



iJiNUS
CLAIRE GROUP

Natural water & Sanitation

CATALOGUE 2022

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ijinus.com

The challenges of sanitation

The sanitation system in France comprises nearly 400,000 km of pipes, for both wastewater and rainwater, two thirds of which are separate networks.

With drinking water, the **estimated infrastructure value of the water networks is 300 billion euros.**

Wastewater treatment is a service that is not accessible for the entire population: 1.4 million people do not enjoy any such access and 7.5 million people do not have access to securely managed facilities.

Only 0.4% of the sanitation system is renewed each year and its knowledge index and patrimonial management is insufficient (57/120).

Against this background, it is essential to place the management of water resources at the very forefront of our priorities.

The first step towards improving network efficiency to contribute to its sustainability and provide a trouble-free service involves installing reliable products made from high-quality materials that are manufactured locally.

Monitoring (measuring parameters and detecting anomalies), supervision (prioritising work and maintenance) and remote action (control) also help to improve the management and performance of water networks in order to safeguard resources.

395 000 km

of sanitation system

2/3

of separate systems

1/3

of combined systems

0,4%

of the network renewed each year





13%

of the population does not
have access to sanitation
or is inadequately served

Claire group

Your partner to...

Fit out
Improve
Safeguard





The leading European partner for fitting out and improving the performance of water networks,

Claire regards safeguarding resources as a priority.

It takes action in many aspects of the water cycle: Natural Water, Drinking Water, Sanitation and Irrigation.

Within the Claire Product branch, the company markets a range of equipment designed for construction, maintenance and repair

of water distribution and irrigation networks.

The Claire Connect branch specialises in a range of solutions (products and services) for diagnostics, automation and performance management of water networks.



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IJINUS
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WAYVE
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wayve.fr



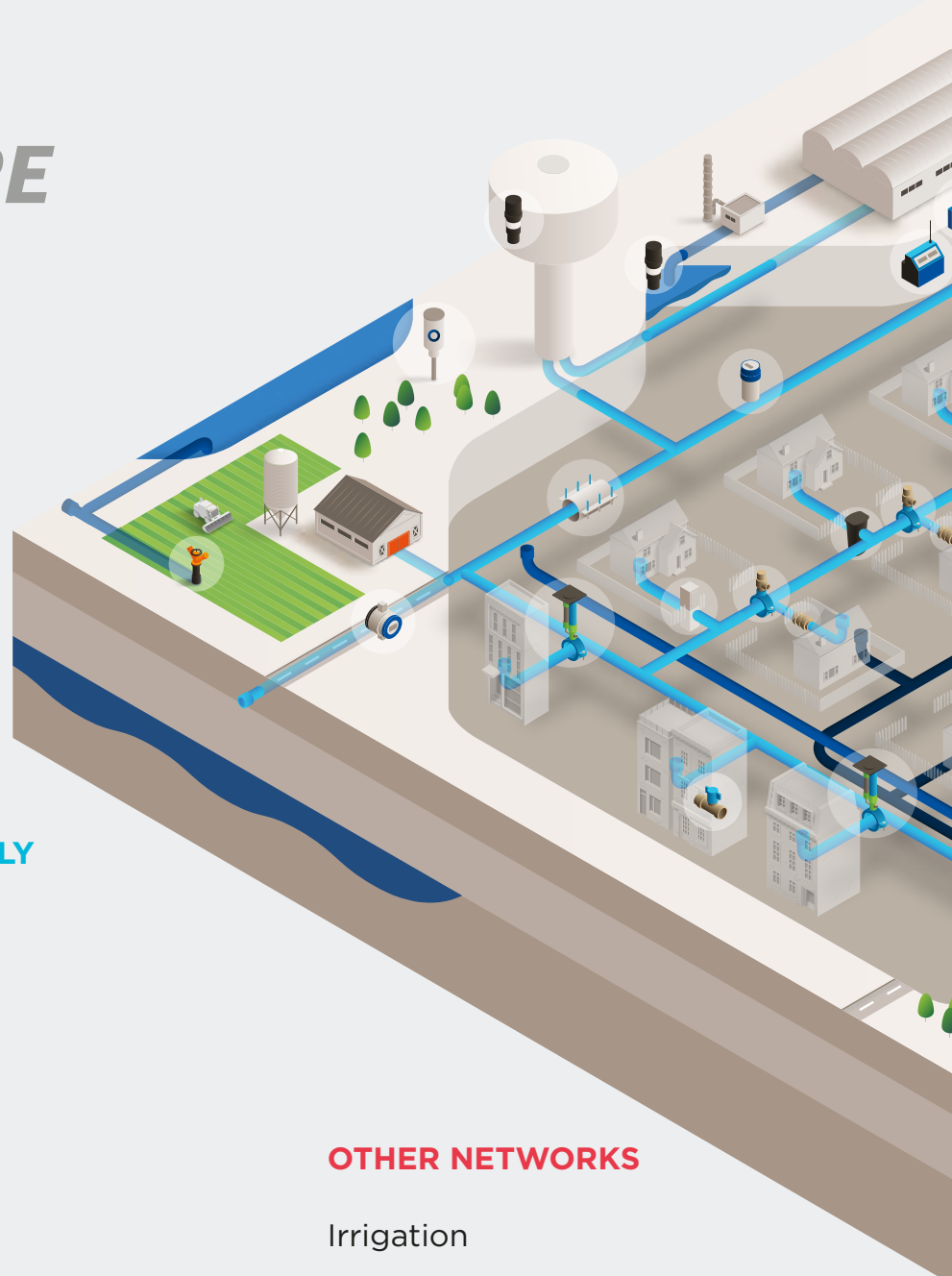


Natural water & Sanitation

Drinking water



claiRE



DRINKING WATER SUPPLY NETWORK

Connection
 Metering environment
 Connection
 Network
 Tools
 Diagnostics
 Leak detection
 Supervision
 Control

OTHER NETWORKS

Irrigation
 Sub-metering
 Industrial networks



NATURAL WATER & SANITATION SYSTEM

- Rainfall
- Preventive flood control
- Groundwater monitoring
- Environmental quality
- Diagnostics
- Sampling
- Supervision

Claire group opens the doors of its campus

A **bespoke training system** geared to the operational requirements of water networks

Training courses / topics

WATER INDUSTRY

Learn about drinking water supply / sanitation
Identify the stakeholders and the equipment

CONSUMER CONNECTION

Understand, install the consumer connection equipment and manage the service

CONNECTION

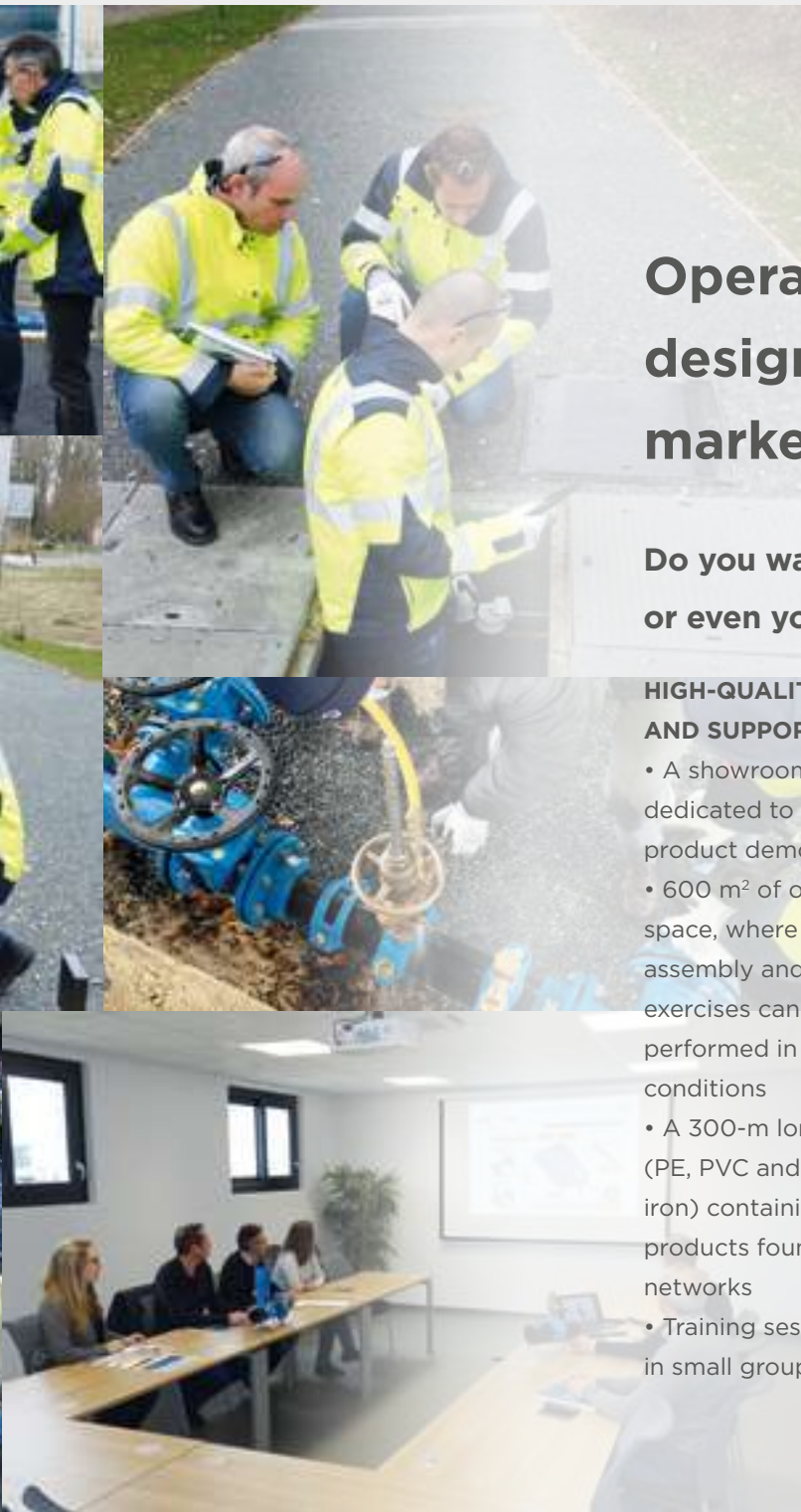
Connect pipes efficiently with the U-CAN universal platform

WAYVE

Manage your network of smart boxes from your application or your Wayve platform (Activate, program and analyse)



Claire campus located on the Sainte-Lizaïgne production site to grasp how the entire product life cycle unfolds.



Operators, installers, design offices market managers, etc.

**Do you want to train your team
or even yourself?**

HIGH-QUALITY CARE AND SUPPORT

- A showroom + a room dedicated to training and product demonstrations
- 600 m² of outdoor space, where workshops, assembly and installation exercises can be performed in field conditions
- A 300-m long network (PE, PVC and cast iron) containing all the products found in water networks
- Training sessions held in small groups

SIMPLIFIED LOGISTICS

- Training centre based in the middle of France
- On-site dining facilities
- Accommodation can be arranged

A MADE-TO-MEASURE OFFERING

- Various modules are available to build up skills
- A custom programme tailored to your project

LEAK DETECTION

Accurately and swiftly locate leaks in the water network

BOXES AND MANHOLES

Install and commission underground and above-ground metering systems

METER VALVES

Identify the metering system that is the most appropriate and install it in any environment

INDIVIDUALISED TRAINING

Highly-specialised training officers and partners to elaborate your training project

Our brands



Ijinus is specialised in the development of **autonomous and smart measuring and data logging systems to monitor water**: metrology equipment, automated water samplers, sensors and data loggers connected to a supervision application and platform.

ijinus.com

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Smart, connected network management with our range of **AUTONOMOUS DATA LOGGERS**

What is an autonomous data logger?

A data logger transmits the measurements collected by one or more sensors to supervision tools via different communication protocols (GSM, GPRS - 2G / 3G, 4G (LTE-M and NB-IoT), MODBUS & 4-20mA).

Therefore, it simplifies the management of environmental data on drinking water, wastewater and surface water. The data are transmitted to a platform or to software where they can be

compiled, compared, analysed and interpreted.

A data logger is described as being autonomous when it does not require an external power supply.

All IJINUS data loggers are autonomous thanks to their own internal battery and can supply power to external sensors. For the most energy demanding sensors an external battery pack is also proposed.



So why use an IJINUS data logger?

IJINUS data loggers can be used for a multitude of applications. Hence, they are:

- **Compatible with a wide range of sensors**
- **Capable of being interfaced with most monitoring platforms and software, including IJITRACK**
- **Designed to communicate over all commercially available wide area networks: GSM, GPRS, 2G/3G/4G**
- **4-20mA, Modbus RS485 ...**

IJINUS data loggers can be adapted to all your measurement campaigns, all types of water networks (drinking water and wastewater) and all environments. These rugged data loggers are easy to program by radio (RFID), user-friendly and safe to use, and offer a fast response in the field in any situation. They

have been developed by our teams and are designed to be independent and long-lasting, with a 5-year battery life (for 1 measurement every 15 minutes and 1 transmission per day). The data are characterised by a quality indicator to provide the highest possible reliability.

A complete range for all market sectors and applications

The LOG range includes 4 models of data loggers that can be customised to suit your requirements

COMMUNICATIONS

MEASUREMENT

APPLICATIONS

ACCESS POINT

COMPATIBLE SENSORS

Technical characteristics

Memory: 500,000 measurements

Battery-powered

Seal: IP68 (1 Bar/30 days)

Wireless configuration via radio

Communications: radio locally (RFID), and depending on model GSM, GRPS, 2G, 3G, 4G (LTe-M and NB-IoT)

LOG03	LOG04	LOG09	LOG10
4-20mA	MODBUS RS485	4-20mA - MODBUS RS485	MODBUS RS485 / DIGITAL INPUTS / EXTERNAL ULTRASONIC PROBE
Height flow using pressure probe	Height / Velocity Flow Physico-chemical	Height / Velocity Flow Physico-chemical Height and Flow using pressure probe	External ultrasonic probe Height / Velocity Flow
CSO / SSO Groundwater resources Lift station Rainfall	CSO / SSO Lift station Physico-chemical Rainfall Electromagnetic flowmeter	CSO / SSO Lift station Groundwater resources Electromagnetic flowmeter	CSO / SSO Lift station Physico-chemical Rainfall
Hf / GPRS	Hf / MODBUS / GPRS	Hf / MODBUS / GPRS	Hf / MODBUS / GPRS
Overflow detector Clamp-on ammeters Relative pressure level sensors CNR and CNRT series Rainfall Pressure probe Inclinometer Other 4-20mA output sensors	Submerged height/velocity sensor VLI and KDO Velocity sensor Submerged Doppler UB-V Overflow detector Clamp-on ammeters Physico-chemical water quality sensor Rain gauge RG20 and RG25 Electromagnetic flowmeter (MODBUS)	Relative pressure level sensors CNR and CNRT series Pressure probe CPA Physico-chemical water quality sensor Electromagnetic flowmeter (MODBUS)	Submerged height/velocity sensor VLI and KDO Velocity sensor Submerged Doppler UB-V Overflow detector Clamp-on ammeters Physico-chemical water quality sensor Rain gauge RG20 and RG25 Electromagnetic flowmeter (MODBUS)
			

Conserving resources

Sanitation is a process that encompasses wastewater collection, treatment and discharge into the natural environment. It also includes the management of rainwater and run-off water, which impacts the sanitation system.

To safeguard the sustainability and performance of the sanitation system, which is a community asset, continuous

monitoring facilities are required. The measurement of certain parameters such as rainfall, levels, flow and H₂S, as well as monitoring of groundwater infiltration, provides information on the operation of the sanitation system, its infrastructure and equipment. This optimises management of the sanitation system and prioritises the measures to be taken.

IJINUS provides **smart instrumentation for continuous diagnostics** of the sanitation system.





Diagnostics of the sanitation system covers the measuring instruments required to monitor and supervise it:

rain gauge, level sensors, flow sensors, H₂S sensors, pressure sensors and physico-chemical data logger, etc.

LEVEL

The **LSC wireless overflow data logger**, see p.28



FLOW

The **autonomous ultrasonic level sensor for water level and flow measurement, LNU06**, see p.32



H₂S

The **LOGAZ smart H₂S sensor**, see p.50





Autonomous rain gauge RG20 / RG25

As rainfall measurement is crucial for flood prevention and management, as well as to more accurately anticipate potential water shortages, Ijinus offers an autonomous, smart rain gauge. The RG20 or RG25, together with its data logger, is very easy to install and set up and can be used for both temporary measurement campaigns and fixed installations. It enables the impact of rainfall on groundwater (water tables) and surface water (river flow) to be accurately monitored.

It can be connected to a data logger to retrieve data locally by radio, or to a remote monitoring tool. This tipping-bucket rain gauge consists of a funnel collector and two calibrated collection vessels, designed to prevent rain from splashing inside and outside, as recommended by the WMO (World Meteorological Organisation). Data can be logged as time-stamped bucket-tipping or as cumulative rainfall, with the option of sending alarms.



Advantages

Easy to install, interface and set up in the field

Modular, to match your requirements, by configuring alarms on rain durations and intensities

Practical with the option of cross-referencing rainfall data with data from other sensors interfaced to the same data logger

Multifunctional design with time-stamped or cumulative rainfall operation

Where should it be installed?

- Pumping station
- Building
- CSO / SSO

We recommend installing one rain gauge per km² and distributing them uniformly over the area to cover the catchment area as effectively as possible

Additional products



Technical characteristics

- ___ **Memory:** 500,000 measurements
- ___ **Measuring range:** 0 - 300 mm/h
- ___ **Accuracy:**
 - <1% for rainfall intensity of 30 mm/h
 - <2% for 20 - 40 mm/h
 - <3% for 10 - 50 mm/h
- ___ **Configuration:** wireless by radio
- ___ **Communications:** locally via radio or remotely via GSM, GPRS, 3G, 4G (LTE-M and NB-IoT). Depending on model, communications take place by pairing with an autonomous data logger or via the data logger integrated in the RG25
- ___ **Radio range:** 100 metres in open field conditions
- ___ **Data export:** csv, Excel, HTML
- ___ **Temperature range:** -30°C à + 70°C
- ___ **Seal:** IP68



Designation

- 1** **Autonomous data logger from the LOG03, LOG04, or LOG10 range** to collect and transmit data via a radio link or other (see p.16)
- 2** **AVELOUR software** to swiftly program sensors and to retrieve, analyse and export data (see p.112)
- 3** **WIJI connection kit** (see p.122)
- 4** **IJITRACK web platform** to display and process data, set alerts, etc. (see p.116)
- 5** **Screw-on support stand/ base stainless steel** 658 mm x Ø 60.3 mm (see p.134)
- 6** **Spike stand and mounting clamp** (Stand Ø: 60.3 mm) (see p.134)





Wireless level sensor LNU06

The wireless LNU06 is an acoustic imaging level sensor, which is ideally suited to measuring water levels in harsh environments.

It facilitates network monitoring in accordance with regulations through continuous diagnostics, and it can also be used to monitor the levels of storm water overflows and the overflows of the pumping stations as and when required.

It is a useful ally in preventing wastewater from being discharged into the natural environment and in monitoring the state of decay of the network.



Advantages

Fully autonomous: long-life battery, data logger and built-in modem

Versatile: height measurements, can be coupled with a physico-chemical sensor or can be used to control samplers by indicating the volume to be taken for sampling based on the measured flows

Easy to install and use: safe programming by radio without actually having to touch the sensor

Reliable: accurate level measurements

Compact all-in-one: sensor/data logger/communications

Easy to maintain: not directly in contact with water

Widely acclaimed for its measurement accuracy through its external temperature sensor

Where should it be installed?

- Drainage pipe
- Venturi flume
- CSO / SSO
- Overflow of pumping stations
- Wastewater treatment plant

Additional products

12345

Technical characteristics

- ___ **Autonomy:** 5 years on average for 1 measurement every 15 minutes and 1 transmission per day
- ___ **Memory:** 500,000 measurements
- ___ **Measuring range:** 0.3 m to 6 m
- ___ **Built-in conversion tables:** height/flow/volume
- ___ **Configuration:** wireless by radio
- ___ **Communications:** GSM, GPRS, 3G, 4G (LTE-M and NB-IoT).
- ___ **Seal:** IP68

Designation

- 1 **AVELOUR software** to swiftly program sensors and to retrieve, analyse and export data (see p.112)
- 2 **WIJI connection kit** (see p.122)
- 3 **IJITRACK** web platform to display and process data, set alerts, etc. (see p.116)
- 4 **Display** to view the measured data (see p.140)
- 5 **Mountings:** clamp only, single or double plate with clamp (see p.132)





Process level sensor CNU06

The CNU06 level sensor is an ultrasonic sensor that provides continuous level or flow measurement without coming into contact with water.

This powered sensor is designed for process applications by connecting to a PLC using MODBUS or 4-20mA.

It requires a fixed PLC to be installed beforehand to provide an alert if the water level or flow set on the PLC is exceeded..



Advantages

- Easy to program by radio without line break
- Intuitive through pre-assisted calibration
- Practical with real-time data shown on the display
- Switches over to internal battery in the event of a power failure

Where should it be installed?

- Drainage pipe
- Venturi flume
- CSO / SSO
- Lift station
- Tank and overflow of pumping stations
- Overflow of wastewater treatment plant

Additional products

1234

Technical characteristics

- ___ **Measuring period:** 500 ms to 1 s depending on the conversions taken from the level measurement
- ___ **Measuring range:** 0.3 m to 6 m
- ___ **Configuration:** wireless by radio
- ___ **Remote data:** Level (water height), Flow (according to H/Q conversion table), Volume, Temperature
- ___ **Output:** MODBUS RS485 / 4-20 mA
- ___ **Input:** Digital (1Hz max.)
- ___ **Seal:** IP68



Designation

- 1 **Display** to view the data in real time
(see p.138)
- 2 **AVELOUR software** to swiftly program sensors and to retrieve, analyse and export data
(see p.112)
- 3 **WIJI connection kit**
(see p.122)
- 4 **IJITRACK** web platform to display and process data, set alerts, etc.
(see p.116)



Data logger and wired capacitive overflow sensor

Overflow CSC

The capacitive overflow sensor is a wired solution to measure overflow times from the sanitation system to the natural environment. It is used to comply with regulations on overflow measurements (required when more than 2,000 inhabitants are connected to the same pumping station or CSO / SSO), or to carry out specific diagnostics of sanitation networks. It records the number and duration of overflows.

The CapAir® technology, capacitive measurement with air referential, provides reliable and unparalleled detection of overflows in wastewater networks in the toughest conditions. For reliable detection, the capacitive measurement is temperature compensated.

The sensor is designed to be connected to a data logger for remote data transfer. The detection zone is marked by a silk-screen print on the surface of the casing, which enables the detector to be positioned in relation to the desired triggering threshold.



Advantages

Patented “CapAir” capacitive technology makes it virtually insensitive to clogging

Practical with its clogging monitoring and management system

Very easy to install with the integral mounting plate

Where should it be installed?

- CSO / SSO
- Overflow of pumping station



Additional products



Technical characteristics

- ___ **Memory:** 50,000 measurements
- ___ **Configuration** using a wireless programming kit via MODBUS, LOG or LNU sensor
- ___ **Communications:** GSM, GPRS, 3G, LTE-M and NB-IoT via a data logger from the LOG range
- ___ **Data export:** csv, Excel
- ___ **Temperature range:** -40°C to +85°C
- ___ **Seal:** IP68



Designation

- 1** **Autonomous MODBUS data logger from the LOG03 or LOG04 range** to collect and transmit data (see p.16)
- 2** **Ultrasonic level sensor LNU06** to modulate the measuring cycle (see p.22)
- 3** **AVELOUR software** to swiftly program sensors and to retrieve, analyse and export data (see p.112)
- 4** **WIJI connection kit** (see p.122)
- 5** **IJITRACK** web platform to display and process data, set alerts. (see p.116)



Overflow LSC wireless overflow data logger

Overflow LSC is the first autonomous overflow data logger. It is used to accurately measure the number and duration of overflows on CSOs / SSOs and pumping stations, either in response to a regulatory requirement (more than 2,000 inhabitants connected to a single pumping station or CSO / SSO), or to carry out specific diagnostics of sanitation networks.

With this highly reliable sensor, you can measure the exact period of time that wastewater is discharged into the environment. The CapAir® technology, capacitive measurement with air referential, provides reliable and unparalleled detection of overflows in wastewater networks in the toughest conditions. For reliable detection, the capacitive measurement is temperature compensated.

The overflow sensor signals the presence of liquid above a certain threshold. The detection zone is marked by a silk-screen print on the surface of the casing, which enables the detector to be positioned in relation to the desired triggering threshold.

The data are transmitted locally to the computer by radio, or sent remotely to supervision software when coupled with a data logger from the LOG range.



Advantages

Battery-powered

Wireless, so there is no risk of the cable being pulled out during immersion or being cut by rodents

Patented "CapAir" capacitive technology makes it virtually insensitive to clogging

Practical with its clogging monitoring and management system

Slick with its dynamic threshold analysis

Very easy to install with the integral mounting plate

Where should it be installed?

- CSO / SSO
- Overflow of pumping station



Additional products



Technical characteristics

- ___ **Memory:** 50,000 measurements
- ___ **Configuration:** wireless by radio
- ___ **Communications:** radio, GSM, GPRS, SigFox, 3G, LTE-M and NB-IoT via a data logger from the LOG range
- ___ **Data export:** csv, Excel
- ___ **Temperature range:** -40°C to +85°C
- ___ **Seal:** IP68



Designation

- 1 **Autonomous MODBUS data logger from the IJINUS LOG range** to collect and transmit data (see p.16)
- 2 **Ultrasonic level sensor LNU06** to modulate the measuring cycle (see p.22)
- 3 **AVELOUR software** to swiftly program sensors and to retrieve, analyse and export data (see p.112)
- 4 **WIJI connection kit** (see p.122)
- 5 **IJITRACK** web platform to display and process data, set alerts. (see p.116)



CNR level-relative pressure sensor

CNRT level and temperature sensor

The CNRT level sensor is an autonomous pressure type level sensor used to measure the level and temperature of wastewater, whereas the CNR sensor only measures its level by pressure.

Both sensors can be connected to a LOG03 or LOG09 data logger for data transmission.

The water flow can be deduced from the measured height without any additional equipment.

The range comprises sensors without a modem for your local measurement campaigns and other sensors with an integral modem for remote data transmission.



Advantages

Battery-powered: battery life > 5 years

Compact, robust and discrete

Very easy to program by radio

Suitable for any environment with cables from 5 to 60 m and incorporating an atmospheric pressure vent

Multifunctional design with temperature measurement (optional)

Where should it be installed?

- Drainage pipe
- Tank of pumping station

Additional products



Technical characteristics

- ___ **Memory:** 500,000 measurements
- ___ **Measuring range:** 1, 2, 5, 10, 20, 50, 100, 200 mH2O for the CNR - 5, 10, 20 mH2O for the CNRT
- ___ **Configuration:** wireless by radio
- ___ **Communications:** HF, GSM, GPRS, 3G, SigFox, LTE-M, NB-IoT
- ___ **Integral atmospheric pressure equalisation system**
- ___ **Reverse polarity protection**
- ___ **Connection** via connector on LOG data loggers
- ___ **Seal:** IP68



Designation

- 1** **LOG03 digital data logger/connector on the side**, for applications in CSO / SSO, lift station monitoring, etc. and height and flow calculation by pressure sensor (see p.16)
- 2** **LOG09 digital data logger/underside connector**, for height and flow calculation by pressure sensor or for coupling with physico-chemical sensors (see p.16)
- 3** **AVELOUR software** to swiftly program sensors and to retrieve, analyse and export data (see p.112)
- 4** **WIJI connection kit** (see p.122)
- 5** **IJITRACK** web platform to display and process data, set alerts, etc. (see p.116)



Wireless flow sensor LNU06

The wireless LNU06 is an acoustic imaging ultrasonic level sensor that is ideally suited to flow measurements in harsh environments.

It can carry out continuous diagnostics of the network in response to the regulations and thus monitor how the network is ageing.

With this sensor, maintenance operations can be anticipated and the network infrastructure preserved.



Advantages

Fully autonomous: long-life battery, data logger and built-in modem

Versatile: height measurements, can be coupled with a physico-chemical sensor or can be used to control samplers by indicating the volume to be taken for sampling based on the measured flows

Easy to install and use: safe programming by radio without actually having to touch the sensor

Reliable: accurate flow measurements

Compact all-in-one: sensor/data logger/communications

Easy to maintain: not directly in contact with water

Widely acclaimed for its measurement accuracy through its external temperature sensor

Where should it be installed?

- Drainage pipe

Additional products

12345

OSRAI FLOW height/flow converter

OSRAI FLOW is the autonomous and communicating solution **to reliably convert a water level measurement into flow. It significantly reduces the margin of error** for flow calculations in the harshest environments. It is quick and easy to install in drainage pipes and can be adapted to the needs of the site, even in existing drainage channels. It can be used to calculate the flow rate over a wide range of upstream slopes using the measured water level. The patented Osrai Flow system is based on the principle of the flow contracting through an “obstacle” in order to guarantee a hydraulic relationship between the flow and the water level upstream.

Its innovative shape reduces the risk of clogging and guarantees reliable flow rates for upstream slopes of up to 4%, and it can be installed in an existing manhole.

Designation

- 1 **AVELOUR software** to swiftly program sensors and to retrieve, analyse and export data (see p.112)
- 2 **WIJI connection kit** (see p.122)
- 3 **IJITRACK** web platform to display and process data, set alerts, etc. (see p.116)
- 4 **Mountings:** clamp only, single or double plate with clamp (see p. 132)
- 5 **Display** to view the data in real time (see p.140)

Technical characteristics

Memory: 500,000 measurements

Autonomy: 5 years on average for 1 measurement every 15 minutes and 1 transmission per day

Measuring range: 0.3 m to 6 m

Configuration: : wireless by radio

Communications: GSM, GPRS, 3G, Sigfox, LTE-M, NB-IoT

Seal: IP68





Doppler velocity sensor UB-V

The UB-V sensor is a Doppler sensor for optimal speed measurements.

This sensor accurately measures even very low velocities, from a water height of 35 mm, even in water with low particle content. It is particularly suited to continuous diagnostics of sanitation networks.



Advantages

- Very low power consumption
- Smart digital velocity sensor
- Ultra-compact and ultra-long battery life
- High-quality and accurate velocity measurement
- Quick and easy to install
- Deduces flows from a height of water

Where should it be installed?

- Inlet of wastewater treatment plant
- CSO / SSO
- Storm water basin
- Overflow of pumping station



Additional products



Technical characteristics

- ___ **Technology:** 1MHz pulsed submerged Doppler
- ___ **Minimum height** for velocity measurement: 35 mm
- ___ **Dimensions H x W x L:** 2.7 cm x 2.8 cm x 16.2 cm
- ___ **Cable length:** 10, 15 m or 20 m

Designation

- 1** **LNU06 level sensor**, to deduce flow rates from water level measurements (see p.22)
- 2** **LOG04 data logger**, to collect, transfer and cross-reference data from several sensors (see p.16)
- 3** **CNR or CNRT pressure sensor**, for cross-referenced water velocity/pressure analysis (see p.30)
- 4** **Power pack**, for longer battery life (see p.124)
- 5** **Mounting ring** stainless steel, adjustable up to 182 cm





Height | speed sensor VLI

The VLI sensor is a multi-purpose, highly accurate height and speed sensor.

It is equipped with a digital Doppler velocity sensor, and coupled with a pressure level sensor. It can measure velocity from a water height of 25 mm. This makes it easier to operate and monitor the sanitation system.



Advantages

Very compact

High measuring accuracy

Extremely versatile and can be interfaced with other sensors via a data logger for cross-referenced measurements

Smart as it has Overflow technology to check the relevance of velocity measurements in storm overflows to increase sensor battery life

Where should it be installed?

- Drainage pipe
- Inlet of wastewater treatment plant
- CSO / SSO
- Storm water basin
- Pumping station

Additional products

1234

Designation

1

LOG04 data logger to collect, transfer and cross-reference data from several sensors (see p.16)

2

Power pack for longer battery life (see p.124)

3

Fixed stainless steel mounting ring, available for pipe diameters from 150 to 380 mm

4

Stainless steel mounting ring, adjustable up to 182 cm

Technical characteristics

- ___ **Memory:** 500,000 measurements
- ___ **1 open-collector output**
- ___ **Configuration:** wireless by RFID
- ___ **Data retrieval:** HF, GSM, 3G
- ___ **Report:** Excel
- ___ **Seal:** IP68





Clamp-on ammeters

Dual clamp-on ammeters are sensors that convert current into an on/off signal.

They connect to pump starting cables and operate in an “on/off” or “quick & clip” mode. These clamp-on ammeters need to be coupled to a data logger that will collect the measured data.



Advantages

- “On/off” contact
- Easy to install
- High detection threshold
- Safety provided by no contact between the clamps and the cables
- Magnetically powered clamps

Where should it be installed?

- Pumping station

Additional products

1234

Designation

1

LOG03 data logger for height and flow measurements using pressure probe (see p.16)

2

LOG04 data logger for flow measurements using height / velocity (see p.16)

3

LOG08 data logger for pressure measurements (see p.16)

4

LOG10 data logger for remote flow measurements using height / velocity (see p.16)

Technical characteristics

— **2 models** depending on the required detection range

— **Frequency:** 50/60 Hz

— **Cable length:** 1,5 m

— **Dimensions:** 43 x 123 x 23.5 mm or 26 x 89 x 64 mm depending on model





Transit time flowmeter

The transit time is a portable ultrasonic flowmeter that calculates the flow of water as a function of its velocity.

Through specific and efficient signal processing, this portable flowmeter offers high performance measurement capabilities under all conditions.

It can be used for temporary measurement campaigns, for pump control, or on a continuous basis.



Advantages

Non-intrusive and easy to install

Easy to use with Minisonic II's new processor and improved performance

User-friendly with the installation assistance feature

Lightweight and portable (less than 750g)

Robust with an IP68 ABS casing

Where should it be installed?

- Wastewater treatment plant
- Pumping station

Additional products



Technical characteristics

- ___ **Memory:** 2 GB
- ___ **10 flow calculations/s**
- ___ **Data retrieval** via USB
- ___ **Pipe diameter:** 10 to 10,000 mm
- ___ Easy-to-read OLED **graphic display**
- ___ **Autonomy:** >70 hours continuous and more with sequencer function
- ___ **Automatic** on-site 0-point **calibration**
- ___ **Technology:** transit time ultrasound - continuous and two-way measurement
- ___ **Diagnostic assistance:** oscilloscope function (echo display), gain, quality index, alarms
- ___ **Temperature range:** -20°C to 50°C and 0°C to 45°C under load
- ___ **Seal:** IP68
- ___ **Dimensions:** 220 x 115 x 74 mm



Designation

- 1** **External probe kit** to be applied to the pipe to measure the flow
- 2** **LOG03 data logger** to collect the data via a 4-20mA signal (see p.16)
- 3** **LOG08 data logger** to collect data via a 4-20mA signal or to perform fast pulse metering (see p.16)

FOR YOUR WORKSITES

*This product is available for RENT.
Please contact our teams!*



Physico-chemical data logger

The physico-chemical data logger is a battery-powered solution to monitor wastewater quality. It is used to simultaneously measure one or more parameters to comply with regulatory requirements or to carry out network diagnostics: urban wastewater treatment (inlet monitoring and monitoring of groundwater infiltration) or treatment of industrial effluents.

It is quick and easy to install, including on-site calibration.

Data can be retrieved optionally on site by radio or remotely for the integrated GSM / GPRS versions.

Several water quality probes are available:

- pH / Redox / Temperature
- Conductivity / Salinity / Temperature
- Induction Conductivity / Salinity / Temperature
- Redox potential / Temperature
- Dissolved oxygen / Temperature
- Turbidity NTU-SS / Temperature



Advantages

Compact 2-in-1: sensor + data logger

Modular with multiple sensors, and the option of collecting data on site or remotely via a supervision tool

Multiple-parameter with the option of connecting several water quality probes to the same data logger

Easy on-site calibration

Very long battery life with the option of extending it with a battery pack

Automatic cleaning available

Where should it be installed?

- Drainage pipe
- Inlet of wastewater treatment plant

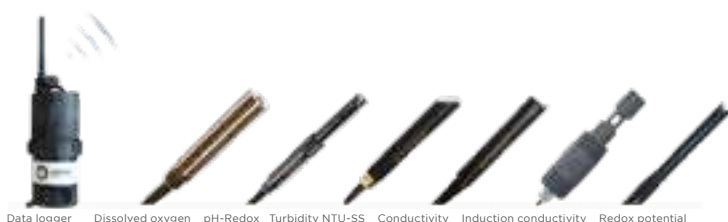


Additional products



Technical characteristics

- ___ **Memory:** 500,000 measurements
- ___ **Configuration:** wireless by radio
- ___ **Communications:** locally via radio or remotely via GSM, GPRS, 3G, Sigfox, LTE-M and NB-IoT
- ___ **Radio range:** 100 metres in open field conditions
- ___ **Temperature range:** -40°C to + 85°C
- ___ **Seal:** IP68



Data logger Dissolved oxygen pH-Redox Turbidity NTU-SS Conductivity Induction conductivity Redox potential

Designation

- 1** **LOG04 or LOG09 data logger** to collect and transmit data via a radio link or other (see p.16)
- 2** **AVELOUR software** to swiftly program sensors and to retrieve, analyse and export data (see p.112)
- 3** **WIJI connection kit** (see p.122)
- 4** **IJITRACK** web platform to display and process data, set alerts, etc. (see p.116)

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Two-axis inclinometer

As well as being suitable for a wide range of applications, this slope sensor is also ideal for monitoring valves. It is a compact device that can be connected to a LOG03 data logger with 4-20 mA.

Data can be collected directly in the field via RFID or transmitted to a monitoring platform when the inclinometer is interfaced to a data logger.



Advantages

- Two-axis slope measurement
- Measuring accuracy
- Easy to install
- 4-20 mA sensor configuration model already integrated in the AVELOUR software
- Secure on-site radio configuration

Where should it be installed?

- Drainage pipe
- Non-return valve

Additional products

1234

Designation

- 1 **LOG03 data logger** to collect and transmit the data to a Supervision tool (see p.16)
- 2 **AVELOUR software** to swiftly program sensors and to retrieve, analyse and export data (see p.112)
- 3 **WIJI connection kit** (see p.122)
- 4 **IJITRACK** web platform to display and process data, set alerts, etc. (see p.116)

Technical characteristics

- ___ **Configuration:** wireless by radio
- ___ **Measuring range:** -90°C to 90°C
- ___ **Resolution:** 0,1°
- ___ **Cable length:** 5 m
- ___ **Connectors:** M12 8 pins
- ___ **Weight:** 45 g (excluding cable)





LOGAZ

Smart H2S sensor

The Logaz smart sensor can detect and locate the presence of H2S gas. By taking accurate measurements, it plays a key role in:

- **safeguarding the sanitation system infrastructure**, for which hydrogen sulphide is highly corrosive
- **providing a clean and healthy environment for local residents**
- **quantifying the effectiveness of anti-H2S treatment**, and adjusting it as needed

The range comprises sensors without a modem for your local measurement campaigns and other sensors with an integral modem for remote data transmission.

They can be connected to a PLC via their 4-20mA and MODBUS output.



Advantages

Easy to use with on-site interchangeable measuring head, which incorporates a built-in calibration function

Multimodal: can communicate with several types of technical platforms (supervisors and FTP)

Self-contained with replaceable lithium battery

“Backup” mode to continue measurements and logging in the event of a power failure, on the LOGAZ PRO version

Where should it be installed?

- Wastewater treatment plant
- Pumping station



Additional products

1



2



3



4



LOGAZ PRO H2S data logger with process outputs

This new sensor incorporates the H2S gas sensor, data logger and **4-20 mA and MODBUS process outputs**.

Thanks to its radio feature, it can be configured remotely at a **distance of up to 100 m** in open field conditions. It operates as a data logger and can therefore **record data from other nearby sensors**, with which it communicates by radio.

The H2S sensor with process outputs can be used for the same applications and just as easily as the LOGAZ smart H2S sensor.



Designation

- 1 **Gas cells**
- 2 **AVELOUR software** to swiftly program sensors and to retrieve, analyse and export data (see p.112)
- 3 **WIJI connection kit** (see p.122)
- 4 **IJITRACK** web platform to display and process data, set alerts, etc. (see p.116)

Technical characteristics

- Memory:** 500,000 measurements
- Measuring range:** 0-2000ppm
- Resolution:** 1 ppm
- Configuration:** wireless by radio
- Communications:** 2 versions - radio only or HF, GSM, GPRS, 3G, Sigfox, LTE-M and NB-IoT
- Autonomy:** 5 years on average for 1 measurement every 15 minutes and 1 transmission per day - replaceable batteries
- Seal:** IP68

Conserving resources

Natural water, which is used for agriculture (mainly irrigation), drinking water supply and industry, is a scarce and precious commodity. It is taken from natural environments such as rivers, lakes and groundwater.

To preserve this resource and provide overall management of the water cycle (drinking water and sanitation), it is essential to monitor natural water: rainfall, water levels in the water tables

and rivers form the basis for preventive management of floods or anticipation of potential water shortages. Other equipment monitors the quality of surface water.

Ijinus supplies monitoring systems for natural water.





Our range for natural water monitoring includes rainfall, level and physico-chemical measuring instruments installed in water tables, on rivers, or nearby...

RAINFALL

RG, a battery-powered, smart rain gauge,
see p.86



FLOOD PREVENTION

A battery-powered data logger coupled with a level/pressure sensor,
see p.88



SURFACE WATER QUALITY

A physico-chemical data logger,
see p.92





Autonomous rain gauge RG20 / RG25

As rainfall measurement is an obligation in terms of regulatory self-monitoring, and is essential in terms of monitoring groundwater infiltration, Ijinus offers an autonomous, smart rain gauge. The RG20 or RG25, together with its data logger, is very easy to install and set up and can be used for both temporary measurement campaigns and fixed installations. It enables groundwater infiltration to be accurately monitored and floods or water shortages to be anticipated in order to provide a faster response.

It can be connected to a data logger to retrieve data locally by radio, or to a remote monitoring tool. This tipping-bucket rain gauge consists of a funnel collector and two calibrated collection vessels, designed to prevent rain from splashing inside and outside, as recommended by the WMO (World Meteorological Organisation). Data can be logged as time-stamped bucket-tipping or as cumulative rainfall, with the option of sending alarms.



Advantages

Easy to install, interface and set up in the field

Modular, to match your requirements, by configuring alarms on rain durations and intensities

Practical with the option of cross-referencing rainfall data with data from other sensors interfaced to the same data logger

Multifunctional design with time-stamped or cumulative rainfall operation

Where should it be installed?

- CSO / SSO
- Building
- Civil engineering structure

We recommend installing one rain gauge per km² and distributing them uniformly over the area to cover the catchment area as effectively as possible

Additional products



Technical characteristics

- ___ **Memory:** 500,000 measurements
- ___ **Measuring range:** 0 - 300mm/h
- ___ **Accuracy:** <1% for rainfall intensity of 30 mm/h, <2% in the measuring range 20 - 40 mm/h, <3% in the measuring range 10 - 50 mm/h
- ___ **Resolution:** 0.2 mm for the RG20 and 0.254 mm for the RG25
- ___ **Configuration:** wireless by radio
- ___ **Communications:** locally via radio or remotely via GSM, GPRS, 3G, Sigfox, LTE-M and NB-IoT. Depending on model, communications take place by pairing with an autonomous data logger or via the data logger integrated in the RG25
- ___ **Radio range:** 100 metres in open field conditions
- ___ **Data export:** csv, Excel, HTML
- ___ **Temperature range:** -30°C to + 70°C
- ___ **Seal:** IP68



Designation

- 1 Autonomous data logger from the IJINUS LOG range** to collect and transmit data via a radio link or via GSM/GPRS (see p.16)
 - **LOG03** for height/flow measurements using pressure probe, ideal for CSOs / SSOs, underground water resources with Hf/GPRS access points, etc
 - **LOG04** and **LOG10** for height/flow measurements, ideal for CSOs / SSOs, with Hf / MODBUS / GPRS access points, etc...
- 2 AVELOUR software** to swiftly program sensors and to retrieve, analyse and export data (see p.112)
- 3 WIJI connection kit** (see p.122)
- 4 IJITRACK web platform** to display and process data, set alerts, etc. (see p.116)
- 5 Screw-on support stand/ base,** stainless steel 658 mm x Ø 60.3 mm (see p.134)
- 6 Spike stand and mounting clamp** (Stand Ø: 60.3 mm) (see p.134)



CNR level relative pressure sensor

CNRT level and temperature sensor

The CNRT level sensor is an autonomous pressure type level sensor that also measures the temperature of natural water in water tables, whereas the CNR sensor only measures water level by pressure.

Both sensors can be connected to a LOG03 or LOG09 data logger for data to be transmitted by radio.

They facilitate monitoring of water levels in water tables through alerts to anticipate possible water shortages.

The range comprises sensors without a modem for your local measurement campaigns and other sensors with an integral modem for remote data transmission.



Advantages

Battery-powered: battery life > 5 years

Compact, robust and discrete

Very easy to program

Suitable for any environment with cables from 5 to 60 m and incorporating an atmospheric pressure vent

Multifunctional design with temperature measurement (optional)

Where should it be installed?

- Boreholes

Additional products



Technical characteristics

- ___ **Memory:** 500,000 measurements
- ___ **Measuring range:** 1, 2, 5, 10, 20, 50, 100, 200 mH2O for the CNR - 5, 10, 20 mH2O for the CNRT
- ___ **Configuration:** wireless by radio
- ___ **Communications:** HF, GSM, GPRS, 3G,)< LTE-M, NB-IoT
- ___ **Integral atmospheric pressure equalisation system**
- ___ **Reverse polarity protection**
- ___ **Connection** via connector on LOG data loggers
- ___ **Seal:** IP68



Designation

- 1 LOG03 digital data logger/connector on the side**, it provides feedback of data measured for underground water resources, rainfall, etc. height and flow calculation by pressure sensor (see p.16)
- 2 LOG09 digital data logger/underside connector**, it is used to calculate the height and flow using a pressure sensor and to cross-reference the height and flow measurements with water quality analyses using a physico-chemical sensor (see p.16)
- 3 AVELOUR software** to swiftly program sensors and to retrieve, analyse and export data (see p.112)
- 4 WIJI connection kit** (see p.122)
- 5 IJITRACK** web platform to display and process data, set alerts, etc. (see p.116)



Wireless level sensor LNU06

The wireless LNU06 is an acoustic imaging ultrasonic level sensor that is ideally suited to harsh environments. After calibration, it can be used to take accurate level measurements. Therefore, it facilitates monitoring of low and high water levels, with alerts if a critical threshold is reached.

It is fully autonomous with a long-lasting battery, data logger and built-in modem, and is easy to install and use. It can be safely programmed via radio link without any physical action on the sensor. It is suitable for both one-off measurement campaigns and permanent installations.



Advantages

- Fully autonomous: long-life battery, data logger and built-in modem
- Versatile: height measurements, can be coupled with a physico-chemical sensor or can be used to control samplers by indicating the volume to be taken for sampling based on the measured flows
- Easy to install and use: safe programming by radio without actually having to touch the sensor
- Reliable: accurate level measurements
- Compact all-in-one: sensor/data logger/communications
- Easy to maintain: not directly in contact with water
- Widely acclaimed for its measurement accuracy through its external temperature sensor

Where should it be installed?

- Bridge
- Constructed parts of water courses (pipes, ducts, etc.)

Additional products



1



2



3



4



5



Designation

- 1 **AVELOUR software** to swiftly program sensors and to retrieve, analyse and export data (see p.112)
- 2 **WIJI connection kit** (see p.122)
- 3 **IJITRACK** web platform to display and process data, set alerts, etc. (see p.116)
- 4 **Mountings:** clamp only, single or double plate with clamp (see p.132)
- 5 **Display,** to view the data in real time (see p.140)

Technical characteristics

- ___ **Memory:** 500,000 measurements
- ___ **Measuring range:** 0.3 m to 6 m
- ___ **Configuration:** wireless by radio
- ___ **Communications:** GSM, GPRS, 3G, Sigfox, LTE-M, NB-IoT.
- ___ **Integral atmospheric pressure equalisation system**
- ___ **Seal:** IP68



Physico-chemical data logger

The physico-chemical data logger is a battery-powered solution to monitor natural water quality. It is used to simultaneously measure one or more parameters to comply with regulatory requirements or to carry out network diagnostics: surface water monitoring, fish farming and aquaculture.

It is quick and easy to install, including on-site calibration.

Data can be retrieved optionally on site by radio or remotely for the integrated GSM / GPRS versions.

Several water quality probes are available:

- pH / Redox / Temperature
- Conductivity / Salinity / Temperature
- Induction Conductivity / Salinity / Temperature
- Redox potential / Temperature
- Dissolved oxygen / Temperature
- Turbidity NTU-SS / Temperature



Advantages

Compact 2-in-1: sensor + data logger

Modular with multiple sensors, and the option of collecting data on site or remotely via a supervision tool

Multimodal with the option of connecting several water quality probes to the same data logger

Easy on-site calibration

Very long battery life with the option of extending it with a battery pack

Automatic cleaning available

Where should it be installed?

- Riverbank
- Bridge

Additional products



1



2



3



4



Battery-powered physico-chemical GSM buoy

Installation on watercourses

The ingenious physico-chemical buoy is the “all-in-one” single-parameter solution for physico-chemical monitoring of natural waters. It integrates both a data logger and a water quality probe that can be changed to suit the type of measurement required (pH, dissolved oxygen, turbidity, conductivity). It monitors natural water quality and can easily be installed by one person.



Designation

- 1 **LOG04 or LOG09 data logger** to collect and transmit data via a radio link or other (see p.16)
- 2 **AVELOUR software** to swiftly program sensors and to retrieve, analyse and export data (see p.112)
- 3 **WIJI connection kit** (see p.122)
- 4 **IJITRACK** web platform to display and process data, set alerts, etc. (see p.116)

Technical characteristics

Memory: 500,000 measurements
Configuration: wireless by radio
Communications: locally via radio or remotely via GSM, GPRS, 3G, Sigfox, LTE-M and NB-IoT
Radio range: 100 metres in open field conditions
Temperature range: -40°C to +85°C
Seal: IP68

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Conserving resources

A wide range of equipment can be positioned at various points in water networks or near watercourses to monitor them. This often communicating equipment, which is installed temporarily or permanently, measures parameters and collects data to provide information on the state of the network and to provide an alert in the event of an anomaly.

Supervision solutions (platform, application, software, etc.) can be used to monitor equipment globally and remotely for relevant analysis and suitable monitoring.

The monitoring tools are a decision-making aid for operators in their management of the water network: prioritisation of actions and work. They improve response in the event of an anomaly.

Ijinus offers industry-specific tools to monitor your equipment remotely and to respond quickly.

Supervision includes platforms, software and applications that collect the data transmitted by communicating equipment installed in the field, with the aim of carrying out a global remote analysis.





CONFIGURATION AND ANALYSIS SOFTWARE

AVELOUR configuration software,
see p.112



SUPERVISION PLATFORM

IJITRACK, a platform to view and analyse
sensor data,
see p.116



APPLICATION

The **WIJI** application to activate real-time
notifications and alerts,
see p.118





AVELOUR configuration software

Configuration and data collection

AVELOUR is the IJINUS software to configure your sensors, data loggers, detectors and hubs. It can also be used to collect and analyse data and export the data to Excel files or reports.

Configuration via AVELOUR does not require any manual activation. It guarantees the safety of your employees and saves them time.

Multiple configuration options are available: measured data, frequency, sensor name, GPS coordinates. Sensors are configured and data collected locally via radio or remotely using a data logger.

For remote collection, alerts can be configured on your monitoring tool.



Advantages

Intuitive interface

Unique configuration tool, compatible with all IJINUS sensors

Fast assisted configuration

Settings are saved so that they can be duplicated for several sensors

Summary display of your data in graph form, with the option of comparing data from several devices

Remote configuration and supervision means security is guaranteed



Additional products

1



2



3



4



5



Designation

- 1 **IJINUS device:** Sensors, detectors, data loggers or hubs
- 2 **WIJI programming kit** including radio transmitter, USB cable and antenna to configure the sensors in IJITRACK (see p.122)
- 3 **WIJI app** to quickly set up your IJITRACK account (see p.118)
- 4 **IJITRACK** web platform to collect and analyse data (see p.116)
- 5 **PC or tablet:** Minimum version Windows XP

Technical characteristics

- ___ **Data export:** GIF, jpeg, Excel and .cvs format
- ___ **Update:** availability notified at each connection
- ___ **Required operating system:** Windows XP or later





IJITRACK web platform

Data display and management

IJITRACK is a web-based platform where your sensor data is compiled and displayed to be analysed and interpreted. It can be used to set up e-mail or SMS alerts, and to export measurements in .csv, Excel or graph format. In this way, you can customise how your network is monitored, thereby improving the relevance of your field operations.

You can use the platform to view the location of your sensors on a map and quickly interpret their measurements by displaying graphs with multiple curves.

It is also easy to create and manage customer accounts or groups, by assigning different levels of rights to them.



Advantages

Unique supervision tool, compatible with all IJINUS sensors

Fast assisted configuration

Customised monitoring of your data with tailor-made exports (Excel or graph format, by sensor, by group, from one date to another, can be automated by http request)

Fast response in the field with customised alerts

Increased operator safety through remote supervision

Data security through a secure HTTPS connection and 128-bit encryption

Additional products



1



2



3



4



5



Designation

- 1 **IJINUS device:** Sensors, detectors, data loggers or hubs
- 2 **WIJI programming kit** including radio transmitter, USB cable and antenna to configure the sensors and data loggers in IJITRACK (see p.122)
- 3 **WIJI app** to quickly set up your IJITRACK account (see p.118)
- 4 **AVELOUR software** to swiftly program sensors and to retrieve, analyse and export data (see p.112)
- 5 **PC or tablet** with Internet access

Technical characteristics

- ___ **Data export:** GIF, jpeg, Excel, .csv - can be automated by HTTP request
- ___ **Data import:** by SMS, GPRS (FTP), 3G, Sigfox, LTE-M and NB-IoT
- ___ **Multiple curve display:** up to 7 curves
- ___ **Alert recipients:** up to 20 numbers or e-mail addresses





WIJI App

Mobile configuration application

The WIJI app will help you to get your IJITRACK account set up quickly. It is available on Google Play and on the App Store and provides real-time notifications and alerts to optimally monitor critical points in the network.

The app also displays the latest data sent by the sensor, as well as photos taken during installation.



Advantages

Time saved by scanning the QR code on the data logger/recorder to activate automatic GPS positioning

Fast response in the field with customised notifications and photos of the installation to make it easy to locate the sensor

Remote configuration and supervision means security is guaranteed



Additional products



1



2



3



4



5



Technical characteristics

___ Free

___ **Compatibility:** Android and iOS

___ **Languages:** French and English

___ **Memory required:** 25 MB

Designation

1 **IJINUS device:** Sensors, detectors, data loggers or hubs

2 **IJITRACK** web platform to display and process data, set alerts, etc.
(see p.116)

3 **WIJI programming kit** including radio transmitter, USB cable and antenna to configure the sensors and data loggers in IJITRACK
(see p.122)

4 **AVELOUR software** to swiftly program sensors and to retrieve, analyse and export data
(see p.112)

5 **Smartphone** running iOS or Android

Conserving resources

To make the most of how you operate and use Ijinus products, a range of accessories is available.

Some compile data from several sensors (displays), others improve connectivity in underground and difficult environments (antennas) or transfer data (hubs). There are also connection kits to export data, along with other

equipment such as the power pack to maximise the autonomy of sensors.

Ijinus offers a range of accessories for sanitation diagnostics and to monitor natural water.





Diagnostic accessories are complementary parts to Ijinus sensors and data loggers.

CONNECTION

WIJI connection kit, see p.122



POWER

High capacity power pack, see p.124



TRANSFER

Dipole radio antenna, see p.128





WIJI connection kit

The WIJI connection kit is a small device that can be used to connect to the various IJINUS devices, to set them up and then to collect, display and export data from the IJITRACK platform.

It consists of a pedestrian hands-free kit with antenna and a USB stick to connect to your PC or tablet to transmit the data by radio between the sensors or data loggers and IJITRACK.

Its pocket size makes it easy to carry with you wherever you go in the field.

Depending on signal quality, the USB stick alone may be all that is needed to connect to the sensors and data loggers in the field.

In some cases, the antenna is required to amplify the signal.



Advantages

Easy-to-carry compact format

Intuitive interface that recognises nearby sensors

Quick, assisted setup, with summary

Fast and easy access to equipment measurement and diagnostic data

Increased operator safety through remote configuration of sensors and data loggers

Additional products



Technical characteristics

- ___ **Connection:** Instant HF
- ___ **Communications:** radio
- ___ **Required operating system:** Windows on PC or tablet
- ___ **Compatible software:** AVELOUR and the IJITRACK platform or any other industry tool
- ___ **Pedestrian hands-free kit dimensions:**
60 x 90 x 31.20 mm (excluding antenna)
- ___ **Pedestrian hands-free kit weight:** 115 g



Designation

- 1 IJINUS sensors**, to take measurements in the sanitation network or in waterways
- 2 LOG IJINUS data logger**, to concentrate the data from the sensors located within its radio field and send the data to the supervision tools (see p.16)
- 3 AVELOUR software** to swiftly program sensors and to retrieve, analyse and export data (see p.112)
- 4 IJITRACK web platform** to display and process data, set alerts, etc. (see p.116)



High capacity power pack

The high-capacity power pack consists of 9 long-life lithium batteries to extend the battery life of IJINUS sensors.

Sensor power management can be configured using a LOG04 data logger.



Advantages

Ultra-long battery life

Sealed (IP68)

Fast installation with mounting tabs

Additional products



1



2



3



Designation

- 1 **UB-V sensor**, for velocity measurements (see p.34)
- 2 **VLI sensor**, for height / speed measurements (see p.36)
- 3 **LOG04 data logger**, to configure sensors and their power management, and to collect and transmit data (see p.16)

Technical characteristics

- ___ **Connector:** 5-pin M12 for VLI and UB-V sensors 8-pin M12 for LOG04 data logger
- ___ **Dimensions:** 269 x 154 x 80 mm
- ___ **Weight:** 2 593 g
- ___ **Seal:** IP68





Outdoor GSM antenna

The outdoor GSM antenna facilitates data transmission between sensors, data loggers, and monitoring tools, especially in underground environments or in manholes, where the device's antenna is insufficient.

It can easily be used in combination with underground sensors and data loggers thanks to its robust seal and long cable.



Advantages

Insertion antenna requiring little installation work
Optimised signal quality, even in harsh environments
Seal: IP68

Where should it be installed?

- Manhole
- Underground networks

Additional products



Designation

- 1** **IJINUS sensors**, for which the signal will be amplified
- 2** **LOG IJINUS data loggers**, to record measurements for which the signal will be amplified (see p.16)

Technical characteristics

- ___ **Length:** 2 m as standard, other lengths available on request
- ___ **Frequencies:** GSM 900 (890-960 MHz) / GSM 1800 (1710-1880 MHz)
- ___ **Seal:** IP68
- ___ **Diameter:** 45 mm
- ___ **Weight:** 97 g





AP1-MOD-3G Access point

This hub can be used to retrieve data transmitted by IJINUS sensors and data loggers by radio.

Once the data have been collected, they are sent by GSM/GPRS to a remote server and/or by MODBUS to a local display.

There are 2 radio/MODBUS versions of the access point available: with or without modem.



Advantages

Automatic changeover function

Increased operator safety through remote configuration function

Compatible with all IJINUS sensors and data loggers

Where should it be installed?

- In installations with several IJINUS data loggers
- Outdoors with data loggers in an underground network

Additional products



Designation

- 1** **IJINUS sensors**, for which the signal will be amplified
- 2** **LOG IJINUS data loggers**, to record measurements for which the signal will be amplified (see p.16)

Technical characteristics

- ___ **Configuration:** wireless by radio
- ___ **Communications:** HF, MODBUS, GSM/GPRS, 3G, Sigfox, LTE-M and NB-IoT
- ___ **Radio range:** 500 m in open field conditions
- ___ **Seal:** IP65 with air vent
- ___ **Power supply required** to use the MODBUS output
- ___ **Dimensions:** Ø102 x 189 mm (excluding antenna)
- ___ **Weight:** 400 g



Mounting kit (clamp + plate)

for LOG IJINUS data logger

The mounting kit for LOG IJINUS data loggers is designed to make them easy to install in any environment.

The double plate enables it to be installed in a variety of configurations, and it can be folded back to leave enough space for a technician to pass through.



Advantages

Easy to install

Foldable to make it easier for the technician to pass through the manhole

Where should it be installed?

- Sanitation network manhole
- Pumping station
- CSO / SSO
- Riverbank
- Bridge
- Constructed parts of rivers (pipes, ducts, etc.)

Additional products

1



Designation

- 1 **LOG IJINUS data loggers**, to record measurements (see p.16)

Technical characteristics

- ___ **Compatibility:** all data loggers from the LOG IJINUS range
- ___ **Materials:** stainless steel plate, composite plastic clamp





Mounting kit

for RG20 and RG25 rain gauges

Rain gauges can be installed using different types of mountings depending on the location of the measuring point.

IJINUS offers two screw-on or spike support stands / bases to be used in accordance with the type of ground where the rain gauge is being installed, as well as a clamp to fit the data logger to the rain gauge stand.



Advantages

Several mounting options available depending on the characteristics of the measurement site

Adjustment via integrated spirit level (in PVC mount)

Additional products

12

Designation

1

RG20/RG25 rain gauges, for rainfall measurements to monitor sanitation networks and water courses (see p.20 and 86)

2

LOG03 data logger, to collect and transmit the data to a supervision tool (see p.16)

Technical characteristics

- ___ **Mounting mode:** screw-on or spike
- ___ **Material:** stainless steel
- ___ **Diameter:** 60.3 mm for the RG20, 35 mm for the spike RG25 or 50 mm for the screw-on RG25
- ___ **Length:** 65 cm for the screw-on support stand and 150 cm for the spike stand





Mounting kit for VLI velocity sensor

The mounting kit for the VLI velocity sensor makes it easy for water to pass through, even at low flow rates, to provide a reliable analysis of the network or watercourse.



Advantages

Suitable for all types of pipes up to Ø91 cm

Accurate measurement even at low flow rates

Where should it be installed?

- Constructed parts of water-courses (pipes, ducts, bridges, etc.)
- Drainage pipe

Additional products

1



Designation

1

VLI velocity sensor, for accurate height and flow measurements (see p.36)

Use

- Plates to be assembled in the recommended configurations in accordance with the pipe diameter
- 1 spreader, 1 plate and 4 extensions available to fit all types of pipes





iJINUS
GROUPE CLAIRE

MODBUS touchscreen

The MODBUS display features a colour touchscreen to view the measurements from sensors installed in the field in real time. Its intuitive interface facilitates data analysis.

Up to 32 measurement points can be displayed to detect any critical threshold.



Advantages

Colour LCD touchscreen

Up to 32 measuring points displayed

High brightness

Compact and robust

Additional products

12

Designation

- 1 **VLI velocity sensor**, for accurate height and flow measurements (see p.36)
- 2 **Access point**, to collect data from the sensors by radio and transmit them to the display (see p.130)

Technical characteristics

- ___ **Screen:** LCD, colour, touchscreen
- ___ **Resolution:** 480 x 272 pixels
- ___ **Backlit**
- ___ **Measuring points displayed:** 4, 8, 16 or 32
- ___ **Dimensions:** 128 x 102 x 38 mm
- ___ **Required power supply**



Autonomous touchscreen

The autonomous display can be used to easily view the measurement data recorded in the field without needing a power supply. It is a useful ally for monitoring the sanitation network, self-monitoring storm water overflows, or managing and preventing floods.

The data from the sensors located in the radio field (approx. 100 m) are retrieved by the hub and displayed directly on the screen. It allows 3 values to be displayed per screen up to 20 channels.



Advantages

Battery-powered

Extremely easy to use

Automatic or manual page scrolling

Additional products



Designation

1 **VLI velocity sensor**, for accurate height and flow measurements (see p.36)

2 **Access point**, to collect data from the velocity sensors by radio and transmit them to the display (see p.130)

Technical characteristics

- ___ **Definition** : 128 x 64 pixels
- ___ **Brightness**: 70 cd/m²
- ___ **Display**: Up to 20 channels and 3 values
- ___ **Programming**: By software or using the buttons on the front panel





IJINUS
GROUPE CLAIRE

Drinking water - Sanitation - Natural water

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