Manhole Monitoring with ProSENSOR-125

In the nowadays modern city, as in many other areas, cities itself are being digitalized as well, and the infrastructure is monitored closely for safety and service perfection. This is done over called "Smart City Applications". One of the most popular smart application is to monitor manholes against theft or misusage. In a manhole monitoring application, each manhole is equipped with a smart sensor to sense the unintended movement.

Profen provides a turn-key solution to monitor manholes in a city by using LoRA technology. The system is consisting of sensors, gateways, and network servers. The sensors collect the data and transfer it to the centralized server over the gateways, which are strategically located throughout the city. The collected data is then further processed for dashboarding and reporting.

Key Features of Application

- Smart and customizable operator dashboard for easy and effective management
- Centralized data management
- Cloud based or on-premise software suite
- 24/7 Real-Time turnover information
- Data analytics software
- Private or public LORA® network
- Flexible Integration with third party Apps

Typical Applications

- Manhole monitoring
- Garbage container monitoring
- Garbage collection truck tracking

ProSENSOR Technical Specifications

Model Name	ProSENSOR-125
Frequency Band	AS923/US915/CN470/EU868
Number of Channels	Configurable up to 16 channels
WAN Protocol	LoRaWAN
Modulation	Based on LoRaWAN
RF Transceiver	SX1276
Transmit RF Power	Up to 20 dBm
Receiver Sensitivity	Down to 140 dBm
Operating Temperature	-40°C ~ 70°C
Storage Temperature	-40°C ~ 70°C
Sensor	3 axis accelerometers
Power Voltage	2.2DCV ~ 3.3.DCV
Battery	Non-rechargeable Li-on battery 2400mAh*2
Antenna Type	Integrated PIFA
Ingress Protection	IP68
Dimensions	L142xW113xH42.5
Weight	318 gr
Security	AES 128