



Low-cost Energy Management Solutions

For homes & buildings



Residential



Small Business
Up to 5 sites



Commercial
Above 5 sites



Commercial
Multi-site



Wiser Energy

Home Owner
Free mobile app \$0



EcoStruxure Small Business

Small business Owner
Free mobile app \$0



EcoStruxure Facility Expert

Multi-site Building Owner
Web portal license
from \$630 per year



EcoStruxure Facility Expert

Any number of sites
Free mobile app \$0
Paid license if alarming
from \$300 per year





Residential



Small Business
Up to 5 sites



Wiser Energy

Home Owner

Free mobile app \$0

EcoXpert™

Home & Small Business

Certified by

CLIPSAL

by Schneider Electric



**EcoStruxure Small
Business**

Small business Owner

Free mobile app \$0

A low-angle, upward-looking photograph of several tall skyscrapers. The buildings are made of glass and steel, reflecting the sky. The sky is a vibrant blue with wispy white clouds. The perspective creates a sense of height and scale.

What is Power Tag

Solution from Schneider Electric

What is Power Tag?



Why PowerTag?

New generation of product developed by Schneider Electric

“Go the closest as possible to the circuit to be monitored”

We used to monitor energy consumption at panel or group level.
In order to better monitor the installation, we need to go closer to the load.

PowerTag is the solution! PowerTag offers something more!

PowerTag offers a consistent solution to monitor your installation at every level,
from load to main incomer.

ENERGY SAVING

ISO51001 enabler

Allows to monitor the
consumption of each final
distribution circuit.

PEACE OF MIND

Alarm in case of voltage
loss or in case of abnormal
behavior of the load.

TAKE ACTION

Thanks to alarm / notification
action can be taken without
any delay, downtime can be
reduced and up-time can be
improved.

With Acti9 Communication System... ... turn your circuit-breaker into a load monitor !

Simply add the new PowerTag
Wireless Sensor...



Monitor your Energy



Real time U,V,I,P,PF



Active Energy (**Class 1** – EN61557-12)
Partial and total

Load by phase



Load balance overview (web pages)



Improve your maintenance



Pre-Alarm on **overload*** (50%, 80%)
(by email)



Specific alarming on U,I,P... (email)
Periodic email with Energy thresholds



Alarm on feeder **voltage loss** (overload/trip)
(Modbus and email) if installed downstream



... and get valuable information
to improve your maintenance
and energy efficiency !

Life Is On

Schneider
Electric



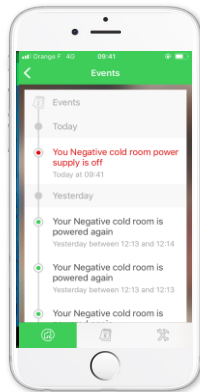
Deep Dive EcoStruxure Small Business

Small Business stores

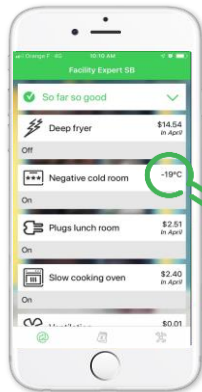
Monitor & Control your small business with EcoStruxure Small Business



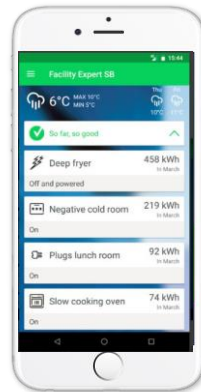
Monitor key equipment 24/7



Real time alarms when equipment shuts down



Monitor **temperature** of your cold room
Generate automatic **reports**



Control and Schedule your loads to turn on/off



Compare energy consumption of various business processes over time

Monitor & Control up to 5 small businesses through your app



Tip : Indicate the facility in the equipment naming; e.g. *Fridge facility 1, Fridge facility 2*

EcoStruxure Small Business



Facility Expert SB
Mobile app



Gateway

A white, rectangular Schneider Electric Acti9 SmartLink EL-D gateway device. It has a green terminal block on top and a green 'cloud' icon on the front. The front also displays 'Acti9 SmartLink EL-D' and 'Schneider Electric' branding.

PowerTag Link C

Energy and Load Monitoring

A collection of Schneider Electric PowerTag sensors and a circuit breaker. The sensors include the Acti 9 PowerTag (a small white box with a blue cable), the NSX PowerTag (a small white box with a blue cable), and the NSX PowerTag C (a larger white box with a blue cable). The circuit breaker is a large, dark grey unit with a green display on the front.

Acti 9 PowerTag

NSX PowerTag

Refrigeration Monitoring

A small, white, rectangular Schneider Electric FWsense Temp sensor. It has a green terminal block on top and a green 'cloud' icon on the front. The front also displays 'FWsense Temp' and 'Schneider Electric' branding.

FWsense Temp

Control

A small, white, rectangular Schneider Electric MIOz sensor. It has a green terminal block on top and a green 'cloud' icon on the front. The front also displays 'MIOz' and 'Schneider Electric' branding.

MIOz

Wireless Input
monitoring & Control

Acti9 Smartlink
EL-D A9XELC10



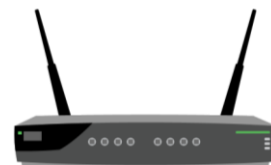
Acti Smartlink EL
D

PowerTag sensors



PowerTag sensors
Up to 20

Ethernet
Connectivity



Internet router
Ethernet cable



Small Business



Schneider cloud
secured server



Business owner
smartphone

EcoStruxure
Facility Expert
Small Business



How
Does it
Work?



Applications





HOTEL

- Laundry area & Kitchen equipment
- HVAC, Lighting control, EMS
- Convention area



WAREHOUSE

- Lighting circuits
- Forklift charging stations



RETAIL

- Lighting,
- Cold storage,
- Billing counters



EDUCATION

- Socket loads in classrooms
- Playground lighting,
- IT systems,



HOSPITAL

- WAGES metering
- OT area, Oxygen system



PORTS

- Refrigerated containers
- Yacht and Boat powering



DATACENTRE COMMERCIAL

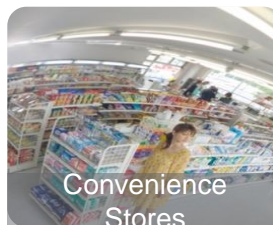
- Rack level monitoring and alarms
- Shop level metering
- Cold storage, HVAC
- Security, lighting loads

New solution for Small Business owners

Small Business

Run business efficiently

- Avoid loss of raw material
- Avoid loss of business data
- Avoid trouble in production
- Keep customers satisfied
- Quick fixing of issues



Consume less energy

- Clear view of energy consumption of major consuming equipment
- reduce energy consumption without jeopardizing business

Closely monitor operations

- Check all is OK when away from facility
- Get alerted in case of issue
- Get alerted in case of risk

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Electric

Potential applications

Think about the impact on your business of an unknown shut-off or a device that stays on when it should be off, etc.

My customer's field of activity	Devices to monitor?	Information need? (Know the ON/OFF statuses, consumption...)
Small Corner Store / Convenience Store (IGA)	Dedicated Computer Circuit 1 ph Dedicated Refrigeration Circuit 3ph Dedicated Cold Room Circuit 3ph Dedicated A/C Circuit 3 ph Dedicated Oven Circuit 3ph Dedicated Security Circuit 1ph Dedicated Lighting Circuit 1ph Dedicated Ventilation Circuit 3ph Dedicated Power Circuit 1ph	<ul style="list-style-type: none"> - Know if the dedicated Computer Circuit is ON as the impact of the system going down could be critical loss of data. (Single Phase) - Dedicated Display Fridges are OFF and follow their consumption (impact: avoid loss of goods). - Dedicated Cold Rooms / Freezers are OFF (impact: avoid loss of goods). - Check that Air Conditioning is cycled OFF so that I do not have consumption when shop is closed - Make sure the oven's working when it should, and be alerted if it is still ON when it should be OFF - Dedicated Security Circuit in ON, and be alerted if it is OFF - Check dedicated external lighting circuit is ON. - Check if underground carpark ventilation fan is ON as CO² levels are critical
Bakery	Dedicated Computer Circuit 1 ph Dedicated Refrigeration Circuit 3ph Dedicated Cold Room Circuit 3ph Dedicated A/C Circuit 3 ph Dedicated Oven Circuit 3 Ph Dedicated Display Cabinets 1ph Dedicated Lighting Circuit 1ph	<ul style="list-style-type: none"> - Know if the dedicated Computer Circuit is ON as the impact of the system going down could be critical loss of data. (Single Phase) - Dedicated Display Fridges are OFF and follow their consumption (impact: avoid loss of goods). - Dedicated Cold Rooms / Freezers are OFF (impact: avoid loss of goods). - Check that Air Conditioning is cycled OFF so that I do not have consumption when shop is closed - Make sure the oven's working when it should, and be alerted if it is still ON when it should be OFF - Know if the dedicated Display Cabinets is ON as the impact of the system going down could be critical loss of data. (Single Phase) - Check dedicated external lighting circuit is ON.
Micro-Brewery	Dedicated Computer Circuit 1 ph Dedicated Refrigeration Circuit 3ph Dedicated Cold Room Circuit 3ph Dedicated A/C Circuit 3 ph Dedicated Security Circuit 1ph Dedicated Lighting Circuit	<ul style="list-style-type: none"> - Know if the dedicated Computer Circuit is ON as the impact of the system going down could be critical loss of data. (Single Phase) - Dedicated Display Fridges are OFF and follow their consumption (impact: avoid loss of goods). - Dedicated Cold Rooms / Freezers are OFF (impact: avoid loss of goods). - Check that Air Conditioning is cycled OFF so that I do not have consumption when shop is closed - Dedicated Security Circuit in ON, and be alerted if it is OFF - Check dedicated external lighting circuit is ON.

Potential applications

Small Manufacturing Plant	Dedicated Scaling Equipment Circuit 1 ph	<ul style="list-style-type: none"> - Know if the dedicated Scaling Equipment Circuit is ON as the impact of the system going down could be critical loss of data. (Single Phase)
Restaurant	Dedicated Computer Circuit 1 ph Dedicated Refrigeration Circuit 3ph Dedicated Cold Room Circuit 3ph Dedicated A/C Circuit 3 ph Dedicated Oven Circuit 3ph Dedicated Security Circuit 1ph Dedicated Lighting Circuit	<ul style="list-style-type: none"> - Know if the dedicated Computer Circuit is ON as the impact of the system going down could be critical loss of data. (Single Phase) - Dedicated Display Fridges are OFF and follow their consumption (impact: avoid loss of goods). - Dedicated Cold Rooms / Freezers are OFF (impact: avoid loss of goods). - Check that Air Conditioning is cycled OFF so that I do not have consumption when shop is closed - Make sure the oven's working when it should, and be alerted if it is still ON when it should be OFF - Dedicated Security Circuit in ON, and be alerted if it is OFF - Check dedicated external lighting circuit is ON. -
Take Away Store	Dedicated Deep Fryer Circuit 3ph Dedicated Exhaust Fan 3ph Dedicated Computer Circuit 1 ph Dedicated Refrigeration Circuit 3ph Dedicated Cold Room Circuit 3ph Dedicated Oven Circuit 3ph	<ul style="list-style-type: none"> - When I am back home after closing of the take away, I can check that the deep fryer is OFF hence avoiding risk of fire to the restaurant - When I am back home after closing of the take away, I can check that the exhaust is OFF hence excess power consumption - Know if the dedicated Computer Circuit is ON as the impact of the system going down could be critical loss of data. (Single Phase) SERVER (Cash registers etc) - Dedicated Display Fridges are OFF and follow their consumption (impact: avoid loss of goods). - Dedicated Cold Rooms / Freezers are OFF (impact: avoid loss of goods). - Make sure the oven's working when it should, and be alerted if it is still ON when it should be OFF
Small Business	Dedicated Computer Circuit 1 ph Dedicated A/C Circuit 3 ph Dedicated Security Circuit 1ph Dedicated Lighting Circuit	<ul style="list-style-type: none"> - Know if the dedicated Computer Circuit is ON as the impact of the system going down could be critical loss of data. (Single Phase) - Check that Air Conditioning is cycled OFF so that I do not have consumption when shop is closed - Dedicated Security Circuit in ON, and be alerted if it is OFF - Check dedicated external lighting circuit is ON. -

Potential applications

Small Warehouse	Dedicated Scaling Equipment Circuit 1 ph	<ul style="list-style-type: none"> - Know if the dedicated Scaling Equipment Circuit is ON as the impact of the system going down could be critical loss of data. (Single Phase)
School Hall	Dedicated Audio-Visual Circuit 1 ph Dedicated A/C Circuit 3 ph Dedicated Security Circuit 1ph Dedicated Lighting Circuit	<ul style="list-style-type: none"> - Know if the dedicated Audio-Visual Circuit is ON as the impact of the system going down could be critical loss of data. (Single Phase) - Check that Air Conditioning is cycled OFF so that I do not have consumption when shop is closed - Dedicated Security Circuit in ON, and be alerted if it is OFF - Check dedicated external lighting circuit is ON.
Small Data Centre	Dedicated Computer Circuit 1 ph Dedicated A/C Circuit 3 ph Dedicated Security Circuit 1ph Dedicated Lighting Circuit	<ul style="list-style-type: none"> - Know if the dedicated Computer Circuit is ON as the impact of the system going down could be critical loss of data. (Single Phase) - Check that Air Conditioning is cycled OFF so that I do not have consumption when shop is closed - Dedicated Security Circuit in ON, and be alerted if it is OFF - Check dedicated external lighting circuit is ON.
Service Station	Dedicated Computer Circuit 1 ph Dedicated Refrigeration Circuit 3ph Dedicated Cold Room Circuit 3ph Dedicated A/C Circuit 3 ph Dedicated Security Circuit 1ph Dedicated Lighting Circuit	<ul style="list-style-type: none"> - Know if the dedicated Computer Circuit is ON as the impact of the system going down could be critical loss of data. (Single Phase) - Dedicated Display Fridges are OFF and follow their consumption (impact: avoid loss of goods). - Dedicated Cold Rooms / Freezers are OFF (impact: avoid loss of goods). - Check that Air Conditioning is cycled OFF so that I do not have consumption when shop is closed - Dedicated Security Circuit in ON, and be alerted if it is OFF - Check dedicated external lighting circuit is ON.

Potential applications

mall Crop Irrigation	<p>Dedicated Irrigation Bore 3ph</p> <p>Overland irrigation pump</p> <p>Irrigation rig</p>	<ul style="list-style-type: none"> - Monitor Energy Consumption History of Bore based on monthly usage. (kwh billing information required) - Risk of power shut off due to pump reaching nominal rating of the circuit breaker. (Motor wear and tear) - Power shut off – Loss of Voltage - On and or off status of Bore. - Monitor Energy Consumption History of Overland irrigation pump based on monthly usage. (kwh billing information required) - Risk of power shut off due to pump reaching nominal rating of the circuit breaker. (Motor wear and tear) - Power shut off – Loss of Voltage - On and or off status of Overland Pump. - Monitor Energy Consumption History of Irrigation Rig based on monthly usage. (kwh billing information required) - Risk of power shut off due to pump reaching nominal rating of the circuit breaker. (Motor wear and tear) - Power shut off – Loss of Voltage - On and or off status of Overland Pump.
Small Parks and Gardens	<p>Overland irrigation pump</p> <p>Dedicated Irrigation Bore 3ph</p>	<ul style="list-style-type: none"> - Monitor Energy Consumption History of Overland irrigation pump based on monthly usage. (kwh billing information required) - Risk of power shut off due to pump reaching nominal rating of the circuit breaker. (Motor wear and tear) - Power shut off – Loss of Voltage - On and or off status of Overland Pump. - Monitor Energy Consumption History of Bore based on monthly usage. (kwh billing information required) - Risk of power shut off due to pump reaching nominal rating of the circuit breaker. (Motor wear and tear) - Power shut off – Loss of Voltage - On and or off status of Bore. -

Bringing secure power to Marugen Koi farm

Case Study



Watch the video

The Challenge

- The farm's remote location makes it **vulnerable to prolonged power failures**.
- It is critical that **electricity runs 24/7** to power the farm's oxygen filter or the fish will die
- This would results in great business losses as the rare bloodline Koi fish would be gone, leading to significant monetary impact loss.

The Application

- Monitor in real time the pumping system so the water stays clean and the owner can maintain good environment for fish to grow and survive – using **PowerTag**

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Electric

Salmon Farm in Tasmania

- Using LED lighting in salmon cages can enhance fish growth by 25%
- PowerTag installed on individual LED circuit can send an alarm if a circuit breaker trips and ensure 100% productivity of the salmon farms

Cloud
Remote access and
visualisation

IP / 3G / 4G

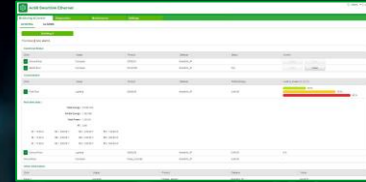
Data logging and energy
reports



Com'X 510
energy server

Ethernet

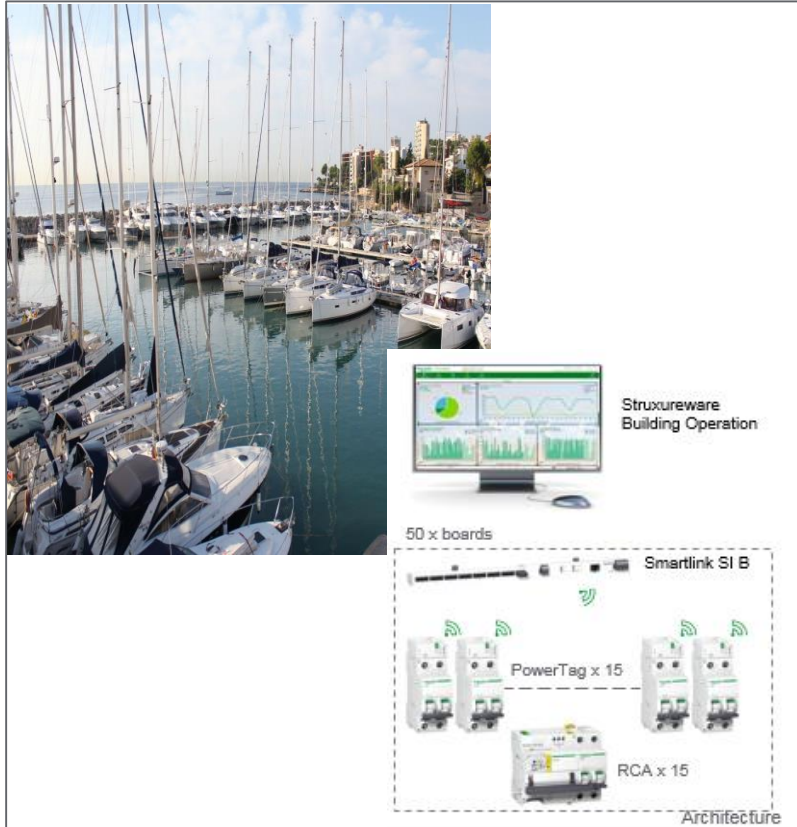
Real-time monitoring
and alarming



PowerTag
wireless sensors



Smartlink monitoring
gateway



- Monitor **energy consumption of each boat** plugged on to the Marina's electrical distribution boards
- Monitor energy consumption in Winter
- Remotely control individual loads
- **Get overload and trip alarms**
- Reduce space needed in the distribution board for retrofit of metering

Thank you



Life Is On

Schneider
Electric