

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 (30 days under 4 meters of water) |
| Power supply | Powered by an internal lithium battery |
| Connector types | Military-grade hermetic connector |

DATA LOGGER INPUTS:

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

COMMUNICATION:

| | |
|---|---|
| 2G/4G M2M quad-band modem | 4G LTE-M : B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B27/B28/B66/B85 4G NB-IoT : B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B28/B66/B71/B85 Quad-band GSM/GPRS/EDGE (850 MHz, 900 MHz, 1800 MHz, 1900 MHz) |
| 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 | 4G M2M and 2G reception level measurement LEDs for visual diagnosis of operation and 4G M2M/2G signal |
| 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 | Includes two conversion tables for flow calculations Flow calculation based on height measured via an analog input (AI) Daily calculation of volume linked to flow Calculation of the number of daily overflows |
|-----------------|--|

CERTIFICATIONS:

| | |
|-----------------------------|--|
| CE Certification | 2014/53/UE "Radio equipment" 2014/30/UE "Electromagnetic compatibility" 2014/35/UE "Low voltage" |
| Enhanced IP68 certification | Extended immersion test (30 days under 4 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