

Product Comparison Guide

Wireless Devices for EcoStruxure Building Expert™ Solution





Get control.
Get efficient.
Get value.



Integrated small- to medium-sized
building management

Product Comparison Guide

EcoStruxure Building Expert™ Lite solution and wireless devices for EcoStruxure Building Operation™.

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Integrated small to medium-sized building management

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*Not all products in the catalogue may be available in every country. Check availability with your local Schneider Electric office.

Efficiency for small and medium-sized buildings

Small and medium-sized buildings represent 98% of all commercial buildings. However, less than 10% of these facilities benefit from the energy savings provided by Building Management Systems (BMS). The reason is simple; traditional BMS were designed for much larger facilities, and do not scale down to be cost-effective for smaller buildings.

Energy efficiency needs

Energy consumption and waste per square meter/foot can be as significant (if not more) in a small retail store as in a large skyscraper. Although size may differ, their energy needs are similar as shown below:

- > Heating, Ventilation and Air Conditioning (HVAC) — Comfort of employees and customers, typically the main energy expense of a facility
- > Lighting — Indoor and outdoor lighting and blinds, including signage
- > Energy management — Metering energy consumption to monitor habits, expense, and identify opportunities for improvement
- > Equipment — Monitoring critical equipment and managing plug load
- > Water — Water heating

Facility constraints

Every facility is different such as their systems, space configuration and facility usage. Some are old, others are new. Some have plenums, others don't. These various constraints require a BMS that is flexible and adaptable to the facility.

- > New constructions can be wired more easily, while existing buildings undergoing a retrofit can benefit from less invasive wireless technologies
- > Disruption to regular operations can impact the facility's bottom line, so downtime must be avoided or minimized

Typical buildings

These needs and constraints apply to a wide-variety of small and medium-sized buildings that could save up to 30% on their energy costs, if they can find the right BMS.

Retail



- > Banking
- > Grocery
- > Restaurants
- > Services branches
- > Stores

Healthcare



- > Clinics

Education



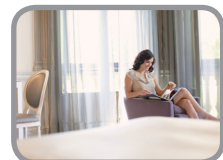
- > Campus
- > Primary
- > School boards

Office



- > Offices

Hospitality



- > Motels
- > Hotels

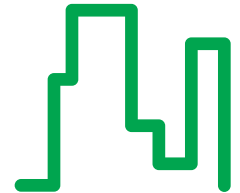
High performance meets affordability

EcoStructure Building Expert is a fast, easy way to future-fit your small to medium-sized buildings using Web and wireless technology to control HVAC, lighting, and metering. Save energy, save time, and improve comfort with minimal impact on operations.

Get control

SmartStruxure™ Lite solution is an affordable solution for those who don't need or can't afford a large building management system — helping you control your building's energy costs and improve comfort for maximum productivity.

- > Flexible monitoring, control, and scheduling options
- > Simple web interface delivers one-click access to your site's data
- > Wireless technology makes it a perfect solution for retrofits



Control your building of less than 10,000 square meters (100,000 square feet) for comfort and efficiency.

Get efficient

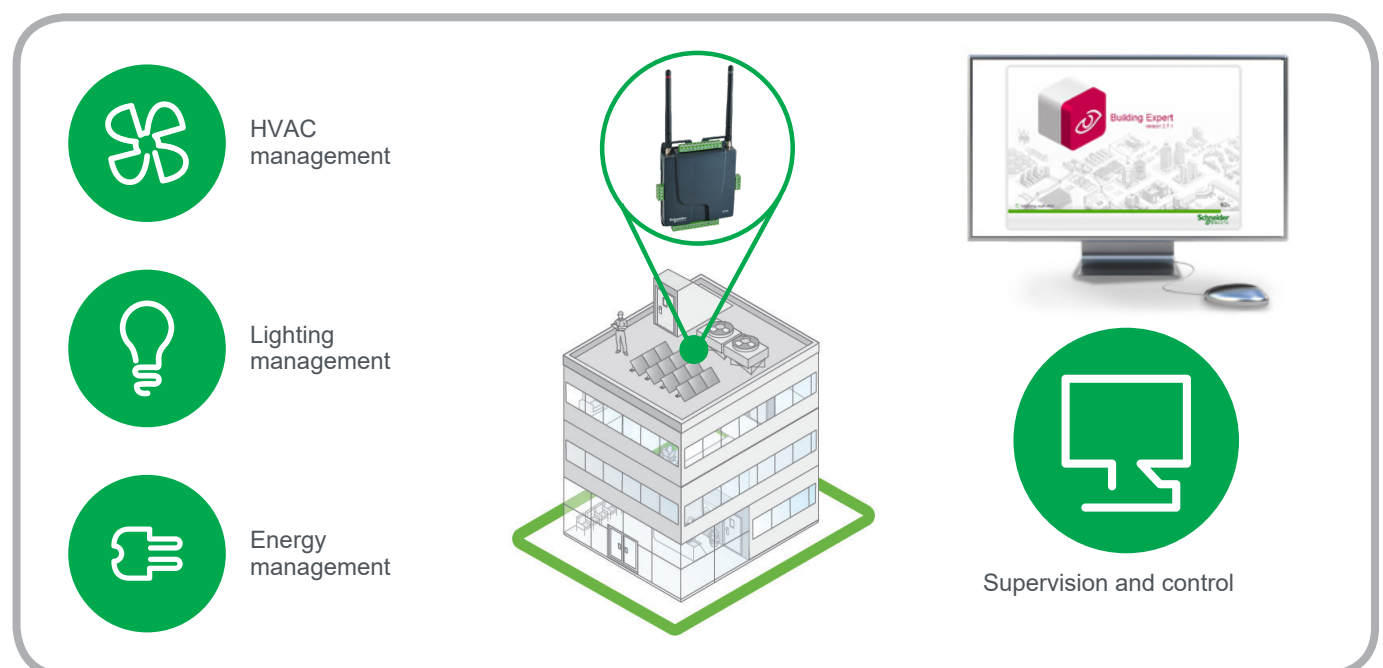
You can't control what you don't measure. EcoStruxure Building Expert provides the tools you need to operate your small to medium-sized building at peak efficiency.

- > Delivers immediate energy savings and reduced operational costs
- > Easy-to-operate mobile platform for anywhere, anytime access to integrated building data
- > View all your systems on a single, customizable user interface

Get value

EcoStruxure Building Expert prepares your building for the challenges of rising energy prices and stricter efficiency regulations.

- > Scalable, future-proof solution that grows with your business
- > Instant return on investment through lower energy costs
- > Maintain day-to-day building operation during installation



Part of Schneider Electric



EcoStruxure Building Expert is a part of Schneider Electric's EcoStruxure architecture of solutions. EcoStruxure is not a product but rather an approach that creates intelligent energy management systems. EcoStruxure system architecture allows you to see, measure, and manage energy use across your Data Centers, Industrial Plants, Buildings, and Energy & Infrastructure, with guaranteed compatibility among your critical energy domains.



Part of Building Management

EcoStruxure Building Expert uses open standards and protocols to integrate with other Schneider Electric solutions, as well as third party systems and products.

Our open system approach to standards and protocols

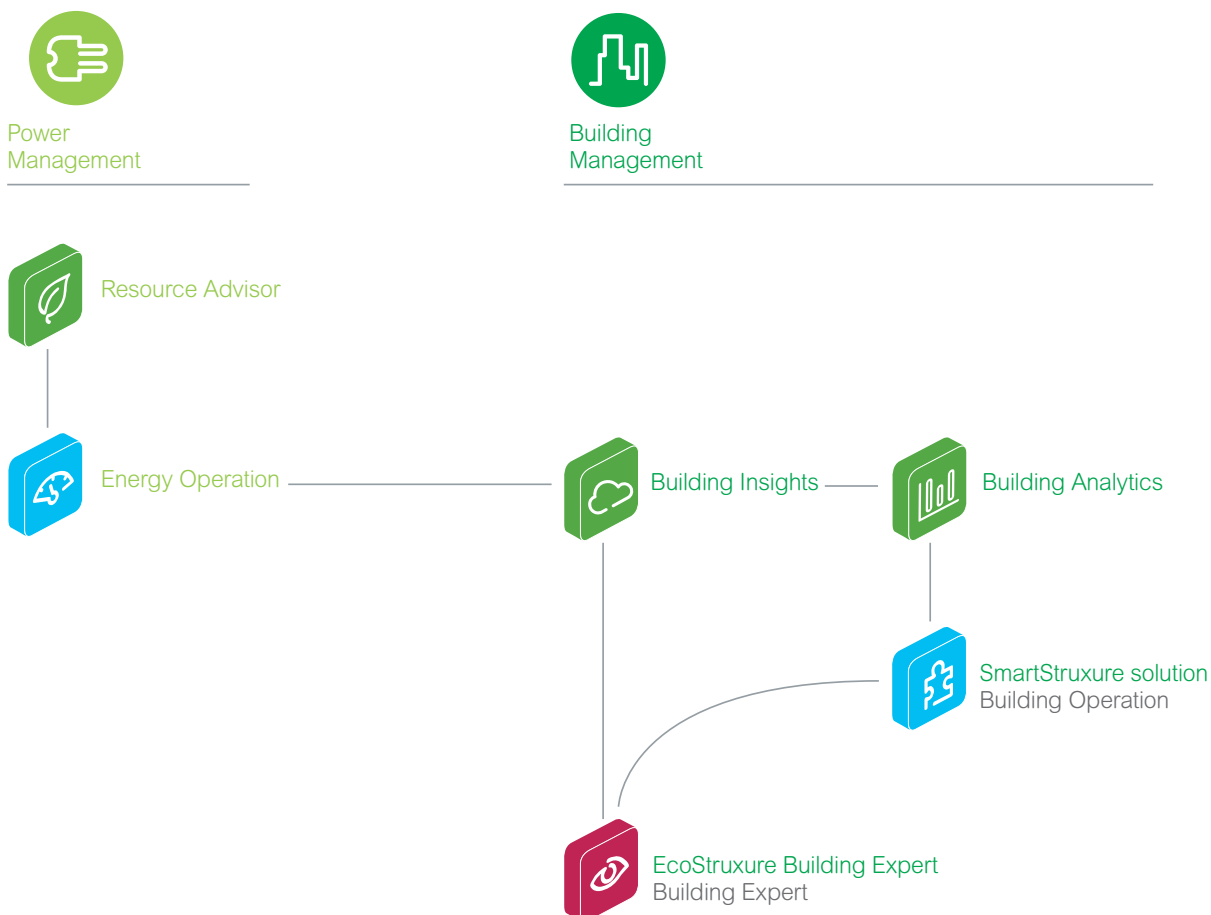
Our products provide wired and wireless control, networking, and integration capabilities, using a wide variety of open standards and protocols such as: EcoStruxure™ Web Services, FTP, Modbus®, CANbus™, ZigBee®, EnOcean®, BACnet®, and oBIX®. This enables EcoStruxure Building Expert to integrate with other Schneider Electric solutions, integrate third party devices, and combine multiple applications within the same BMS.

EcoStruxure Building Operation

EcoStruxure Building Operation software, is Schneider Electric's BMS for large buildings. The EcoStruxure Building Expert can be integrated into this larger solution using MPM devices connected via LAN into an automation server or enterprise server using BACnet®/IP or EcoStruxure Web Services.

Integration to Building Insights

Building Insights is Schneider Electric's solution to aggregate potentially thousands of EcoStruxure Building Expert sites into a single Cloud-based solution. Multiple EcoStruxure Building Expert sites can be integrated into this Cloud solution by installing a Cloud Controller in each site.

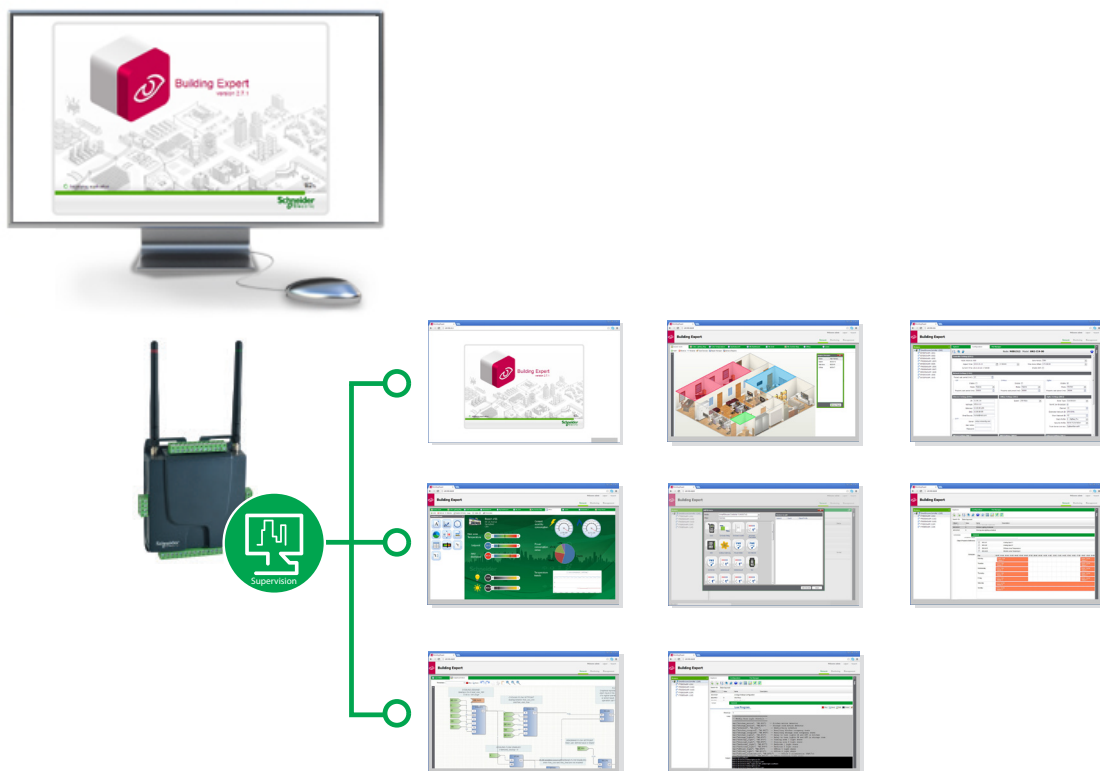


SmartSturxure Lite Solution

Total Control

All-in-One

Connect to the web and manage everything.
No software, no license, no server, web hosting directly from the MPMs.



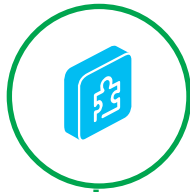
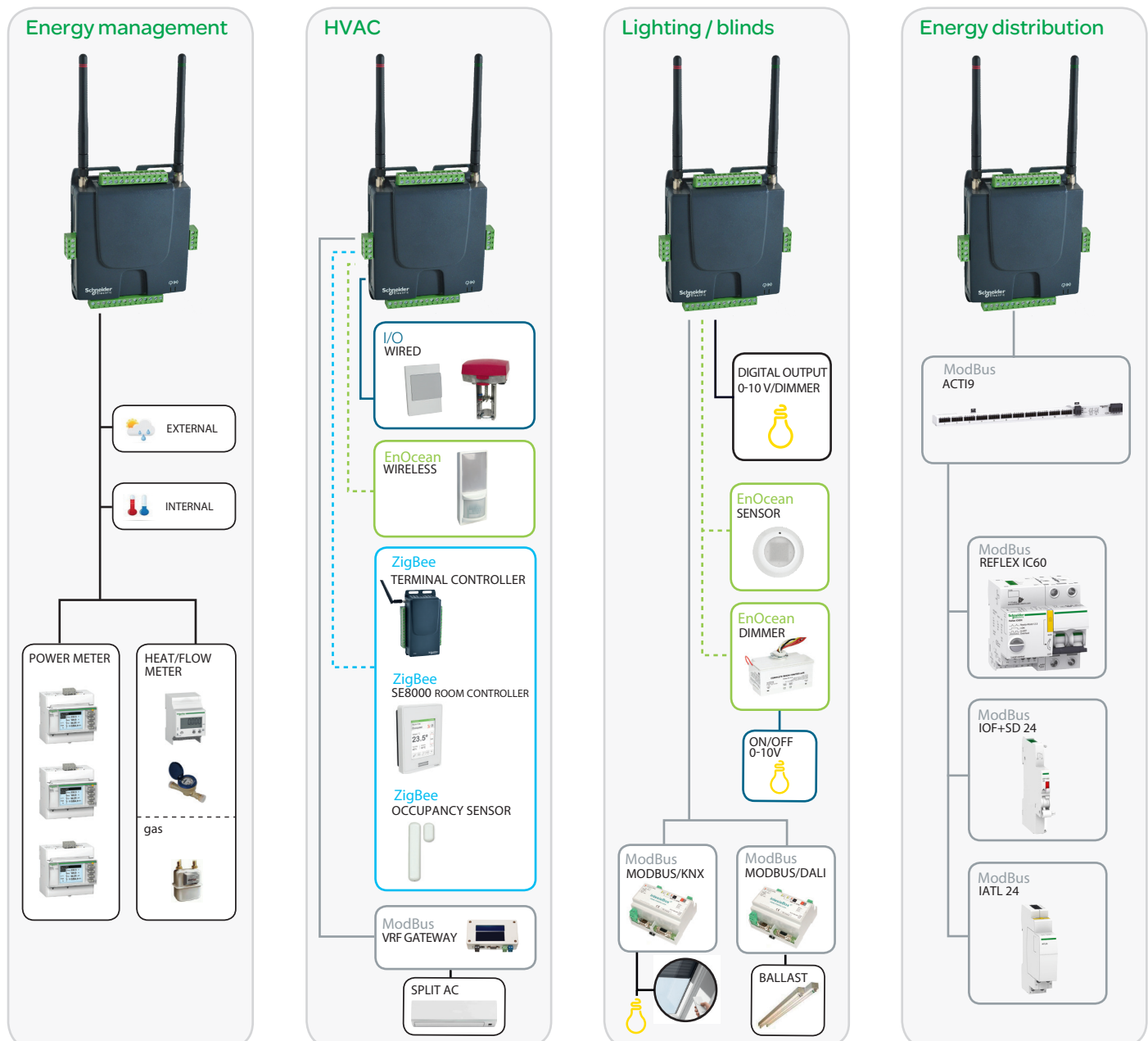
Total control

Building Expert supports the local programming of MPMs, real-time response when scripting, as well as objects such as trending, scheduling and events.

The interface also has a straightforward Graphical User Interface (GUI) with point-and-click control and monitoring views (supports imported floor plans & images).

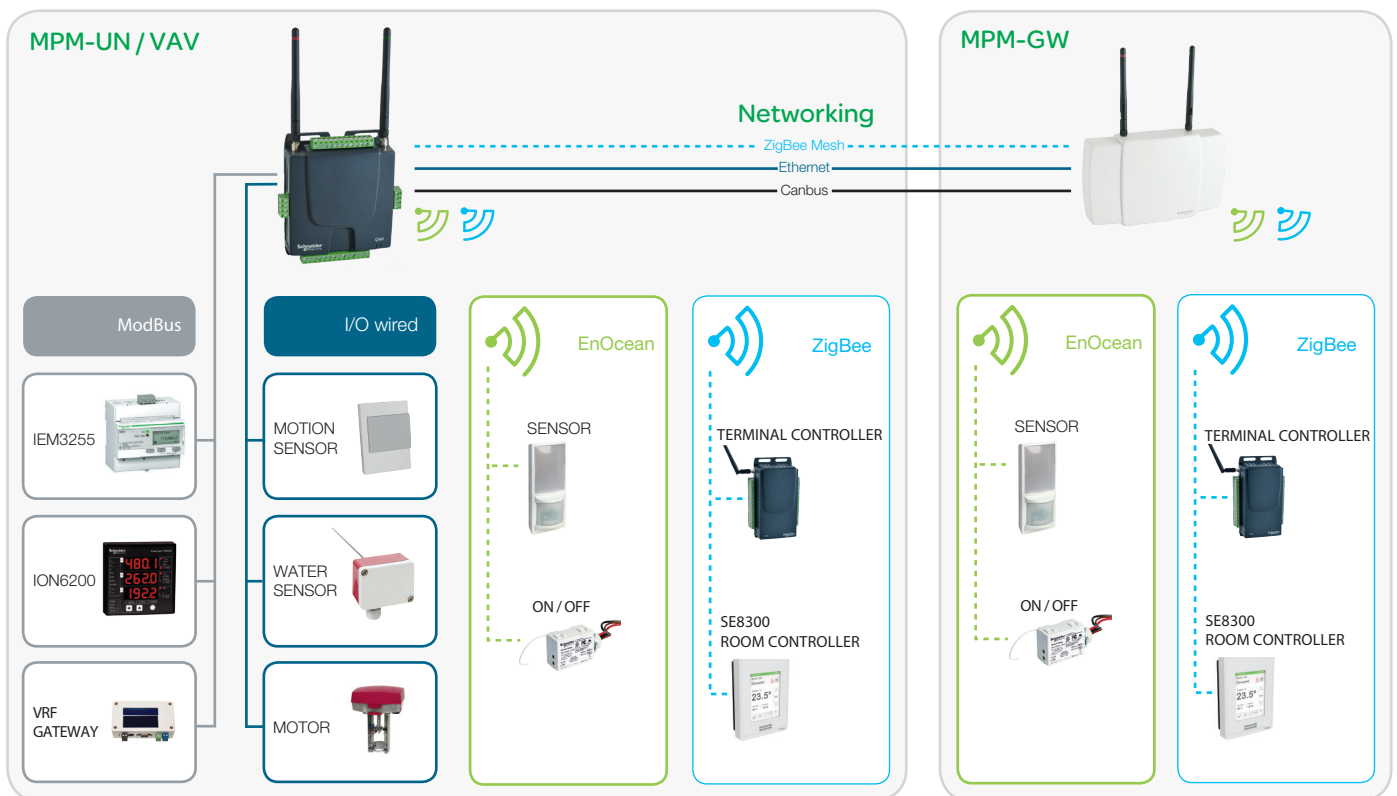
System Architecture

Functional system architecture

Integration to SmartStruxure solution
and other systemsBuilding management
with Building ExpertBACnet IP/Ethernet
network, server or software

Technical system architecture

Wired (BACnet, CANbus, ModBus RTU) and wireless (EnOcean, ZigBee Pro) technologies and protocols.



EcoStruxure
Web Service



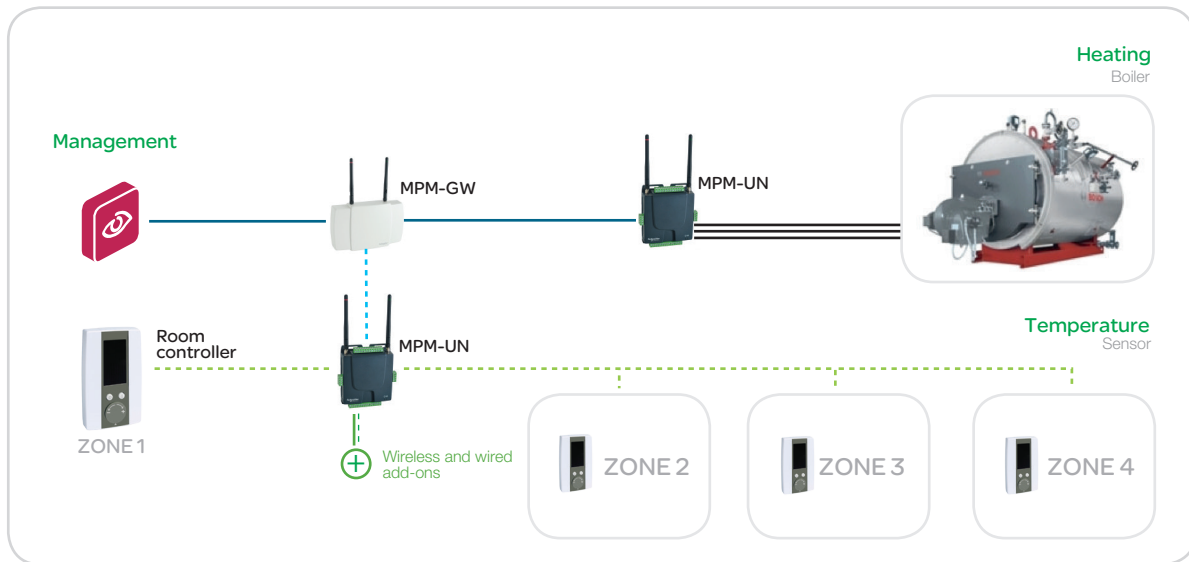
BACnet



Applications

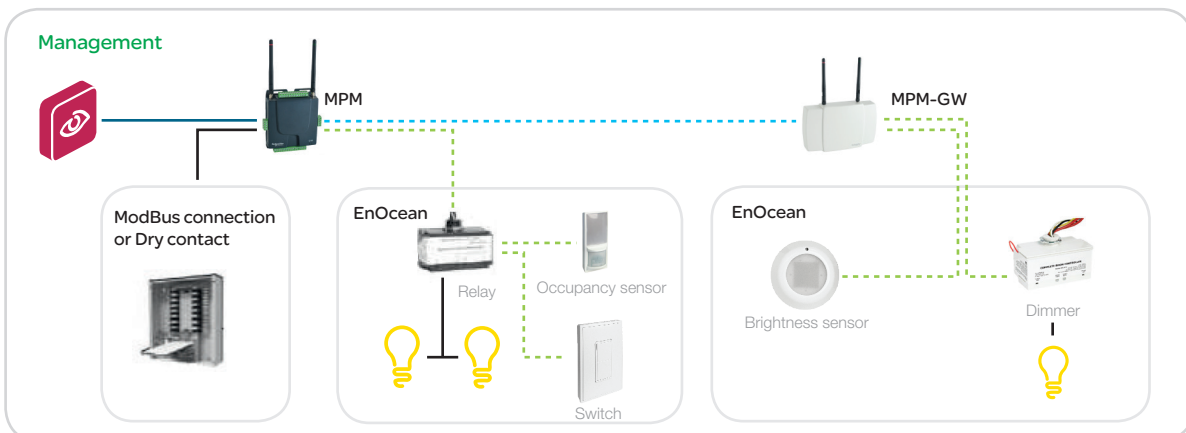
Boiler application

Fully independent system including boiler and secondary networks managed by an MPM. In this example, energy harvesting wireless sensors with setpoint adjustments are connected to an MPM-UN to drive the boiler/pumps demand.



Lighting application

Wireless centralized lighting control relay managed by MPM, controlling lights and blinds. Local commands performed with switches, dimmers, and wireless light and motion sensors.



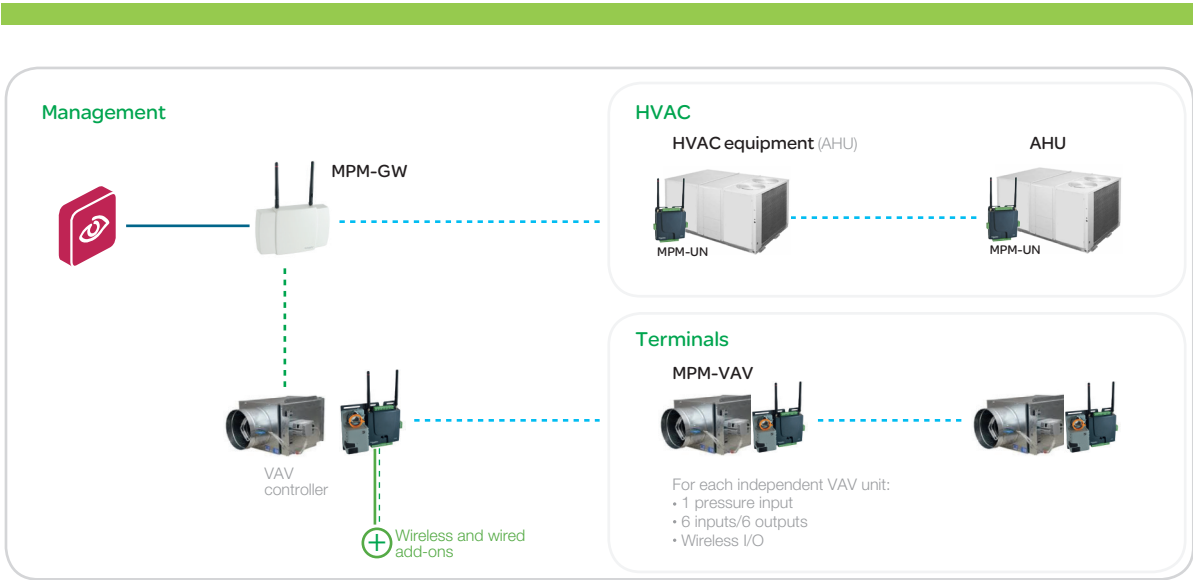
Terminal application

In an office building where comfort is required, many solutions can be considered. From simple fan coil control to local network solutions with an MPM-UN. Users can manage and monitor their facilities either locally or remotely.



VAV application

Variable Air Volume (VAV) system is controlled via an MPM-UN connected to an Air Handler Unit (AHU), with an MPM-VA connected to the VAV boxes. The MPM-VA is equipped with a pressure sensor and an actuator for damper control.



User matrix - Solutions

Building Type

Criteria	SSL	Arguments
new	•	small and medium-sized buildings without criticality
retrofit	•	partial retrofit - adding wireless sensor - reducing costs and downtime
surface	•	small and medium-sized buildings (5000 m²) or larger with SBO
criticality	✗	SmartStruxure Lite - not optimum management for critical buildings (hospitals)
Sensors		
wired	•	all sensor types from the conversion table
EnOcean	•	EnOcean native system reference
ZigBee Pro	•	Zigbee Pro native system reference
Field protocol		
KNX	•	with Gateway
LON	•	SE7000 Room controllers with LON communication module
BACnet	•	SE7000 & SE8000 Room Controllers and other devices
EcoWebServices	•	native web controllers
EnOcean	•	sensors / relays and other devices
ZigBee Pro	•	SEC-TE, SE7000, SE8000 and other devices
ModBus	•	Modbus RS485 (RTU)
Lighting		
Dali	•	with Gateway
dimmer 0-10V	•	0-10 volts wireless remote control
on/off	•	on/off wireless remote control
Blinds		
SMI	•	with Gateway
shutters	•	controlled via EnOcean device
venetian blinds	•	controlled via EnOcean device
Meter		
ModBus	•	on RS com
pulse	•	1 input SEC-TE
Terminals		
terminals	•	SE8000 BACnet MS/TP and/or ZigBee Pro
M/slave	✗	-
repartitioning	✗	-
Security		
video	✗	separate lot
access control	✗	separate lot
WEB		
integrated web	•	UN2/GW built-in controllers
java applets	•	no java applets
programming	•	direct programming via browser
Tools		
no tool required	•	no tools required / all programming and web page directly through web browser
programming tools	•	graphical block programming and LUA script

StruxureWare Building Expert

StruxureWare Building Expert is a fully programmable, no license-free software, hosted directly by MPM devices. No other gateway or server is needed on set-up, thereby providing the lowest fixed cost per location for small and medium-sized buildings.



Introduction

StruxureWare Building Expert offers all the BMS functionalities necessary to optimize energy efficiency and comfort in small and medium-sized facilities. It supports scripting, graphical programming and a wide array of objects such as events, PID loops, schedules and trend logs. It also offers customizable dashboards and the ability to import floor plans and add color-coded zones providing status information.

Applications

Building Expert allows you to locally and remotely monitor and control the HVAC, lighting and metering systems of your buildings.

Navigation

Navigation in the software uses a Tabbed Document Interface (TDI), allowing you to manage multiple functions within a single window. It is divided into the following four main sections:

- Devices panel: showing all devices in your network (network tree)
- Explorer tab: create, access and manage all your objects and variables
- Monitoring tab: visualization tools including section maps, dashboards and grids
- Management tab: to create and manage user rights

Programming

It is fully programmable using either scripting (Lua) or graphical programming.

Objects

A vast library of objects based on the BACnet® library allows you to create, access, manipulate, and control data inputs and outputs for your integrated devices, as well as control various other settings related to your MPM devices.

Integration

Building Expert can be used as a stand-alone mini-iBMS, but can also be integrated into other Schneider Electric BMS, including SmartStruxure solution, as well as third-party BMS, via EcoStruxure™ Web Services, BACnet IP and oBIX.

The following protocols can be used:

- EnOcean (wireless) to BACnet IP / oBIX / EWS
- ZigBee (wireless) to BACnet IP / oBIX / EWS
- Modbus RTU to BACnet IP / oBIX / EWS

Multi-Purpose Manager

Multi-Purpose Manager

MPM-GW | Wireless Manager

Multi-Purpose Managers (MPMs) enable the control, monitoring and management of entire sites via StruxureWare Building Expert. They can also be used for wired and wireless zone control in larger buildings. The MPM-GW has an aesthetic look, similar to a router, allowing for in-room deployment. It offers general control and gateway functionalities for a wide variety of wireless peripherals.



Control features

- Up to 49 peripherals per MPM
- Wireless control of EnOcean end-devices (optional)
- Wireless control of up to 30 ZigBee Pro end-devices (optional)
- Programmable via StruxureWare™ Building Expert
- Points visible through BACnet, EcoStruxure Web Services (EWS) & oBIX
- Real-time response to scripting/graphical programming

Networking between units

- Wireless - ZigBee Pro wireless mesh network (self-forming/healing - 25 nodes per network)
- Wired - Daisy chain
- IP/Ethernet - Ethernet port

Embedded gateway

- EnOcean (wireless) to BACnet IP / oBIX / EWS
- ZigBee Pro (wireless) to BACnet IP / oBIX / EWS

Power	
Voltage	24VAC; ± 15%; 50/60HZ; Class 2
	24VDC ± 10%
Battery	CR1220 3v Lithium Coin Cell (Battery not required as of June 2106. Replaced with Super Cap).
System	
Processor	ARM9 32-bit, 400MHz
Memory	64MB flash
Storage	4GB flash for local storage
Real-time clock	Battery backed (10,000 hours) (Battery not required as of June 2106. Replaced with Super Cap).
Communication	
Protocol	ZigBee Pro, EnOcean, BACnet
	CANbus (125-500 Kbps)
	Ethernet (10/100 Mbps)
StruxureWare™ Building Expert	
Software type interface	Embedded web
Browser compatibility	Firefox ESR / Internet Explorer 10 (only) / Google Chrome / Safari (Mac only)

Part Number	Description
MPM-GW-xxx-5045*	Building Expert, StruxureWare integration / EnOcean frequencies 868MHz / 902MHz ZigBee Pro - High power and High power for Japan

*Refer to page 20 for ordering information

Multi-Purpose Manager

MPM-UN | Multi-Purpose Manager

Multi-Purpose Managers enable the control, monitoring and management of entire sites via StruxureWare Building Expert. They can also be used for wired and wireless zone control in larger buildings. Supports HVAC, lighting and metering application including: HVAC and lighting room and zone control, unitary equipment such as rooftop HVAC units, air handling units, heat pumps and dehumidification units.



Control features

- Control of wired end-devices (6 inputs, 6 outputs)
- Up to 49 peripherals per MPM
- Wireless control of EnOcean end-devices (optional)
- Wireless control of up to 30 ZigBee Pro end-devices (optional)
- Modbus RTU
- Programmable via StruxureWare™ Building Expert
- Points visible through BACnet, EcoStruxure Web Services (EWS) & oBIX
- Real-time response to scripting/graphical programming

Networking between units

- Wireless - ZigBee Pro wireless mesh network (self-forming/healing - 25 nodes per network)
- Wired - Daisy chain
- IP/Ethernet - Ethernet port

Embedded gateway

- EnOcean (wireless) to BACnet IP / oBIX / EWS
- ZigBee Pro (wireless) to BACnet IP / oBIX / EWS
- Modbus to BACnet IP / oBIX / EWS

Power	
Voltage	24VAC; ± 15%; 50/60HZ; Class 2
	24VDC ± 10%
Battery	CR1220 3v Lithium Coin Cell (Battery not required as of June 2106. Replaced with Super Cap).
System	
Processor	ARM9 32-bit, 400MHz
Memory	64MB flash
Storage	4GB flash for local storage
Real-time clock	Battery backed (10,000 hours) (Battery not required as of June 2106. Replaced with Super Cap).
Communication	
Protocol	ZigBee Pro, EnOcean, BACnet
	CANbus (125-500 Kbps)
	Ethernet (10/100 Mbps)
StruxureWare™ Building Expert	
Software type interface	Embedded web
Browser compatibility	Firefox ESR / Internet Explorer 10 (only) / Google Chrome / Safari (Mac only)

Part Number	Description
MPM-UN-xxx-5045*	Building Expert, StruxureWare integration / EnOcean 868MHz / 902MHz ZigBee Pro - High power and High power for Japan / I/O - 6 in / 6 out / Modbus

*Refer to page 20 for ordering information

MPM-VAV | VAV Manager

The MPM-VAV supports variable-air-volume, HVAC, lighting and metering applications for rooftop HVAC units, air handling units, heat pumps and dehumidification units. The MPM-VAV can manage a wide variety of power meters and other metering devices. It can also manage wireless meters and sub-meters.



Control features

- Up to 49 peripherals per MPM
- Wireless control of EnOcean end-devices (optional)
- Wireless control of up to 30 ZigBee end-devices (optional)
- Programmable via StruxureWare™ Building Expert
- Points visible through BACnet, EcoStruxure Web Services (EWS) & oBIX
- Real-time response to scripting/graphical programming
- Pressure sensor with actuator (optional)

Networking between units

- Wireless - ZigBee Pro wireless mesh network (self-forming/healing - 25 nodes per network)
- Wired - Daisy chain
- IP/Ethernet - Ethernet port

Embedded gateway

- EnOcean (wireless) to BACnet IP / oBIX / EWS
- ZigBee Pro (wireless) to BACnet IP / oBIX / EWS
- Modbus to BACnet IP / oBIX / EWS
- Modbus RTU

Power	
Voltage	24VAC; ± 15%; 50/60HZ; Class 2
	24VDC ± 10%
Battery	CR1220 3v Lithium Coin Cell (Battery not required as of June 2106. Replaced with Super Cap).
System	
Processor	ARM9 32-bit, 400MHz
Memory	64MB flash
Storage	4GB flash for local storage
Real-time clock	Battery backed (10,000 hours) (Battery not required as of June 2106. Replaced with Super Cap).
Communication	
Protocol	ZigBee Pro, EnOcean, BACnet
	CANbus (125-500 Kbps)
	Ethernet (10/100 Mbps)
StruxureWare™ Building Expert	
Software type interface	Embedded web
Browser compatibility	Firefox ESR / Internet Explorer 10 (only) / Google Chrome / Safari (Mac only)

Part Number	Description
MPM-VA-xxx-5045*	Building Expert, StruxureWare integration / EnOcean frequencies 868MHz / 902MHz ZigBee Pro - High power and High power for Japan / I/O - 6 in / 6 out / Modbus / VAV Zone control Flow sensor / Actuator
MPM-VS-xxx-5045*	Building Expert, StruxureWare integration / EnOcean frequencies 868MHz / 902MHz ZigBee Pro - High power and High power for Japan / I/O - 6 in / 6 out / Modbus / VAV Zone control - Flow sensor

*Refer to page 21 for ordering information

Ordering Information

MPM-GW | Wireless Manager

Part Numbers

Part numbers	Manager		EnOcean*		ZigBee Pro	I/O		VAV	
	Building Expert	StruxureWare integration	868 MHz	902 MHz	High power	6 inputs	6 outputs	Modbus	Flow sensor Actuator
MPM-GW-D00-5045	x	x	x						
MPM-GW-E00-5045	x	x		x					
MPM-GW-DI0-5045	x	x	x		x				
MPM-GW-EI0-5045	x	x		x	x				
MPM-GW-OI0-5045	x	x			x				

*EnOcean: Contact EnOcean for the latest information about the frequency in your country.

902MHz: Americas, Hong Kong, India, Japan, Thailand, Taiwan

868MHz: Europe, China, Malaysia, Singapore, Vietnam, New Zealand

*USA has transitioned to 902 MHz in 2013. Other countries may do so as well.

MPM-UN | Multi-Purpose Manager

Part Numbers

Part numbers	Manager		EnOcean*		ZigBee Pro	I/O		VAV	
	Building Expert	StruxureWare integration	868 MHz	902 MHz	High power	6 inputs	6 outputs	Modbus	Flow sensor Actuator
MPM-UN-004-5045	x	x				x	x	x	
MPM-UN-OI4-5045	x	x			x	x	x	x	
MPM-UN-D04-5045	x	x	x			x	x	x	
MPM-UN-DI4-5045	x	x	x		x	x	x	x	
MPM-UN-E00-5045	x	x		x		x	x		
MPM-UN-E04-5045	x	x		x		x	x	x	
MPM-UN-EI4-5045	x	x		x	x	x	x	x	

*EnOcean: Contact EnOcean for the latest information about the frequency in your country.

902MHz: Americas, Hong Kong, India, Japan, Thailand, Taiwan

868MHz: Europe, China, Malaysia, Singapore, Vietnam, New Zealand

*USA has transitioned to 902 MHz in 2013. Other countries may do so as well.

MPM-VAV | VAV Manager

Part Numbers

Part numbers	Manager		EnOcean*		ZigBee Pro	I/O		VAV		
	Building Expert	StruxureWare integration	868 MHz	902 MHz	High power	6 inputs	6 outputs	Modbus	Flow sensor	Actuator
MPM-VA-004-5045	x	x				x	x	x	x	x
MPM-VA-014-5045	x	x			x	x	x	x	x	x
MPM-VA-D04-5045	x	x	x			x	x	x	x	x
MPM-VA-D14-5045	x	x	x		x	x	x	x	x	x
MPM-VA-E04-5045	x	x		x		x	x	x	x	x
MPM-VA-E14-5045	x	x		x	x	x	x	x	x	x
MPM-VS-004-5045	x	x				x	x	x	x	
MPM-VS-014-5045	x	x			x	x	x	x	x	
MPM-VS-D04-5045	x	x	x			x	x	x	x	
MPM-VS-D14-5045	x	x	x		x	x	x	x	x	
MPM-VS-E04-5045	x	x		x		x	x	x	x	
MPM-VS-E14-5045	x	x		x	x	x	x	x	x	

*EnOcean: Contact EnOcean for the latest information about the frequency in your country.

902MHz: Americas, Hong Kong, India, Japan, Thailand, Taiwan

868MHz: Europe, China, Malaysia, Singapore, Vietnam, New Zealand

*USA has transitioned to 902 MHz in 2013. Other countries may do so as well.

Smart Controllers

Smart Controllers

SEC-TE | Smart Terminal Controller

Smart terminal Controllers enable the wireless control of a wide variety of equipment to optimize use, comfort and power consumption. They are the remote control arm of MPM devices, all part of the SmartStruxure Lite line of products. The SEC-TE is equipped with the smallest control engine in the industry. It supports a local scripting / programming application, providing distributed intelligence and enabling redundant control solutions.



Control features

The SEC-TE is equipped with the smallest control engine in the industry. It supports local fail-safe scripting, providing distributed intelligence and enabling redundant control solutions.

- Programmable (240 characters)

Communication

The SEC-TE has an internal ZigBee Pro transceiver and antenna (external antenna available as an option), enabling it to communicate with MPMs.

- Wireless ZigBee Pro

Power	
Voltage	24VAC; ± 15%; 50/60HZ; Class 2
	24VDC ± 10%
Inputs & Outputs	
Inputs	4 universal port / 0-10 volt / 4-20mA with / 1 k to 100 k pulse (up to 1000Hz / 1ms) – AI3
Outputs	4 analog port / 5 relay (optional) R1, R2 and R3 are 24V, 115VAC or 230VAC Two relays (R4 and R5) are independent of the input power voltage
	R4 and R5 are independent of the input power voltage

Part Number	Description
SEC-TEA-xxx-5045	ZigBee Pro - High power / I/O - 4 Universal in / 4 Universal out / 5 Digital out Power 110-120 VAC / 220-240 VAC / 24 VAC
SEC-TEA-R-xxx-5045	ZigBee Pro - High power / External antenna / I/O - 4 Universal in / 4 Universal out / 5 Digital out Power 110-120 VAC / 220-240 VAC / 24 VAC
SEC-TEB-xxx-5045	ZigBee Pro - High power / I/O - 4 Universal in / 4 Universal out Power 110-120 VAC / 220-240 VAC / 24 VAC
SEC-TEB-R-xxx-5045	ZigBee Pro - High power / External antenna / I/O - 4 Universal in / 4 Universal out Power 110-120 VAC / 220-240 VAC / 24 VAC

Part Numbers	ZigBee Pro			I/O			Power		
	High power	External antenna	4 universal outputs	4 analog outputs	5 digital outputs	110-120 VAC	220-240 VAC	24 VAC	
SEC-TEA-115-5045	X		X	X	X	X			
SEC-TEA-230-5045	X		X	X	X		X		
SEC-TEA-24-5045	X		X	X	X			X	
SEC-TEA-R-115-5045	X	X	X	X	X	X			
SEC-TEA-R-230-5045	X	X	X	X	X		X		
SEC-TEA-R-24-5045	X	X	X	X	X			X	
SEC-TEB-115-5045	X		X	X		X			
SEC-TEB-230-5045	X		X	X			X		
SEC-TEB-24-5045	X		X	X				X	
SEC-TEB-R-115-5045	X	X	X	X		X			
SEC-TEB-R-230-5045	X	X	X	X			X		
SEC-TEB-R-24-5045	X	X	X	X				X	

Smart Controllers

SED-0 | Smart Wireless Actuator

Smart wireless actuators enable the wireless control of water-based and air-based HVAC systems to optimize use and comfort while saving energy. They are the remote control arm of MPM devices, all part of the SmartStruxure Lite line of products. The SED-0 is the ideal valve/damper actuator for retrofitting water-based and air-based central heating systems. Energy savings and a fast payback period can be obtained by adding zone control without any wires being required. The valve actuator enables the modulation of water flow in a zone based on local or central temperature setpoints and local temperature sensors.



Control features

The SED-0 is equipped with the smallest control engine in the industry. It supports local scripting/programmability, providing distributed intelligence and enabling redundant control solutions.

- Programmable with a fail-safe script (240 characters)
- Real-time response to scripting
- Two extra universal inputs for sensors

Communication

The SED-0 has an internal ZigBee Pro transceiver and antenna, enabling it to communicate with MPMs.

- Wireless ZigBee Pro

Power	
Voltage	24VAC; $\pm 15\%$; 50/60HZ; Class 2
Typical consumption	1.85 VA (Idle) / 5 VA (Maximum For Wire Sizing)
Inputs	
Quantity	2
Voltage	0-10 volt Two relays (R4 and R5) are independant of the input power voltage
Current	4-20mA with 249 Ω external resistor
Actuator (LM24e)	
Electrical connection	1/2" conduit connector / 18 GA, plenum rated cable / 3ft [1m] or 10ft [3m] or 16ft [5m]
Manual override	External push button
Running time	Constant independant of load 90 seconds
Torque	45 in-lb/5 Nm
Noise level	<35 dB(A)
Setpoint	0-100%
Position/Feedback	0-100%

Part Number	Description
SED-0H0-5045	SED-0 Smart Wireless Actuator with ZigBee Pro - High power
SED-0-ACC-M51	These accessories are necessary to be able to use the SED-0 Smart Wireless Actuators with valves: M5 Lever, M5 Tappet, Endstop Ring and Mounting Panel.

Optional accessories

BEL-K-LM20	3/4 inch clamp (18mm)
BEL-TF-P	7" x 3/4" LM anti-rotation bracket (179 x 18mm)

* When using an SED-0H0-5045 as a damper actuator, a 3/4 inch clamp and a LM anti-rotation bracket are also required.

Room Controllers

SE8000 Series

The perfect balance between simplicity and sophistication

The SE8000 Series is a sophisticated addition to the Schneider Electric product portfolio of room controllers. With rich, customizable features, the SE8000 Series enables significant energy savings with accurate temperature control in any space. The SE8000 room controllers can be easily integrated into most Building Management Systems (BMS).

Configurable languages



Configurable color schemes



Configurable user interface



Common features

- Configurable sequence of operations
- BACnet COV
- Scheduler
- Programmable with Lua4RC to modify control sequences or override inputs and outputs
- Optional on-board relative humidity sensor with dehumidification control sequences
- Optional on-board PIR motion sensor with occupancy-based control sequences

Orderable Fascias



SER8300 Series (with SC3000)

> Line voltage fan coil units

Line voltage fan coil units

- Requires SC3000 relay pack
- Fan speed and sequence of operation
- Two pipe
- Four pipe

SE8300 Series

- > Low voltage fan coil units
- > Mixed voltage fan coil units
- > Zone control

Low voltage fan coil units

- Fan speed and sequence of operation
- Two pipe
- Four pipe

Mixed voltage fan coil units

- Requires SC1300/SC2300 relay pack

Zone control

- Cooling only VVT zone with reheat
- Fin-tube radiators
- Cabinet heaters
- Radiant panel heaters
- Electric re-heat zones
- Pressure dependent VAV system
- Terminal reheat

SE8600 Series

- > Rooftop units
- > Heat pumps
- > Indoor air quality

Rooftop units, heat pumps and indoor air quality

- Economizer
- CO₂ sensor input
- Fresh Air Station input

Configurable stages

- 1 heat/1 cool
- 2 heat/2 cool
- Modulation heat/2 cool
- 3 heat/2 cool

SER8300 | Line-voltage fan coil controller with SC3000 relay pack

This two component retrofit option consists of the SER8300 terminal equipment Controller and the SC3000 relay pack. Together, they provide an easy solution for retrofitting fan coil unit thermostats without requiring other components such as relays, transformers, Controllers, sensors, and network wiring to be upgraded. Existing line voltage wiring between the fan coil unit and temperature Controller can be reused further minimizing overall labor and installation costs for both retrofit and new construction control projects. Additional flexibility and energy savings can be achieved with optional wireless door and window switches. An elegantly simple casing combines with configurable screen colors to match decor. Display your own logo and custom messages on screen to reinforce your brand and provide a more enjoyable occupant experience.



Product highlights

- Elegant style combinations, designed to complement any decor
- Customizable color digital touch screen interface with multi- language support
- 2 Pipe or 4 Pipe configuration
- Line voltage applications
- On board configuration interface utility
- Alarm monitoring
- Suitable for both commercial and hospitality markets and systems
- Fully programmable control sequences using scripting
- Configurable fan sequence of operation
- Configurable scheduler
- Change of value (COV) function for BMS integration
- Humidity sensor with on-board dehumidification strategy (model dependent)
- Configurable I/O
- Optional PIR motion sensor
- Advanced occupancy functions for commercial and lodging applications
- Optional wireless door and window switches available for wireless communicating models only

Communication

- ZigBee Pro (P) option for direct MPM integration (Optional with communication module purchased separately)
- CO₂ sensor module (Optional with communication module purchased separately)
- BACnet MS/TP (B) (Optional with BACnet integration purchased separately)
- Network-ready Stand-alone (A)

Facias

This model can be ordered with silver or white Fascia, and can be customized with many different Fascias. Refer to the Fascia page for more information (later in this document).

Accessories

The SC3000 relay pack is a necessary accessory for retrofit solution to use with the SER8300 room controller. Refer to the SC3000 page for more information (later in this document).

Wireless communication module ZigBee Pro upgrade available for this room controller. Ordered separately. Refer to the ZigBee Pro page for more information (later in this document).

CO₂ sensor module.

Description	
Dimension	Height: 12cm/4.72in / Width: 8.6cm/3.38in / Depth: 2.5cm/1in
Power	
Voltage (SER8000)	6.5 - 28 Vdc or 20 - 28 Vac, 50/60Hz / 2.4 watts minimum
Voltage (SC3000)	90 - 277 Vac universal, 50/60Hz
Communication	
Protocol	Stand-alone, BACnet MS/TP, ZigBee Pro

Part Number	Description	BACnet MS/TP	RH sensor & control	PIR motion sensor	ZigBee	Fascia & casing
SER8300A0B00	Line voltage fan coil Controller	X				Silver
SER8350A0B00	Line voltage fan coil Controller	X	X			Silver
SER8300A5B00	Line voltage fan coil Controller	X		X		Silver
SER8350A5B00	Line voltage fan coil Controller	X	X	X		Silver
SER8300A0B11	Line voltage fan coil Controller	X				White
SER8350A0B11	Line voltage fan coil Controller	X	X			White
SER8300A5B11	Line voltage fan coil Controller	X		X		White
SER8350A5B11	Line voltage fan coil Controller	X	X	X		White
SER8350A5B00P	Line voltage fan coil Controller	X	X	X	X	Silver
SER8350A5B11P	Line voltage fan coil Controller	X	X	X	X	White

Room Controllers

SE8300 | Low voltage fan coil controller and zone controller

Smart energy management has never been easier than with the SE8300 series Fan coil room controllers. Designed for new construction and retrofit projects, the room controllers dramatically decrease project delivery costs by reducing installation, configuration and commissioning time. No complex software or tools are required to customize functionality to meet your applications requirements. The room controllers provide all the advanced features and monitoring functions required by modern building automation systems in a simple compact enclosure. An elegantly simple casing combines with configurable screen colors to match decor. Display your own logo and custom messages on screen to reinforce your brand and provide a more enjoyable occupant experience.



Product Highlights

- Elegant style combinations, designed to complement any decor
- Touch screen interface with multi-language support
- 2 Pipe or 4 Pipe configuration
- Suitable for both commercial and hospitality markets and systems
- Fully programmable control sequences using scripting
- On board configuration interface utility
- Configurable fan sequence of operation
- Configurable Scheduler.
- Change of value (COV) function for BMS integration.
- Humidity sensor with on-board dehumidification strategy (model dependent)
- Optional PIR motion sensor
- Advanced occupancy and scheduling functions for commercial and lodging applications
- Optional wireless door and window switches (with optional ZigBee Pro® card) available

Communication

- ZigBee Pro (P) option for direct MPM integration (Optional with communication module purchased separately)
- CO₂ sensor module (Optional with communication module purchased separately)
- BACnet MS/TP (B) (Comes standard on all models)

Facias

This model can be ordered with silver or white Fascia, and can be customized with many different Fascias. Refer to the Fascia page for more information (later in this document).

Accessories

Wireless communication module ZigBee Pro upgrade available for this room controller. Ordered separately, refer to the ZigBee Pro page for more information (later in this document).

CO₂ sensor module.

Description	
Dimension	Height: 12cm/4.72in Width: 8.6cm/3.38in Depth: 2.5cm/1in
Power	
Voltage	6.5 - 28 Vdc or 20 - 28 Vac 50/60Hz / 4VA + Output Load (64 VA Max.)
Communication	
Protocol	BACnet MS/TP ZigBee Pro /w VCM8000V5045P

Part Number	Description	BACnet MS/TP	RH sensor & control	PIR motion sensor	ZigBee	Fascia & casing
SE8300U0B00	Low voltage fan coil Controller	X				Silver
SE8350U0B00	Low voltage fan coil Controller	X	X			Silver
SE8300U5B00	Low voltage fan coil Controller	X		X		Silver
SE8350U5B00	Low voltage fan coil Controller	X	X	X		Silver
SE8300U0B11	Low voltage fan coil Controller	X				White
SE8350U0B11	Low voltage fan coil Controller	X	X			White
SE8300U5B11	Low voltage fan coil Controller	X		X		White
SE8350U5B11	Low voltage fan coil Controller	X	X	X		White
SE8350U5B00P	Low voltage fan coil Controller	X	X	X	X	Silver
SE8350U5B11P	Low voltage fan coil Controller	X	X	X	X	White

SE8600 | Rooftop unit, heat pump and indoor air quality room controller

Smart energy management has never been easier than with the SE8600 room controllers for Rooftop units, heat pumps and indoor air quality applications. Designed for new construction and retrofit projects, the room controllers dramatically decrease project delivery costs by reducing installation, configuration and commissioning time. No complex software or tools are required to customize functionality in order to meet your applications requirements. The room controllers provide all the advanced features and monitoring functions required by modern building automation systems in a simple compact enclosure. An elegantly simple casing combines with configurable screen colors to match decor. Display your own logo and custom messages on screen to reinforce your brand and provide a more enjoyable occupant experience.



Product highlights

- Elegant style combinations, designed to complement any decor
- Customizable color digital touch screen interface with multi-language support
- Configurable as 1H / 1C, 2H / 2C, 3H / 2C and Modulating (Analog) Heat / 2C for Rooftop units
- CO₂ and fresh air inputs for Indoor Air Quality (IAQ) applications
- Suitable for both commercial and hospitality markets and systems
- Fully programmable control sequences using scripting
- On board configuration interface utility
- Configurable sequence of operations
- Configurable Economizer
- Configurable Scheduler
- Change of value (COV) function for BMS integration
- Humidity sensor with on-board dehumidification strategy (model dependent)
- Optional Passive Infrared (PIR) occupancy sensor
- Advanced occupancy functions for commercial and lodging applications
- Optional wireless motion sensors, door and window switches (with optional ZigBee Pro® card) available

Description

Dimension	Height: 12cm/4.72in
	Width: 8.6cm/3.38in
	Depth: 2.5cm/1in

Power

Voltage	28 Vdc or 20 - 28 Vac
	50/60Hz / 4VA + Output Load (64 VA Max.)

Communication

Protocol	BACnet MS/TP
	ZigBee Pro /w VCM8000V5045P

Communication

- ZigBee Pro (P) option for direct MPM integration (Optional with communication module purchased separately)
- CO₂ sensor module (Optional with communication module purchased separately)
- BACnet MS/TP (B) (Comes standard on all models)

Facias

This model can be ordered with silver or white Fascia, and can be customized with many different Fascias. Refer to the Fascia page for more information (later in this document).

Accessories

Wireless communication module ZigBee Pro upgrade available for this room controller. Ordered separately, refer to the ZigBee Pro page for more information (later in this document).

CO₂ sensor module.

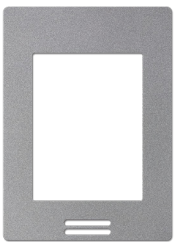
Part Number	Description	BACnet MS/TP	RH sensor & control	PIR motion sensor	ZigBee	Fascia & casing
SE8600U0B00	RTU, heat pump & IAQ Controller	X				Silver
SE8650U0B00	RTU, heat pump & IAQ Controller	X	X			Silver
SE8600U5B00	RTU, heat pump & IAQ Controller	X		X		Silver
SE8650U5B00	RTU, heat pump & IAQ Controller	X	X	X		Silver
SE8600U0B11	RTU, heat pump & IAQ Controller	X				White
SE8650U0B11	RTU, heat pump & IAQ Controller	X	X			White
SE8600U5B11	RTU, heat pump & IAQ Controller	X		X		White
SE8650U5B11	RTU, heat pump & IAQ Controller	X	X	X		White
SE8650U5B00P	RTU, heat pump & IAQ Controller	X	X	X	X	Silver
SE8650U5B11P	RTU, heat pump & IAQ Controller	X	X	X	X	White

Fascias | Fascias for the SE8000 Series

The Fascias for the SE8600 and SE8300 Series room controllers enable the customization of the exterior appearance of the room controllers to match and blend with any decor. The default Fascia that comes with SE8600 and SE8300 Series room controllers can be replaced with another snap-on Fascia (not available on SER8300 models).

FAS-00

Silver



FAS-01

White



FAS-03

Glossy translucent white



FAS-05

Light tan wood



FAS-06

Dark brown wood



FAS-07

Dark black wood



FAS-10

Brushed steel finish



Part Number	Description
FAS-00	Silver
FAS-01	White
FAS-03	Glossy translucent white
FAS-05	Light tan wood
FAS-06	Dark brown wood
FAS-07	Dark black wood
FAS-10	Brushed steel finish

Some Fascias may not be available in all markets. Verify Fascia availability in your area.

SE7000 Series

Communicating application-specific controllers

Room controllers are a compact and cost-effective alternative to the Direct Digital Controller (DDC) and sensor combination. Designed for new construction and retrofit projects, they dramatically decrease project delivery costs by reducing installation time, configuration and commissioning time. Room controllers can re-use existing wiring and support both wired and wireless networking. No complex software or tools are required to configure them to meet your application requirements. The SE7000 Series is a time-tested product line that delivers scalability, automation and connectivity at the lowest total installed cost.



Powerfully simple temperature control

Improved comfort and savings

- Models for fan coil units, roof top units, heat pumps and zone control
- BACnet MS/TP, ZigBee Pro, and Echelon communication options
- Passive Infrared (PIR) motion sensor option
- User interface options for commercial and hospitality applications
- Connectivity to external wired and wireless sensors
- Upgradable communication modules to add connectivity after installation
- Upgradable cover to add PIR motion sensor after installation

Models for each application

SE7200

- Zone control
- Floating (On/Off) and Analog (0-10V) output options
- 1 heat / 1 cool, and reheat



SE7300 and SER7300

- Low-voltage, line-voltage and mixed-voltage fan coil unit control
- Multiple fan speed, heating and cooling stages configurations
- Humidity control options
- Relay pack accessories for line-voltage and mixed-voltage applications
- Commercial (below) and hospitality user interface options



SE7600

- Roof top units, heat pumps, water source heat pumps, and indoor air quality applications
- Multiple fan speed, heating and cooling stages configurations
- Humidity control options
- Economizer options
- CO₂ and air flow options
- Scheduler options



Accessories for SE7000 Series room controllers

Wireless motion sensor & contact switch

*Compatible with SE7000 Series room controllers with VCM7000 communication modules.

Room Controllers

SE7200 | Communicating and network-ready zone controllers

Smart energy management has never been easier than with the SE7200 series. Designed for new construction or retrofit projects, the controllers dramatically decrease total costs by reducing installation time, configuration and commissioning time. The SE7200 series provides the advanced features and monitoring functions required by modern building automation systems without the use of software and commissioning tools.



Features

- Reheat control
- Induction units
- Chilled beam
- Under floor heating
- Perimeter radiant heat
- Pressure dependent VAV
- Optional PIR motion sensor

Communication

- ZigBee Pro (P) option for direct MPM integration (Optional with communication module purchased separately)
- BACnet MS/TP (B) (Comes standard on all models)
- Echelon
- Network-ready "stand-alone" with optional communication modules

Accessories

All models can be customized with PIR motion sensor functionality via an optional PIR accessory cover. The cover can be installed in the field or ordered as a factory installed option.

Description	
Dimension	Height: 12.5cm/4.94in / Width: 8.6cm/3.38in / Depth: 2.9cm/1.13in
Power	
Voltage	19-30 Vac 50 or 60 Hz; 2 VA (RC & C) Class 2 RC to RH jumper 2.0 Amps 48 VA maximum
Communication	
Protocol	ZigBee Pro / BACnet MS/TP / Echelon

Part Number		
SE7200XX45X EX: SE7200C5045P	SE7200XX45X EX: SE7200C5045P	SE7200XX45X EX: SE7200C5045P
Control output type:	PIR options:	Communication options:
-C = Floating or on/off digital control outputs -F = Analogue 0 - 10 VDC control outputs	-50 = PIR ready but PIR cover not included -55 = Factory assembled with PIR cover	-P = ZigBee Pro - (P) is the only direct MPM integration option -B = BACnet MS/TP -E = Echelon - = Network ready

Visit <http://tools.buildings.schneider-electric.com/SE7000/Default.htm> for more information

SER7300 | Line-voltage fan coil terminal equipment controller with relay packs

The SER7300 fan coil unit solution requires installation of only two components, the SER7300 terminal equipment controller and the SC3000 relay pack. This allows reuse of existing line-voltage wiring between the fan coil unit and temperature controller, thereby reducing overall costs, labor, and installation time for both retrofit and new construction control projects.



Features

- Line voltage applications
- 2 Pipe or 4 Pipe configuration
- 3 Speed fan
- Alarm monitoring
- Configurable I/O
- Optional humidity control
- Optional PIR motion sensor

Communication

- ZigBee Pro (P) option for direct MPM integration (Optional with communication module purchased separately)
- BACnet MS/TP (B) (Comes standard on all models)
- Echelon
- Network-ready “stand-alone” with optional communication modules

Accessories

The SC3000 relay pack is a necessary accessory for retrofit solution to use with SER7300 room controller. Refer to the SC3000 page for more information (later in this document).

Description	
Dimension	Height: 12.5cm/4.94in / Width: 8.6cm/3.38in / Depth: 2.9cm/1.13in
Power	
Voltage	19-30 Vac 50 or 60 Hz; 2 VA (RC & C) Class 2 RC to RH jumper 2.0 Amps 48 VA maximum
Communication	
Protocol	ZigBee Pro / BACnet MS/TP / Echelon

Part Number				
SER73XXX45X EX: SER7300C5045P	SER73XXX45X EX: SER7300C5045P	SER73XX45X EX: SER7300C5045P	SER73XXX45X EX: SER7300C5045P	SER73XXXX45X EX: SER7300C5045P
Humidity Sensor and Control:	Center Key Function:	Compatibility:	PIR options:	Communication options:
-0 = No humidity sensor -5 = Internal humidity sensor	-0 = Override (commercial applications) -5 = °C/ °F (hotels and lodging applications)	-C = Floating or on/off digital control outputs -F = Analogue 0 - 10 VDC control outputs	-50 = PIR ready but PIR cover not included -55 = Factory assembled with PIR cover	-P = ZigBee Pro - (P) is the only direct MPM integration option -B = BACnet MS/TP -E = Echelon - = Network ready

Visit <http://tools.buildings.schneider-electric.com/SE7000/Default.htm> for more information

Room Controllers

SE7300 | Low voltage communicating and network-ready fan coil controllers

The SE7300 series provides the advanced features and monitoring functions required by modern building automation systems without the use of software and commissioning tools. The SE7300 is a low voltage fan coil terminal equipment controller suitable for commercial and high end hospitality markets. It can also be used as a zone controller or mixed voltage solution.



Features

- Low voltage applications
- 2 Pipe or 4 Pipe configuration
- 3 Speed fan
- Alarm monitoring
- Configurable I/O
- Optional humidity control
- Optional PIR motion sensor

Communication

- ZigBee Pro (P) option for direct MPM integration
Optional with communication module purchased separately
- BACnet MS/TP (B)
Comes standard on all models
- Echelon
- Network-ready "stand-alone" with optional communication modules

Accessories

All models can be customized with PIR motion sensor functionality via an optional PIR accessory cover. The cover can be installed in the field or ordered as a factory installed option.

Description

Dimension Height: 12.5cm/4.94in / Width: 8.6cm/3.38in / Depth: 2.9cm/1.13in

Power

Voltage 19-30 Vac 50 or 60 Hz; 2 VA (RC & C) Class 2
RC to RH jumper 2.0 Amps 48 VA maximum

Communication

Protocol ZigBee Pro / BACnet MS/TP / Echelon

Part Number

SE73XXX45X EX: SE7300C5045P	SE73XXX45X EX: SE7300C5045P	SE73XXX45X EX: SE7300C5045P	SE73XXX45X EX: SE7300C5045P	SE73XXX45X EX: SE7300C5045P
Humidity Sensor and Control:	Center Key Function:	Compatibility:	PIR options:	Communication options:
-0 = No humidity sensor -5 = Internal humidity sensor	-0 = Override (commercial applications) -5 = °C/°F (hotels and lodging applications)	-C = Floating or on/off digital control outputs -F = Analogue 0 - 10 VDC control outputs	-50 = PIR ready but PIR cover not included -55 = Factory assembled with PIR cover	-P = ZigBee Pro - (P) is the only direct MPM integration option -B = BACnet MS/TP -E = Echelon - = Network ready

Visit <http://tools.buildings.schneider-electric.com/SE7000/Default.htm> for more information

SE7600 | Communicating and network-ready roof-top and heat-pump controllers

Smart energy management has never been easier than with the SE7600 series roof top and heat pump temperature controllers. Designed for new construction and retrofit projects, the controllers dramatically decrease total costs by reducing installation time, configuration and commissioning time. When compared to traditional building automation controllers, the SE7600 series roof top and heat pump wall mounted controllers provide unmatched return on investment to building owners while maximizing profits for system integrators.



Features

- 1H/1C, 2H/2C, and Modulating (Analog) Heat/2C options for roof top units
- CO₂ and fresh air input options for Indoor Air Quality (IAQ) applications
- 3H / 2C options for heat pumps and water source heat pumps
- Optional PIR motion sensor
- Humidity control option
- Economizer option
- Scheduler option

Communication

- ZigBee Pro (P) option for direct MPM integration
Optional with communication module purchased separately
- BACnet MS/TP (B)
Comes standard on all models
- Echelon
- Network-ready "stand-alone" with optional communication modules

Accessories

All models can be customized with PIR motion sensor functionality via an optional PIR accessory cover. The cover can be installed in the field or ordered as a factory installed option.

Description	
Dimension	Height: 12.5cm/4.94in / Width: 8.6cm/3.38in / Depth: 2.9cm/1.13in
Power	
Voltage	19-30 Vac 50 or 60 Hz; 2 VA (RC & C) Class 2 RC to RH jumper 2.0 Amps 48 VA maximum
Communication	
Protocol	ZigBee Pro / BACnet MS/TP / Echelon

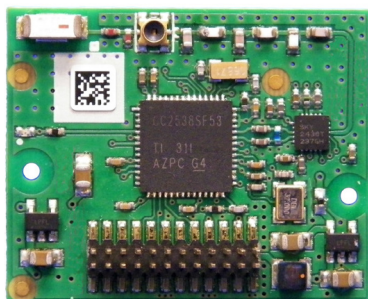
Part Number				
SE76XXXX45X EX: SE7652A5545B	SE76XXXX45X EX: SE7652A5545B	SE76XXXX45X EX: SE7652A5545B	SE76XXXX45X EX: SE7652A5545B	SE76XXXX45X EX: SE7652A5545B
Programmability:	Economizer / Humidity Control:	Application:	PIR options:	Communication options:
-0 = No local scheduling / Non programmable -5 = Local scheduling / programmable	-0 = No local scheduling / non prog. -2 = Local sched. / prog. -5 = Economizer / No local sched. / Non prog. -6 = Economizer / Local sched. / prog. -7 = With Humidification / Dehumid. control	-A = 1H/1C roof top unit app. -B = 2H/2C roof top unit app. -E = 2H/2C IAQ app. -F = 1H/2C modulating heat app. -H = 3H/2C heat pump app. -W = 2H/2C water source heat pump app.	-50 = PIR ready but PIR cover not included -55 = Factory assembled with PIR cover	-P = ZigBee Pro - (P) is the only direct MPM integration option -B = BACnet MS/TP -E = Echelon - = Network ready

Visit <http://tools.buildings.schneider-electric.com/SE7000/Default.htm> for more information

Room Controllers

VCM8000V5045P | Communication Module

Accessory communication modules allow the upgrade of all SE8000 Series room controllers to support wireless communication. All current SE8000 Series room controllers are capable of being retrofitted in the field with an accessory communication module. This enables the room controllers to be integrated into a ZigBee Pro wireless network.



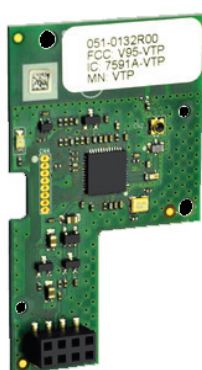
Wireless Option

- The VCM8000V5045P communication module makes SE8000 Series products compatible with ZigBee Pro ready MPM's SmartStruxure™ Lite solution.

Part Number	Description
VCM8000V5045P	ZigBee Pro extended profile retrofit communication module for all SE8000 Series

VCM7000 | Communication Module

Accessory communication modules allow the upgrade of all SE7000 Series room controllers to support wireless communication. All current SE7000 Series room controllers are capable of being retrofitted in the field with accessory communication modules. This enables the room controllers to be integrated into virtually all leading building automation systems.



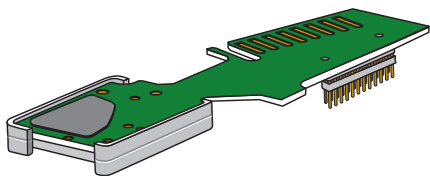
Wireless Option

- The VCM7000 communication module makes SE7000 Series products compatible with ZigBee Pro ready MPM's SmartStruxure™ Lite solution.

Part Number	Description
VCM7000V5045P	ZigBee Pro extended profile retrofit communication module for all SE7000 Series
VCM7x0xx5000B	BACnet Retrofit / SE76x7 with RH / SE7000 & SER7000 Series
VCM7x0xV5000E	Echelon Retrofit / SE76x7 with RH / SE7000 & SER7000 Series

VCM8001V5045 | CO₂ Sensor Module

Out-of-the-box CO₂ sensor module to improve fresh air quality in schools, restaurants, offices and other small buildings. All current SE8000 series room controllers are capable of being retrofitted in the field with the sensor module.



Wireless Option

- The VCM8001V5045 CO₂ sensor module allows SE8000 Series products to improve fresh air quality in buildings.

Part Number	Description
VCM8001V5045	CO ₂ sensor module for all SE8000 Series Room Controllers

Wireless CO₂ Sensor

Wireless CO₂ Temperature and Humidity Sensor to monitor indoor air quality, review data on interfacing devices, and control fresh air inside customizable zones. The sensor conforms to ASHRAE specifications for Green Building Standards and used the wireless ZigBee Green Power protocol.



Wireless Option

- The wireless CO₂ sensor allows SE8000 Series products to improve fresh air quality in buildings.

Part Number	Description
SED-CO2-G-5045	Wireless CO ₂ Sensor with Room Temperature and Humidity
SED-TRH-G-5045	Wireless Sensor with Room Temperature and Humidity

SC3000 | Relay Pack

A compact and easy to install relay pack for line-voltage fan coil units to be used in combination with room controllers. The SC3000 is a relay pack for line-voltage fan coil units. The device is used with SER7300 and SER8300 room controllers as a two component retrofit option.



Features

The SC3000 relay pack features an onboard universal voltage power supply and line-voltage relays which directly drive fractional horsepower fan motors and valves. This eliminates the need to install and wire costly pilot relays and transformers.

No previous building automation training is required for the installation and commissioning process.

Existing line voltage wiring between the fan coil unit and temperature controller can be reused further minimizing overall labor and installation costs.

Description	
Dimension	Height: 12cm/4.72in / Width: 8.6cm/3.38in / Depth: 2.5cm/1in
Power	
Voltage	7.0 VDC +/- 10% 2.4 watts minimum

Part Number	Applications	Fan control	Monitoring inputs	Control types
SC3500E5045	2 pipes 2 pipes with reheat 4 pipes	Up to 3 speed	None	On-Off line switched valve output control 1 heat / cool output 1 cool output 3 fan outputs
SC3504E5045	2 pipes 2 pipes with reheat 4 pipes	Up to 3 speed	4 FCU remote inputs	On-Off line switched valve output control 1 heat / cool output 1 cool output 3 fan outputs
SC3514E5045 (with occupancy output)	2 pipes 2 pipes with reheat 4 pipes	Up to 3 speed	4 FCU remote inputs	On-Off line switched valve output control 1 heat / cool output 1 cool output 3 fan outputs Occupancy output (7VDC)
SC3400E5045	2 pipes 2 pipes with modulating pulsed reheat	Up to 3 speed	None	On-Off line switched valve output control 1 heat / cool output 1 Modulating pulsed Vdc output for SSR electric reheat control 3 fan outputs
SC3404E5045	2 pipes 2 pipes with modulating pulsed reheat	Up to 3 speed	4 FCU remote inputs	On-Off line switched valve output control 1 heat / cool output 1 Modulating pulsed Vdc output for SSR electric reheat control 3 fan outputs
SC3300E5045 (slave fan unit)	Slave fan control only	Up to 3 speed	None	Slave fan control only 3 fan outputs

Relay Pack

SC1300 | Mixed Voltage fan-coil package

A compact and easy to install relay pack for fan control for mixed Voltages with 24VAC transformer units to be used in combination with SE7300 and SE8300 room controllers as a two component mixed voltage solution.



Mixed Voltage Application

In combination with the SE7300/SE8300 Series room controllers, the SC1300 allows control of a fan-coil requiring mixed voltage for the following:

- Line voltage for the 3-speed fan control (120V unit)
- Low voltage for valve control
- LED indication of relay status

Description	
Dimension	Height: 5cm/2in / Width: 14cm/5.5in / Depth: 17cm/6.7in
Power	
Voltage	110-130 Vac / 24 Vac
Contacts ratings	Resistive: 7 Amp / 1680 W ; Motor and or compressor: ¼ Hp / 10 LRA / 2.5 FLA approved for 30,000 operations at 240 VAC
24VAC low voltage power output	0.5A, 12 VA max
Outputs	
Number of outputs	3 on/off outputs
Part Number	Description
SC1300E5045	Fan control for mixed Voltages with 24VAC Transformer

SC2300 | Mixed Voltage fan-coil package

A compact and easy to install relay pack for fan control for mixed voltages with 24VAC transformer units to be used in combination with SE7300 and SE8300 room controllers as a two component mixed voltage solution.



Mixed Voltage Application

In combination with the SE7300/SE8300 Series room controllers, the SC2300 allows control of a fan-coil requiring mixed voltage for the following:

- Line voltage for the 3-speed fan control (220/240V unit)
- Low voltage for valve control
- LED indication of relay status

Description	
Dimension	Height: 5cm/2in / Width: 14cm/5.5in / Depth: 17cm/6.7in
Power	
Voltage	220-240 Vac / 24 Vac
Contacts ratings	Resistive: 7 Amp / 1680 W ; Motor and or compressor: ¼ Hp / 10 LRA / 2.5 FLA approved for 30,000 operations at 240 VAC
24VAC low voltage power output	0.5A, 12 VA max
Outputs	
Number of outputs	3 on/off outputs
Part Number	Description
SC2300E5045	Fan control for mixed Voltages with 24VAC Transformer

ZigBee Pro Devices

ZigBee Pro

Wireless sensors for room controllers

Extend the reach of your room controllers to further optimize efficiency and comfort

Logic is in the controller

The room controller collects information provided by the sensors (wireless and/or wired) and adapts its control sequence accordingly.



SE8000
room controller

room controller (with PIR motion sensor) in the main area of the suite, receives information from all sensors and adjusts its control sequences.

Integration into a BMS

Visible sensor status, battery level and points in the Building Management Systems (BMS) displayed when the room controller is integrated with an MPM device via ZigBee Pro.



Ceiling mounted motion sensor

Living room area of the suite



Door contact sensor

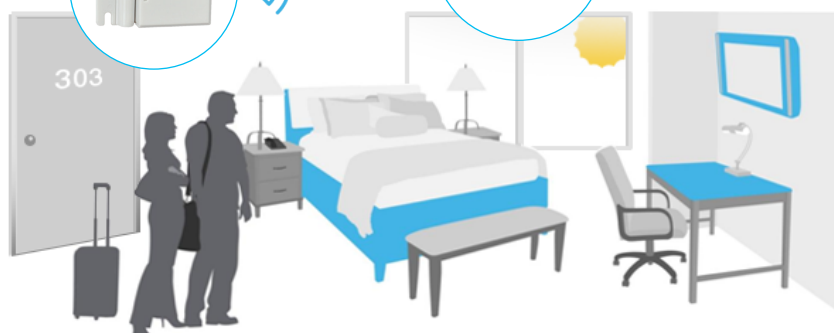


Window contact sensor



Wall mounted motion sensor

Bathroom of the suite



SED-CMS-P | Wireless ceiling mounted motion sensor

A sleek, compact, and easy to install wireless sensor that provides motion and occupancy information to enable room controllers to further optimize the management of HVAC and other systems.



Communication

- ZigBee Pro to compatible SE8000 room controllers

Integration

The sensor points can be accessed through the display of SE8000 room controllers. They are also visible in SmartStruxure™ solution (StruxureWare™ Building Operation) when the SE8000 is integrated via BACnet® MS/TP. The sensor status, battery level and points are visible in Building Expert when the SE8000 is integrated with an MPM device via ZigBee Pro.

Description	
Dimension	Diameter: 7.5cm/2.94in / Depth: 2cm/0.75in
Power	
Voltage	1.5VDC Alkaline / 2 x AAA
Communication	
Protocol	ZigBee Pro, HA1.2 Compatible
Range	Rec: 60ft/20m - Los: 300ft/100m

Part Number	Description
SED-CMS-P-5045	ZigBee Pro ceiling-mounted motion sensor Compatible with SE8300 room controllers with VCM8000V5045P communication modules

SED-WDS-P | Wireless door & window contact switch

A small and easy to install wireless contact switch that provides the “open” and “closed” status information of doors and windows to enable room controllers to further optimize the management of HVAC and other systems.



Communication

- ZigBee Pro to compatible SE8000 room controllers

Integration

The sensor points can be accessed through the display of SE8000 room controllers. They are also visible in SmartStruxure™ solution (StruxureWare™ Building Operation) when the SE8000 is integrated via BACnet® MS/TP. The sensor status, battery level and points are visible in Building Expert when the SE8000 is integrated with an MPM device via ZigBee Pro.

Description	
Sensor Dimension	Height: 3cm/1.16in / Width: 3.2cm/1.26in / Depth: 1.1cm/0.43in
Magnet Dimension	Height: 3.2cm/1.26in / Width: 1.5cm/0.59in / Depth: 0.6cm/0.24in
Power	
Voltage	3.0VDC Lithium / CR2032
Communication	
Protocol	ZigBee Pro, HA1.2 Compatible
Range	Rec: 60ft/20m - Los: 300ft/100m

Part Number	Description
SED-WDS-P-5045	ZigBee Pro door and window contact switch Compatible with SE8300 room controllers with VCM8000V5045P communication modules

ZigBee Pro Devices

SED-WMS-P | Wireless wall-mounted motion sensor

A sleek, compact, and easy to install wireless sensor that provides motion and occupancy information to enable room controllers to further optimize the management of HVAC and other systems.



Communication

- ZigBee Pro to compatible SE8000 room controllers

Integration

The sensor points can be accessed through the display of SE8000 room controllers. They are also visible in SmartStruxure™ solution (StruxureWare™ Building Operation) when the SE8000 is integrated via BACnet® MS/TP. The sensor status, battery level and points are visible in Building Expert when the SE8000 is integrated with an MPM device via ZigBee Pro.

Description	
Dimension	Height: 2.9cm/1.14in / Width: 6.5cm/2.56in / Depth: 2.5cm/0.99in
Power	
Voltage	3.0VDC Lithium / CR2
Communication	
Protocol	ZigBee Pro, HA1.2 Compatible
Range	Rec: 60ft/20m - Los: 300ft/100m

Part Number	Description
SED-WMS-P-5045	ZigBee Pro wall-mounted motion sensor Compatible with SE8300 room controllers with VCM8000V5045P communication modules

SED-WIN & SED-DOR | Wireless door and window contact switch

A small and easy to install wireless contact switch that provides the “open” and “closed” status information of doors and windows to enable room controllers to further optimize the management of HVAC and other systems.



Communication

- ZigBee Pro compatible only with SE7300 series room controllers only (P)

Integration

The sensor points can be accessed through the display of SE7300 room controllers. They are also visible in SmartStruxure™ solution (StruxureWare™ Building Operation) when the SE7300 is integrated via BACnet® MS/TP. The sensor status, battery level and points are visible in Building Expert, when the SE7300 is integrated with an MPM device via ZigBee Pro.

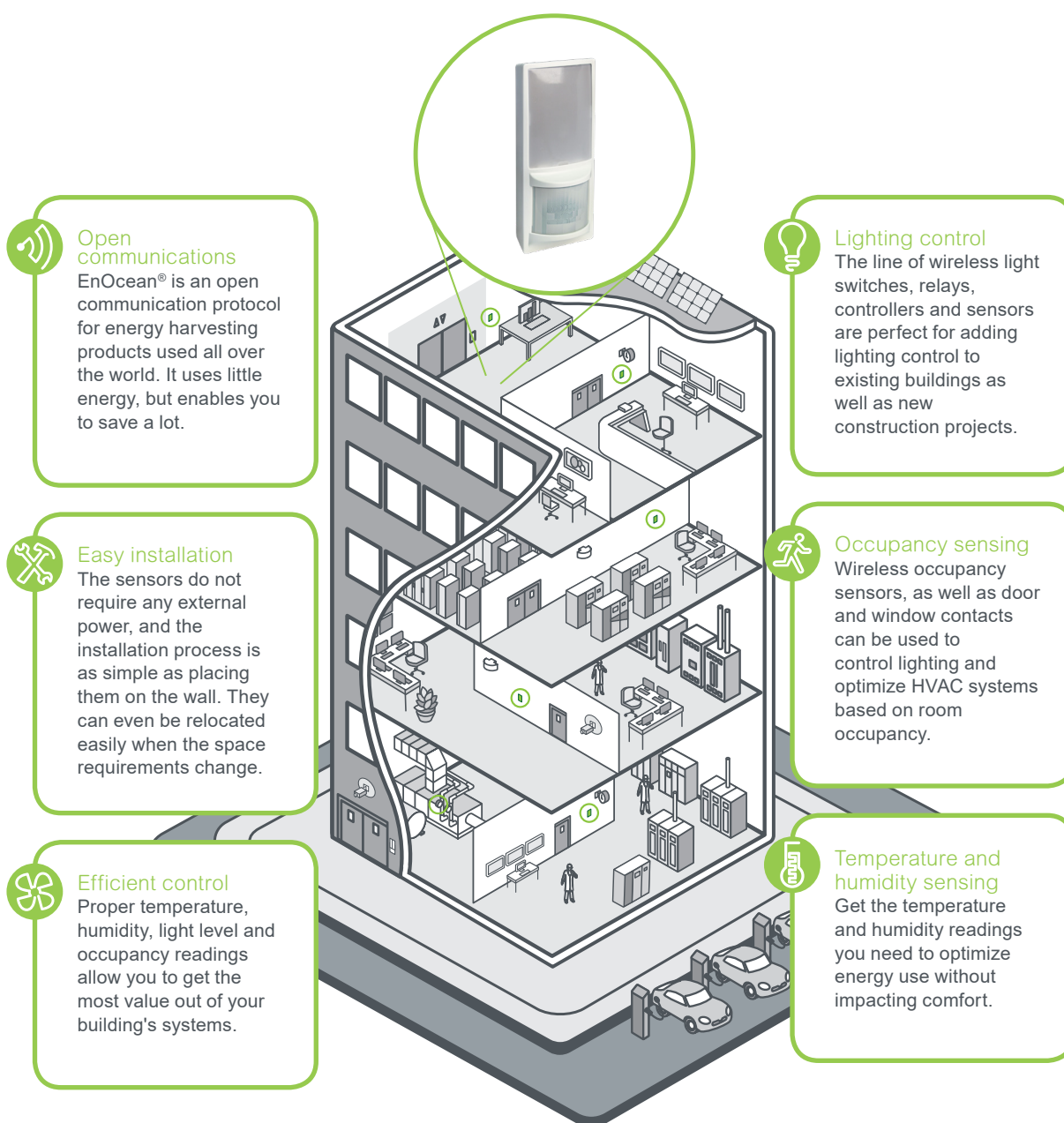
Description	
Sensor Dimension	Height: 12.19cm/4.8in / Width: 2.44cm/0.96in / Depth: 1.14cm/0.45in
Magnet Dimension	Height: 3.94cm/1.55in / Width: 2.16cm/0.85in / Depth: .94cm/0.37in
Power	
Voltage	3.0 VDC / 2 x AAA batteries.
Communication	
Protocol	ZigBee Pro, HA1.2 Compatible
Range	Rec: 60ft/20m - Los: 300ft/100m

Part Number	Description
SED-WIN-P-5045	ZigBee Pro window contact switch Compatible with SE7300 room controllers with VCM7000 communication modules
SED-DOR-P-5045	ZigBee Pro door contact switch Compatible with SE7300 room controllers with VCM7000 communication modules

EnOcean Devices

Improve energy efficiency and building comfort

Lights turn on when a person enters a room, and turn off when the person leaves. Sensors powered by photovoltaic cells report temperature and humidity readings which enable HVAC systems to be optimized. Occupancy sensors regulate room comfort when space is occupied outside set schedules. Sensors and switches blend into the decor of a modern office, even when installed on glass walls and panels. These are some of the advantages and optimizations you can gain from wireless energy harvesting EnOcean devices.



EnOcean 902MHz and 868MHz Devices

Energy harvesting wireless sensors, switches, relays and actuators

Schneider Electric products based on the EnOcean protocol are energy harvesting. They generate the energy needed to function via solar cells, piezo-electric generators, or other similar sources. This eliminates the need to change the device's battery or to connect it to a power source, thereby keeping installation and maintenance costs to a minimum.

Integration with SmartStruxure solution

EnOcean 902MHz (US/Canada) and 868MHz devices can be integrated into Schneider Electric's SmartStruxure™ solution by using MPM devices (from SmartStruxure™ Lite solution) that support this mode of communication. MPM devices are all equipped with an Ethernet port and can be integrated via LAN into a SmartStruxure solution Automation Server (AS) using BACnet IP or EWS.

Integration with EcoStruxure Building Expert

EnOcean devices can be integrated directly into Schneider Electric's SmartStruxure™ Lite solution by using MPM devices that support this mode of communication. StruxureWare™ Building Expert, the software powering EcoStruxure Building Expert, has drivers and objects designed for make integration of EnOcean devices easy.




EnOcean 902MHz Devices for Canada and US

SED-1R | Single rocker light switches

This self-powered wireless device is simple to install and uses EnOcean energy harvesting technology to communicate wirelessly with other wireless devices to provide convenient control of lighting, temperature and miscellaneous electric loads. The device features a clean contemporary styling, making it an attractive addition sure to compliment any decor.

SED-1RS Single rocker light switch



Part Number	Description
SED-1RS-U-5045	Turns on/off, and dims lights

Communication	
Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	902 MHz

EnOcean 902MHz Devices

SED-LC | Load controllers

The load controller is a versatile control device used for applications such as on/off lighting, timed light switch, daylight harvesting, photo inhibit, and occupancy or vacancy based lighting control. Other vertical market applications include process control and hospitality applications.

The controller supports radio range confirmation, which allows installers to test signal strength for optimal sensor placement and system integrity, and is supported with the SED-LLS and SED-THF sensors.

SED-LC277 Lighting load controller 24VAC-277VAC



Part Number	Description
SED-LC277-U-5045	120/277VAC, 16 Amps, manual or automatic on/off
Communication	
Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	902 MHz

SED-LC347 Lighting load controller 120/277/347VAC



Part Number	Description
SED-LC347-U-5045	120/277/347VAC, 15-20 Amps, manual or automatic on/off
Communication	
Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	902 MHz

SED-LC347D Lighting load controller with 0-10V dimming output



Part Number	Description
SED-LC347D-U-5045	120/277/347VAC, 15-20 Amps, manual or automatic on/off, 0-10V dimming output
Communication	
Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	902 MHz

SED-LL | Light level sensors

This photo sensor provides a reliable and simple method to increase energy savings by adding daylight harvesting to your wireless lighting control system. The device controls a single lighting controller or groups of controllers for switching or dimming zone control in relation to the natural light contribution in the area. Batteries are not required due to advanced solar energy harvesting and power management features. The device can operate over 80 hours in darkness from maximum charge levels.

SED-LLS Light level sensor



Part Number	Description
SED-LLS-U-5045	Selectable 0-510 lux (~0-50 fc) and 0-1024 lux (~0-100 fc) ranges

Communication	
Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	902 MHz

EnOcean 902MHz Devices

SED-CM | Ceiling mounted occupancy sensors

The ceiling mounted sensor enables a new level of energy saving control for rooms, hallways, and other common areas. The sensor uses radio frequency technology to communicate wirelessly with other EnOcean-enabled devices to scale back temperature and turn-off lights when a space is unoccupied for a set period of time. The sensor is self-powered by harvesting energy from indoor light.

SED-CMS Ceiling mounted occupancy sensor



Part Number	Description
SED-CMS-U-5045	Can operate with 10 lux (100hrs in dark)

Communication	
Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	902 MHz

SED-WD | Window and door contact sensors

The device can be easily mounted on any standard door or window frame to enable occupancy based control of lighting, HVAC, and miscellaneous electric loads. The sensor uses radio frequency technology to communicate wirelessly with other EnOcean-based devices whenever it detects a door or window has been opened or closed. The sensor is completely self-powered by harvesting ambient solar energy so there are no wires to run or batteries to replace.

SED-WDS Window and door contact sensor



Part Number	Description
SED-WDS-U-5045	Detection gap 0.25in/7mm, can operate with 10 lux (6 days in dark), back-up coin cell battery

Communication	
Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	902 MHz

EnOcean 902MHz Devices

SED-THF Temperature sensor with setpoint, humidity and fan speed control



Part Number	Description
SED-THF-U-5045	Temperature with setpoint, override button, humidity (sensor precision: +/- 3%), fan speed button

Communication	
Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	902 MHz

EnOcean 868MHz Devices

EnOcean 868MHz Devices

LSS1002004x | Single and double gang light switches

These self-powered wireless devices are simple to install. They use EnOcean energy harvesting technology to communicate wirelessly with other wireless devices from Schneider Electric system M range of devices, making them an attractive means to provide convenient control of lighting, blinds and other miscellaneous electric loads. The devices feature clean contemporary styling, making them attractive additions sure to compliment any decor.

LSS10020049 and LSS10020048 Single and double light gang



Part Number	Description
LSS10020049	Single gang. Turns on/off and dims lights
LSS10020048	Double gang. Turns on/off and dims lights, controls blinds

Communication

Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	868 MHz

LSS10020070 | DIN mounted 1 channel relay

The DIN Mounted 1 channel relay used to receive radio signals originating from MPMs, switch transmitters or window contact transmitters. It is used for switching loads, such as incandescent, halogen, electronic ballast lights or small motors. Thanks to its output changeover contact, it enables through simple cabling, the changeover (of the power supply) of the load for applications such as switching the heating off upon opening the windows.

LSS10020070 DIN mounted 1 channel relay



Part Number	Description
LSS10020070*	Single channel on/off relay *LSS10020070 replaces LSS10020025


Communication

Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	868 MHz

LSS502931 | Wall box mounted PUK 2 dimming channel 1-10V relay

The wall box mounted PUK 2 dimming channel works as a dimmer, but can also be used for 1-10V valve motor control. Via the MPMs, or by pressing the buttons on an EnOcean switch associated with the dimmer, the output value of the lighting devices it controls can be changed. The change is either logarithmic or linear (configurable). In addition, a minimum output voltage can be defined, which is especially necessary when working with LEDs.

LSS502931 Wall box mounted PUK 2 dimming channel 1-10 V




Part Number	Description
LSS502931	2 dimming channel 1-10 V ballast

Communication	
Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	868 MHz

LSS10020055 | Wall box mounted 2 channel blind relay

The wall box mounted 2 channel blind relay is specifically designed to control a roller blind, a blind or a patio blind equipped with a limit switch (230V/50Hz motor), with settings for ON, OFF and TILT. It operates in response to signals sent from MPMs, self-powered wireless EnOcean transmitters, and it features a protective feed with a 10A breaker to prevent damage to attached loads.

LSS10020055 Wall box mounted 2 channel blind relay



Part Number	Description
LSS10020055	230V~/50 Hz, Protective feed with 10A breaker.

Communication	
Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	868 MHz

EnOcean 868MHz Devices

LSS10020062 | Flush mount 1 channel relay

The relay is used to receive radio signals originating from switch transmitters or contact sensors. The output allows activation of loads like incandescent lights, halogen lights, electronic ballasts, or small motors. Before any use, the transmitters must be allocated to a receiver (maximum 32 transmitters). Each sensor or transmitter can control an unlimited number of receivers.

LSS10020062 Flush mount 1 channel remote control switch receiver



Part Number	Description
LSS10020062	230V~ / 50 Hz, 16A max

Communication

Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	868 MHz

LSS10020063 | Flush mount roller blind multifunction receiver

The roller blind receiver is used to receive radio signals originating from switch transmitters. The outputs UP and DOWN are used to control a roller blind, a blind or a patio blind equipped with a limit switch (230V/50Hz motor). Before any use, the transmitters must be allocated to a receiver (maximum 32 transmitters). Each sensor or transmitter can control an unlimited number of receivers.

LSS10020063 Flush mount roller blind multifunction receiver



Part Number	Description
LSS10020063	230V~/50 Hz, Circuit breaker of 10A max.


Communication

Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	868 MHz

LSS10020065 | Universal smart plug receiver, French style 16A

The remote control switch receiver is used to receive radio signals originating from switch transmitters or contact sensors. The output allows activation of loads like incandescent lights, halogen lights, electronic ballasts, or small motors. Before any use, the transmitters must be allocated to a receiver (maximum 32 transmitters). Each sensor or transmitter can control an unlimited number of receivers.

LSS10020065 French style universal smart plug receiver



Part Number	Description
LSS10020065	230V~ / 50 Hz, 16A max


Communication

Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	868 MHz

LSS10020066 | Universal smart plug receiver, Schuko style 16A

The remote control switch receiver is used to receive radio signals originating from switch transmitters or contact sensors. The output allows activation of loads like incandescent lights, halogen lights, electronic ballasts, or small motors. Before any use, the transmitters must be allocated to a receiver (maximum 32 transmitters). Each sensor or transmitter can control an unlimited number of receivers.

LSS10020063 Flush mount roller blind multifunction receiver



Part Number	Description
LSS10020063	230V~/50 Hz, Circuit breaker of 10A max.

Communication

Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	868 MHz

EnOcean 868MHz Devices

LSS10020053 | Indoor light level sensor

This photo sensor is designed to measure interior luminosity and transmit it wirelessly to a matched receiver. The device controls a single lighting controller or groups of controllers for lighting or blind control in relation to the natural light contribution in the area. Batteries are not required due to advanced light energy harvesting and power management features.

LSS10020053 Indoor light level sensor



Part Number	Description
LSS10020053	50-1020 lux, solar powered

Communication	
Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	868 MHz

LSS10020052 | Outdoor light level sensor

The outdoor light Level sensor is designed to measure the exterior luminosity and transmit it wirelessly to a matched receiver. It provides reliable information of exterior lighting conditions for use in controlling lighting, blinds and HVAC systems. Batteries or an external power supply are not required due to advanced light energy harvesting and power management features.

LSS10020052 Outdoor light level sensor



Part Number	Description
LSS10020052	300-30000 lux, solar powered

Communication	
Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	868 MHz

LSS396462 | Multi-sensor (presence and light level CLC sensor)

This battery-powered multi-sensor is designed for movement and brightness detection in rooms or office spaces. It maximizes thermal energy savings by communicating wirelessly with HVAC systems to ensure they are only active when necessary. The sensor can be programmed with different responses to changes in lighting alone and to changes in lighting and movement.

LSS396462 Multi-sensor (presence and light level CLC sensor)



Part Number	Description
LSS396462	PIR occupancy & light level sensor, battery powered

Communication	
Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	868 MHz

LSS10020051 | Ceiling occupancy sensor

The ceiling mounted sensor enables a new level of energy saving control for rooms, hallways, and other common areas. The sensor uses radio frequency technology to communicate wirelessly with other EnOcean-enabled devices to set them to unoccupied status when a space remains empty for a set period of time. The sensor is self-powered by harvesting energy from indoor light.

LSS10020051 Ceiling occupancy sensor



Part Number	Description
LSS10020051	PIR design, 12 M range

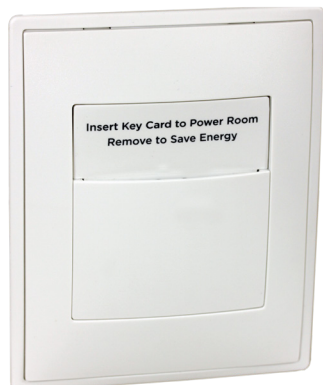
Communication	
Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	868 MHz

EnOcean 868MHz Devices

LSS10020067 | Key card switch

The key card switch saves energy through occupancy-based control of lighting, HVAC, and miscellaneous electric loads. The switch is self-powered, and inserting or removing the card generates sufficient kinetic energy to send a wireless signal to other EnOcean-based devices within the room. Guests simply insert their key card in the slot when they enter the room and remove it when they leave.

LSS10020050 Key card switch



Part Number	Description
LSS10020067	Compatible with standard key cards

Communication	
Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	868 MHz

LSS10020032 | Window and door sensor

These exterior sensors are designed to detect the opening (and closing) of an opening such as a door, window, etc.. Each is comprised of 2 parts, a sensor (large casing) and a magnet (small casing). They enable occupancy based control of lighting, HVAC, and miscellaneous electric loads. The sensor uses radio frequency technology to communicate wirelessly with other EnOcean-based devices whenever it detects a door or window has been opened or closed. The sensor is completely self-powered by harvesting ambient light energy so there are no wires to run or batteries to replace.

LSS10020032 Window and door sensor



Part Number	Description
LSS10020032	Detection gap 5mm, can operate with 10 lux

Communication	
Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	868 MHz

LSS10020047 | Dry contact sensor

This device can transform a dry contact input from any control device into a wireless EnOcean telegram signal that can be used to control lighting, HVAC or other systems. The sensor is completely self-powered by harvesting ambient light energy so there are no wires to run or batteries to replace.

LSS10020047 Dry contact input



Part Number	Description
LSS10020047	Can operate with 10 lux (100hrs in dark).

Communication	
Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	868 MHz

LSS226172 / LSS252331 | Temperature sensors with setpoint changes

These temperature and relative humidity sensors provide a reliable and simple method to set-up intelligent automation of interior spaces for energy savings, including control over HVAC and blinds. These sensors use the latest in light energy harvesting technology and do not require batteries nor an external power source. The temperature setpoints for these devices are controlled through the use of a rotary dial.

LSS226172 and LSS252331 Temperature sensors with setpoint changes and humidity option



Part Number	Description
LSS226172	Temperature sensor with setpoint only
LSS252331	Temperature sensor with setpoint and humidity sensor

Communication

Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	868 MHz

LSS10020033 / LSS10020041 | Indoor temperature sensors

These simple and reliable sensors are designed to measure ambient temperature and relative humidity, and then transmit it wirelessly to a matched receiver. These sensors use the latest in light energy harvesting technology and do not require batteries nor an external power source.

LSS10020033 and LSS10020041 Temperature sensors with humidity option



Part Number	Description
LSS10020033	Temperature sensor
LSS10020041	Temperature and humidity sensor

Communication

Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	868 MHz

LSS10020076 | Outdoor temperature sensor

This simple and reliable sensor is designed to measure the outside ambient temperature and transmit it wirelessly to a matched receiver. These sensors use the latest in light energy harvesting technology and do not require batteries nor an external power source.

LSS10020076 Outdoor temperature sensor



Part Number	Description
LSS10020076	Outdoor temperature sensor

Communication

Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	868 MHz

EnOcean 868MHz Devices

LSS442510 | Indoor CO₂ sensor

This sensor is designed for the detection of carbon dioxide (CO₂) in living spaces, as well as temperature. Wherever people are staying in rooms, the CO₂ concentration is an evident indicator for the room air quality. The sensor sends telegrams with information on CO₂ concentration in air on both an event-controlled and time-controlled basis.

LSS442510 Indoor CO₂ sensor



Part Number	Description
LSS442510	Indoor CO ₂ sensor, 24 V Power required

Communication	
Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	868 MHz

LSS283427 / LSS263733 | Wall box mounted 230V / 24V valve actuators

These devices are designed for temperature control. The thermostat receiver compares the room temperature supplied by the sensor with the setpoint adjusted on the sensor, and switches the relay on or off accordingly. The relay output can be used directly to drive thermal two-point valves.

LSS283427 and LSS263733 Wall box mounted 230V/24V valve actuator



Part Number	Description
LSS283427	230 V valve actuator
LSS263733	24 V valve actuator

Communication	
Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	868 MHz

LSS298391 / LSS270946 | Wireless switching actuators 230 V / 24V

These devices are designed to receive on/off commands from wireless switches. Up to 10 wireless switches can be connected to an actuator using OR logic, that is, the controlled HVAC system will be activated if any of the connected switches are in the ON position. Similarly, only if all the connected switches are in the OFF position will the system be shut off.

LSS298391 and LSS270946 Wall box mounted 230V/24V valve actuator



Part Number	Description
LSS298391	230 Vac wireless switch actuator
LSS270946	24 Vac/DC wireless switch actuator

Communication	
Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	868 MHz

LSS513753 | Motorised valve actuator

This battery-powered device is used to provide control for a comfortable single room of radiators or underfloor heating. It operates standard tread valves in response to EnOcean telegrams received from a room controller, and it mounts directly onto most commercially available radiator valves.

LSS513753 Motorised valve actuator



Part Number	Description
LSS513753	Motorised valve actuator

Communication	
Range	Rec: 45ft/13m - Los: 100ft/30m
Frequency	868 MHz

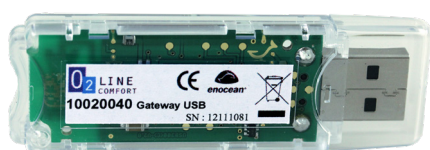
EnOcean 868MHz Devices

LSS10020040 | USB Gateway

This device is a small USB stick which connects PC's, consumer devices, DSL boxes and other USB master devices to EnOcean based radio products. It is equipped with a TCM 310 transceiver gateway module. It provides bidirectional EnOcean radio and bidirectional serial interface via USB. Radio messages are sent and received via an externally connected USB host.

LSS10020040 USB gateway

Part Number	Description
LSS10020040	USB gateway



Power Metering

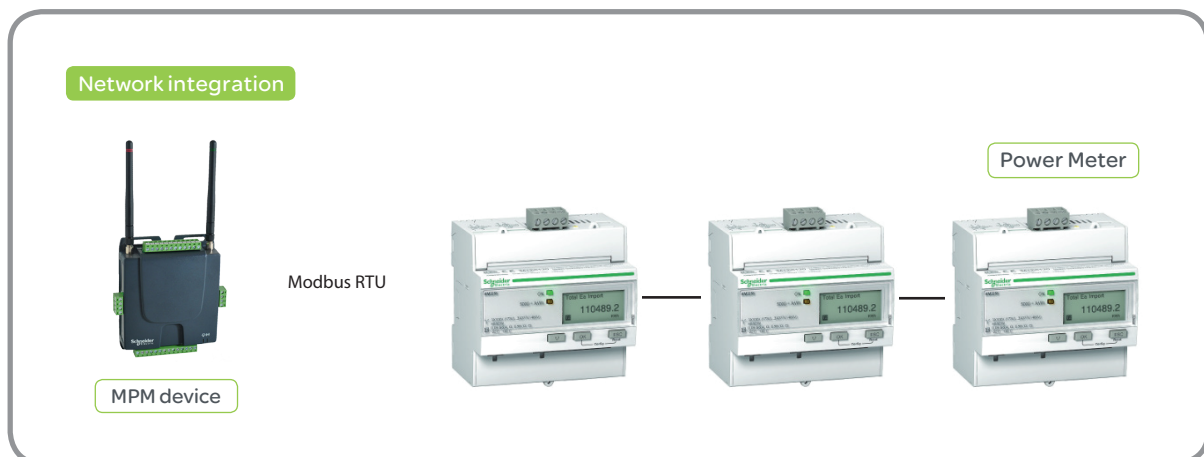
Power Metering

Compact, cost-effective power meters

The PowerLogic™ Power Meter Series is multi-functional, used for digital instrumentation, data acquisition and as a control device. It can replace a variety of meters, relays, transducers, and other components. Power meters are equipped with RS485 communications for integration into any power monitoring/control system and can be installed at multiple locations within a facility and allow data to be uploaded to Building Expert software for viewing and analysis. The port offers 2-wire connection, operates at speeds up to 19.2 kbaud, and supports the Modbus RTU protocol. Modbus compatibility supports integration with MPMs.

Accurate measurement

These are true Root Mean Square (RMS) meters, capable of exceptionally accurate measurement of highly non-linear loads. A sophisticated sampling technique enables accurate measurements through the 63rd harmonic. You can view over 50 metered values, plus minimum and maximum data, either from the display or remotely using Building Expert software.



iEM3255 | Energy meter

The Acti 9 iEM3000 series energy meter is an ideal cost-attractive, feature-rich energy-metering offer that makes customer installation more energy efficient. It also reduces your own installation and commissioning costs thanks to an efficient design. With the iEM3000 series energy meters located on the circuits with the Acti 9 system, you can gather the information necessary to optimize energy consumption and enable energy efficient practices.



Simple and smart

- Ten references to cover most installation requirements
- Each meter supports 1P, 2P, 3P, and 3P+N wiring connections
- Graphic display makes it easy to accurately read descriptions of displayed values
- LED indicators provide visual status such as 'energized' and 'communicating'

Reliable and accurate

- Anti-tamper sealing parts prohibit accessibility to all metering connections (voltage, current, and DI/DO)
- Save date/time of last reset to verify start of measurement campaigns as well as determine if clock was altered

Applications

- Import / export energy measurement
- Reactive energy measurement
- 1 configurable digital output for metered pulses (kWh), and alarm status
- 1 configurable digital input for partial meter reset, circuit breaker status, and input metering and tariff control

Power	
Voltage	3 x 100/173 Vac to 3 x 277/480 Vac (50/60 Hz)
Communication	
Modbus RS485 comm port	
Modbus RTU protocol	Modbus protocol for integration with power and energy management software
Display characteristics	
Screen	Backlit LCD, monitoring of energy current, voltage, power, frequency, and power factor

Part Number	Description
A9MEM3255	iEM3255 advanced multi-tariff energy meter and electrical parameter plus Modbus RS485 comm port

Power Metering

Series 700 | PowerLogic power-monitoring unit

The PowerLogic™ Power Meter Series 700 and energy meters offer outstanding quality, versatility and functionality in a cost-effective, ultra-compact unit. OEMs, panel builders and customers in industrial, buildings or infrastructure environments will find the meters ideal for replacing analog meters or for adding metering to custom panels, switchboards, switchgear, gensets, motor control centers and UPS systems.



MPM-UN compatible Power Meter Series 700

- PM710, Modbus RTU protocol communication
- PM750, IEC62053-22 Class 0.5S energy accuracy

The Power Meter Series 700 is also available in two other versions:

- PM700, basic version, IEC62053-21 Class 1 energy accuracy
- PM700P, 2 digital KY outputs

Applications

- Energy savings
- Measure efficiency, reveal opportunities and verify savings
- Sub-bill tenants for energy costs
- Allocate energy costs to departments or processes
- Reduce peak demand surcharges
- Reduce power factor penalties
- Leverage existing infrastructure capacity and avoid over-building
- Energy availability and reliability
- Verify the reliable operation of equipment
- Improve response to power quality-related problems

Power	
Voltage	10 to 277 direct Vac line-to-neutral 10 to 480 Vac direct line-to-line Up to 1.6 MV with external VT/PT, start of measuring voltage depends on PT ratio
Communication	
RS-485 port (PM710, PM750)	2-wire connection, operates at speeds up to 19.2 kbaud
Modbus RTU protocol	Modbus protocol for integration with power and energy management software such as PowerLogic ION Enterprise, PowerLogic System Manager, or PowerLogic PowerView
Display characteristics	
Screen	Backlit green LCD (6 lines total, 4 concurrent values) Dimensions 73 x 69 mm

Part Number	Description
PM710MG	Basic readings, demand, and summary screens, Harmonic distortion (current, voltage), RS485 comm. port Modbus protocol
PM750MG	Basic readings, demand, and summary screens, Harmonic distortion (current, voltage), RS485 comm. port Modbus protocol / 2 Pulse output and 1 Pulse input.

Series 800 | PowerLogic power-monitoring unit

The PowerLogic™ Power Meter Series 800 offers many high-performance capabilities needed to meter and monitor an electrical installation in a compact 96 x 96 mm unit. All models include an easy-to-read display that presents measurements for all three phases and neutral at the same time, an RS-485 Modbus communication port, one digital input, one KY-type digital output, and Total Harmonic Distortion (THD).



MPM-UN compatible Power Meter Series 800

- PM810, basic version, with PM810LOG option
- PM820, individual current and voltage harmonics readings
- PM850, waveform capture
- PM870, configurable waveform capture, voltage and current disturbance (sag/swell) detection

Applications

- Panel instrumentation
- Sub-billing, cost allocation and energy management
- Remote monitoring of an electrical installation
- Power quality analysis
- Utility bill verification, utility contract optimization and load preservation

Power	
Voltage	0 to 600 Vac (direct L-L) 0 to 347 Vac (direct L-N) up to 3.2 MV AC (with external VT)
Communication	
RS-485 port	2-wire connection, operates at speeds up to 19.2 kbaud
Modbus RTU protocol	Modbus protocol for integration with power and energy management software such as PowerLogic ION Enterprise, PowerLogic System Manager, or PowerLogic PowerView
Display characteristics	
Screen	Backlit white LCD (6 lines total, 4 concurrent values) Dimensions 73 x 69 mm

Part Number	With no display	With remote display	Description
PM810MG	PM810UMG	PM810MG	Basic instrumentation, THD, alarming, 80 kB logging (with PM810LOG)
PM820MG	PM820UMG	PM820MG	Basic instrumentation, THD, alarming, 80 kB logging
PM850MG	PM850UMG	PM850MG	Basic instrumentation, THD, alarming, 800 kB logging, waveform capture
PM870MG	PM870UMG	PM870MG	Basic instrumentation, THD, alarming, 800 kB logging, configurable waveform capture and disturbance detection.

Power Metering

PM3255 | PowerLogic power-monitoring unit

The 3255 PowerLogic™ Power Meter offers basic to advanced measurement capabilities. With compact size and DIN rail mounting, the PM3255 allows mains and feeders monitoring in small electrical cabinets. Combined with current transformers and voltage transformers, these meters can monitor two, three and four-wire systems. The graphic display has intuitive navigation to easily access important parameters.



Network management applications

- Panel instrumentation
- Up to 15 onboard time stamped alarms to monitor events
- Easy integration with PLC system with input/output interface

Applications

- Electrical parameters I, In, U, V, PQS, E, PF, Hz, THD
- Power/current demand and peak demand
- Min/max. and 15 time stamped alarms
- LED to indicate communication
- Up to 4 tariffs management
- 71 digital inputs and 71 digital outputs
- Memory for load profile (demand 10mn to 60mn)
- RS485 port for Modbus communication

Power

Voltage 100/173 to 277/480VAC (+/- 0%), 3W/5VA; 45Hz to 65Hz
100 to 300VDC, 3W

Communication

RS-485 port RS485 with screw terminals allows connection to a daisy chain

Modbus RTU protocol Modbus protocol for integration with power and energy management software such as PowerLogic ION Enterprise, PowerLogic System Manager, or PowerLogic PowerView

Display characteristics

Screen Backlit graphic display allows smart navigation in relevant information and in multi languages

Part Number	Description
METSEPM3255	PM3255 power meter + 2 digital inputs, 2 digital outputs with RS485 port

ION6200 | PowerLogic power-monitoring unit

The PowerLogic™ ION6200 Power Meter is an ultra-compact meter that offers outstanding quality, versatility, and functionality in a low cost flexible meter. An ideal replacement for multiple analog meters, the PowerLogic modularity allows genset and electrical equipment manufacturers, panel shops, EMS manufacturers and energy service providers to reduce inventory requirements by stocking inexpensive components and building specific meter configurations as needed, rather than carrying a large inventory of pre-configured meters.



Modularity

- Simple retrofit
- Low initial investment that can still meet future needs
- Retrofittable upgrades add functionality as required

Applications

- Measure efficiency, reveal opportunities, and verify savings
- Sub-bill tenants for energy costs
- Allocate energy costs to departments or processes
- Reduce peak demand surcharges
- Reduce power factor penalties
- Leverage existing infrastructure capacity and avoid over-building
- Energy availability and reliability
- Verify the reliable operation of equipment
- Improve response to power quality-related problems
- Enhance substation automation to reduce field service time

Power	
Voltage	100 to 240Vac (50 to 60Hz)/110 to 300Vdc Optional 20 to 60DC (±10%) Optional 480Vac (60Hz)
Communication	
RS-485 port / Modbus RTU protocol	Modbus protocol for integration with power and energy management software as PowerLogic ION Enterprise, PowerLogic System Manager, or PowerLogic PowerView
Display characteristics	
Screen	Bright LED display with twelve 19mm (3/4") high digits
Part Number	Description
M6200xxxxxA0xxx	ION6200 power meter + outputs with RS485 port

Power Metering

Series E5x | Veris power-monitoring unit

The E5x Series DIN Rail Meter combines exceptional performance and easy installation to deliver a cost-effective solution for power monitoring applications. The E5x can be installed on standard DIN rail or surface mounted as needed. The data logging capability protects data in the event of a power failure. Combinations of serial communication, pulse output, and phase alarms are provided to suit a wide variety of applications.



MPM-UN compatible Power Meter Series E5x

- E50C2, basic version, with Modbus RTU
- E50C2A, basic version, with Modbus RTU for use with U018-Series rope-style CTs
- E50C3, native data logging, with Modbus RTU
- E50C3A, native data logging, with Modbus RTU for use with U018-Series rope-style CTs

Features

- Revenue grade measurements
- Real energy output and phase loss alarm output
- Data logging capability
- User-enabled password protection via Modbus
- Native BACnet MS/TP support (no gateway)

Applications

- Energy monitoring in building automation systems
- Renewable energy
- Energy management
- Commercial submetering
- Industrial monitoring
- Cost allocation

Power

Voltage	50/60 Hz; 5VA max.; 90V min.; UL Maximums: 600V L-L (347V L-N); CE Maximum: 300V L-N
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Communication

RS-485 port / BACnet MS/TP	Native support
RS-485 port / Modbus RTU protocol	Modbus protocol for integration with power and energy management software

Display characteristics

Screen	Backlit LCD screen
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Part Number	Description
E50B1 and E5xCx	Real Energy Pulse / N.O. static / Alarm contacts / N.C. static
E50Bx	Reactive energy pulse 30VAC / DC
E5xCx	RS-485 2-wire Modbus RTU (1200 baud to 38.4 kbaud)
E5xHx R	RS-485 2-wire BACnet MS/TP (9600 baud to 115.2 kbaud)

Power Metering

Series H803x | Veris enercept networked power transducers

The Enercept H803x Series is an innovative three-phase networked (Modbus RTU) power transducer that combines electronics and high accuracy industrial grade CTs in a single package. The need for external electrical enclosures is eliminated, greatly reducing installation time and cost. Color-coordination between voltage leads and CTs makes phase matching easy. Additionally, these transducers automatically detect and compensate for phase reversal, eliminating the concern of CT load orientation.



Series Specifications

- Up to 63 Transducers can be daisy-chained on a single RS-485 network
- Input primary voltage 208 to 480VAC RMS
- Number of Phases Monitored: 1-3
- Frequency 50/60Hz
- Primary current: up to 2400 amps (cont. per phase)
- Internal isolation 2000VAC RMS
- Insulation class 600VAC RMS
- Protocol Modbus RTU

Applications

- Energy managing and performance contracting
- Sub-metering for commercial tenants
- Activity-based costing in commercial and industrial facilities
- Real-time power monitoring

Power	
Voltage	208 to 480VAC, 50/60 Hz RMS 1, 2, 3
Communication	
RS-485 port / Modbus RTU protocol	Modbus protocol for integration with power and energy management software

Part Number	Description
H8036-0100-2	Max amps 100 / CT size small
H8036-0300-2	Max amps 300 / CT size small
H8036-0400-3	Max amps 400 / CT size medium
H8036-0800-3	Max amps 800 / CT size medium
H8036-0800-4	Max amps 800 / CT size large
H8036-1600-4	Max amps 1600 / CT size large
H8036-2400-4	Max amps 2400 / CT size large

Acti 9 Control

Acti 9 | Smartlink

The devices are connected to the Modbus network via the Acti 9 Smartlink communication interfaces and fully prefabricated connectors. No handling tool is required due to the plug-in connectors. A single RS485 link connects the switchboards to the PLCs and to the monitoring system. Integrated into Acti 9 Smartlink are a protection device trip and luminary operating time metering making it possible to plan preventive maintenance.



Solution

- The Acti 9 Smartlink enables all the terminal switchboards to be directly connected to the site monitoring network.
- The circuit breaker auxiliaries iOF+SD24 indicate any tripping or deliberate opening.
- The contactors and impulse relays receive the On/Off switching orders and indicate their state.
- Switches on the front panel of the switchboards allow the maintenance personnel to activate the automated device to control the contactors and impulse relays via push-buttons. In this case, the position of the inhibitor switch is sent over the Modbus network by the Acti 9 Smartlink interface.

Part Number	Description
A9XMSB11	Acti 9 Smartlink

IATL 24 | Impulse relays



Function

- Closing of the impulse relay pole(s) is triggered by an impulse on the coil.
- Having two stable mechanical positions, the pole(s) will be opened by the next impulse. Each impulse received by the coil reverses the position of the pole(s).
- Can be controlled by an unlimited number of push buttons.
- Zero energy consumption.

Part Number	Description
A9C15424	Impulse relay auxiliary low level 24VDC

Acti 9 Control

Reflex IC60 | Integrated control circuit breaker

A typical installation would be in a room where power supply is provided by a distribution board fastened horizontally in the false ceiling at the room entrance. This arrangement does not allow the use of a modular contactor. A Reflex iC60 integrated control circuit breaker can switch off the circuits' power supply when the keycard is removed from its reader located at the entrance to the room. Customer presence and electrical fault information is reported to the room's PLC without any additional interface. This information is then transmitted to the supervision room via a communication bus.



Solution

Remote control by latched and/or impulse-type order according to the 3 operating modes to be chosen by the user

The Reflex iC60 devices are integrated control circuit breakers and combine the following main functions in a single device:

- circuit protection against short-circuit currents
- circuit protection against overload currents
- disconnection in the industrial sector

Resetting after a fault is performed manually by the resetting handle

Part Number	Description
A9Cxxxxx	Reflex IC60

IOF+SD 24 | Impulse relays



Function

- 2 contacts (1 NO + 1 NC) can report the signalling information of the associated device to the Acti 9 Smartlink or a programmable logic controller
- Electrical fault actuation of the tripping auxiliary
- Open or Closed position of the associated device

Part Number	Description
A9A26897	IOF+SD Impulse relay auxiliary low level 24VDC /w Ti24

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- > 140 000+ employees in more than 100 countries
- > 200+ factories around the world
- > 11 000 R&D engineers around the world



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