### CASE STUDY: SMART BUILDINGS

# **DIRIS DigiBOX**

solution for energy billing system







East Farm Shopping Mall is a vast mall that includes 60 shops and 3 department stores. Most of the mall's electrical energy comes from rooftop solar panels and two utility transformers. These solar panels have allowed for an overall saving on energy costs for the East Farm Mall.

The management of East Farm Mall wanted to charge each tenant based on their individual energy consumption, but the mall did not have any individual meters installed to do this. So, each tenant shared the total energy cost based on the acquired square footage.

This shared cost was not an effective way to bill each tenant because depending on the type of store, different amounts of energy would be consumed. Therefore, it was imperative for meters to be installed so that each tenant was fairly charged based on their energy consumption.



## The Solution

# Socomec's DIRIS DigiBOX based Energy Billing System

In order to start charging their tenants more fairly, the management team of the mall decided to start monitoring the actual energy consumption of each shop with the goal to bill them accordingly and not anymore based on the square footage occupancy.

The most effective way to measure each individual tenant's energy consumption is through electric metering. Electric metering is the process of using electric meters to measure the amount of electricity or energy consumed by a particular business or tenant within a building.



By connecting these submeters with smart web based technology, East Farm Mall can gain a deeper understanding of how each tenant consumes energy and the costs associated.

The solution provided by Socomec to meet these demands is the DIRIS DigiBOX, a revenue grade enclosed single and multi-point metering solution designed to provide an unrivaled accuracy and reliability. DIRIS DigiBOX is the most compact product on the market, based on the number of measuring points. It also offers factory pre-wired Plug & Play technology which amounts to considerable savings in installation costs.

DIRIS DigiBOX allows building managers to monitor power parameters in real time and understand consumption levels. Combined with our software solution WEBVIEW, this solution gives building managers the ability to access data gathered by the meters via any web browser. WEBVIEW also allows the building owners/managers to take the data recorded by DIRIS DigiBOX and, with a third party billing software, use it to bill each tenant according to their energy consumption. This simple-to-use system enables building owners/managers to more effectively manage power usage and respond to changing power usage requirements.

The Socomec metering solution installed at East Farm Mall was twelve DIRIS DigiBOX enclosures with DIRIS Digiware modules inside. Within the two electric rooms there were a total of six DIRIS DigiBOX enclosures. Each room has one display for local readings and two gateways for data logging

#### **Electrical Room 1:**



#### **Electrical Room 2:**



# The Advantages









DIRIS DigiBOX metering solution offers modular installation to adapt to any environment, drastically shortening installation time. It also allows for easy modification which is crucial because tenants come and go from the units frequently and meters will need to be added or removed to accommodate changing tenants.

Another key advantage of the DigiBOX system is its unrivaled accuracy. Socomec's DIRIS DigiBOX provides revenue grade ANSI C12.20 accuracy, class 0.5 from 2% to 120% of rated current for the entire measurement chain (meters associated with current sensors). The accuracy of the whole measuring system is especially important in subtenant billing applications as this can have a significant dollar impact on the energy bills.



## The Benefits

One of the biggest expenses for tenants/businesses after rent and payroll is their utilities. By having each business responsible for their own energy consumption it will help them become more energy efficient and as a result, they will lower their total cost of occupancy. This will allow them to put more money into the promotion of their products giving them a greater chance of succeeding in the retail marketplace.

In addition, the benefits of energy metering goes beyond just the individual tenants—it can have a huge impact on the building as a whole. Having individual meters track energy consumption and having tenants pay based on this consumption will impact the tenants' behaviors and make them more cautious of wasteful energy usage leading to better energy efficiency. If each tenant is more energy efficient, the energy consumption of the building as a whole will drastically decrease, saving money and helping to achieve a greater sense of environmental responsibility.

The mall owner is benefiting from this project by transforming this building into an environmentally friendly place, giving his business a better image and reputation within the community and participating in the reduction of its carbon footprint.

For more information on Socomec's metering solutions, please visit our website at **www.socomec.us** or email our team of engineers at **info.us@socomec.com**.



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