

# SmartStruxure™ Lite Solution

MPM series


multi-purpose manager (MPM-UN)

Smart  Compatible

Site and zone managers providing wired and wireless integrated control solutions for HVAC, lighting and metering, as well as remote management via StruxureWare™ Building Expert.



Get Control. Get Efficient. Get Value.

**Schneider**  
 Electric

# SmartStruxure™ Lite Multi-Purpose Manager Features



## AT A GLANCE

### Networking

- Ethernet connector for BACnet Ethernet/IP
- 802.15.4 wireless mesh (25 nodes/network)
- Wired serial bus for daisy chain (CANbus)

### Third-party interoperability

- BACnet, EWS, oBIX, FTP
- EnOcean (wireless)
- ZigBee (wireless)
- Modbus
- CANbus

### Inputs/Outputs

- Inputs: 6 universal (analog: 4-20mA, 0-10V, digital: dry contact, thermistor: 1-100K)
- Outputs: 2 relay, 4 analog
- EnOcean (wireless): 128 points
- ZigBee (wireless): 30 peripherals

### Other

- Real-time clock
- 400MHz processor
- 64MB of RAM
- 2GB of Flash for local storage
- StruxureWare™ Building Expert

Multi-Purpose Management devices (MPM) 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.

## Control features

- Control of wired end-devices (6 inputs, 6 outputs).
- Wireless control of EnOcean end-devices (optional) (128 points per MPM).
- Wireless control of ZigBee end-devices (optional) (30 peripherals per MPM).
- Modbus (optional).
- Programmable via StruxureWare™ Building Expert.
- Points visible through BACnet, EcoStruxure Web Services (EWS) & oBIX.
- Real-time response to scripting/graphical programming.

## Applications

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.
- Mechanical rooms and equipment cabinets.
- Metering: the Modbus option enables management of a wide variety of power meters and other metering devices. Can also manage wireless meters and sub-meters.

## Networking between units

- Wireless - ZigBee 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 (wireless) to BACnet IP / oBIX / EWS.
- Modbus to BACnet IP / oBIX / EWS.

## StruxureWare™ Building Expert

All MPM models have an embedded web server hosting Building Expert, a web-based intelligent building management system that allows complete configuration and management of small sites. Building Expert offers dashboards, maps, graphical programming, scripting, scheduling, trend logging and more. It is the perfect mini-iBMS for small and medium buildings. It can also be integrated with other SmartStruxure™ solutions.

# SmartStruxure™ Lite Multi-Purpose Manager Specifications

## Specifications

### Power

#### Voltage

24VAC;  $\pm 15\%$ ; 50/60HZ; Class 2.

24VDC  $\pm 10\%$

#### Typical consumption

3 VA + Output (VAC)

1.2W + Output (VDC)

### General

#### Processor

ARM9 32-bit, 400MHz

#### Memory

64MB flash

#### Storage

2GB flash for local storage

#### Real-time clock

Battery backed (10,000 hours)

#### Communication

ZigBee Pro, EnOcean, BACnet

CANbus (125-500 Kbps)

Ethernet (10/100 Mbps)

### Enclosure

#### Material

Rigid ABS

#### Dimensions

132mm (5.20 in) X126mm (4.96 in)

#### Rating

UL94V0-5VB

#### Mounting

Din-rail, wall or ceiling mount

### Environmental

#### Operating Temperature

0°C (32°F) to 60°C (140°F)

#### Storage Temperature

-20°C (-4°F) to 60°C (140°F)

#### Relative Humidity

0 to 90% non-condensing

### Inputs

#### Quantity

6 universal inputs (configurable)

#### Analog inputs

Current: 4-20mA with 249  $\Omega$  external resistor

Voltage: 0-10V

#### Digital inputs

Dry contacts

#### Thermistor

1 k $\Omega$  to 100 k $\Omega$

#### Resolution

14-bit

### Outputs

#### Analog (x4)

0-12V, nominal 50mAmax each, 12-bit resolution

#### Relay (x2)

24V, 1.1 Amp per relay

### RS485 (optional)

#### Supported protocols

Modbus

### EnOcean (optional)

#### Frequency

315MHz or 868MHz or 902MHz

#### Receiver Sensitivity

-95dBm

#### Conducted Output Power

5dBm

#### Range

Recommended: 45ft / 15m

Line of sight: 100ft / 30m

#### Antenna

External whip, RP SMA 0dBi

### ZigBee (optional)

#### Frequency

2400 – 2483.5MHz, 16RF channels

#### Data rate / Mod.type

250Kbps

#### Receiver Sensitivity

-101dBm / -105dBm (amplified)

#### Nominal Output Power

8dBm / 18dBm (amplified)

#### Range

Recommended to MPM: 150ft / 50m

Line of sight to MPM: 300ft / 100m

Recommended to peripherals: 50ft / 17m

Line of sight to peripherals: 100ft / 30m

#### Antenna

External whip, RP SMA 2.5dbi

### StruxureWare™ Building Expert

#### Software type

Embedded web interface

#### Local installation

None necessary

#### PDA/Tablet/Smartphone compatible

Yes, using compatible browsers

#### Browser compatibility

Firefox ESR

### Agency approvals

Energy Management Equipment, UL 916, Fourth Edition, December 23, 1998, rev. December 17, 2007

CSA Standard for Signal Equipment C22.2 No. 205-M1983 (R2004)

CFR47 FCC Part15, Subpart B:2009

ICES-003: Issue 4 (2004)

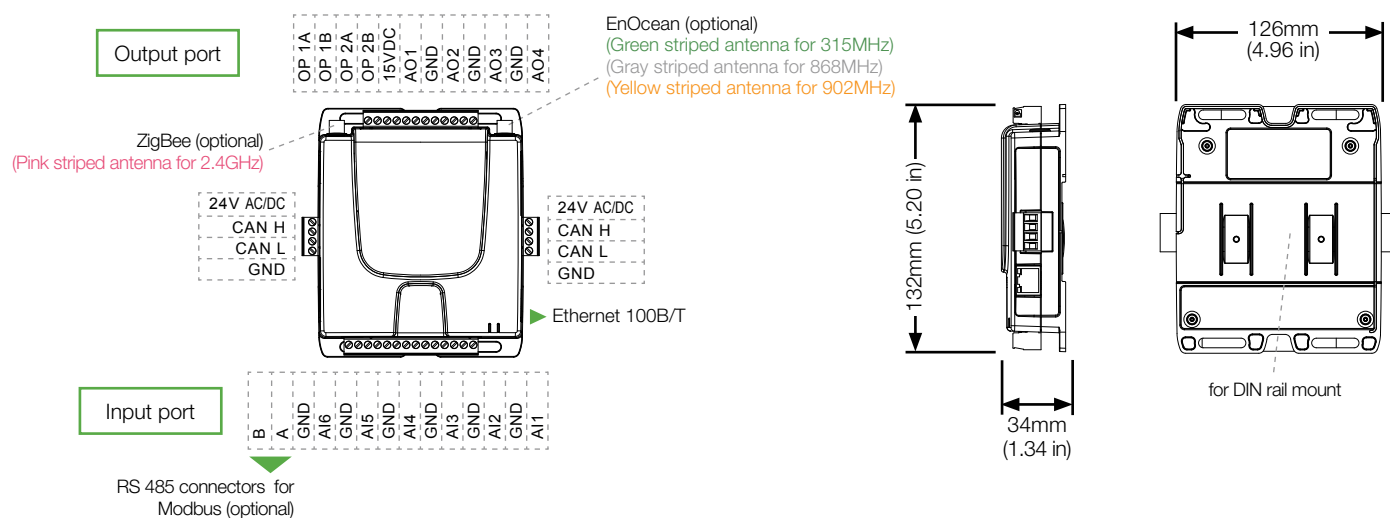
CE

Japanese Radio Law

RoHS



# SmartStruxure™ Lite Multi-Purpose Manager Specifications (continued)



## Ordering information

Part numbers	Manager		EnOcean*			ZigBee		I/O		VAV	
	Building Expert	StruxureWare integration	315 MHz	868 MHz	902 MHz	High power	High power for Japan	6 inputs	6 outputs	Modbus	Flow sensor Actuator
MPM-UN-CI4-5045	x	x	x			x		x	x	x	
MPM-UN-CG4-5045	x	x	x				x	x	x	x	
MPM-UN-DI4-5045	x	x		x		x		x	x	x	
MPM-UN-EI4-5045	x	x			x	x		x	x	x	
MPM-UN-C00-5045	x	x	x					x	x		
MPM-UN-C04-5045	x	x	x					x	x	x	
MPM-UN-D00-5045	x	x		x				x	x		
MPM-UN-D04-5045	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-0I0-5045	x	x				x		x	x		
MPM-UN-0G0-5045	x	x					x	x	x		
MPM-UN-004-5045	x	x						x	x	x	
MPM-UN-000-5045	x	x						x	x		

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

315MHz: Americas, Hong Kong, India, Japan, Thailand, Taiwan

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

902MHz: USA will transition to 902 MHz in 2013. Other countries may do so as well.