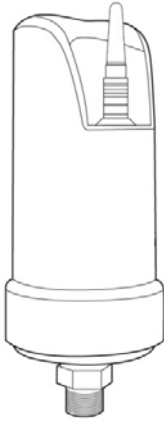


# Technical Specification

## NautiLog NL-2

### Battery Powered Pressure/Flow logger with GPRS



Intelligent energy efficient data logger/GPRS module for water industry

#### Application

- Smart sensor network for water industry
- DMA meter reading and transmission to reduce NRW
- Bulk meter reading and transmission

#### Features

- Ultra low power design with internal battery
- Dual channel pressure/flow data logging
- Water proof design with IP68
- Support 2G/3G wireless network
- Data requisition rate as high as 40mS to monitor water hammer with high density local data storage
- Support remote parameter configuration and program update
- Support Bluetooth interface for onsite maintenance and setup
- Can be connected up to 3 external battery pack to extend maintenance interval

#### Your benefits

- Integrated pressure sensor to save installation complicity
- True Real-Time pressure and flowrate monitor
- Water seal quick connector on meter - no more wiring work on the meter
- IP68 protected device give you confident on all weather condition
- Energy-saving measurement and communication – no more need of huge solar panel
- No power grid required – battery lifetime of up to 5 years(with extension battery kit)
- Worldwide transmission of measured data and events
- Reliable data storage

---

## Pressure measurement

---

**Measured variable**                      **Direct measured variables**  
Fluid pressure

---

**Measuring range**  
0~10 bar

---

**Measuring performance**  
0.5% o.R.

---

## Output

---

**Communication**                      GSM/GPRS  
UART (to communicate with flowmeter)

## Memory

---

**Capacity**                                32MB  
UART (to communicate with flowmeter)

**Saving interval**                      1second ~24 hours configurable, typical 5 minutes

**Sending interval**                    5 minutes~24 hours configurable, typical 15 minutes

## Power supply

---

**Supply voltage**                      **Power from batteries**  
3.6 V DC  
35 Ah nominal capacity at 20 °C  
Max. power: 12W@GSM transmission time

**Operation life with batteries**

10 months@15 minutes transmission interval with internal battery

30 months with external battery pack 1

50 months with external battery pack 2

70 months with external battery pack 3

**Supply voltage via external power supply**

12 V DC

Max. power: 40 mW

A battery to act as a backup if the power supply fails

---

**Power consumption**                    **Switch-on current**  
Max. 0.5 A at 24 V DC

## Environment

---

**Ambient temperature**                **Operation temperature**  
-10~55°C

**CE Marking**
**Electrical Static Discharge**

IEC61000-4-2, 6kV direct discharge, 8kV discharge

**Radiated RF fields**

IEC 61000-4-3, 80MHz~1000MHz 10V/m, 1000MHz ~ 2700MHz:3V/m

**Electrical fast transient/burst**

IEC 61000-4-4 1kV on cable

**Surge**

IEC 61000-4-5, 1kV on cable, 1,2/50s wave

**Conducted RF disturbances**

IEC 61000-4-6, 0.15~80MHz 3V

**Electromagnetic compatibility**

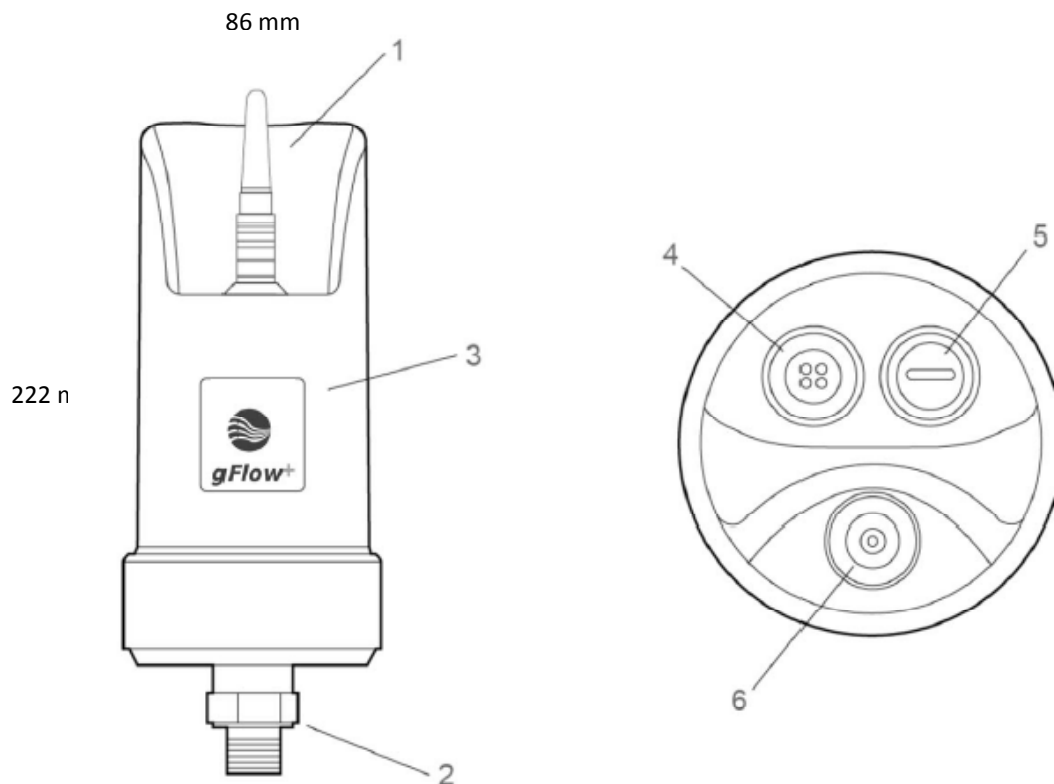
IEC 61000-4-8, 10A/m

**Mechanical Shock**

IEC 68-2-27, half sine wave, 300g, 3 axles

**Protection Level**

IP68

**Connection and installation dimensions**


1. RF Antenna (detached remote antenna can be use if needed)
2. Pressure tapping connection
3. ABS body
4. Water proof connector for external power or external battery package
5. Water proof connector for flow meter signal
6. Water proof connector socket for attached or detached antenna

## Materials

---

<b>Sensor material</b>	<b>Pressure tapping fittings</b>
	316 Stainless steel
<b>Electronics Housing</b>	ABS
<b>Sealing O-Rings</b>	EPDM

## Order structure

---

<b>NL-2</b>	-	<b>AAA</b>	<b>BBB</b>	<b>C</b>	<b>DDD</b>
	<b>Model</b>				
	NL2-				
		<b>AAA</b>	<b>Flowmeter model</b>		
		IF200	gFlow IF200 flowmeter		
		IF800	gFlow IF800 flowmeter		
		ABBAM	ABB Aquamaster flowmeter		
		MAG80	Siemens MAG8000		
			<b>B</b>	<b>Rate unit</b>	
			1	With attached antenna	
			2	With detached antenna	
				<b>C</b>	<b>Unit per pulse</b>
				0	Internal battery only
				1	External battery pack 1
				2	External battery pack 2
				3	External battery pack 3