

# Hydrolog® HLF4

Data logger with data remote transmission  
for water level recording

Technical Information TI05.24



## Application

- Water and waste water sector
- Environmental technology
- Process industry e.g. for
- Long-term monitoring of water levels at hydroelectric power plants
- Alerting in the event of flooding
- Weir control
- Stockpile management of storage tanks

## Main features

- Wide range of power supply options
  - Long-term lithium battery 19/35Ah
  - Li-Ion battery 10Ah
  - DC supply 7...32V
  - Photovoltaic module (PV module)
- Up to 5 sensors for up to 11 measured variables
  - 2x sensor current 0/4...20mA
  - 2x 4-channel multi-parameter sensor
- RS485 Modbus®-RTU
  - 2x sensor supply 16.6V / 30mA
  - 2x sensor supply 6.7V / 100mA
- Digital input / pulse counter
- 800,000 measured values
- Local operation via Bluetooth 5.0 LE
- Remote data transmission via 4G/LTE, 2G GSM/GPRS
- Alarm management and remote alarming
- Measured value verification through
- Comparison sensor
- Highest data security
- Installation in water level pipes from 2"
- Flood-proof up to 3m water column
- Temperature range -20°C to +60°C
- Translated with DeepL.com (free version)



## Description

The Hydrolog is an electronic data logger for installation in water level pipes, with integrated 4G/2G remote data transmission for autonomous recording of various measured variables and with Bluetooth 5.0 LE interface for simple wireless local operation via cell phone app.

Highly efficient energy management allows both long-term use for more than 10 years and a fast measuring operating mode with short-term data transmission, depending on the supply and settings.

The robust design and high-quality workmanship make the device a very high-quality product.

Captive laser marking on the nameplate ensures that the device can be identified throughout its entire service life. The optional attachment of a measuring point designation or TAG is of course also possible by laser marking.

A customer-specific configuration or presetting is also available as an option, as is a factory certificate for drinking water suitability.



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# TECHNICAL DATA

## Auxiliary power supply

Battery B1	Lithium / 3,6V-19Ah
BatteryB2	Lithium / 3,6V-35Ah
Battery rechargeable A1	LiION / 4,1V-20Ah
Supply voltage DC	7...32VDC / $\leq$ 350mA
PV module	4,5...32VDC / $\leq$ 2A

## Communication - RS485 Modbus-RTU

Interface Ci1 / Ci2	RS485, bidirectional / Modbus-RTU / 9600 Baud (4800...38400 Baud)
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## Analogue - Current 0/4...20mA

Signal range Ai1/Ai2	0/4...20mA / FSI: 0...28mA / Ri 27R
Resolution	FSI 16 Bit
Characteristic deviation	$\leq \pm 0,05\%$ FSI
Temperature deviation	$\leq \pm 0,1\%$ FSI / 10K
Long term deviation	$\leq \pm 0,05\%$ FSI / year

## Digital - Switch / Counter

Operating range Di1	$\leq 20k\Omega$ / $\leq 1kHz$
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## Transmitter power supply Uo

Output voltage Uo1/Uo2	16,6V $\pm 0,3V$ (0mA) / 15,9V $\pm 0,3V$ (30mA) / 0...30mA, max. 40mA
Output voltage Uo3/Uo4	6,7V $\pm 0,2V$ (0mA) / 6,6V $\pm 0,2V$ (100mA) / 0...100mA, max. 300mA

## Interface - Bluetooth®

Standard	Bluetooth® 5.2
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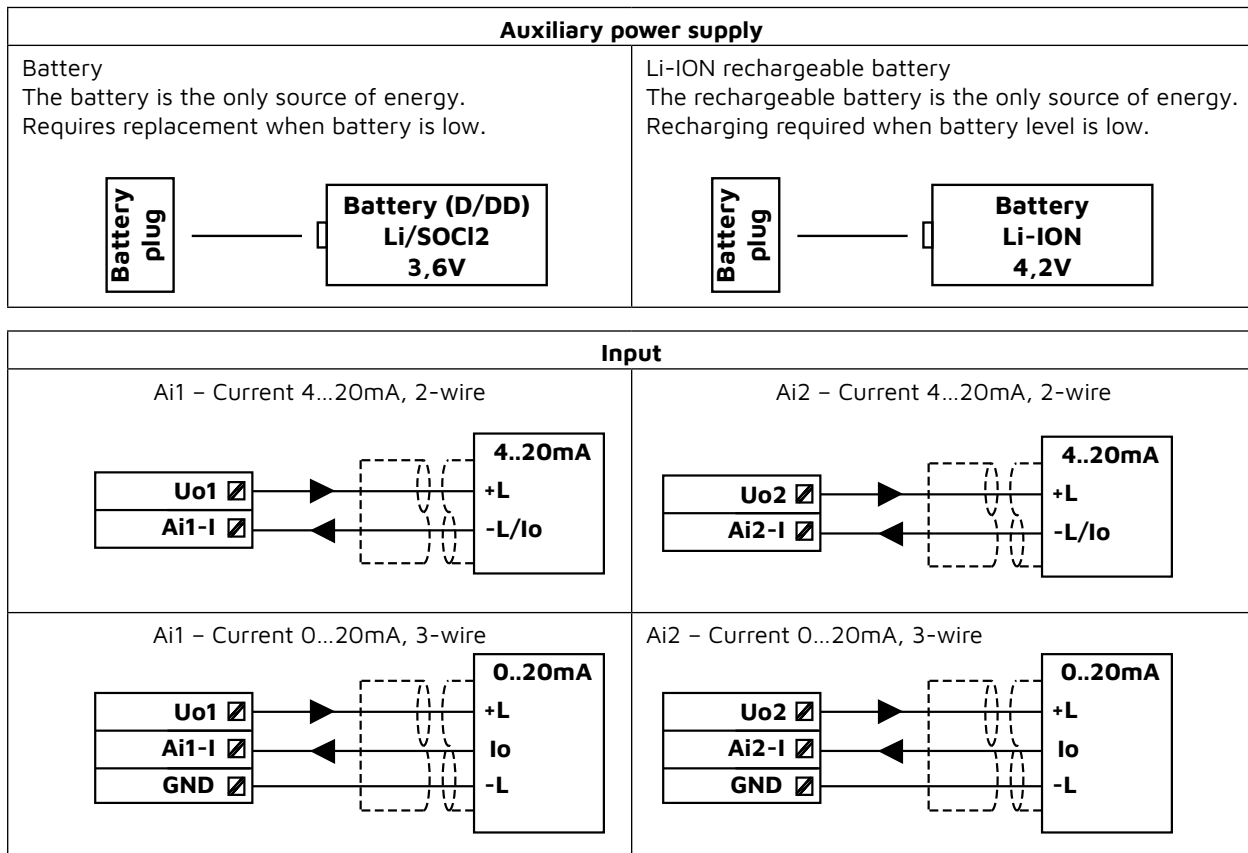
## Interface - Cellular LTE-M1 / LTE-NB2 / EGPRS

Standard	4G LTE-M1 LTE-FDD: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B27/B28/B66/B85 4G LTE-NB2 (NB-IoT) LTE-FDD: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B28/B66/B71/B85 2G EGPRS 850/900/1800/1900MHz
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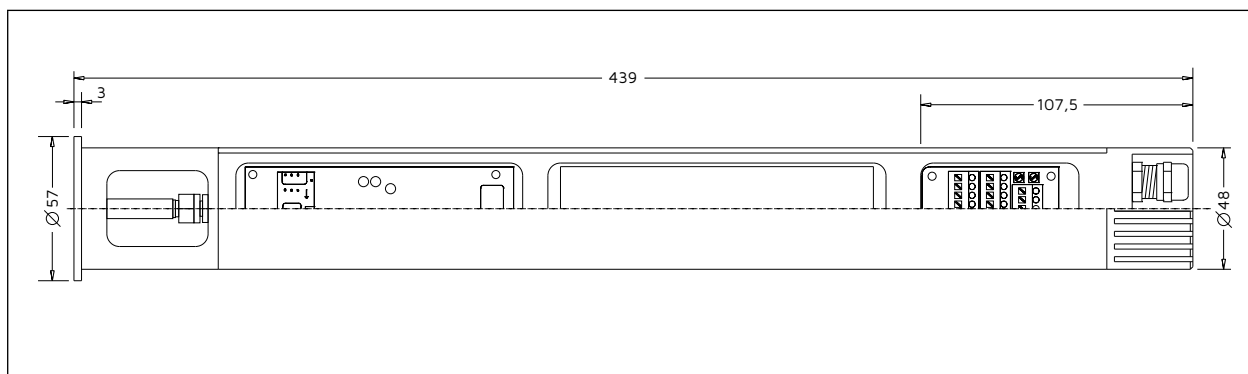
## Memory

Type	Datflash, nonvolatile
Memory size	8 MB
Memory content	$\geq 800.000$ measuring values

# ELECTRICAL CONNECTION



# DIMENSIONS (MM)



Type	
HLF4	Standard
<b>Approval</b>	
S	Standard
<b>Enclosure type</b>	
R2	In-tube enclosure Ø 48mm / tube 2"
<b>Electronic - Supply</b>	
B1	Battery lithium 19Ah / DC supply 7...32V
B2	Battery lithium 35Ah / DC supply 7...32V
A1	Rechargeable battery Li-ION 20Ah / DC supply 7...32V / PV module
<b>Electronic - Function</b>	
0	Bluetooth® 5.2
5	LTE-M1, LTE-NB2, EGPRS / Bluetooth® 5.2
<b>Electronic - Input</b>	
M	2x Ai 0/4...20mA / 2x Ci RS485 / 1x Di
<b>Tariff</b>	
0	Separate billing / without
XS1B	ACS DataComplete XS, Basic
XS1S	ACS DataComplete XS, Standard
XS1P	ACS DataComplete XS, Premium
S1B	ACS DataComplete S, Basic
S1S	ACS DataComplete S, Standard
S1P	ACS DataComplete S, Premium
M1B	ACS DataComplete M, Basic
M1S	ACS DataComplete M, Standard
M1P	ACS DataComplete M, Premium
L1B	ACS DataComplete L, Basic
L1S	ACS DataComplete L, Standard
L1P	ACS DataComplete L, Premium
<b>Additional option</b>	
-ML	Measurement point designation / TAG - Laser marking
-KF	Configuration / Preset

**Hydrolog® HLF4** S R2 M S