

CE ISURLOG (v2026)

Battery-powered data logger with cloud data



ISURLOG is a state-of-the-art, intelligent cloud datalogger for industrial/professional use, featuring:

- **wireless remote communications** by terrestrial (NB-IoT), satellite (NB-IoT-NTN) and free (LoRa) networks.
- **local wireless connectivity** using BlueTooth and WiFi.
- device consumption management to ensure **maximum battery life**.
- **constant information** on sensor parameters and connected device statuses.
- **remote and local wireless configuration** of system operating parameters.
- real time messaging, via email, SMS and Telegram, about **alarms and operational diagnostics**, both of the process to be controlled and of the **ISURLOG** units that control it.
- **database of historical records hosted in the cloud**, which allows analysing and optimizing the operation of the infrastructure to be controlled.
- **Remotely management of the fleet of installed units**, using the **IsurDash** cloud platform.

ISURLOG¹ is based on **SP-IIoT-SAP** (Self Powered Industrial Internet of Things Sensor Access Point), thus offering:

- Rechargeable batteries power supplied.
- Data monitoring and device management from/to any smart terminal.
- General purpose input/outputs allowing the connection of practically any sensor.
- On the cloud data hosting.
- IIoT-NB connectivity.



↑ **ISURLOG** field unit for drinkable water distribution network pressure monitoring



Embedded Inputs/Outputs (I/O) for external sensors/detectors:



- Aux. power supply for sensors 9-24V 1A (cloud adjustable) + 5V/0.5A.
- 4 x 4-20mA analogue inputs, active/passive loops, fused protected with aut. reset.
- 1 x voltage free DI.
- 1 x RS485, up to 32 sensors + 1 x QWIIC connector for I2C sensors.
- 1 x PT100, 2, 3 or 4 wires.
- 3 x relay DO: 1 x 2A + 2 x 0.4A
- 3 x GPIO, one by one selectable as I/O.



I/O expansion module:



- Modbus RTU.
- 4 x 4/20 mA analogue inputs, active/passive loops.
- 2 x voltage free status DI + 2 voltage free counter.
- Open/closed and proportional control of automatic hydraulic valves (pressure and flow regulators) with latch solenoid valves.
- Internal temperature and relative humidity measurement inside the device.

**COMING
SOON!**

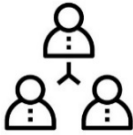
¹ As a result of a constant evolution, here in stated characteristics can be upgraded and changed without previous notice to customer. Please ask for the last datasheet version contacting directly with our company.

IsurDash: RATIONAL, INTUITIVE AND EFFICIENT ON-THE-CLOUD MANAGEMENT OF THE ISURLOG UNITS DEPLOYED IN THE FIELD

IsurDash is a cloud platform for the management of the fleet of devices in the **ISURLOG** ecosystem based on criteria of rationality, friendliness and efficiency.

Its purpose is to facilitate the management of remote units for the user, reducing operating times and enhancing the quality and degree of processing of the information received.

The main management areas integrated into **IsurDash** are as follows:

<p> Dashboard of the ISURLOG fleet of operational devices:</p> <ul style="list-style-type: none"> ○ Geolocation. ○ Management. ○ Diagnosis. 	  
<p> Devices:</p> <ul style="list-style-type: none"> ○ Field devices data base. ○ Real-time monitoring. ○ Trending charts. ○ Configuration. 	   
<p> Customization:</p>  <ul style="list-style-type: none"> ○ Tags: Tag creation and assignment for intelligent and intuitive management. ○ Profiles: Allows you to generate custom configurations that respond to a common pattern applicable to various devices. ○ Users, with different levels of access: <ul style="list-style-type: none"> ▪ Manager: access to monitoring, alarm notification and configuration. ▪ Operator: access to monitoring and alarm notifications. 	
<p> Communications:</p>  <ul style="list-style-type: none"> ○ Bluetooth: Wireless local link between the IsurDash platform and the ISURLOG device, contactless activation via magnetic pen, avoiding opening the unit. 	



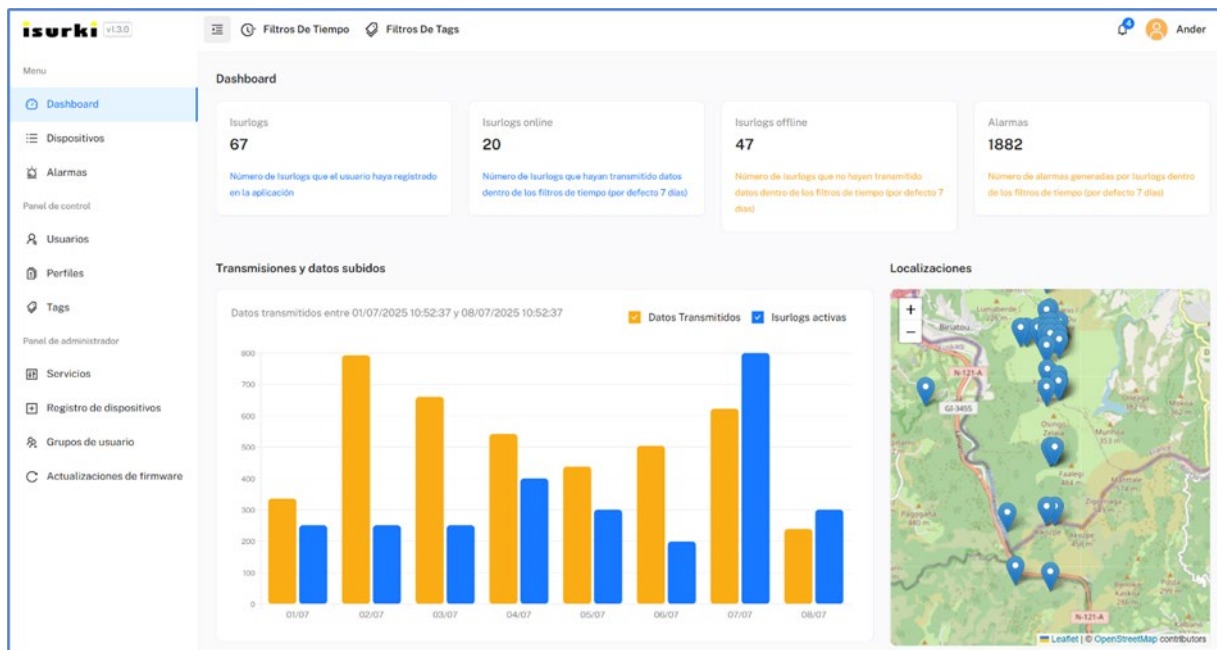


- NB-IoT / LoRa / Satellite (NB-IoT NTN): Remote wireless connection.
 - Force access to the **ISURLOG** remote device out of latency time (wake it up from sleep mode).
 - FOTA: Remote firmware update.
- Satellite: NB-IoT NTN (Non-Terrestrial Network): Global connectivity for areas without terrestrial infrastructures (LEO satellites).

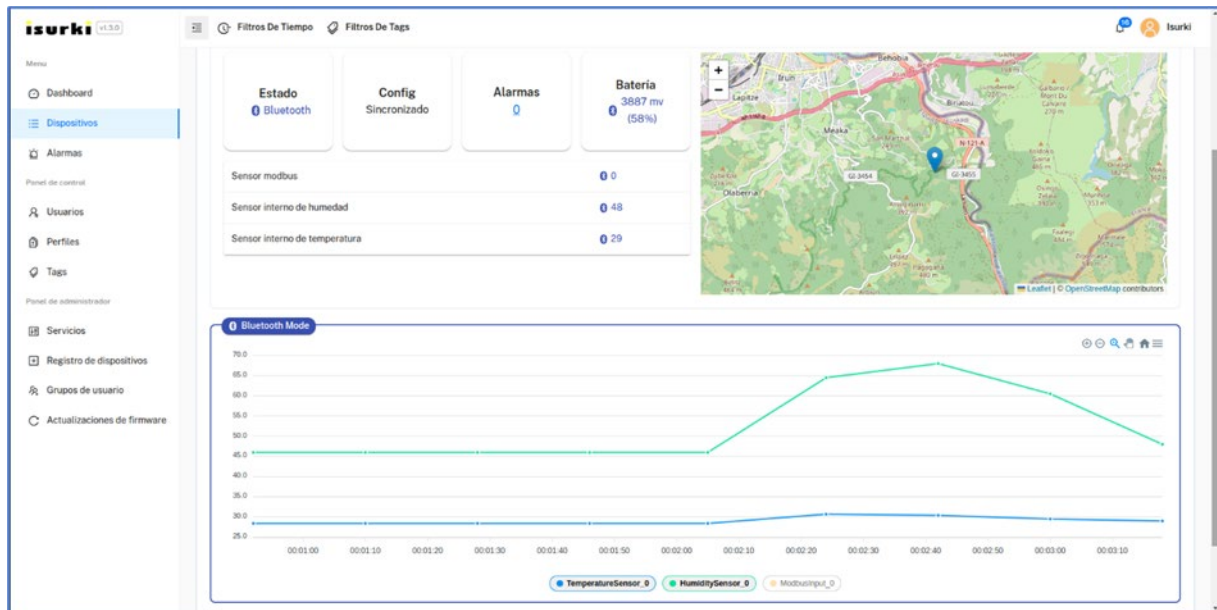


Alarming, on:

- email.
- SMS.
- Telegram messaging.



Screenshot of the “dashboard” menu of the **IsurDash** platform with geolocation of the deployment of devices in the field and daily graphs of data traffic.



Screenshot of the “devices” menu at the **IsurDash** platform, with graph of the evolution of temperature and relative humidity.

The **ISURLOG** units acquire and register field parameter readings internally with a configurable periodicity between 5 minutes and 24 hours. The upload of data to the **IsurDash** platform occurs once the number of acquisitions/registrations configured by the user has been verified, without this implying a limitation in the time frame between two consecutive uploads. This procedure, exclusive to the **ISURLOG** solution, allows the consumption of the device to be optimised by maximising the battery life. The data is accessible in table and graph format from the **IsurDash** platform, being downloadable in a .csv format, which allows direct import from any spreadsheet.

IsurDash allows you to configure in a few minutes a MODBUS RTU connection with other smart devices (sensors, PLC, PC, controllers, etc.), allowing you to centralize in one unit the information of up to 32 instrumentation and control devices from other manufacturers. In this way, an **ISURLOG** unit can act as a Sensor Access Point open to any device that integrates this protocol, considered one of the most widespread and reputable in industrial communications.

SECTORS OF APPLICATION



- ✓ Environment.
- ✓ Clean energy.
- ✓ Instrumentation and sensors.
- ✓ Smart cities.
- ✓ Smart buildings.
- ✓ Industrial Control.
- ✓ Sustainable agrifood.
- ✓ Healthcare.
- ✓ Meteorology.
- ✓ Roads networks.

TECHNICAL SPECIFICATIONS

• Power supply:

- using commercial stacks, in two optional executions:
 - 5 INR18650 rechargeable batteries with a total capacity of 17 Ah, charge loss rate of 12% per year and battery charger integrated into the PCB.
 - 2 non-rechargeable batteries with a total capacity of 38 Ah and a charge loss rate of 1% per year.
- External power supply available through USB-C or terminal blocks @ 5V maximum voltage.
- Energy harvesting through weak sources such as embedded micro solar panels, TEGs... $\geq 225\text{mV}$
- 5V external solar panels compatible, available as an option.
- CR2032 connector for the RTC.
- Minimum consumption: $20\mu\text{A}$ @ sleep mode.



• Autonomy (assumption: local logging every 15 minutes, sending data to the cloud every 3 hours, A 4-20 mA analogue sensor powered directly from the ISURLOG @ 12 V):



- Powered by rechargeable batteries: 19.3 months.
- powered by NON-rechargeable batteries: 46.4 months.
- With Embedded Solar Panel: Unlimited.

• Local wireless connectivity:



- Wi-Fi 802.11 b/g/n
- Bluetooth v4.2 BR/EDR and Bluetooth LE.

• Remote wireless connectivity:

- Terrestrial mobile: LTE Cat-M1, LTE CAT-NB1 (NB-IoT) with global coverage, On-board eSIM and external Nano SIM (Optional)
- Satellite: NB-IoT NTN (Non-Terrestrial Network), Global satellite coverage for areas without terrestrial infrastructure (LEO satellites). Available soon.
- GPS (L1 C/A). Antenna not included. Optional.
- LoRa 868MHz (Optional).
- Protocols: HTTP, MQTT, UDP (compatible; not included in standard firmware).



• PCB embedded sensors:



- Temperature & relative humidity sensor.
- Low consumption RTC.
- Hall-effect switch for contactless unit activation from sleep mode.
- 3-axis accelerometer: Motion, impact, and orientation detection.
- Battery Monitor: Reports percent charge (SOC), voltage, and rate of change in %/hour. Estimates the Remaining Time allowing to predict the autonomy in days and automatically compensates for battery degradation due to aging.

- Connection to field devices (central unit):



- Aux. power supply for sensors 9-24V (cloud adjustable) 1A + 5V/0.5A.
- 4 x 4-20mA analogue inputs, 16 bits, active/passive loops, fused protected with aut. reset.
- 1 x voltage free DI for status/counter (voltage-free NO contacts, pulse width ≥ 200 mS).
- 1 x RS485, up to 32 sensors + 1 x QWII connector for I2C sensors.
- 1 x PT100, 2, 3 or 4 wires.
- 3 x solid state relay DO: 1 x 2A + 2 x 0.4A
- 3 x GPIO, one by one selectable as I/Os.

- Connection to field devices (**IsurNode** I/O expansion module):



- Power supply: from an **Isurlog** unit or from an external source 9-18 Vdc.
- 4 analogue inputs, 4/20mA, for active or passive current loops (powered from the unit), with auto-reset protection fuse. **16-bit resolution.**
- 2 digital status inputs + 2 pulse inputs for latching (voltage-free contacts, pulse width ≥ 50 mS).
- 4 digital outputs for latch solenoid valve control.
- 1 RS485 input, up to 32 sensors, Modbus RTU protocol.
- Execution in a waterproof polycarbonate box, 120x80x56 mm, IP66, IK08, -50 to 100°C, suitable for outdoor UVA rays, self-extinguishing, flammability UL94 V-2.

- Electrical protections:



- PCB-integrated battery protection against:
 - Transients and overvoltage.
 - Overloads.
 - Overcurrent.
 - Short circuit.
- ESD protection (Electrostatic discharges):
 - Implemented using TVS diodes (Transient Voltage Suppressors) at key points of the circuit.

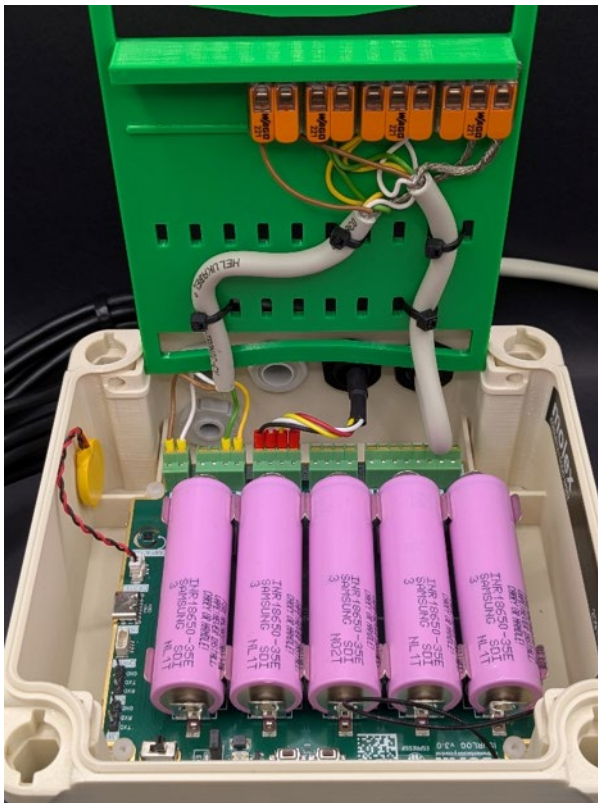
- Standard Enclosure Ext dimensions, in mm.: 140 (H) x140 (W) x 60 (D):

- IP67 waterproof version for outdoor use: PETG material.
- [Optional accessories for DIN rail, wall and pole mounting.](#)
- Internal anti-condensation kit included: atmospheric pressure compensation membrane + 2 g desiccant bag + interior humidity % indicator card.
- For long term exposure to direct solar radiation, consult ASA version



↑ Legionella prevention in the HVAC network by temperature measurement and recording.

↔ Special version in IP66 cabinet, 300x265x165mm, with terminal block, and optional solar panel.



EASY-WIRING



Easy-Wiring

— THE SIMPLE AND ROBUST CABLE SOLUTION —

EQUIPPED WITH ISURLOG DATALOGGERS



CABLED
INSTALLATION



SENSOR
CONNECTION



ROBUST DESIGN
AND SECURITY



COMMUNICATION
IN THE FIELD AND
IN THE CLOUD



TECHNOLOGY, SERVICE, QUALITY THAT MAKE THE DIFFERENCE

Easy-Wiring is a simple and robust wiring solution designed to facilitate the connection of **Isurlog** dataloggers with field devices:

- No tools.
- Fast.
- Robust and reliable.
- Allows bridges to be made for connection on RS485 buses

isurki
Instrumentación-y-control

✉ Gabiria 2, 1-P E-20.305 Irun SPAIN ☎ (34)943-635437
✉ tecnica@isurki.com 🌐 www.isurki.com www.irisboxpc.com

CYBERSECURITY AND ALIGNMENT WITH THE CYBER RESILIENCE ACT (CRA)

Both **Isurlog** and the **IsurDASH** platform have been developed taking into account the European cybersecurity requirements established by the Cyber Resilience Act (EU Regulation 2024/2847), aimed at protecting connected products against digital threats throughout their life cycle. This approach includes risk assessment, access and communications protection, and vulnerability and security update management, with the aim of ensuring a robust, reliable IIoT solution prepared for the challenges of industrial digitalization.

For the customer, this means greater protection of data and communications, a reduction in the risk of unauthorized access and greater confidence in the operational continuity of their facilities. For professional users, **Isurlog** represents a commitment to digital security, long-term reliability and adaptation to the European regulatory framework of connected devices.

ENVIRONMENTALLY FRIENDLY

Since our beginnings in 1992, ISURKI has been involved in the application of cutting-edge technologies to provide products and solutions that help preserve the environment and natural surroundings.

As a result of this business approach, we are committed to reducing as much as possible the impact that the production and marketing of our products can have on the environment.

All our devices and spare parts provide traceability that allows us to know the fleet of operational units deployed in the field.

Likewise, both the devices and the batteries used in them have been declared and registered within the European Recycling Platform, which guarantees the correct recycling of these at the end of their useful life.

Finally, we apply environmental criteria in the design of our products, especially in terms of compliance with applicable regulations (RoHS), materials, type of energy sources (Energy harvesting, rechargeable batteries only, ...) as well as in the implementation of operational management routines that reduce the consumption of each unit as much as possible and maximise the autonomy time of the batteries.



✉ Gabiria 2, 1-P E-20.305 Irun SPAIN ☎ (34)943-635437

✉ isurki@isurki.com 🌐 <https://isurki.com>

ORDER CODING		
Image	Description	Code
	IIoT Data logger, chip NB-IoT, basic execution <ul style="list-style-type: none"> • PCB execution (without box). • 4 analogue inputs 4/20 mA, active/passive loops. • 1 voltage-free digital input for pulses/states. • 3 digital outputs with solid-state relay, 1x2A + 2x0.4A. • 1 input for Pt100 temperature probe, 2, 3 and 4 wires. • 1 RS485 communications input with Modbus RTU. • Internal temperature and relative humidity sensor. • with Wi-Fi and Bluetooth. • RTC. • battery holders according to the type of battery chosen (rechargeable/non-rechargeable) • External power supply 6-24 Vdc • Includes interior anti-condensation kit. 	ISURLOG NB
	Data logger IIoT, chip LoRaWAN basic execution <ul style="list-style-type: none"> • Rest of characteristics as in NB-IoT version. 	ISURLOG LR
	Alimentación por pilas (Recargables / No Recargables). <ul style="list-style-type: none"> • x (1,2) <ul style="list-style-type: none"> ○ x = 1: 5 pilas recargables tipo 18650, capacidad total 17 Ah. ○ x = 2: 2 pilas NO recargables LiSOCl2, capacidad total 38 Ah. 	- BT1
		- BT2
 x = 2	NB IoT antennas. <ul style="list-style-type: none"> • x (1,2,3) <ul style="list-style-type: none"> ○ x = 1: flexible interior antenna, 868MHz, 915MHz 863MHz ~ 928MHz 3dBi. ○ x = 2: 2.5 dBi elbowed antenna mounted in the box, total length: 196 mm. ↵ ○ x = 3: 8 dBi vertical antenna for outdoors. Wall mounting kit and 3 m of RG174 coaxial cable with SMA connector included. Total length: 750 mm. 	- NB1
		- NB2
		- NB3
 x = 2 x = 3	LoRa/LoRaWAN antennas. <ul style="list-style-type: none"> • x (1,2,3) <ul style="list-style-type: none"> ○ x = 1: with flexible interior antenna 868MHz, 915MHz 863MHz ~ 928MHz 3dBi. ○ x = 2: 2.5 dBi elbowed antenna mounted in the box, total length: 196 mm. ○ x = 3: with outdoor antenna, wall-mounting bracket, SMA male connector w/ 5m cable, 205 height x 25 diameter (mm), 3 dBi 	- LR1
		- LR2
		- LR3
	NTN (Non-Terrestrial Network) Satellite Communications: global satellite coverage for areas without terrestrial infrastructure (LEO Satellites). COMING SOON! <ul style="list-style-type: none"> • x (0,1): <ul style="list-style-type: none"> ○ x = 0: sin comunicaciones extra (data logger local vía Wi-Fi). ○ x = 1: with vertical antenna for outdoor outdoors, 5m of cable. 	- ST1
 x = 2	Basic box/enclosure: <ul style="list-style-type: none"> • xy <ul style="list-style-type: none"> ○ xy = 10: without box. ○ xy = 2y: PRO-EX box: Complete unit mounted in IP67 waterproof box for outdoor use, 140 (height) x 140 (width) x 60 (depth), in mm, with all selected accessories. PETG material, hydrophobic. No UVA radiation long-term resistant. Includes TPU gasket and hinged receptacle for the Easy-Wiring connectivity solution 	- 1PC10
		- 1PC2y
		- 1PC3y
		- 1PCx1

	<ul style="list-style-type: none"> xy = 3y: PRO-IN box: Complete unit mounted in <u>box for indoor use</u>, 140 (height) x 140 (width) x 60 (depth), in mm, with all selected accessories. PETG-V0 material, self-extinguishing, UL94 flammability. Incl. hinged receptacle for the Easy-Wiring solution xy = x0: without mounting kit. xy = x1: with DIN rail mounting kit. xy = x2: with DIN rail + wall mounting kit (no tools required). xy = x3: with mounting kit for pole attachment. 	- 1PCx2 - 1PCx3
x = 2 	Additional external power supply: <ul style="list-style-type: none"> x (0,1,2) <ul style="list-style-type: none"> x = 0: No additional power to the batteries. x = 1: 230V charger for mains power supply + 3 m. cable. x = 2: embedded solar panel. x = 3: IP65 outdoor solar panel, 5W, 194x166x14 mm, with articulated arm support + 3 m. cable. 	- EPS1 - EPS2 - EPS3
x = 1 	Double waterproof box for outdoor mounting: <ul style="list-style-type: none"> x (0,1,2,3) <ul style="list-style-type: none"> x = 0: without double box. x = 1: Complete unit mounted in outdoor waterproof box, IP66, 300 (height) x 265 (width) x 165 (depth), in mm, with all selected accessories, terminal block and cable glands. 	- 2PC1
	x (0,1) 1 = IsurNode , I/O Expansion Module: <ul style="list-style-type: none"> 4x4/20 mA 16-bit active/passive current loops, 2xDIs states, 2xDIs counters, 4xDOs solenoid valves. Modbus RTU. IP66 enclosure, 120x80x56 mm. Cable glands. 	- IN1
	IsurCloud cloud data connectivity. <ul style="list-style-type: none"> x (0,1,2) <ul style="list-style-type: none"> x = 0: no cloud data connectivity. x = 1: IsurCloud-NB: SIM card 500 MB for 5 years (whatever comes first). Warning notifications at 20% and 0% of consumption. x = 2: IsurCloud-SAT: COMING SOON! 	- ICN1 - ICN2



TECHNICAL SUPPORT



+34-943-63.54.37



tecnic@isurki.com



[WIKI](#)



[YouTube](#) [tutoriales](#)

As a result of our determined desire to meet the most demanding requirements of our customers and incorporate the latest technological advances, ISURLOG is a product in constant evolution, so the content of this document is merely informative and may be subject to change without prior notice.

isurki
Instrumentación y control

✉ Gabiria 2, 1-L E-20.305 Irun SPAIN ☎ (34)943-635437

✉ isurki@isurki.com 🌐 https://isurki.com/Isurlog_NB.html