SIMPLE ENGINEERING SOLUTIONS FOR COMPLEX TECHNOLOGICAL TASKS

Leaks Detector LoRaWAN

LEAKS DETECTOR FOR THE INTERNET OF THINGS

The device Leaks Detector LoRaWAN **"Smartico L2-LR"** is used in various fields of industry, utilities and automation for remote data collection, leaks detection and data transmission via LoRaWAN networks. The device implements two zone control using passive leak sensors, which provide high energy efficiency solutions. The design of the sensor in a waterproof housing allows external use. The compact size allows installation in confined spaces, and special adapters provide reliable mounting to a pipe or flat surface without opening the enclosure.

Specifications	
Compliance with LoRaWAN	1.0.2 Class A
Frequency plan of LoRaWAN	EU868/US915
Power of transmitter, mW	25/100
Number of control zones	2
Archive of events and messages	8000
Connection of external antenna	Available
Magnetic sensor	Built-in
Accelerometer	Built-in
Ambient temperature, °C	-30 …+75°C
Built-in battery	Li-SOCl2 AA/A
Battery capacity, mAh	2400/3400
Weight, g	132
Dimensions, WxDxH mm	75x100x35
Ingress protection	IP67

KEY FEATURES:

- Protection from external interference and transmission of an alarm message to the server.
- Monitoring and transmission of the following parameters:
  - leak sensors status
  - the presence of an external magnetic field;
  - battery discharge;
  - monitoring the performance of internal sensors;
  - control of impacts and changes in position.
- The presence of built-in non-volatile memory, archiving, built-in real-time clock.
- Monitoring two different zones by leak sensors.
- Data transmission in the unlicensed frequency range.
- Available with an external antenna.
- Small dimensions, easy installation.
- Battery life is more than 10 years.

FIELDS OF APPLICATION:

- Monitoring flooding of basements;
- Smart city;
- Monitoring of process units;
- Water level measurement in three levels:
  - below two marks;
  - between marks;
  - above two marks.

ADVANTAGES OF THE SYSTEM BASED ON LoRaWAN:

- Unlimited network scaling;
- Long range communications (up to 15 km with direct visibility);
- Autonomy of the end devices (more than 10 years from the built-in batteries);
- Adaptive data transmission rate and power trim to save battery;
- Interference immunity (the possibility of demodulating a signal with a level of up to 20 dB below noise and interference);
- The use of an unlicensed frequency range that does not require additional costs;
- Two-level data encryption at the gateway and application level;
- The ability to expand and change functionality without significant investments;
- Flexible adjustable functionality reporting and software analytics;
- Export data to any analytical and billing systems.

LoRaWAN

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