

SOFREL LS RANGE

IoT DATA LOGGERS FOR WATER NETWORK PERFORMANCE



LS 10



LS 42



LS-Flow



LS-V



LS-P

Remote reading and district metering

Pressure monitoring and dynamic management

FUNCTIONAL CHARACTERISTICS

COMMUNICATION	LS10	LS42	LS-Flow	LS-P	LS-V
DATA TRANSMISSION:					
- Sending of data to 1 or 2 SCADA Central Stations	SMS 2G/3G	SMS 2G/3G	IP 2G/3G	SMS 2G/3G	IP 2G/3G
- Communication medium	✓	✓	✓	✓	✓
- Versatile antenna management (FLEX version)	✓	✓	✓	✓	✓
- Temporary exceptions	✓	✓	✓	✓	✓
ALERT:					
- Send SMS alerts to mobiles	✓	✓	✓	✓	✓
- Instant detection via a specific DI (intrusion on site)	✓	✓	✓	✓	✓
- Sensor fault detection	✓	✓	✓	✓	✓
CENTRALISATION:					
- SOFREL WEB LS (cloud hosting of data sent by LX data loggers)		✓	✓	✓	✓
- SOFREL PCwin2 (SCADA Central Station for SOFREL devices)	✓	✓	✓	✓	✓
- Open to third-party applications (Web services and FTP)		✓	✓	✓	✓
- Analysis and exploitation of data on PC, tablet or smartphone	✓	✓	✓	✓	✓
- Open to other SCADA systems			✓	✓	✓
	Contact us				
INTER-SITES:					
- Periodic or event-driven communications (change of DI status or threshold exceedance) to a S4W, S500 or AS for remote site control		✓	✓	✓	✓
I/O MANAGEMENT					
NUMBER OF INPUTS / OUTPUTS:					
- Digital Inputs (DI)	1	4			4
- Analogue Inputs (AI)		2	1	2	2
- RS485 series port			1		
- Solenoid valve					1
TYPES OF INPUTS / OUTPUTS:					
- Pulses for metering	✓	✓			✓
- Modbus for metering			✓		
- Dry contact	✓	✓			✓
- SOFREL CPR / CNPR Pressure sensors		✓	✓	✓	✓
- Remote power feeding to third-party sensors		✓	✓		✓
TREATMENT					
CALCULATIONS:					
- Daily district metering balance (night flow, max flow, min flow and daily volume)	✓	✓	✓		✓
ARCHIVING:					
- Daily balances and archiving of meters and flows	✓	✓	✓		✓
WEEKLY SCHEDULE:					
- Programming the control of a pressure regulation valve according to a weekly schedule					✓

PHYSICAL CHARACTERISTICS:

General characteristics	Screwless opening system for easy access by the user 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	Reinforced IP68 certification (100 days under 1 meter of water) obtained from an external laboratory
Power supply	Power supply by an internal lithium battery: - Standard battery: up to 5 years battery life - High Capacity battery: up to 10 years battery life
Connector types	Military-grade waterproof connectors

CONNECTIONS:

DI (Digital Inputs)	Digital input for standard and bidirectional metering and signalling Maximum frequency: 250 Hz Minimum pulse time: 2 ms Polarisation voltage: 3.3V max Polarisation current: 15µA max
AI (Analog Inputs)	2 analogue inputs for measuring pressure or level Remote power feeding to third-party sensors via 4-20mA loop in 12V or 20V
RS485	Modbus RTU Interface for automatic communication with Aquamaster (ABB), MAG8000 (SIEMENS) and Waterflux (KROHNE) flowmeters
Output	Specific interface for operating SOFREL solenoid valve

COMMUNICATIONS:

Quadriband 2G/3G modem	Quad-band GSM/GPRS/EDGE (850 MHz, 900 MHz, 1800 MHz, 1900 MHz) Hexa-band UMTS WCDMA FDD (800 MHz (B19), 850 MHz (B5/B6), 900 MHz (B8), 1900 MHz (B2), 2100 MHz (B1))
SIM cards supported	Standard SIM cards (Nano and Micro SIM cards can be installed via adapter)
Versatile antenna (FLEX version)	External, 4-meters-long antenna, IP68 certified
Configuration of the Data Logger	Daily configuration of the LS via SCADA
Communication to 1 or 2 PCs	Periodic, programmed or event-based

CONFIGURATION AND COMMISSIONING:

Bluetooth	Data logger configuration via Bluetooth connection
Assistance with commissioning	3G and 2G signal reception measurement 3G and 2G best operator test LEDs for visual diagnosis of 2G and 3G operation and signal
Assistance with maintenance	Calculation of remaining battery life

LOCAL DATA ARCHIVING:

Archiving capacities	50,000 data points
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