



Intelligent Sensing Anywhere

Case Study



Summary

Project

Multi-utility remote metering: Remote monitorization of electricity, gas and water meters

Industry

Utilities: Electricity, Gas and Water

Challenge

To know, in real time, electricity, gas, and water consumptions

Solution

The iMeter – Solution for electricity, gas and water remote metering

Benefits

- Reducing costs associated with manual reading and estimated invoicing
- Intelligent remote metering
- Eliminating reading errors
- Paving the way for multiple-tariff plans
- Allowing multiple and frequent readings
- Better customer management
- Easy to operate with and to install
- Access via cell phone/web
- Tampering alarms
- Energy efficiency promotion tool

State of business

Phase one concluded

Requisites / Specifications

- Monitorization and control of 3 single-phase circuits (16A) or 1 three phase circuit
- Radio Interface
- ModBus Protocol (RS-485)
- GSM/GPRS Communications or ADSL
- Memory Data Register: 1 month
- Operating temperature: -10oC to 60oC

Multi-Utility Remote Metering

Electricity, gas and water distribution companies have continuously showed an interest in improving the quality of the service provided to their customers, as they have been investing on technologically innovative solutions which will increase their value, in addition to reducing operating costs simultaneously. The implementation of remote metering systems is an essential requisite for the development of the service provided and for a decrease in costs.

For that reason, ISA developed the iMeter – a device that monitors consumption, concentrates the information and works as a communications portal. It remotely provides information related to electricity, gas and water consumption, as well as it monitors indoors and outdoors temperature and moisture.



Figure 1 - iMeter: Remote Metering and Energy Efficiency Solution

Case Study Multi-Utility Remote Metering

Remote
Monitoring of:



Water



Electricity



Gas

Detected necessities

Águas de Coimbra company felt the need to improve its customer service and to reduce costs related to the periodical presential reading of water meters in the city of Coimbra by eliminating the practice of estimated invoicing, by detecting frauds, and by expediting maintenance processes and damage detection. iMeter appeared as the best solution to the company, as it provided the distributor with the readings of water consumption at distance, and allowing the final customer to know its actual expenditure, in a transparent, confidential way.

Implementation

On a first step, to respond to the company's needs, the equipment installed by ISA was intended to remotely monitor water meters exclusively, but the infrastructure was planned to integrate gas and electricity meters in the future. It was decided to implement the solution of remote metering on the largest consumers, such as industries, hospitals and schools, installing simultaneously, a pilot project for home customers (*Quinta da Portela*).

Conclusions/Future Developments

Currently the company Águas de Coimbra already has remote access to water consumption of the installed pilot, avoiding the inconvenient of presential meter readings. On a next stage, the solution of remote metering will be expanded on to all water meters in the city of Coimbra.

As a future evolution (currently being deployed), full potentialities of iMeter will be put into practice and that its use will expand on to the intelligent monitorization of gas and electricity use. Is it furthermore desired that the customers directly benefit from their equipment, as they become able to access their own individual, discriminated consumption, in an added value and energy efficiency promoted service provided by the operators.



Intelligent Sensing Anywhere

ISA is an award-winning global company specialized in Telemetry and M2M (Machine to Machine) Communications. ISA is a global leader in different market segments such as: Remote Management for Utilities, including telemetry and remote metering solutions for gas, fuel, electricity and water. The products, solutions, and services offered by ISA are based on its own technology and know-how in the fields of electronics, software development, telemetry and control, which have been accumulated over the past 20 years. The ability to develop and launch innovative products into the market in a very short time is the key to ISA's international success. Among many awards received, ISA was distinguished in the course of Metering Europe 2006 in Copenhagen with the Innovation Award of the European Utility Awards. This award cited ISA's iEyeMeter – an innovative solution which enables wireless multi-utility remote metering without the need to exchange legacy meters.

Águas de Coimbra

Águas de Coimbra company is responsible for the potable water distribution in the Portuguese city of Coimbra with more than 80.000 habitants. Keeping the quality of their service as their utmost value, the company has a long history of water supply and sanitation in the city and it has always invested in new technology, in order to increase their ability to respond to their customers' needs.



www.isasensing.com