Sofrel
LACROIX

SOFREL WATER PRODUCT PORTFOLIO

CONNECTED EQUIPMENT FOR WATER NETWORKS

THE **BEST TECHNOLOGY** AT THE SERVICE OF THE ENVIRONMENT

The water supply is a major challenge for our planet.

Water networks are rich ecosystems that need to be monitored and automated to protect our natural resources.

IIoT

SMART DA

SMART WATER

SMART ENVIRONMENT

SECURE YOUR **FACILITIES** 🔒

- **Receive alerts** 24/7 of any network failures
- Have a **permanent overview** of all your operations
- **Save** all operating data
- **Monitor** and **secure** access points

IMPROVE YOUR **SERVICE**

- Be **immediately** alerted in the event of a breakdown, allowing you to intervene quickly
- **Anticipate** wear-related problems by monitoring equipment run times
- **Have back-up automation systems** available in the event of equipment failure
- **Ensure continuity of service** to your customers

REDUCE **COSTS**

- **Reduce routine visits** and meter reading rounds
- **Optimize the operation** of electrical components (pumps, motors, etc.) so that they run during the most economical billing periods
- **Facilitate maintenance** by continuously monitoring the operation of your installations
- **Save energy**
- **Optimize** travel and operating costs

SMART ENERGY

M2M

BIG DATA

PROTECT THE **ENVIRONMENT**

- Check for any evacuations **into the natural environment**
- Reduce **energy consumption**
- Promote the development of **renewable energy**
- Save on **natural resources** (reducing leaks, etc.)
- **Prevent risks** (flooding, pollution, etc.)

IIoT equipment for the Smart Environment

Reservoir

District Metering Area Meter

Rain gauge

Drinking water treatment plant

Water drilling

Lagoon

Pumping station

Major Consumer water meter

Pressure Regulation Valve

Water quality monitoring

Waste Water Treatment Plant

Waste Water lift station

Combined Sewer Overflow

IIoT
CYBERSECURITY
SMART DATA
SMART ENVIRONMENT
SMART WATER
M2M
BIG DATA
SMART ENERGY

In the heart of the Smart Environment

LACROIX Sofrel, a leading French company with over 40 years experience, provides IIoT solutions for the remote monitoring and management of technical installations for drinking water and wastewater networks.

Telemetry and SCADA technology allows you to:

- **Act quickly** in the event of an anomaly
- Stay in **permanent contact** with remote installations
- **Remotely control** equipment
- **Measure, analyse and store** data
- **Automate** installations and processes

" LACROIX Sofrel products help us to keep our 'Blue Flag' rating, a symbol of exemplary environmental quality, allowing the city to retain its appeal to tourists. "

" SOFREL devices allow us to monitor and manage the traceability of access to sensitive sites and guarantee cybersecurity. "

" *Thanks to SOFREL products, we are automatically alerted if clogged pumps are detected at lift stations and the energy efficiency of our installations is optimised.* "

" *Using SOFREL LS and LT data loggers has allowed us to obtain a network efficiency of 89%, thus limiting costly water losses.* "

" *Thanks to the smart functions of LACROIX Sofrel products, on-site maintenance interventions are limited, which allows us to considerably reduce operating costs.* "

" *By using SOFREL LT-US data loggers, we remain in full compliance with the self-monitoring directives thus avoiding penalties and limiting wastewater discharge into the environment.* "
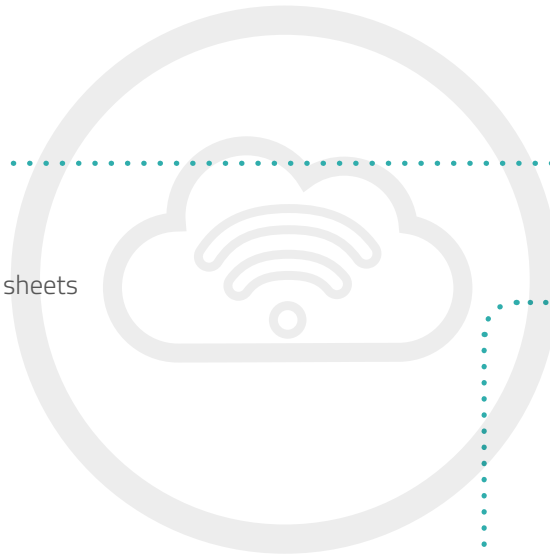
SOFREL AS
Remote Terminal Unit

- Remote management, archiving and balance sheets
- Parameterisable "Lifting Station" function
- Integrated automation workshop
- Multi-carrier communication, redundancy
- Inter-site communication

SOFREL BOX
Autonomous Telemetry

- Links between sites (Reservoir/pumping station slave control)
- Battery-powered
- Data recording
- Unlicensed radio communication

SOFREL LS10
Remote meter reading and district metering

- Index reading and network district metering
- Remote metering for "major consumers"
- District Metering Area
- Detecting metering anomalies
- Leak detection
- Flowrate calculation

SOFREL LS42
Remote meter reading and pressure monitoring

- Index reading and network district metering
- Remote metering for "major consumers"
- District Metering Area
- Detecting metering anomalies
- Flowrate calculation and leak detection
- Pressure measurement and monitoring
- Quality settings control
- Monitoring inter-network transfers

king water networks

SOFREL LS-Flow ⬡
Remote reading of flow meters and District Metering Area

- Electromagnetic flow meter remote reading and diagnostics
- Flow and pressure monitoring
- Leak detection
- Monitoring of "major consumers" flow
- District Metering Area

SOFREL LS-V
Pressure management and regulation

- Monitoring of Pressure Reduction Valves, stabilisers and regulator operations.
- Measuring and monitoring the level of service quality (pressure)
- Programmed control of a two-stage control valve

⬡ SOFREL LS-P
Pressure measurement and monitoring

- Monitoring of Pressure Reduction Valves, stabilisers and regulator operations
- Measuring and monitoring the level of service quality (pressure)

IIoT Data Loggers for the self-monitorin

◆ **SOFREL** LT42
Continuous diagnosis and monitoring of water quality

- Detection of overflows in Combined Sewer Overflow
- Calculation and recording of evacuated flows and volumes
- Control of an autonomous sampler
- Rain intensity calculation
- Detection of polluting incidents

g of wastewater networks

◆ **SOFREL** LT-US
Overflow and flow monitoring by ultrasound probe

- Level measurement by ultrasound probe
- Detection of overflows in Combined Sewer Overflow
- Calculation and recording of evacuated volumes
- Control of an autonomous sampler
- Rain intensity calculation

SOFREL LT-US ATEX
Overflow and flow monitoring in explosive atmospheres

- Level measurement by ultrasound probe
- Detection of overflows in Combined Sewer Overflows
- Calculation and recording of evacuated volumes
- Installation in ATEX zones

SOFREL LT-Radar
Level measurement and recording by radar sensor

- Level measurement by radar sensor
- Calculation and recording of evacuated volumes
- Control of an autonomous sampler
- Rain intensity calculation

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SOFREL PCWin2
SCADA Central Station

- Centralisation of data from remote terminal units or data loggers
- Graphic mimic diagrams
- Sectoral analysis table
- Automatic calculations and processing
- Operation reports
- Curve charts
- Data sharing (CSV format, Excel, etc.)

SOFREL WEB LS
Cloud centralisation

- Centralisation and processing of data from data loggers
- Secure cloud data hosting
- Data loggers network map view
- Sectoral analysis tables
- Remote configuration of data loggers settings
- Data sharing with third-party applications

and management

SOFREL OPC DA

- OPC DA standard server
- Open communication between supervisory control software systems and hypervisors

SOFREL OPC UA

- OPC UA standard server
- Open communication between supervisory control software systems and hypervisors

Communication **front-ends** and **servers**

SOFREL SG4000

- Secure GPRS communication between SOFREL telemetry and SCADA devices
- Creation of a VPN
- IP address distribution

SOFREL FR4000

- Front-end processor communication hardware
- Communication between SOFREL equipment and supervisory control software system or PCWin2 SCADA central station

◆ SOFREL Sensors

Drinking water networks

- SOFREL CNPi: Submersible level sensor to measure water levels
- SOFREL CNPr: Pressure sensor, connected to pipes

Wastewater networks

- SOFREL CNPa: submersible level sensor with ceramic cover to measure wastewater levels
- SOFREL CSV: overflow detection sensor

◆ SOFREL protective equipment

- Power supply surge arresters
- Analogue input surge arresters
- Communication media surge arresters

◆ Actuator

Solenoid

- Pressure Regulation Valve control
- Very low energy consumption

accessories and external components

Power supply

- Power supply units and energy converters
- Emergency batteries for remote terminal units
- Lithium batteries for data loggers

SOFREL accessories

- Protection window for S500 range
- Wall bracket and deflector for LT-US probe
- Lock code and activation code for data loggers
- Watertight connection kits

Access control

Badge readers
- Access identification and traceability

Badges
- Identification of persons
- Access management

Communication

- External GSM/GPRS modem
- Radio transmitter/receiver with or without licence
- Omnidirectional and directional antennas

HMI

PC panel and displays
- Display of data points on cabinet front panel
- Interactive graphical display
- Easy to install

Project feasibility study and follow-up

- Dedicated technical sales service for project feasibility studies
- In-depth research to find the most suitable solutions
- Customisation of offers according to your desired applications
- Advice for the implementation and running of the proposed products.

Training

- Approved training organisation
- Experienced team of trainers
- Training sessions available in France and abroad
- More than 800 trainees are welcomed each year for training sessions of 2 to 5 days and limited to a maximum of 8 participants
- Training programmes and timetables available at www.lacroix-sofrel.com

After-sales service

- 3-year warranty on all products
- Returning products to our After-Sales Service department is made easy with the anomaly description sheet which can be downloaded on the website.
- Your product is examined within 48 hours by After-Sales Service technicians
- Your product will then be replaced or repaired depending on the problem encountered
- Traceability of all maintenance interventions

Start-up assistance

- Start-up assistance for telemetry and SCADA equipment
- Call-out service available for assistance in configuring a telemetry and SCADA network
- A set-up service by a LACROIX Sofrel technician or one of our certified partners is available

Free hotline

+33 (0)2 99 04 89 00

- **A team of specialised technicians** with perfect knowledge of the constraints of the field and all LACROIX Sofrel products

- We are **always on-hand** to respond to any incident or question

- **Remote connection** possible to carry out **remote diagnostics**

- **More than 90%** of calls to the Hotline are **resolved directly and quickly** by phone

LACROIX Sofrel is a member of LACROIX Group

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TECHNOLOGIES
FOR A SMARTER
ENVIRONMENT

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