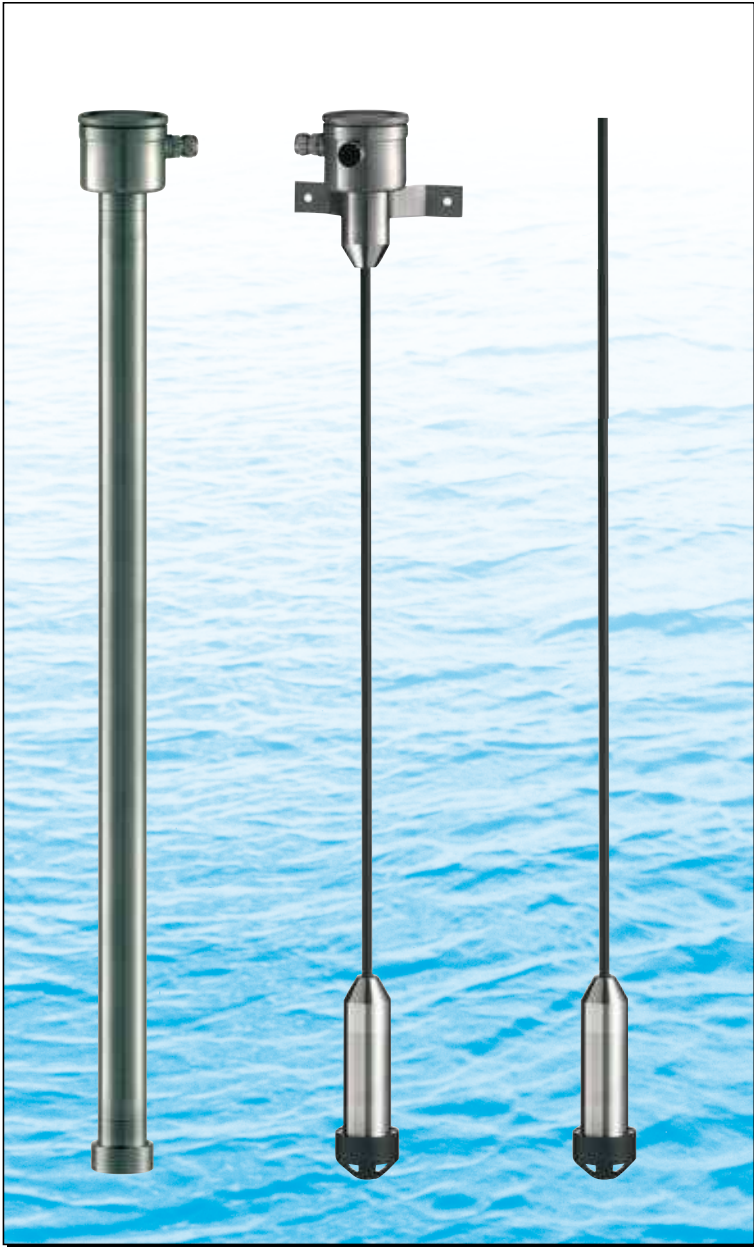





SUBMERSIBLE LEVEL TRANSMITTERS



HYDROBAR

- ▶ 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

DESCRIPTION

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 laserwelded, this results in a **perfect long term stability**.

Made by:

 **KLAY-INSTRUMENTS B.V.**

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Our representative in your area is:

SPECIFICATIONS

Measuring ranges	: 0,1 bar to 10 bar
Output signal	: 4-20 mA, 2-wire
Adjustment	: Zero and span internally (not for FR type)
Overall accuracy	: 0,2% of adjusted span
Power supply	: 12 to 36 Vdc (Exi: 13/17-26,5 Vdc)
Electrical connection	: PG9, 1/2" NPT or M20 x1.5
External load (max.)	: 550 Ohm/24 V to 1400 Ohm/40 Vdc
Protection grade	: IP68 (cable/SS tube) IP66 (electr. housing)
Process temperature	: -10°C to +70°C
Temperature sensitivity:	: +/- 0,015%/K
Wetted parts	: AISI 316L (standard)
Material cable	: Polyethylene (PE) (option: Hytrel or PTFE)



Flush diaphragm

Specifications can change without notice

SERIES HYDROBAR						
	Type code:	Hydrobar-Cable-FR	Hydrobar-Cable	Hydrobar-Cable-F	Hydrobar-EXTD	Hydrobar-EXTD-F

Detailed drawings available on request

ORDERING CODES

Order code cable extension:*		Hydrobar-cable (length) -							
Order code SS extension:*		Hydrobar-EXTD (length) -							
Measuring Ranges (bar)	Maximum overpressure (bar)	Adjustable span range (bar)	↑	↑	↑	↑	↑	↑	↑
0 - 0,1...0,4	6,4	0 - 0,1 / 0 - 0,4	B						
0 - 0,4...0,7	6,4	0 - 0,4 / 0 - 0,7	C						
0 - 0,7...1,5	10,5	0 - 0,7 / 0 - 1,5	D						
0 - 1 ... 4	16	0 - 1 / 0 - 4	E						
Fixed range: Specify calibrated range (only Hydrobar-cable)			FR						
- Mounting connection: Flange DIN or ANSI (specify size)				F					
- Special mounting connections: Example 1 1/2" or 2" BSP (specify)				X					
- Digital local indicator 3 1/2 digit, programmable					I				
- Intrinsically safe: ATEX II 1 G Ex ia IIC T4 Ga and IECEx						EX			
- SPECIALS: Other wetted parts (Hast.C or gold plated) or other cable material (Hytrel or PTFE) (specify)							G		

* Always specify cable or SS extension length at order code

GENERAL INFORMATION

Laser welded diaphragms: All Hydrobar level transmitters consist of a strong, flush mounted diaphragm, which are laser welded.
Temperature compensation: All Hydrobar transmitters are fully temperature compensated.
EMC/CE: Klay Instruments manufactures all transmitters according to the new EMC/CE regulations.

ACCESSORIES



Cable clamp
Art. no. 20636



Junction Box FMD(IP67)
Art. no. 20069



INTELLIGENT SUBMERSIBLE LEVEL TRANSMITTERS

Remote Rangeable

HYDROBAR 'I'

HART
COMMUNICATION PROTOCOL

- ▶ Free Programmable by PC or HHT
- ▶ Output 4-20 mA and HART® Protocol
- ▶ Accuracy 0.1%
- ▶ Strong Diaphragms
- ▶ Perfect Long Term Stability (<0.1%/ 2 years)
- ▶ Temperature compensated
- ▶ Zero/Span adjustable
- ▶ Intrinsically Safe
ATEX II 1G
Ex ia IIC T4 Ga



The Hydrobar 'I' is an 'Intelligent', free adjustable, hydrostatic level transmitter with cable (IP68) for level measurement in water & wastewater, pulp, slurry, chemicals, etc.

Zero and span are adjustable by HART® Protocol and PC or HHT.

The Hydrobar 'I' has active temperature compensation and a strong (laserwelded) diaphragm which results in a **perfect long term stability**.



HART® is a registered trademark of the HART Communication Foundation

Programmable by PC or HHT

Made by

KLAY-INSTRUMENTS B.V.

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Website: www.klay.nl

Our representative in your area is:

Specifications

Measuring ranges	: 0,04 bar to 10 bar
Output signal	: 4-20 mA / 2-wire + HART® Protocol
Adjustment	: Zero and span by PC or HHT
Accuracy	: 0.1% of adjusted span
Power supply	: 12 to 40 Vdc
External load (max.)	: 550 Ohm/24 Vdc to 1400 Ohm/40 Vdc
Protection grade	: IP68
Process temperature	: -10 °C to +70 °C
Temperature sensitivity	: +/- 0.01%/K
Wetted parts	: AISI 316L (standard)
Material cable	: Polyethylene (PE) (option: Hytrel or PTFE)

Specifications can change without notice



Strong flush diaphragm

Ordering codes

ORDERINGCODE		Hydrobar -I- cable (length) -			
Ranges (bar)	Maximum overpressure (bar)	Adjustable span range (bar) min. - max.	↑	↑	↑
0 – 0,04...0,4	6,4	0 – 0,04 / 0 – 0,4	1		
0 – 0,12...1,2	10,5	0 – 0,12 / 0 – 1,2	2		
0 – 1 ... 10	30	0 – 1 / 0 – 10	3		
- Mounting connection: Flange DIN or ANSI (specify size)					F
- Other top mounting connections: Example G2" thread (specify)					X
OPTIONS					
- Intrinsically safe: ATEX II 1 G Ex ia IIC T4 Ga					Ex
- Hasteloy C diaphragm					G7
- Hytrel cable					G10
- Gold plated diaphragm					G16
- Process connection 1/2" BSP M. (By adapter)					G21
- Process connection 1" BSP (flush diaphragm)					G54

* Always specify cable length at orderingcode

Applications

The Hydrobar "I" can be used for level and pressure measurement in all kind of fluids, like water & waste water, pulp, slurry, chemicals, etc. Typical applications are Levelmeasurement in:

- Basins
- Deep wells
- Tanks/vessels
- Underground tanks
- Ballast tanks (Shipbuilding)

Also available with threaded connections (G1/2" and G1") for pressure measurement.

General Information

- **Laser welded diaphragms**
All Hydrobar leveltransmitters have strong, flush mounted, diaphragms which are laser welded.
- **Active Temperature compensation**
All Hydrobar transmitters are fully Temperature compensated.
- **EMC/CE**
Klay Instruments manufactures all transmitters according to the European CE rules.

Approvals

- The following certificates are available:
- HART® Protocol
 - ATEX II 1G Ex ia IIC T4 Ga
 - DNV, RINA, BV Type Approvals



Accessories



Cable clamp
Art. no. 20636



Junction Box FMD(IP67)
Art. no. 20069

