

SOFREL LT42

PERMANENT DIAGNOSIS AND QUALITY MONITORING



USES & BENEFITS

- **Regulatory self-monitoring**
 - Overflows detection in Combined Services Overflows
 - Daily calculation of the number of overflows and their duration
 - Discharge volumes and flows monitoring
 - Autonomous sampler controls
- **Continuous diagnostics**
 - Ensure appropriate network sizing
 - Anticipate load development
 - Measure inputs from adjacent municipalities
 - Monitor industrial discharge into the system
 - Detect quantity of infiltration water
- **Rain gauge**
 - Calculate rainfall intensity
 - Compare rain gauge indications with the network operation
- **Water quality, Physico-chemical measurements**
 - Quality sensors management (conductivity, pH, Redox, ORP, etc.)

PRODUCT FEATURES

- Enhanced IP68 waterproof rating
- Battery powered
- Integrated high performance 2G/4G M2M antenna
- Access to the SIM card and battery on site
- 3-year manufacturer guarantee

EASE OF USE

- On-site communication and exploitation via Bluetooth link
- Open to supervisory control software and third-party applications of major water operators
- Specific communication protocol guaranteeing data availability
- Simplified data exploitation via the SOFREL WEB LS IoT platform

MAIN FEATURES:



Communication



Simplicity



Waterproof



Battery life



Guarantee



Antenna FLEX

Technical and functional characteristics

GENERAL FEATURES:

Mechanical design	Screwless opening system for easy access to the SIM card and battery
Dimensions	H 261 x W 155 mm
Weight	1,1 kg
Operating temperature	-20°C to +55°C
Storage temperature	-25°C to +70°C
Watertightness	Enhanced IP68 certification (200 days under 2 meters of water)
Power supply	Powered by an internal lithium battery
Connector types	Military-grade hermetic connector

DATA LOGGER INPUTS:

DI (Digital Inputs)	<p>4 digital inputs for standard metering, signalling and overflow sensors</p> <p>Maximum frequency: 250 Hz</p> <p>Minimum pulse time: 2 ms</p> <p>Maximum polarisation voltage: 3.3 V</p> <p>Maximum polarisation current: 15 µA</p>
AI (Analog Inputs)	<p>2 analog inputs for SOFREL pressure sensors or remote powering of third-party sensors</p> <p>Remote powering of third-party sensors via 4-20 mA loop, 12 V or 20 V</p> <p>Controlling a sampler</p>

COMMUNICATION:

2G/4G M2M quad-band modem	<p>4G LTE-M : B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B27/B28/B66/B85</p> <p>4G NB-IoT : B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B28/B66/B71/B85</p> <p>Quad-band GSM/GPRS/EDGE (850 MHz, 900 MHz, 1800 MHz, 1900 MHz)</p>
Supported SIM cards	Standard SIM cards (Nano and Micro SIM cards can be installed via adapter)
Versatile antenna (FLEX option)	4-meters, IP68-certified external antenna
Automatic data logger synchronisation	Daily synchronisation of the LT via the SCADA
Communication with 1 or 2 PCs	Periodic, programmed or event-based
Inter-sites communication to S500, S4W, YDRIX or AS	Periodic or event-driven (change of DI status or threshold exceedance)
Alert transmitted to mobile via SMS*	Upon change in DI state, exceeded threshold, sensor fault...

CONFIGURATION AND COMMISSIONING:

Bluetooth	Data logger configuration via Bluetooth link
Assistance with commissioning	<p>4G M2M and 2G reception level measurement</p> <p>LEDs for visual diagnosis of operation and 4G M2M/2G signal</p>
Assistance with maintenance	Remaining battery life calculator

ARCHIVING:

Local archiving capacity	100,000 data points
Primary and secondary archiving of DI, AI and US probe data	Event-based automatic changing of the archiving period (e.g. overflow)

PROCESSING:

Self-monitoring	<p>Includes two conversion tables for flow calculations</p> <p>Flow calculation based on height measured via an analog input (AI)</p> <p>Daily calculation of volume linked to flow</p> <p>Calculation of the number of daily overflows</p>
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CERTIFICATIONS:

CE Certification	<p>2014/53/UE "Radio equipment"</p> <p>2014/30/UE "Electromagnetic compatibility"</p> <p>2014/35/UE "Low voltage"</p>
Enhanced IP68 certification	Extended immersion test (200 days under 2 meters of water) performed by an independent laboratory

STANDARD BATTERY LIFE:

Height measurement every 5 minutes	6 years (Daily communication with the SCADA)
Height measurement every 15 minutes	10 years (Daily communication with the SCADA)

* Depending on the activation of the telecom operator



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