Hydrolog® HLF4

Data logger with data remote transmission for water level recording

Technical liformation TI05.24

slim design | flood protected | alarm management | Bluetooth LE | Ultra Low Power | 4G LTE 2G GSM 5G- ready

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 20Ah
  - -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

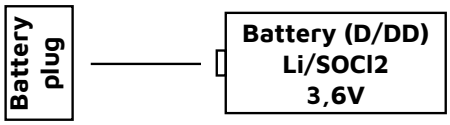
Auxiliary power supply	
Battery B1	Lithium / 3,6V-19Ah
BatteryB2	Lithium / 3,6V-35Ah
Battery rechargeable A1	LiION / 4,1V-20Ah
Supply voltage DC	7...32VDC / ≤ 350mA
PV module	4,5...32VDC / ≤ 2A
Communication - RS485 Modbus-RTU	
Interface Ci1 / Ci2	RS485, bidirectional / Modbus-RTU / 9600 Baud (4800...38400 Baud)
Analogue - Current 0/4...20mA	
Signal range Ai1/Ai2	0/4...20mA / FSI: 0...28mA / Ri 27R
Resolution	FSI 16 Bit
Characteristic deviation	≤ ±0,05% FSI
Temperature deviation	≤ ±0,1% FSI / 10K
Long term deviation	≤ ±0,05% FSI / year
Digital - Switch / Counter	
Operating range Di1	≤ 20kOhm / ≤ 1kHz
Transmitter power supply Uo	
Output voltage Uo1/Uo2	16,6V ±0,3V (0mA) / 15,9V ±0,3V (30mA) / 0...30mA, max. 40mA
Output voltage Uo3/Uo4	6,7V ±0,2V (0mA) / 6,6V ±0,2V (100mA) / 0...100mA, max. 300mA
Interface - Bluetooth®	
Standard	Bluetooth® 5.2
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
Memory	
Type	Dataflash, nonvolatile
Memory size	8 MB
Memory content	≥ 800.000 measuring values

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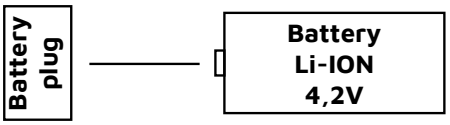
ELECTRICAL CONNECTION

Auxiliary power supply

Battery
The battery is the only source of energy.
Requires replacement when battery is low.

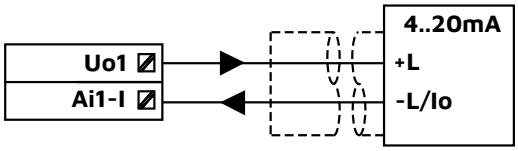


Li-ION rechargeable battery
The rechargeable battery is the only source of energy.
Recharging required when battery level is low.

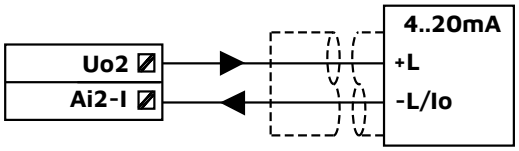


Input

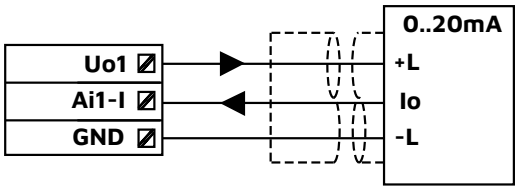
Ai1 – Current 4...20mA, 2-wire



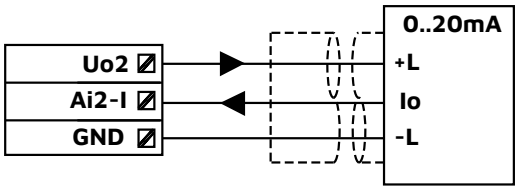
Ai2 – Current 4...20mA, 2-wire



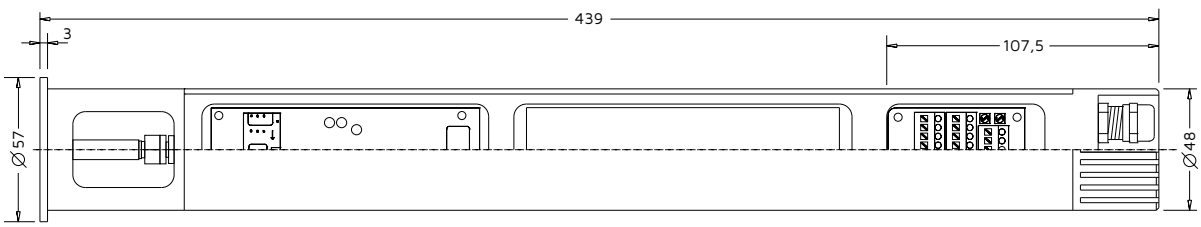
Ai1 – Current 0...20mA, 3-wire



Ai2 – Current 0...20mA, 3-wire



DIMENSIONS (MM)



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ORDE CODE

Type

HLF4 Standard

Approval

S Standard

Enclosure type

R2 In-tube enclosure Ø 48mm / tube 2"

Electronic – Supply

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

Electronic – Function

0 Bluetooth® 5.2

5 LTE-M1, LTE-NB2, EGPRS / Bluetooth® 5.2

Electronic – Input

M 2x Ai 0/4...20mA / 2x Ci RS485 / 1x Di

Tariff

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

S

Additional option

-ML Measurement point designation / TAG – Laser marking

-KF Configuration / Preset

Hydrolog® HLF4	S	R2			M		S

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