Product Selection Guide

SmartStruxure™ solution

Integrated building management system

Life Is On | Schneider Electric

SmartStruxure™ solution includes software, hardware, engineering and services that enable you to monitor, measure, and optimize your building's performance throughout its life cycle — saving energy while saving money and increasing occupant satisfaction. SmartStruxure solution facilitates the exchange and analysis of data from energy, lighting, fire safety and HVAC because you can't control what you don't measure.

Real world requirements

Our customers need to optimize their operations and energy consumption, enhance occupant comfort and productivity, future-ready aging facilities, and have anytime, anywhere access to their building systems.

So they got smart…

SmartStruxure solution

Real simple. Real smart. Real performance.

Real simple. Real smart. Real performance.

Your job is complicated — SmartStruxure solution helps you simplify by delivering the right information when, where, and how you want it.

- Personalized user interfaces
- Anytime, anywhere access and mobile apps
- Simplified day-to-day operations and engineering
- Attractive, user-friendly HTML graphics

SmartStruxure solution is a smart investment for today's needs and tomorrow's challenges. You can start new or modernize, and expand from a single building to a global enterprise.

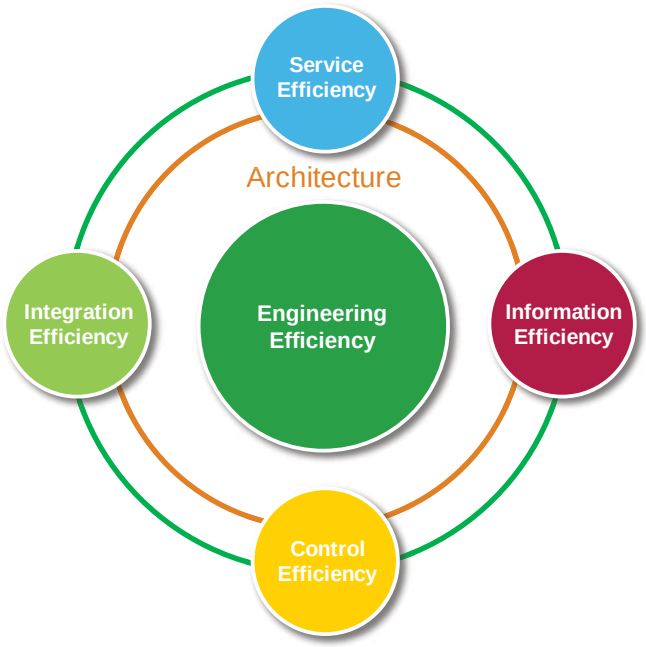
- Scalable system based on native open protocols
- Flexible, IP-enabled architectures
- System-to-system, and system-to-device integration
- IoT-ready and secure

SmartStruxure solution delivers an efficient enterprise by optimizing your building's performance and saving up to 30% or more of your energy costs.

- Optimize energy and operational performance
- Maintain occupant comfort and increase facility value
- Actionable intelligence across all building systems
- Connected services for enhanced performance and peace of mind

Building's Digital Hub

SmartStruxure™



One global platform

Secure, connected, open

Engineering Efficiency

- Lower labor costs to design, build, install & maintain
- Lower project risk

Integration Efficiency

- Lower cost and easy to integrate
- System-to-system & system-to-device integration
- Leverage Schneider Electric-wide solutions

Service Efficiency

- Simplify system modernization
- Optimize energy, asset and space usage

Information Efficiency

- Customize reports and user interfaces
- Visualize analytics and big data

Control Efficiency

- Competitive & reliable control infrastructure
- Easy to install

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SmartStruxure™ Solution

LonWorks® Controllers

BACnet® Controllers

Additional EcoBuilding Resources

Disclaimers

- Not all products in the guide may be available in every country, please check availability with the local Schneider Electric office.
- Some product images are not images of the exact model, but are represented by a “series” image.
- Information within this guide is subject to change without notice.
- Schneider Electric is not responsible for inadvertent typographical errors or omissions.

Flexible, personalized user workspace

SmartStruxure solution provides an attractive, modern interface that can be organised by individual users to suit their needs. These preferences follow users regardless of where they log on. The information each user can access, such as graphics and alarms, can be managed at the job function, or individual level for added security and accountability.

StruxureWare™ Building Operation

StruxureWare Building Operation, the software that powers SmartStruxure solution, provides integrated monitoring, control, and management of energy, lighting, fire safety, and HVAC. It is a centralized system with distributed intelligence that optimizes facility performance. It is easy-to-use with robust functionality that leverages prior investments with Schneider Electric.

The Enterprise Server is the Windows® application version of a StruxureWare Building Operation Server that collects site-wide data for aggregation and archiving, yet is flexible enough to run stand-alone applications. It also serves as a single point of administration through WorkStation, WebStation and Mobile Applications. Reports Server software is included with the Enterprise Server and enables advanced reporting capabilities*.

WorkStation is the interface where users and engineers access their Automation Servers and Enterprise Servers. You can view and manage graphics, alarms, scheduling, trend logs, and reports. Engineers can configure and maintain all aspects of the StruxureWare Building Operation software.

WebStation provides a built-in, portable, fully functioning user interface to access the Automation and Enterprise Servers using a web browser. Users can view and manage graphics, alarms, schedules, trend logs, and reports as well as create, edit, or remove user accounts.

Technician Tool Mobile Application is a user interface for day-to-day operation of StruxureWare Building Operation software. It can connect to Automation Servers and Enterprise Servers, and provides easy access to the system from anywhere in the world. Users can view and manage values, alarms, schedules, and trend logs lists.

Web Services enable systems to easily connect with one another and share information securely across the internet using standard HTTP and XML-based protocols. Examples: weather forecasts and utility prices.

EcoStruxure™ Web Services provide common and easy integration between Schneider Electric products. It has additional functionality, including browse the other system's exposed objects, Read/Write real time values, receive and acknowledge active alarms, read historical (trend log) data. They can be used with third parties if the standards are implemented.

SmartDriver is a custom driver that allows connection with other intelligent building devices that use non-native protocols (available with StruxureWare Building Operation v1.8.1 and later versions).

Part Number	Product Name	Description
Enterprise Server		
SXWSWESXX00001	SW-ES-BASE-0	Enterprise Server license for a PC server, includes Reports Server license
WorkStation**		
SXWSWWORK00001	SW-STATION-STD-0	WorkStation Standard, 1 concurrent user license
SXWSWWORK00002	SW-STATION-PRO-0	WorkStation Professional, 1 concurrent user license. Professional WorkStation version includes Editor licensing (Includes TGML Graphics editor, Function Block & Script Programming)
SXWSWEDIT00001	SW-EDITORS-0	Programming & Graphics Editor licensing, 1 concurrent user license. TGML Graphics editor, Function Block & Script Programming license only (Used for adding to existing WorkStation Standard license)
Add-ons		
SXWSWEWSX00001	SW-EWS-1	EcoStruxure Web Services (run-time) option – Consume only
SXWSWEWSX00002	SW-EWS-2	EcoStruxure Web Services (run-time) option – Serve & Consume
SXWSWEWSX00003	SW-EWS-3	EcoStruxure Web Services (run-time) option – Serve & Consume, plus Historical trend log data
SXWSWGWSX00001	SW-GWS-1	Web Services (Generic Consume) option
LonWorks Control Networking Software		
SXWSWLNSX00001	SW-OPEN-LNS-SERVER	Activation Key for OpenLNS Server
Technician Tool Mobile App		
SXWSWMAPP00001	SW-MAP-1	Technician Tool Mobile Application, 1 concurrent user license
SXWSWMAPP00002	SW-MAP-2	Technician Tool Mobile Application, 10 concurrent users license
SXWSWMAPP00003	SW-MAP-3	Technician Tool Mobile Application, 25 concurrent users license
SXWSWMAPP00004	SW-MAP-4	Technician Tool Mobile Application, unlimited concurrent users license
SmartDriver		
SXWSWSDRV00001	SW-SMARTDRIVER-1	Communication to external devices via SmartDriver, for one SmartDriver

* The Enterprise Server is BACnet B-OWS and B-BC certified; the testing for this certification included the use of StruxureWare Building Operation WorkStation as the HMI.

** Note: There is no part number for WebStation; it is a default feature of the Automation Server and Enterprise Server (with no need for additional licensing).

(continued)

Power Manager for SmartStruxure is an embedded software module that enables energy usage to monitored, managed and optimized in the same system as HVAC, lighting and fire safety. Designed specifically for non-electrical experts in buildings with non-critical power needs. (Not available in all regions.)

AdaptiApps Custom User App Development Kit is a cloud-based solution to design and deploy customizable apps for end users to increase satisfaction and productivity. With AdaptiApps, users have a simple, personalized app designed specifically for their individual roles, giving them access to monitor and control systems and equipment relevant to them. AdaptiApps consists of two parts: 1) Design & Deployment cloud-based environment for system integrators; 2.) Multiplatform Shell App to host apps for site occupants.

Part Number	Product Name	Description
Power Manager for SmartStruxure		
PSWPMNCZZSPEZZ	Power Manager Base	Power Manager software module license for a PC server (no maintenance subscription included)
Device Licensing - A la Carte		
PSWDENCZZNPEZZ	PME Entry-Range Device	
PSWDMNCZZNPEZZ	PME Mid-Range Device	
PSWDSNCZZNPEZZ	PME High-Range Device	
AdaptiApps - Mandatory Part Numbers		
SXWADPACC10001	AdaptiApps project creation	AdaptiApps Design license (1 project). A project has a unique name, is dedicated to a customer and might have different revisions.
SXWADPDEP10010	App deployment (up to 10 devices) (*)	A deployment license is needed to deploy AdaptiApps projects on devices. This license is mandatory for the first year and optional afterward: the license is strongly recommended when using BYOD deployment process It provides support for the latest devices (OS, new equipment) and deployment of new versions of the App. Several deployment licenses can be linked to a single project to fit the exact number of deployed devices.
SXWADPDEP10050	App deployment (up to 50 devices) (*)	
SXWADPDEP10100	App deployment (up to 100 devices) (*)	
SXWADPDEP10500	App deployment (up to 500 devices) (*)	
SXWADPDEP10999	App deployment (unlimited devices) (**)	
AdaptiApps - Optional Part Numbers		
SXWADPDES10005	Ready to deploy Apps of 1- 5 pages	A 'ready to deploy' project for branches/partners who don't want to spend time designing a User App.
SXWADPDES10010	Ready to deploy Apps of 6-10 pages	
SXWADPDES10999	Ready to deploy Apps of 11+ pages	
SXWADPWID10001	Specific widget development	A dedicated service to design custom Widgets for branches/partners.
N/A	Widget software development kit (SDK)	The AdaptiApps Widget SDK for branches/partners who want to be autonomous and develop their own Widgets – Available on request (AdaptiAppsRequest@schneider-electric.com)
SXWADPPRE10001	End User App deployment on premise	IT expertise for setting up on-premise deployment server, for projects which cannot be deployed from the cloud for cybersecurity reasons

(*) Only supported by Managed Device / BYOD Customized deployment method.

(**) Supported by Managed Device / BYOD Customized and Generic: this requires an unlimited devices deployment license.

Note: SmartStruxure does require use of the EcoStruxure™ Web Services (EWS) interface for communications with AdaptiApps. However, purchase of the EWS add-on option is not required for use with AdaptiApps.

Functionality matrix

WorkStation Standard - WorkStation software without graphics editor, script and function block programming editors.
WorkStation Pro - WorkStation software including graphics editor, script and function block programming editors.
WebStation - Direct access to an Automation Server and/or Enterprise Server using a web browser.
WebReports - Direct access to the Reports Server using a web browser.
Mobile App: Technician Tool - Direct access to an Automation Server and/or Enterprise Server using a mobile application.

• Full functionality o Partial functionality	WorkStation Standard	WorkStation Pro	WebStation	WebReports	Mobile App: Technician Tool	WorkPlace Tech Editor
Alarms						
View alarms	•	•	•		•	
Manage alarms	•	•	•		o *1	
Edit alarms	•	•	o *2			
Create alarms	•	•				
Support for flashing & audible alarms	•	•				
BACnet						
View priority array	•	•	•			
Edit priority array	•	•	•			
Create devices (includes device discovery)	•	•				
Manage BACnet backup and restore	•	•				
Graphics						
View Graphics	•	•	•			
Create and edit graphics		•				
Logs & Extended Logs						
View logs	•	•	•		• *3	
Edit logs	•	•	o *4			
Create logs	•	•	o *5			
View extended logs	•	•	•			
Edit extended logs	•	•	o *4			
Create extended logs	•	•				
LON						
Create devices (includes device discovery)	•	•				
Manage devices	•	•				
View Network Variables (NVs) and Configuration Parameters (CPs)	•	•	•		• *6	
Edit NVs and CPs	•	•	•		• *6	
Modbus						
Create devices	•	•				
Manage devices	•	•				
View values	•	•	•		•	
Edit values	•	•	•		•	
Point Values - e.g. Temperature Setpoint						
View values	•	•	•		•	
Edit values - e.g. "change setpoint"	•	•	•		•	
Programs						
Create and edit customised programs		•				
View graphical function block viewer	•	•				
Program MNL/MNB controllers						• *7

* 1 Supports alarm acknowledgement.
* 2 Edit alarm ranges, text, delay times, shunt variables, assignments, deadband.
* 3 View in list format.
* 4 Change parameters - e.g. interval time.
* 5 Create interval log type.
* 6 NVs and CPs are displayed only in SI units.
* 7 MicroSoft Visio required

Functionality matrix, continued

• Full functionality o Partial functionality	WorkStation Standard	WorkStation Pro	WebStation	WebReports	Mobile App: Technician Tool
Reports					
View reports	•	•	•	•	
Edit reports	•	•	• *8	•	
Create & configure reports	•	•			
Administer reports				•	
Schedules & Calendars					
View schedules and calendars	•	•	•		•
Edit schedules and calendars	•	•	o *9		o *9
Create schedules and calendars	•	•			
Users & User Groups					
Create and edit users	•	•	o *10		
Create and edit user's group membership	•	•	o *10		
Create and edit groups	•	•			
Create and edit permissions	•	•			
User Experience					
View customised workspaces	•	•	•		
Log on as windows Active Directory user	•	•	•		
Automatic guest account log on			•		
Password management	•	•	•		
Create and edit saved searches	•	•			
View saved search	•	•	•		
Ad hoc search	•	•	•		
Kiosk mode			•		
Bookmarking to a particular web view			•	•	
Support for localisation	•	•	•		•
Support for translation	•	• *11	•	o *12	•
Ability to change language on the client side	•	•	•		
Other					
Configure & edit I/O points, field buses, and communication ports	•	•			
Create and edit logical structure	•	•			
Create and edit viewers, panels and workspaces	•	•			
View & configure Watch pane	•	•	o *13		
View events	•	•	•		
Administer backup/restore of database	•	•			
Manage archiving	•	•			

* 8 Edit some parameters per report, save changes or make a copy of the report with changes.
* 9 Edit existing only; cannot create or edit recurring calendar events.
*10 Cannot assign permissions.
*11 Translation is only supported in the WorkStation interface; it is not supported for graphics and programming editors.
*12 Report text can be edited and translated using a Report Definition Language (RDL) editor such as Microsoft® Report Builder.
*13 Configuration changes cannot be saved.

SmartX Controller – AS-P

The SmartX Controller – AS-P is a SmartStruxure server device at the Automation Server Level of the architecture. With superior performance, the AS-P can be used in place of the Automation Server in any application. It simplifies system integration and transition, and is the preferred choice for large, complex enterprise applications. It also enhances integration performance of offers such as Connected Services, Power Manager for SmartStruxure, and AdaptiApps custom user apps.

SmartX Controller – AS-P

The future of building management is here!

The SmartX Controller – AS-P and AS-B feature dual Ethernet ports to elevate BACnet field bus communication to the IP level. Modernize the BMS while keeping in place legacy field buses and devices to future-ready current systems and move buildings into the 21st century!

	AS-P	ASP-SMK
Part Number	**SXWASPXXX10001**	**SWXASPXXX1S001**
Communications		
Communication Interface	LonWorks FTT-10, BACnet/IP, BACnet MS/TP, Modbus TCP (Client+Server), Modbus serial (Master+Slave), EWS, Generic WebSevice consume	LonWorks FTT-10, BACnet/IP, BACnet MS/TP, Modbus TCP (Client+Server), Modbus serial (Master+Slave), EWS, Generic WebSevice consume
Software		
Programability	Function Block/Script Programmable	Function Block/Script Programmable
Physical		
Dimensions	90 W x 114 H x 64 D mm (3.60 W x 4.50 H x 2.50 D in.)	90 W x 114 H x 64 D mm (3.60 W x 4.50 H x 2.50 D in.)
Weight (including baseplate)	0.245 kg (0.54 lb)	0.245 kg (0.54 lb)
Power		
Power	24 VDC	24 VDC
Consumption	10 W	10 W
Environmental		
Operating Range	0°C to 50°C (32°F to 122°F) 0-95% RH (non-condensing)	0°C to 50°C (32°F to 122°F) 0-95% RH (non-condensing)
CPU Internals		
CPU	SPEAr320S, ARM926 core	SPEAr320S, ARM926 core
Memory	4 GB	4 GB
Battery	No	No
Real time clock	Yes -30 days backup/Super Capacitor	Yes -30 days backup/Super Capacitor
External Features		
Enclosure rating	Eco Friendly ABS/PC, UL94 5VB, IP 20 (<12.5 mm protection)	Eco Friendly ABS/PC, UL94 5VB, IP 20 (<12.5 mm protection)
HOA Switches (DO/AO)	N/A	N/A
Manual Override of Outputs	N/A	N/A
Digital Status LEDs	Yes	Yes
Service Port	Yes	Yes
Terminals		
I/O Expansion	Yes - Up to 29 modules/464 max I/O	Yes - Up to 29 modules/464 max I/O
External Enclosure/Mounting		
Mounting	DIN-rail or wall mount	DIN-rail or wall mount
Certifications		
BTL	Yes	Yes
FCC	47 CFR § 15, Class B (Emission)	47 CFR § 15, Class B (Emission)
Industry Canda (IC)	ICES-003 (Emission)	ICES-003 (Emission)
UL	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)
C-UL US	Yes	Yes
CE - EU	Yes	Yes
WEEE - Directive of the European Union	Yes	Yes
RoHS Directive	Yes	Yes
RCM	Yes	Yes
US Patent	8 207 842, 8 271 102, 7 994 438	8 207 842, 8 271 102, 7 994 438
UL-864	No	Yes

*Notes: SmartStruxure solution installations or BMS transitions requiring UL-864 certifications must use the SmartX Controller AS-P-SMK (listed above).

SmartX Controller - AS-P and AS-B conform to the BACnet® Building Controller (B-BC) profile at protocol revision 12 by the BACnet Testing Laboratories (BTL®). StruxureWare™ Building Operation v1.9 is the certified firmware revision.

Power Supply and Module Terminal Bases

The PS-24V is a power supply module that accommodates 24 VAC or 24 VDC input power. Each power supply module delivers reliable and consistent output power of 24 VDC to the backplane. It can deliver power to the AS-P and a number of I/O modules calculated from the Power Budget Table (located below). If more I/O modules are needed, another power supply can be added to the bus. The power supplies are isolated from each other while also providing communication pass-through.

PS-24V
Automation Server Power Supply

Part Number	Product Name	Description
SXWPS24VX10001	PS-24V	Power Supply 24 VAC or 21-30 VDC
SXWTBPSW110001	TB-PS-W1	Terminal Base Power Supply (Terminal Base required for each power supply)
SXWTBASW110002	TB-ASP-W1	Terminal Base AS-P (Terminal base required for each AS-P)
SXWTBIOW110001	TB-IO-W1	Terminal Base I/O (Terminal Base required for each I/O module)

I/O Module
Terminal Base and Module Detail

NOTE: An appropriate terminal base is required for each module, including the AS-P, Power Supply and I/O Modules. See the above table for the correct part numbers.

Power Selection Table

Power Requirements	
SmartX Controller – AS-P	24 VDC / 10 W
SmartX Controller – AS-B	24 VDC / 10 W 24 VAC / 15 VA
Power Requirements - Input only I/O	**24 VDC Power**
DI-16	1.6 W
RTD-DI-16	1.6 W
UI-16	1.8 W
Power Requirements - Output only I/O	**24 VDC Power**
DO-FA-12	1.8 W
DO-FA-12-H	1.8 W
DO-FC-8	2.2 W
DO-FC-8-H	2.2 W
AO-8	4.9 W
AO-8-H	4.9 W
AO-V-8	0.7 W
AO-V-8-H	0.7 W
Power Requirements - Mixed I/O	**24 VDC Power**
UI-8/DO-FC-4	1.9 W
UI-8/DO-FC-4-H	1.9 W
UI-8/AO-4	3.2 W
UI-8/AO-4-H	3.2 W
UI-8/AO-V-4	1.0 W
UI-8/AO-V-4-H	1.0 W

Please refer to the appropriate Data Sheets for more information.

I/O Modules

The Automation Server includes support for a broad spectrum of I/O modules. The variety of modules available ensures the right combination of points for any project, which keeps costs down for our customers. Some modules are available with Hand/Off/Auto (HOA) switches to provide override control of the outputs.

UI-16
16 Channel Universal Input

DI-16
16 Channel Digital Input

AO-8, AO-8-H
8 Channel Analog Output

	UI-16	DI-16	AO-8, AO-8-H
Part Number	**SXWUI16XX10001**	**SXWDI16XX10001**	**SXWAO8XXX10001, SXWAO8HXX10001**
Physical			
Dimensions	90 W x 114 H x 64 D mm (3.60 W x 4.50 H x 2.50 D in.)	90 W x 114 H x 64 D mm (3.60 W x 4.50 H x 2.50 D in.)	90 W x 114 H x 64 D mm (3.60 W x 4.50 H x 2.50 D in.)
Weight (including baseplate)	0.269 kg (0.59 lb.)	0.255 kg (0.56 lb.)	0.279 kg (0.62 lb.)
Power			
Power	24 VDC	24 VDC	24 VDC
Consumption	1.8 W	1.6 W	0.7 W
Environmental			
Operating Range	0 °C to 50 °C (32 °F to 122 °F) 0-95% RH (non-condensing)	0 °C to 50 °C (32 °F to 122 °F) 0-95% RH (non-condensing)	0 °C to 50 °C (32 °F to 122 °F) 0-95% RH (non-condensing)
External Features			
Enclosure rating	Eco Friendly ABS/PC, UL94 5VB, IP 20 (<12.5 mm protection)	Eco Friendly ABS/PC, UL94 5VB, IP 20 (<12.5 mm protection)	Eco Friendly ABS/PC, UL94 5VB, IP 20 (<12.5 mm protection)
HOA Switches (DO/AO)	No	No	Available on -H model
Digital Status LEDs	Yes	Yes	No
Service Port	No	No	No
Terminals			
I/O Terminals	Terminal base	Terminal base	Terminal base
External Enclosure/Mounting			
Mounting	DIN-rail or wall mount	DIN-rail or wall mount	DIN-rail or wall mount
Certifications			
FCC	47 CFR § 15, Class B (Emission)	47 CFR § 15, Class B (Emission)	47 CFR § 15, Class B (Emission)
Industry Canada (IC)	ICES-003 (Emission)	ICES-003 (Emission)	ICES-003 (Emission)
UL	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)
C-UL US	No	No	No
CE - EU	Yes	Yes	Yes
WEEE - Directive of the European Union	Yes	Yes	Yes
RoHS Directive	Yes	Yes	Yes
RCM	Yes	Yes	Yes
US Patent	7 994 438	7 994 438	7 994 438

I/O Modules, continued

AO-V-8 , AO-V-8-H
8 Channel Analog Output
Voltage Points

DO-FA-12 , DO-FA-12-H
12 Channel Digital Output,
Form-A

DO-FC-8, DO-FC-8-H
8 Channel Digital Output,
Form-C

	AO-8-V, AO-8-V-H	DO-FA-12, DO-FA-12-H	DO-FC-8, DO-FC-8-H
Part Number	**SXWAOV8XX10001, SXWAOV8HX10001**	**SXWDOA12X10001, SXWDOA12H10001**	**SXWDOC8XX10001, SXWDOC8HX10001**
Physical			
Dimensions	90 W x 114 H x 64 D mm (3.60 W x 4.50 H x 2.50 D in.)	90 W x 114 H x 64 D mm (3.60 W x 4.50 H x 2.50 D in.)	90 W x 114 H x 64 D mm (3.60 W x 4.50 H x 2.50 D in.)
Weight (including baseplate)	0.279 kg (0.62 lb.)	0.317 kg (0.70 lb.)	0.332 kg (0.73 lb.)
Power			
Power	24 VDC	24 VDC	24 VDC
Consumption	0.7 W	1.8 W	2.2 W
Environmental			
Operating Range	0 °C to 50 °C (32 °F to 122 °F) 0-95% RH (non-condensing)	0 °C to 50 °C (32 °F to 122 °F) 0-95% RH (non-condensing)	0 °C to 50 °C (32 °F to 122 °F) 0-95% RH (non-condensing)
External Features			
Enclosure rating	Eco Friendly ABS/PC, UL94 5VB, IP 20 (<12.5 mm protection)	Eco Friendly ABS/PC, UL94 5VB, IP 20 (<12.5 mm protection)	Eco Friendly ABS/PC, UL94 5VB, IP 20 (<12.5 mm protection)
HOA Switches (DO/AO)	Available on -H model	Available on -H model	Available on -H model
Digital Status LEDs	No	Yes	Yes
Service Port	No	No	No
Terminals			
I/O Terminals	Terminal base	Terminal base	Terminal base
External Enclosure/Mounting			
Mounting	DIN-rail or wall mount	DIN-rail or wall mount	DIN-rail or wall mount
Certifications			
FCC	47 CFR § 15, Class B (Emission)	47 CFR § 15, Class B (Emission)	47 CFR § 15, Class B (Emission)
Industry Canada (IC)	ICES-003 (Emission)	ICES-003 (Emission)	ICES-003 (Emission)
UL	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)
C-UL US	No	No	Yes
CE - EU	Yes	Yes	Yes
WEEE - Directive of the European Union	Yes	Yes	Yes
RoHS Directive	Yes	Yes	Yes
RCM	Yes	Yes	Yes
US Patent	2002/96/EC	2002/96/EC	2002/96/EC

I/O Modules, continued

UI-8/AO-4, UI-8/AO-4-H
8 Channel Universal Inputs
with 4 Analog Outputs

UI-8/AO-V-4, UI-8/AO-V-4-H
8 Channel Universal Inputs
with 4 Channel Voltage
Outputs
(UI-8/AO-V-4-H shown)

UI-8/DO-FC-4, UI-8/DO-FC-4-H
8 Channel Universal Inputs with 4
Channel Digital Outputs, Form-C

	UI-8/AO-4, UI-8/AO-4-H	UI-8/AO-V-4, UI-8/AO-V-4-H	UI-8/DO-FC-4, UI-8/DO-FC-4-H
Part Number	**SXWUI8A4X10001, SXWUI8A4H10001**	**SXWUI8V4X10001, SXWUI8V4H10001**	**SXWUI8D4X10001, SXWUI8D4H10001**
Physical			
Dimensions	90 W x 114 H x 64 D mm (3.60 W x 4.50 H x 2.50 D in.)	90 W x 114 H x 64 D mm (3.60 W x 4.50 H x 2.50 D in.)	90 W x 114 H x 64 D mm (3.60 W x 4.50 H x 2.50 D in.)
Weight (including baseplate)	0.276 kg (0.61 lb.)	0.276 kg (0.61 lb.)	0.304 kg (0.67 lb.)
Power			
Power	24 VDC	24 VDC	24 VDC
Consumption	3.2 W	1.0 W	1.9 W
Environmental			
Operating Range	0 °C to 50 °C (32 °F to 122 °F) 0-95% RH (non-condensing)	0 °C to 50 °C (32 °F to 122 °F) 0-95% RH (non-condensing)	0 °C to 50 °C (32 °F to 122 °F) 0-95% RH (non-condensing)
External Features			
Enclosure rating	Eco Friendly ABS/PC, UL94 5VB, IP 20 (<12.5 mm protection)	Eco Friendly ABS/PC, UL94 5VB, IP 20 (<12.5 mm protection)	Eco Friendly ABS/PC, UL94 5VB, IP 20 (<12.5 mm protection)
HOA Switches (DO/AO)	Available on -H model	Available on -H model	Available on -H model
Digital Status LEDs	Yes	Yes	Yes
Service Port	No	No	No
Terminals			
I/O Terminals	Terminal base	Terminal base	Terminal base
External Enclosure/Mounting			
Mounting	DIN-rail or wall mount	DIN-rail or wall mount	DIN-rail or wall mount
Certifications			
FCC	47 CFR § 15, Class B (Emission)	47 CFR § 15, Class B (Emission)	47 CFR § 15, Class B (Emission)
Industry Canada (IC)	ICES-003 (Emission)	ICES-003 (Emission)	ICES-003 (Emission)
UL	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)
C-UL US	Yes	Yes	Yes
CE - EU	Yes	Yes	Yes
WEEE - Directive of the European Union	Yes	Yes	Yes
RoHS Directive	Yes	Yes	Yes
RCM	Yes	Yes	Yes
US Patent	7 994 438	7 994 438	7 994 438

I/O Modules, continued

RTD-DI-16
16 Channel Inputs (RTD and Digital) Combination Module

	RTD-DI-16
Part Number	**SXWRTD16X10001**
Physical	
Dimensions	90 W x 114 H x 64 D mm (3.60 W x 4.50 H x 2.50 D in.)
Weight (including baseplate)	0.269 kg (0.59 lb.)
Power	
Power	24 VDC
Consumption	1.6 W
Environmental	
Operating Range	0 °C to 50 °C (32 °F to 122 °F) 0-95% RH (non-condensing)
External Features	
Enclosure rating	Eco Friendly ABS/PC, UL94 5VB, IP 20 (<12.5 mm protection)
HOA Switches (DO/AO)	No
Digital Status LEDs	Yes
Service Port	No
Terminals	
I/O Terminals	Terminal base
External Enclosure/Mounting	
Mounting	DIN-rail or wall mount
Certifications	
FCC	47 CFR § 15, Class B (Emission)
Industry Canada (IC)	ICES-003 (Emission)
UL	UL-916 (Energy Management Equipment)
C-UL US	Yes
CE - EU	Yes
WEEE - Directive of the European Union	Yes
RoHS Directive	Yes
RCM	Yes
US Patent	7 994 438

I/O Modules - Inputs and Outputs

	UI-16	DI-16	AO-8, AO-8-H	AO-8-V, AO-8-V-H	DO-FA-12, DO-FA-12-H	DO-FC-8, DO-FC-8-H
Part Number	SXWUI16XX10001	SXWDI16XX10001	SXWAO8XXX10001, SXWAO8HXX10001	SXWAOV8XX10001, SXWAOV8HX10001	SXWDOA12X10001, SXWDOA12H10001	SXWDOC8XX10001, SXWDOC8HX10001
Universal Inputs	16					
Digital Contact	•					
Digital Counter - Low Speed						
Digital Counter - Medium Speed	•					
Digital Counter - High Speed						
Digital Supervised	•					
Analog Voltage - 0-1 V						
Analog Voltage - 0-5 V						
Analog Voltage - 0-10 V	•					
Analog Voltage - 2-10 V						
Analog Current - 0-20 mA	•					
Analog Current - 4-20 mA						
Analog Resistance	•					
Analog Thermistor - 10 k	•					
Analog Thermistor - 1.8 k	•					
Analog Thermistor - 1 k	•					
Analog Thermistor - 20 k	•					
Analog Thermistor - 2.2 k	•					
Analog RTD - Pt100						
Analog RTD - Pt1000						
Analog RTD - Ni1000						
Analog RTD - LG Ni1000						
Digital Inputs		16				
Digital Contact		•				
Counter - Low Speed						
Counter - Medium Speed		•				
Counter - High Speed						
Digital Outputs					12	8
Form A, SPST					•	
Form C, SPDT						•
Triac						
Analog Outputs			8	8		
Voltage - 0-10 V			•	•		
Current - 0-20 mA			•			

I/O Modules - Inputs and Outputs, continued

	UI-8/AO-4, UI-8/AO-4-H	UI-8/AO-V-4, UI-8/AO-V-4-H	UI-8/DO-FC-4, UI-8/DO-FC-4-H	RTD-DI-16
Part Number	SXWUI8A4X10001, SXWUI8A4H10001	SXWUI8V4X10001, SXWUI8V4H10001	SXWUI8D4X10001, SXWUI8D4H10001	SXWRTD16X10001
Universal Inputs	8	8	8	16*
Digital Contact	•	•	•	•
Digital Counter - Low Speed				
Digital Counter - Medium Speed	•	•	•	•
Digital Counter - High Speed				
Digital Supervised	•	•	•	
Analog Voltage - 0-1 V				
Analog Voltage - 0-5 V				
Analog Voltage - 0-10 V	•	•	•	
Analog Voltage - 2-10 V				
Analog Current - 0-20 mA	•	•	•	
Analog Current - 4-20 mA				
Analog Resistance	•	•	•	•
Analog Thermistor - 10 k	•	•	•	
Analog Thermistor - 1.8 k	•	•	•	
Analog Thermistor - 1 k	•	•	•	
Analog Thermistor - 20 k	•	•	•	
Analog Thermistor - 2.2 k	•	•	•	
Analog RTD - Pt100				•
Analog RTD - Pt1000				•
Analog RTD - Ni1000				•
Analog RTD - LG Ni1000				•
Digital Inputs				
Digital Contact				
Counter - Low Speed				
Counter - Medium Speed				
Counter - High Speed				
Digital Outputs			4	
Form A, SPST				
Form C, SPDT			•	
Triac				
Analog Outputs	4	4		
Voltage - 0-10 V	•	•		
Current - 0-20 mA	•			

SmartX Controller – AS-B

The SmartX Controller – AS-B is the most compact, all-in-one BMS. It features flexible on-board universal I/O configurations and built-in power supply. A SmartStruxure server device, its powerful, compact design is ideal for small-to-medium main plant control applications. It offers lower total installation costs.

SmartX Controller – AS-B

Note: Screw terminal blocks for the AS-B and AS-BL must be ordered separately. Please find the AS-B Connector Kit part number in the Accessories section on page S17.

	AS-B-24(H)	AS-B-36(H)
Part Number	**SXWASB24(X,H)10001**	**SXWASB36(X,H)10001**
Communications		
Communication Interface	BACnet/IP, BACnet MS/TP, Modbus TCP (Client+Server), Modbus serial (Master+Slave), EWS, Generic WebSevice consume	BACnet/IP, BACnet MS/TP, Modbus TCP (Client+Server), Modbus serial (Master+Slave), EWS, Generic WebSevice consume
Software		
Programability	Function Block/Script Programmable	Function Block/Script Programmable
Physical		
Dimensions	198 W x 110 H x 64 D mm (7.8 W x 4.3 H x 2.5 D in.)	198 W x 110 H x 64 D mm (7.8 W x 4.3 H x 2.5 D in.)
Weight (including baseplate)	0.504 kg (1.111 lb)	0.504 kg (1.111 lb)
Power		
Power	24 VAC/DC	24 VAC/DC
Consumption	10 W	10 W
Environmental		
Operating Range	0°C to 50°C (32°F to 122°F) 0-95% RH (non-condensing)	0°C to 50°C (32°F to 122°F) 0-95% RH (non-condensing)
CPU Internals		
CPU	SPEAr320S, ARM926 core	SPEAr320S, ARM926 core
Memory	4 GB	4 GB
Battery	No	No
Real time clock	Yes -30 days backup/Super Capacitor	Yes -30 days backup/Super Capacitor
External Features		
Enclosure rating	Eco Friendly ABS/PC, UL94 5VB, IP 20 (<12.5 mm protection)	Eco Friendly ABS/PC, UL94 5VB, IP 20 (<12.5 mm protection)
HOA Switches (DO/AO)	N/A	N/A
Manual Override of Outputs	Yes - On 'H' model	Yes - On 'H' model
Digital Status LEDs	Yes	Yes
Service Port	Yes	Yes
Terminals		
I/O Expansion	No	No
External Enclosure/Mounting		
Mounting	DIN-rail or wall mount	DIN-rail or wall mount
Certifications		
BTL	Yes	Yes
FCC	47 CFR § 15, Class B (Emission)	47 CFR § 15, Class B (Emission)
Industry Canda (IC)	ICES-003 (Emission)	ICES-003 (Emission)
UL	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)
C-UL US	Yes	Yes
CE - EU	Yes	Yes
WEEE - Directive of the European Union	Yes	Yes
RoHS Directive	Yes	Yes
RCM	Yes	Yes
US Patent	8 207 842, 8 271 102, 7 994 438	8 207 842, 8 271 102, 7 994 438

*Notes: SmartStruxure solution installations or BMS transitions requiring UL-864 certifications must use the SmartX Controller AS-P-SMK (see page S6).

SmartX Controller - AS-P and AS-B conform to the BACnet® Building Controller (B-BC) profile at protocol revision 12 by the BACnet Testing Laboratories (BTL®). StruxureWare™ Building Operation v1.9 is the certified firmware revision.

SmartX Controller – AS-BL

The SmartX Controller – AS-BL features a BACnet/IP-only communication interface, making it an ideal high-density IP-based field controller. (Not available in all regions.)

SmartX Controller – AS-BL

Note: Screw terminal blocks for the AS-B and AS-BL must be ordered separately. Please find the AS-B Connector Kit part number in the Accessories section on page S17.

	AS-B-24(H)L	AS-B-36(H)L
Part Number	**SXWASB24(X,H)10002**	**SXWASB36(X,H)10002**
Communications		
Communication Interface	BACnet/IP, EWS, Generic WebSevice consume	BACnet/IP, EWS, Generic WebSevice consume
Software		
Programability	Function Block/Script Programmable	Function Block/Script Programmable
Physical		
Dimensions	198 W x 110 H x 64 D mm (7.8 W x 4.3 H x 2.5 D in.)	198 W x 110 H x 64 D mm (7.8 W x 4.3 H x 2.5 D in.)
Weight (including baseplate)	0.504 kg (1.111 lb)	0.504 kg (1.111 lb)
Power		
Power	24 VAC/DC	24 VAC/DC
Consumption	10 W	10 W
Environmental		
Operating Range	0°C to 50°C (32°F to 122°F) 0-95% RH (non-condensing)	0°C to 50°C (32°F to 122°F) 0-95% RH (non-condensing)
CPU Internals		
CPU	SPEAr320S, ARM926 core	SPEAr320S, ARM926 core
Memory	4 GB	4 GB
Battery	No	No
Real time clock	Yes -30 days backup/Super Capacitor	Yes -30 days backup/Super Capacitor
External Features		
Enclosure rating	Eco Friendly ABS/PC, UL94 5VB, IP 20 (<12.5 mm protection)	Eco Friendly ABS/PC, UL94 5VB, IP 20 (<12.5 mm protection)
HOA Switches (DO/AO)	N/A	N/A
Manual Override of Outputs	Yes - On 'H' model	Yes - On 'H' model
Digital Status LEDs	Yes	Yes
Service Port	Yes	Yes
Terminals		
I/O Expansion	No	No
External Enclosure/Mounting		
Mounting	DIN-rail or wall mount	DIN-rail or wall mount
Certifications		
BTL	Yes	Yes
FCC	47 CFR § 15, Class B (Emission)	47 CFR § 15, Class B (Emission)
Industry Canda (IC)	ICES-003 (Emission)	ICES-003 (Emission)
UL	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)
C-UL US	Yes	Yes
CE - EU	Yes	Yes
WEEE - Directive of the European Union	Yes	Yes
RoHS Directive	Yes	Yes
RCM	Yes	Yes
US Patent	8 207 842, 8 271 102, 7 994 438	8 207 842, 8 271 102, 7 994 438

*Notes: SmartStruxure solution installations or BMS transitions requiring UL-864 certifications must use the SmartX Controller AS-P-SMK (see page S6).

SmartX Controller - AS-P and AS-B conform to the BACnet® Building Controller (B-BC) profile at protocol revision 12 by the BACnet Testing Laboratories (BTL®). StruxureWare™ Building Operation v1.9 is the certified firmware revision.

SmartX Controller – AS-B & AS-BL – Inputs and Outputs

	AS-B-24(H)	AS-B-36(H)	AS-B-24(H)L	AS-B-36(H)L
Part Number	**SXWASB24(X,H)10001**	**SXWASB36(X,H)10001**	**SXWASB24(X,H)10002**	**SXWASB36(X,H)10002**
Universal Inputs/Outputs	12-UA 4-UB	20-UA 8-UB	12-UA 4-UB	20-UA 8-UB
Digital Contact	UA/UB I&O	UA/UB I&O	UA/UB I&O	UA/UB I&O
Digital Counter - Low Speed				
Digital Counter - Medium Speed				
Digital Counter - High Speed				
Digital Supervised				
Analog Voltage - 0-1V				
Analog Voltage - 0-5V				
Analog Voltage - 0-10V	UA/UB I&O	UA/UB I&O	UA/UB I&O	UA/UB I&O
Analog Voltage - 2-10V				
Analog Current - 0-20mA	UB I	UB I	UB I	UB I
Analog Current - 4-20mA				
Analog Resistance	UA/UB I	UA/UB I	UA/UB I	UA/UB I
Analog Thermistor - 10k	UA/UB I	UA/UB I	UA/UB I	UA/UB I
Analog Thermistor - 1.8k	UA/UB I	UA/UB I	UA/UB I	UA/UB I
Analog Thermistor - 1k	UA/UB I	UA/UB I	UA/UB I	UA/UB I
Analog Thermistor - 20k	UA/UB I	UA/UB I	UA/UB I	UA/UB I
Analog Thermistor - 2.2k	UA/UB I	UA/UB I	UA/UB I	UA/UB I
Analog RTD - Pt100				
Analog RTD - Pt1000	UA/UB I	UA/UB I	UA/UB I	UA/UB I
Analog RTD - Ni1000	UA/UB I	UA/UB I	UA/UB I	UA/UB I
Analog RTD - LG Ni1000	UA/UB I	UA/UB I	UA/UB I	UA/UB I
Digital Inputs	4		4	
Digital Contact	•		•	
Counter - Low Speed				
Counter - Medium Speed				
Counter - High Speed				
Digital Outputs	4	8	4	8
Form A, SPST	•	4	•	4
Form C, SPDT				
PWM	•	•	•	•
Triac		4		4

Key:
UA – Universal Type A
UB – Universal Type B
I – Input
O – Output

Automation Server Family of Modules

Accessories

The following accessories are available for the Automation Server Family of modules.

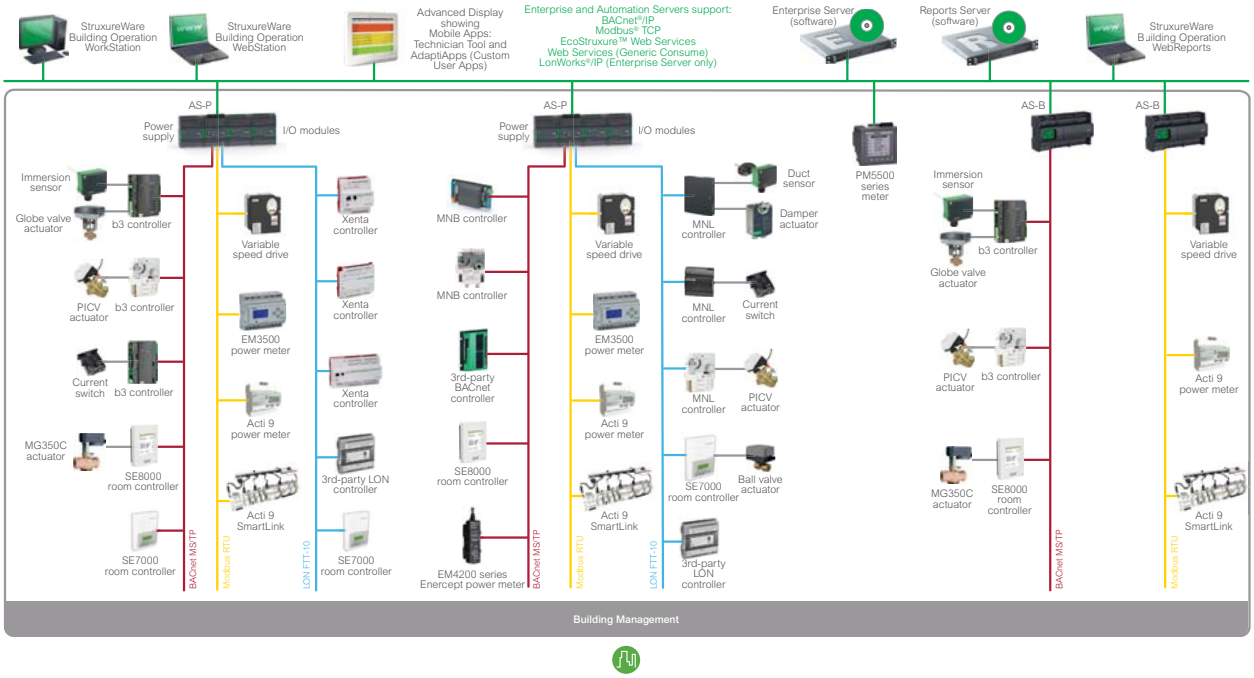
Part Number	Product Name	Description
SXWDINEND10001	DIN-RAIL-CLIP-25	DIN-Rail End Clip, package of 25 pieces
SXWTERLBL10011	PRINTOUT-A4-W1	A4-Size blank printable adhesive label sheets for terminals (100 Sheets, 18 labels per Sheet)
SXWTERLBL10012	PRINTOUT-LTR-W1	Letter-size blank printable adhesive label sheets for terminals (100 Sheets, 16 labels per Sheet)
SXWSCABLE10002	S-CABLE-L-1.5M	S-Cable extension cord for Automation Server I/O bus, L shaped connectors, 1.5 m
SXWSCABLE10003	S-CABLE-L-0.75M	S-Cable extension cable for Automation Server I/O bus, L-shaped connectors, 0.75 m
SXWASBCON10001	AS-B connector kit	Screw terminals for all AS-B models. Note: Ordered separately, not delivered with the controller
SXWASBINS10001	AS-B installer kit	Dummy unit, no electronics, just terminals. Supports easy wiring in the panel shop
SXWUSBADP10001	USB-485-INET Interface Adapter	I/NET Adapter: Seperate hardware component, added to a SmartX Controller - AS-P or Automation Server

SmartX Controller – AD (Advanced Display)

Portable or permanent-mount tablet HMI specifically configured to interact with SmartStruxure solution user interfaces: WebStation, Technician Tool and AdaptiApps.

Part Number	Product Name	Description
SXWADBUND10001	Advanced Display 10-inch Bundle	Includes tablet, mounting frame, and bezel
SXWADUSBA10001	USB cable, 1.5 m (5 ft)	For connection to AS-P or USB power adapter
SXWADUSBA10002	USB cable, 3.0 m (10 ft)	For connection to AS-P or USB power adapter
SXWADUSBB10001	USB cable, Y-shaped, 1.5 m (5 ft)	For connection to automation server and USB power adapter
SXWADUSBB10002	USB cable, Y-shaped, 3.0 m (10 ft)	For connection to automation server and USB power adapter

Reference Architecture



LonWorks Controllers

Xenta Series

Xenta series controllers and I/O modules provide an open and flexible system architecture and access to standardized LonWorks-based network technology.

Xenta Series Controllers

Xenta 102-B
VAV Zone Controller

Xenta 102-EF
VAV Zone Controller

Xenta 102-VF
VAV Zone Controller

	102-B	102-EF	102-VF
Part Number	**007305310**	**007305330**	**007305350**
Communications			
Protocol	LonTalk® communication protocol	LonTalk communication protocol	LonTalk communication protocol
Communication Interface	TP/FT-10, 78 kbps	TP/FT-10, 78 kbps	TP/FT-10, 78 kbps
Software			
Pre loaded Application/ASC	Yes	Yes	Yes
Physical			
Dimensions	127 W x 126 H x 50 D mm (5.0 W x 4.9 H x 1.9 D in.)	127 W x 126 H x 50 D mm (5.0 W x 4.9 H x 1.9 D in.)	127 W x 126 H x 50 D mm (5.0 W x 4.9 H x 1.9 D in.)
Weight (including baseplate)	0.4 kg (0.88 lb.)	0.4 kg (0.88 lb.)	0.4 kg (0.88 lb.)
Power			
Power	24 VAC +20% -10%, 50/60 Hz	24 VAC +20% -10%, 50/60 Hz	24 VAC +20% -10%, 50/60 Hz
Consumption	4 VA with Xenta OP, Actuator supply max 12 VA, Total max 16 VA	4 VA with Xenta OP, Actuator supply max 12 VA, Total max 16 VA	4 VA with Xenta OP, Actuator supply max 12 VA, Total max 16 VA
Environmental			
Operating Range	0 °C to 50 °C (32 °F to 122 °F) 0-95% RH (non-condensing)	0 °C to 50 °C (32 °F to 122 °F) 0-95% RH (non-condensing)	0 °C to 50 °C (32 °F to 122 °F) 0-95% RH (non-condensing)
External Features			
Enclosure rating	UL94 5VB, IP 30 (<2.5 mm protection)	UL94 5VB, IP 30 (<2.5 mm protection)	UL94 5VB, IP 30 (<2.5 mm protection)
HOA Switches (DO/AO)	No	No	No
Digital Status LEDs	No	No	No
Intelligent Sensors	STR150	STR150	STR150
Service Port	Xenta OP	Xenta OP	Xenta OP
Terminals			
I/O Terminals	Fixed terminal	Fixed terminal	Fixed terminal
I/O Expansion	No	No	No
External Enclosure/Mounting			
Enclosure class	N/A	N/A	N/A
Mounting	DIN-rail or wall mount	DIN-rail or wall mount	DIN-rail or wall mount
Certifications			
LonMark	LonMark certified: VAV 8010	LonMark certified: VAV 8010	LonMark certified: VAV 8010
FCC	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class A (Emission)
UL	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)
C-UL US	Yes	Yes	Yes
CE - EU	Yes	Yes	Yes
WEEE - Directive of the European Union	Yes	Yes	Yes
RoHS Directive	Yes	Yes	Yes
RCM	Yes	Yes	Yes

Xenta Series Controllers, continued

Xenta 102-ES
VAV Zone Controller

Xenta 102-AX
VAV Zone Controller

Xenta 103-A
Chilled Ceiling Zone Controller

	102-ES	102-AX	103-A
Part Number	**007305370**	**007305401**	**007305610**
Communications			
Protocol	LonTalk communication protocol	LonTalk communication protocol	LonTalk communication protocol
Communication Interface	TP/FT-10, 78 kbps	TP/FT-10, 78 kbps	TP/FT-10, 78 kbps
Software			
Pre loaded Application/ASC	Yes	Yes	Yes
Physical			
Dimensions	127 W x 126 H x 50 D mm (5.0 W x 4.9 H x 1.9 D in.)	159 W x 197 H x 63 D mm (6.25 W x 7.75 H x 2.50 D in.)	112 W x 110 H x 50 D mm (4.37 W x 4.29 H x 2.00 D in.)
Weight (including baseplate)	0.4 kg (0.88 lb.)	1.04 kg (2.3 lb.)	0.4 kg (0.88 lb.)
Power			
Power	24 VAC ±20%, 50/60 Hz	24 VAC ±10%, 50/60 Hz	24 VAC +20% -10%, 50/60 Hz
Consumption	6 VA with Xenta OP, Digital Outputs max 6 x 9 =114 VA , Total max 120 VA	9 VA, Digital Outputs each 12 VA , Total max 36 VA	4 VA with Xenta OP, Actuator supply max 12 VA, max 2 x 19 VA=38 VA, Total max 54 VA
Environmental			
Operating Range	0 °C to 50 °C (32 °F to 122 °F) 0-95% RH (non-condensing)	0 °C to 50 °C (32 °F to 122 °F) 0-90% RH (non-condensing)	0 °C to 50 °C (32 °F to 122 °F) 0-95% RH (non-condensing)
External Features			
Enclosure rating	UL94 5VB, IP 30 (<2.5 mm protection)	NEMA-1, UL94 5VB, IP 10 (<50 mm protection)	UL94 5VB, IP 30 (<2.5 mm protection)
HOA Switches (DO/AO)	No	No	No
Digital Status LEDs	No	No	No
Intelligent Sensors	STR150	STR150	STR150
Service Port	Xenta OP	Xenta OP	Xenta OP
Terminals			
I/O Terminals	Fixed terminal	Two-piece terminal	Fixed terminal
I/O Expansion	No	No	No
External Enclosure/Mounting			
Enclosure class	N/A	N/A	N/A
Mounting	DIN-rail or wall mount	VAV/FPB box mount	DIN-rail or wall mount
Certifications			
LonMark	LonMark certified: VAV 8010	LonMark certified: VAV 8010	LonMark certified: Chilled Ceiling
FCC	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class B (Emission)	47 CFR § 15, Class A (Emission)
UL	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)
C-UL US	Yes	No	Yes
CE - EU	Yes	Yes	Yes
WEEE - Directive of the European Union	Yes	Yes	Yes
RoHS Directive	Yes	Yes	Yes
RCM	Yes	Yes	Yes

Xenta Series Controllers, continued

Xenta 104-A
Roof Top Zone Controller

Xenta 110-D/24, 110-D/230
Dual Zone Controllers

	104-A	110-D/24, 110-D/230
Part Number	**007305910**	**007306010, 007306030**
Communications		
Protocol	LonTalk communication protocol	LonTalk communication protocol
Communication Interface	TP/FT-10, 78 kbps	TP/FT-10, 78 kbps
Software		
Pre loaded Application/ASC	Yes	Yes
Physical		
Dimensions	112 W x 110 H x 50 D mm (4.37 W x 4.29 H x 2.00 D in.)	112 W x 110 H x 50 D mm (4.37 W x 4.29 H x 2.00 D in.)
Weight (including baseplate)	0.4 kg (0.88 lb.)	0.3 kg (0.66 lb.)
Power		
Power	24 VAC +20% -10%, 50/60 Hz	24 VAC ±20%, 50/60 Hz (230 V AC ±10%, 50–60 Hz)
Consumption	5 VA, digital outputs max 4 x 19 VA, max 81 VA	5 VA, digital outputs max 4 x 19 VA, max 81 VA (5 VA, digital outputs max 12 VA, max 20 VA)
Environmental		
Operating Range	0 °C to 50 °C (32 °F to 122 °F) 0-90% RH (non-condensing)	0 °C to 50 °C (32 °F to 122 °F) 0-90% RH (non-condensing)
External Features		
Enclosure rating	UL94 5VB, IP 30 (<2.5 mm protection)	UL94 5VB, IP 30 (<2.5 mm protection)
HOA Switches (DO/AO)	No	No
Digital Status LEDs	No	No
Intelligent Sensors	STR150	STR150
Service Port	Xenta OP	Xenta OP
Terminals		
I/O Terminals	Fixed terminal	Fixed terminal
I/O Expansion	No	No
External Enclosure/Mounting		
Enclosure class	N/A	N/A
Mounting	DIN-rail or wall mount	DIN-rail or wall mount
Certifications		
LonMark	LonMark certified: Roof Top	LonMark certified: 3040, 3050, 8506
FCC	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class A (Emission)
UL	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)
C-UL US	Yes	Yes
CE - EU	Yes	Yes
WEEE - Directive of the European Union	Yes	Yes
RoHS Directive	Yes	Yes
RCM	Yes	Yes

Xenta Series Controllers, continued

Xenta 121-FC/24, 121-FC/230
Fan Coil Zone Controllers

Xenta 121-HP/24, 121-HP/230
Heat Pump Zone Controllers

	121-FC/24, 121-FC/230	121-HP/24, 121-HP/230
Part Number	**007306210, 007306220**	**007306310, 00730632O**
Communications		
Protocol	LonTalk communication protocol	LonTalk communication protocol
Communication Interface	TP/FT-10, 78 kbps	TP/FT-10, 78 kbps
Software		
Pre loaded Application/ASC	Hybrid	Hybrid
Physical		
Dimensions	112 W x 110 H x 50 D mm (4.37 W x 4.29 H x 2.00 D in.)	112 W x 110 H x 50 D mm (4.37 W x 4.29 H x 2.00 D in.)
Weight (including baseplate)	0.3 kg (0.66 lb.)	0.3 kg (0.66 lb.)
Power		
Power	24 VAC ±20%, 50/60 Hz (230 V AC ±10%, 50–60 Hz)	24 VAC ±20%, 50/60 Hz (230 V AC ±10%, 50–60 Hz)
Consumption	5 VA, digital outputs max 4 x 19 VA, max 81 VA (5 VA, digital outputs max 12 VA, max 20 VA)	5 VA, digital outputs max 4 x 19 VA, max 81 VA (5 VA, digital outputs max 12 VA, max 20 VA)
Environmental		
Operating Range	0 °C to 50 °C (32 °F to 122 °F) 0-90% RH (non-condensing)	0 °C to 50 °C (32 °F to 122 °F) 0-90% RH (non-condensing)
External Features		
Enclosure rating	UL94 5VB, IP 30 (<2.5 mm protection)	UL94 5VB, IP 20 (<12.5 mm protection)
HOA Switches (DO/AO)	No	No
Digital Status LEDs	No	No
Intelligent Sensors	STR150	STR150
Service Port	Xenta OP	Xenta OP
Terminals		
I/O Terminals	Fixed terminal	Fixed terminal
I/O Expansion	No	No
External Enclosure/Mounting		
Enclosure class	N/A	N/A
Mounting	DIN-rail or wall mount	DIN-rail or wall mount
Certifications		
LonMark	LonMark certified: 8501 Fan Coil	LonMark certified: 8503 Heat Pump
FCC	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class A (Emission)
UL	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)
C-UL US	Yes	Yes
CE - EU	Yes	Yes
WEEE - Directive of the European Union	Yes	Yes
RoHS Directive	Yes	Yes
RCM	Yes	Yes

Xenta Series Programmable Controllers, continued

Xenta 281
Freely Programmable
Controller

Xenta 282
Freely Programmable
Controller

Xenta 283
Freely Programmable
Controller

	281	282	283
Part Number	**007300300**	**007300310**	**007300320**
Communications			
Protocol	LonTalk communication protocol	LonTalk communication protocol	LonTalk communication protocol
Communication Interface	TP/FT-10, 78 kbps	TP/FT-10, 78 kbps	TP/FT-10, 78 kbps
Software			
Programmability	Function Block Programmable	Function Block Programmable	Function Block Programmable
Physical			
Dimensions	180 W x 110 H x 77.4 D mm (7.1 W x 4.3 H x 3.1 D in.)	180 W x 110 H x 77.4 D mm (7.1 W x 4.3 H x 3.1 D in.)	180 W x 110 H x 77.4 D mm (7.1 W x 4.3 H x 3.1 D in.)
Weight (including baseplate)	1.18 kg (2.59 lb.)	1.18 kg (2.59 lb.)	1.18 kg (2.59 lb.)
Power			
Power	24 VAC ±20%, 50/60 Hz	24 VAC ±20%, 50/60 Hz	24 VAC ±20%, 50/60 Hz
Consumption	10 VA	10 VA	10 VA
Environmental			
Operating Range	0 °C to 50 °C (32 °F to 122 °F) 0-90% RH (non-condensing)	0 °C to 50 °C (32 °F to 122 °F) 0-90% RH (non-condensing)	0 °C to 50 °C (32 °F to 122 °F) 0-90% RH (non-condensing)
CPU Internals			
CPU	Hitachi H8 32-bit	Hitachi H8 32-bit	Hitachi H8 32-bit
Memory	512 kB flash, 128 kB SRAM, programs/data max 56 kB, parameters 64 kB	512 kB flash, 128 kB SRAM, programs/data max 56 kB, parameters 64 kB	512 kB flash, 128 kB SRAM, programs/data max 56 kB, parameters 64 kB
Battery	72 hour real time clock backup	72 hour real time clock backup	72 hour real time clock backup
Real time clock	±12 minutes/year at 25 °C (77 °F)	±12 minutes/year at 25 °C (77 °F)	±12 minutes/year at 25 °C (77 °F)
External Features			
Enclosure rating	UL94 5VB, IP 20 (<12.5 mm protection)	UL94 5VB, IP 20 (<12.5 mm protection)	UL94 5VB, IP 20 (<12.5 mm protection)
HOA Switches (DO/AO)	No	No	No
Digital Status LEDs	No	No	No
Service Port	OP, RS-232 (9600 bps)	OP, RS-232 (9600 bps)	OP, RS-232 (9600 bps)
Terminals			
I/O Terminals	Terminal base	Terminal base	Terminal base
I/O Expansion	No	No	No
External Enclosure/Mounting			
Enclosure class	Open class (separate enclosure required)	Open class (separate enclosure required)	Closed class
Mounting	DIN-rail or wall mount	DIN-rail or wall mount	DIN-rail or wall mount
Certifications			
LonMark	LonMark certified: Plant Controller v3.0	LonMark certified: Plant Controller v3.0	LonMark certified: Real Time Keeper v3.3
FCC	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class A (Emission)
UL	UL-916 (Energy Management Equipment), UL 3111-1 (Electrical Measuring and Test Equipment)	UL-916 (Energy Management Equipment), UL 3111-1 (Electrical Measuring and Test Equipment)	UL-916 (Energy Management Equipment), UL 3111-1 (Electrical Measuring and Test Equipment)
C-UL US	Yes	Yes	Yes
CE - EU	Yes	Yes	Yes
WEEE - Directive of the European Union	Yes	Yes	Yes
RoHS Directive	Yes	Yes	Yes
RCM	Yes	Yes	Yes

Xenta Series Programmable Controllers, continued

Xenta 301/N/P
Freely Programmable
Controller

Xenta 301:C
Freely Programmable
Controller

Xenta 302/N/P
Freely Programmable
Controller

Xenta 302:C
Freely Programmable
Controller

	301/N/P	301:C*	302/N/P	302:C*
Part Number	**007300092**	**007300017**	**007300112**	**007300018**
Communications				
Protocol	LonTalk communication protocol	LonTalk communication protocol	LonTalk communication protocol	LonTalk communication protocol
Communication Interface	TP/FT-10, 78 kbps	TP/FT-10, 78 kbps	TP/FT-10, 78 kbps	TP/FT-10, 78 kbps
Software				
Programmability	Function Block Programmable	Function Block Programmable	Function Block Programmable	Function Block Programmable
Physical				
Dimensions	180 W x 110 H x 77.4 D mm (7.1 W x 4.3 H x 3.1 D in.)	180 W x 110 H x 77.4 D mm (7.1 W x 4.3 H x 3.1 D in.)	180 W x 110 H x 77.4 D mm (7.1 W x 4.3 H x 3.1 D in.)	180 W x 110 H x 77.4 D mm (7.1 W x 4.3 H x 3.1 D in.)
Weight (including baseplate)	1.18 kg (2.59 lb.)	1.18 kg (2.59 lb.)	1.18 kg (2.59 lb.)	1.18 kg (2.59 lb.)
Power				
Power	24 VAC ±20%, 50/60 Hz	24 VAC ±20%, 50/60 Hz	24 VAC ±20%, 50/60 Hz	24 VAC ±20%, 50/60 Hz
Consumption	10 VA	10 VA	10 VA	10 VA
Environmental				
Operating Range	0 °C to 50 °C (32 °F to 122 °F) 0-90% RH (non-condensing)	0 °C to 50 °C (32 °F to 122 °F) 0-90% RH (non-condensing)	0 °C to 50 °C (32 °F to 122 °F) 0-90% RH (non-condensing)	0 °C to 50 °C (32 °F to 122 °F) 0-90% RH (non-condensing)
CPU Internals				
CPU	Hitachi H8 32-bit	Hitachi H8 32-bit	Hitachi H8 32-bit	Hitachi H8 32-bit
Memory	512 kB flash, 128 kB SRAM, programs/data max 56 kB, parameters 64 kB	512 kB flash, 128 kB SRAM, programs/data max 56 kB, parameters 64 kB	512 kB flash, 128 kB SRAM, programs/data max 56 kB, parameters 64 kB	512 kB flash, 128 kB SRAM, programs/data max 56 kB, parameters 64 kB
Battery	72 hour real time clock backup	72 hour real time clock backup	72 hour real time clock backup	72 hour real time clock backup
Real time clock	±12 minutes/year at 25 °C (77 °F)	±12 minutes/year at 25 °C (77 °F)	±12 minutes/year at 25 °C (77 °F)	±12 minutes/year at 25 °C (77 °F)
External Features				
Enclosure rating	UL94 V-0, IP 20 (<12.5 mm protection)	UL94 V-0, IP 20 (<12.5 mm protection)	UL94 V-0, IP 20 (<12.5 mm protection)	UL94 V-0, IP 20 (<12.5 mm protection)
HOA Switches (DO/AO)	No	No	No	No
Digital Status LEDs	No	No	No	No
Service Port	OP, RS-232 (9600 bps)	OP, RS-232 (9600 bps)	OP, RS-232 (9600 bps)	OP, RS-232 (9600 bps)
Terminals				
I/O Terminals	Terminal base	Terminal base	Terminal base	Terminal base
I/O Expansion	Up to 2 Xenta 400 series I/O modules	Up to 4 Xenta 400 series I/O modules	Up to 2 Xenta 400 series I/O modules	Up to 4 Xenta 400 series I/O modules
External Enclosure/Mounting				
Enclosure class	Open class (separate enclosure required)	Open class (separate enclosure required)	Open class (separate enclosure required)	Open class (separate enclosure required)
Mounting	DIN-rail or wall mount	DIN-rail or wall mount	DIN-rail or wall mount	DIN-rail or wall mount
Certifications				
LonMark	LonMark certified: Plant Controller v3.0	LonMark certified: Plant Controller v3.0	LonMark certified: Plant Controller v3.0	LonMark certified: Plant Controller v3.0
FCC	47 CFR § 15, Class B (Emission)	47 CFR § 15, Class B (Emission)	47 CFR § 15, Class B (Emission)	47 CFR § 15, Class B (Emission)
UL	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)
C-UL US	Yes	Yes	Yes	Yes
CE - EU	Yes	Yes	Yes	Yes
WEEE - Directive of the European Union	Yes	Yes	Yes	Yes
RoHS Directive	Yes	Yes	Yes	Yes
RCM	Yes	Yes	Yes	Yes

* 301C, 302C, 401B, 401C are not available in all markets. Check with your local Schneider Electric office.

Xenta Series Programmable Controllers, continued

Xenta 401
Freely Programmable
Controller

Xenta 401:B
Data Manager

Xenta 401:C
Freely Programmable
Controller

	401	401:B*	401:C*
Part Number	**007301012**	**007301030**	**007300104**
Communications			
Protocol	LonTalk communication protocol	LonTalk communication protocol	LonTalk communication protocol
Communication Interface	TP/FT-10, 78 kbps	TP/FT-10, 78 kbps	TP/FT-10, 78 kbps
Software			
Programmability	Function Block Programmable	Function Block Programmable	Function Block Programmable
Physical			
Dimensions	90 W x 110 H x 77.4 D mm (3.55 W x 4.33 H x 3.05 D in.)	90 W x 110 H x 77.4 D mm (3.55 W x 4.33 H x 3.05 D in.)	90 W x 110 H x 77.4 D mm (3.55 W x 4.33 H x 3.05 D in.)
Weight (including baseplate)	0.595 kg (1.41 lb.)	0.595 kg (1.41 lb.)	0.595 kg (1.41 lb.)
Power			
Power	24 VAC ±20%, 50/60 Hz	24 VAC ±20%, 50/60 Hz	24 VAC ±20%, 50/60 Hz
Consumption	2 VA	2 VA	2 VA
Environmental			
Operating Range	0 °C to 50 °C (32 °F to 122 °F) 0-90% RH (non-condensing)	0 °C to 50 °C (32 °F to 122 °F) 0-90% RH (non-condensing)	0 °C to 50 °C (32 °F to 122 °F) 0-90% RH (non-condensing)
CPU Internals			
CPU	Hitachi H8 32-bit	Hitachi H8 32-bit	Hitachi H8 32-bit
Memory	2 MB flash, 128 kB SRAM	2 MB flash, 128 kB SRAM, 234 kB programs/data, 234 kB parameters	2 MB flash, 128 kB SRAM
Battery	72 hour real time clock backup	72 hour real time clock backup	72 hour real time clock backup
Real time clock	±12 minutes/year at 25 °C (77 °F)	±12 minutes/year at 25 °C (77 °F)	±12 minutes/year at 25 °C (77 °F)
External Features			
Enclosure rating	UL94 V-0, IP 20 (<12.5 mm protection)	UL94 V-0, IP 20 (<12.5 mm protection)	UL94 V-0, IP 20 (<12.5 mm protection)
HOA Switches (DO/AO)	No	No	No
Digital Status LEDs	No	No	No
Service Port	OP, RS-232 (9600 bps)	OP, RS-232 (9600 bps)	OP, RS-232 (9600 bps)
Terminals			
I/O Terminals	Terminal base	Terminal base	Terminal base
I/O Expansion	Up to 10 Xenta 400 series I/O modules	No	Up to 15 Xenta 400 series I/O modules
External Enclosure/Mounting			
Enclosure class	Open class (separate enclosure required)	Open class (separate enclosure required)	Open class (separate enclosure required)
Mounting	DIN-rail or wall mount	DIN-rail or wall mount	DIN-rail or wall mount
Certifications			
LonMark	LonMark certified: Plant Controller v3.0	LonMark certified: Plant Controller v3.0	LonMark certified: Plant Controller v3.0
FCC	47 CFR § 15, Class B (Emission)	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class B (Emission)
UL	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)
C-UL US	Yes	Yes	Yes
CE - EU	Yes	Yes	Yes
WEEE - Directive of the European Union	Yes	Yes	Yes
RoHS Directive	Yes	Yes	Yes
RCM	Yes	Yes	Yes

* 301C, 302C, 401B, 401C are not available in all markets. Check with your local Schneider Electric office.

Xenta Series I/O Modules

Xenta 411/412
10 Channel Digital Input
Modules

Xenta 421A/422A
4 Channel Universal Input/5
Channel Digital Output
Modules

	411, 412	421A, 422A
Part Number	**007302011, 007302031**	**007302450, 007302460**
Communications		
Protocol	LonTalk communication protocol	LonTalk communication protocol
Communication Interface	TP/FT-10, 78 kbps	TP/FT-10, 78 kbps
Physical		
Dimensions	90 W x 110 H x 75 D mm (3.55 W x 4.33 H x 3.1 D in.)	90 W x 110 H x 75 D mm (3.55 W x 4.33 H x 3.1 D in.)
Weight (including baseplate)	0.595 kg (1.41 lb.)	0.295 kg (0.65 lb.)
Power		
Power	24 VAC ±20%, 50/60 Hz	24 VAC ±20%, 50/60 Hz
Consumption	2 VA	4 W, 8 VA transformer
Environmental		
Operating Range	0 °C to 50 °C (32 °F to 122 °F) 0-90% RH (non-condensing)	0 °C to 50 °C (32 °F to 122 °F) 0-90% RH (non-condensing)
External Features		
Enclosure rating	UL94 V-0, IP 20 (<12.5 mm protection)	UL94 V-0, IP 20 (<12.5 mm protection)
HOA Switches (DO/AO)	Available on 412 model	Available on 422A model
Digital Status LEDs	Available on 412 model	Available on 422A model
Terminals		
I/O Terminals	Terminal base	Terminal base
External Enclosure/Mounting		
Enclosure class	Enclosed class (no separate enclosure required)	Open class (separate enclosure required)
Mounting	DIN-rail or wall mount	DIN-rail or wall mount
Certifications		
LonMark	No	LonMark® certified: Digital Input 20543, Analog Input 0520
FCC	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class B (Emission)
UL	UL-916 (Energy Management Equipment), UL 3111-1 (Electrical Measuring and Test Equipment)	UL-916 (Energy Management Equipment)
C-UL US	Yes	Yes
CE - EU	Yes	Yes
WEEE - Directive of the European Union	Yes	Yes
RoHS Directive	Yes	Yes
RCM	Yes	Yes

Xenta Series I/O Modules, continued

Xenta 451A / 452A
8 Channel Universal Input/2 Channel Analog Output Modules

Xenta 471
8 Channel Universal Input Module

Xenta 491/492
8 Channel Analog Output Modules

	451A, 452A	471	491, 492
Part Number	**007302850, 007302860**	**007302910**	**007303010, 007303030**
Communications			
Protocol	LonTalk communication protocol	LonTalk communication protocol	LonTalk communication protocol
Communication Interface	TP/FT-10, 78 kbps	TP/FT-10, 78 kbps	TP/FT-10, 78 kbps
Physical			
Dimensions	90 W x 110 H x 75 D mm (3.55 W x 4.33 H x 3.1 D in.)	90 W x 110 H x 75 D mm (3.55 W x 4.33 H x 3.1 D in.)	90 W x 110 H x 75 D mm (3.55 W x 4.33 H x 3.1 D in.)
Weight (including baseplate)	0.295 kg (0.65 lb.)	0.495 kg (1.09 lb.)	0.495 kg (1.09 lb.)
Power			
Power	24 VAC ±20%, 50/60 Hz	24 VAC ±20%, 50/60 Hz	24 VAC ±20%, 50/60 Hz
Consumption	3 W, 6 VA transformer	4 W, 8 VA transformer	3 W, 6 VA transformer
Environmental			
Operating Range	0 °C to 50 °C (32 °F to 122 °F) 0-90% RH (non-condensing)	0 °C to 50 °C (32 °F to 122 °F) 0-90% RH (non-condensing)	0 °C to 50 °C (32 °F to 122 °F) 0-90% RH (non-condensing)
External Features			
Enclosure rating	UL94 V-0, IP 20 (<12.5 mm protection)	UL94 V-0, IP 20 (<12.5 mm protection)	UL94 V-0, IP 20 (<12.5 mm protection)
HOA Switches (DO/AO)	Available on 452A model	No	Available on 492 model
Digital Status LEDs	Available on 452A model	No	Available on 492 model
Terminals			
I/O Terminals	Terminal base	Terminal base	Terminal base
External Enclosure/Mounting			
Enclosure class	Enclosed class (no separate enclosure required)	Enclosed class (no separate enclosure required)	Enclosed class (no separate enclosure required)
Mounting	DIN-rail or wall mount	DIN-rail or wall mount	DIN-rail or wall mount
Certifications			
LonMark	LonMark certified: Analog Input 0520, Analog Output 0521	No	No
FCC	47 CFR § 15, Class B (Emission)	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class A (Emission)
UL	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment), UL 3111-1 (Electrical Measuring and Test Equipment)	UL-916 (Energy Management Equipment), UL 3111-1 (Electrical Measuring and Test Equipment)
C-UL US	Yes	Yes	Yes
CE - EU	Yes	Yes	Yes
WEEE - Directive of the European Union	Yes	Yes	Yes
RoHS Directive	Yes	Yes	Yes
RCM	Yes	Yes	Yes

Xenta Series Controllers - Inputs and Outputs

	102-B	102-EF	102-VF	102-ES	102-AX
Part Number	007305310	007305330	007305350	007305370	007305401
Universal Inputs					4
Digital Contact					•
Digital Counter - Low Speed					
Digital Counter - Medium Speed					
Digital Counter - High Speed					
Digital Supervised					
Analog Voltage - 0-1 V					
Analog Voltage - 0-5 V					•
Analog Voltage - 0-10 V					
Analog Voltage - 2-10 V					
Analog Current - 0-20 mA					
Analog Current - 4-20 mA					
Analog Resistance					
Analog Thermistor - 10 k					•
Analog Thermistor - 1.8 k					
Analog Thermistor - 1 k					
Digital Inputs	2	2	2	2	
Digital Contact	•	•	•	•	
Counter - Low Speed					
Counter - Medium Speed					
Counter - High Speed					
Analog Inputs	2	2	2	3	5
Voltage - 0-5 V					4 channel
Voltage - 0-10 V	•	•	•	1 channel	
Velocity Pressure	•	•	•	1 channel internal	1 channel internal
Analog Thermistor - 10 k					
Analog Thermistor - 1.8 k				•	
Analog Thermistor - 1 k					
Digital Outputs		2	1	6	3
Form A, SPST					
Form C, SPDT		1 channel			
Triac		2 channel	•	•	•
Analog Outputs	1	1	2	1	
Voltage - 0-10 V	•	•	•	•	
Current - 0-20 mA					
Damper Outputs					1
Form K, Triac					internal
Voltage					
Intelligent Sensors	1	1	1	1	1
STR (Xenta)	•	•	•	•	•

Xenta Series Controllers - Inputs and Outputs, continued

	103-A	104-A	110-D/24, 110-D/230	121-FC/24, 121-FC/230	121-HP/24, 121-HP/230
Part Number	007305610	007305910	007306010, 007306030	007306210, 007306220	007306310, 007306320
Universal Inputs				1	1
Digital Contact				•	•
Digital Counter - Low Speed					
Digital Counter - Medium Speed					
Digital Counter - High Speed					
Digital Supervised					
Analog Voltage - 0-1 V					
Analog Voltage - 0-5 V					
Analog Voltage - 0-10 V				•	•
Analog Voltage - 2-10 V					
Analog Current - 0-20 mA					
Analog Current - 4-20 mA					
Analog Resistance					
Analog Thermistor - 10 k					
Analog Thermistor - 1.8 k				•	•
Analog Thermistor - 1 k					
Digital Inputs	2	2	3	3	3
Digital Contact	•	•	•	•	•
Counter - Low Speed					
Counter - Medium Speed					
Counter - High Speed					
Analog Inputs	1	1	1	1	1
Voltage - 0-5 V					
Voltage - 0-10 V	•				
Velocity Pressure					
Analog Thermistor - 10 k					
Analog Thermistor - 1.8 k		•	•	•	•
Analog Thermistor - 1 k					
Digital Outputs	2	5	4	8	8
Form A, SPST		1 channel		4	4
Form C, SPDT					
Triac	•	4 channel	•	4	4
Analog Outputs	2		1	1	1
Voltage - 0-10 V	•		•	•	•
Current - 0-20 mA					
Damper Outputs					
Form K, Triac					
Voltage					
Intelligent Sensors	1	1	1	1	1
STR (Xenta)	•	•	•	•	•

Xenta Series Programmable Controllers - Inputs and Outputs

	281	282	283	301/N/P	301:C	302/N/P	302:C
Part Number	007300300	007300310	007300320	007300092	007300017	007300112	007300018
Universal Inputs	4	4		4	4	4	4
Digital Contact	•	•		•	•	•	•
Digital Counter - Low Speed							
Digital Counter - Medium Speed							
Digital Counter - High Speed							
Digital Supervised							
Analog Voltage - 0-1 V	•	•		•	•	•	•
Analog Voltage - 0-5 V	•	•		•	•	•	•
Analog Voltage - 0-10 V	•	•		•	•	•	•
Analog Voltage - 2-10 V	•	•		•	•	•	•
Analog Current - 0-20 mA							
Analog Current - 4-20 mA							
Analog Resistance							
Analog Thermistor - 10 k							
Analog Thermistor - 1.8 k	•	•		•	•	•	•
Analog Thermistor - 1 k							
Digital Inputs	2	2	2	4	4	4	4
Digital Contact	•	•	•	•	•	•	•
Counter - Low Speed							
Counter - Medium Speed	•	•	•				
Counter - High Speed							
Analog Inputs	4	2	4	4	4	4	4
Voltage - 0-5 V							
Voltage - 0-10 V	•						
Velocity Pressure							
Analog Thermistor - 10 k			•				
Analog Thermistor - 1.8 k		•	•	•	•	•	•
Analog Thermistor - 1 k							
Digital Outputs	3	4	6	6	6	4	4
Form A, SPST	•	•		•	•	•	•
Form C, SPDT							
Triac			•				
Analog Outputs	3	4		2	2	4	4
Voltage - 0-10 V	•	•		•	•	•	•
Current - 0-20 mA							

Xenta Series I/O Modules - Inputs and Outputs

	411, 412	421A, 422A	451A, 452A	471	491, 492
Part Number	007302011, 007302031	007302450, 007302460	007302850, 007302860	007302910	007303010, 007303030
Universal Inputs		4	8	8	
Digital Contact		•	•		
Digital Counter - Low Speed			•		
Digital Counter - Medium Speed		•			
Digital Counter - High Speed					
Digital Supervised					
Analog Voltage - 0-1 V		•	•	•	
Analog Voltage - 0-5 V		•	•	•	
Analog Voltage - 0-10 V		•	•	•	
Analog Voltage - 2-10 V		•	•	•	
Analog Current - 0-20 mA		•	•	•	
Analog Current - 4-20 mA		•	•	•	
Analog Resistance		•	•		
Analog Thermistor - 10 k		•	•		
Analog Thermistor - 1.8 k		•	•		
Analog Thermistor - 1 k					
Digital Inputs	10				
Digital Contact	•				
Counter - Low Speed					
Counter - Medium Speed	•				
Counter - High Speed					
Digital Outputs		5			
Form A, SPST		•			
Form C, SPDT					
Triac					
Analog Outputs			2		8
Voltage - 0-10 V			•		•
Current - 0-20 mA					

Note: 421A, 422A, 451A, and 452A can also be used as distributed I/Os under an automation server.

MNL Series

The MNL series of controllers are designed in accordance with LonMark® guidelines. When programmed or loaded with a pre-engineered application, these controllers provide control for packaged rooftops, heat pumps, fan coils, unit ventilators, and similar applications.

MNL Series Controllers

MNL-50
Fan Coil, Heat Pump, Roof Top, Satellite Zone Controllers

MNL-100
Fan Coil, Heat Pump, Roof Top, Satellite Zone Controllers

MNL-110
Fan Coil Zone Controller

	MNL-50	MNL-100	MNL-110
Part Number	**MNL-5RF3, MNL-5RH3, MNL-5RR3, MNL-5RS3, MNL-5RS4**	**MNL-10RF3, MNL-10RH3, MNL-10RR3, MNL-10RS3, MNL-10RS4**	**MNL-11RF3**
Communications			
Protocol	LonTalk® communication protocol	LonTalk communication protocol	LonTalk communication protocol
Communication Interface	TP/FT-10, 78 kbps	TP/FT-10, 78 kbps	TP/FT-10, 78 kbps
Software			
Pre loaded Application/ASC	Yes	Yes	Yes
Programmability	WorkPlace Tech programmable	WorkPlace Tech programmable	WorkPlace Tech programmable
Physical			
Dimensions	127 W x 112 H x 41 D mm (5.0 W x 4.5 H x 1.625 D in.)	109 W x 111 H x 51 D mm (4.37 W x 4.29 H x 2.00 D in.)	154.9 W x 107 H x 50 D mm (6.1 W x 4.2 H x 2.0 D in.)
Weight (including baseplate)	N/A	N/A	N/A
Power			
Power	24 VAC +25% -15%, 50/60 Hz	24 VAC +25% -15%, 50/60 Hz	24 VAC +25% -15%, 50/60 Hz
Consumption	12 VA (84 VA with DO loads @24 VA each)	15 VA	20.5 VA
Environmental			
Operating Range	-40 °C to 60 °C (-40 °F to 140 °F) 5-95% RH (non-condensing)	-40 °C to 60 °C (-40 °F to 140 °F) 5-95% RH (non-condensing)	-40 °C to 55 °C (-40 °F to 131 °F) 0-95% RH (non-condensing)
CPU Internals			
CPU	Neuron FT5000	Neuron FT5000	Neuron FT5000
Memory	Flash = 64 byte or 512 k bit, EEProm 6 k bit or 8 k byte	Flash = 64 byte or 512 k bit, EEProm 6 k bit or 8 k byte	Flash = 64 byte or 512 k bit, EEProm 6 k bit or 8 k byte
Battery	N/A	N/A	N/A
Real time clock	No	No	No
External Features			
Enclosure rating	NEMA-1, UL94 5 V (Plenum rated)	NEMA-1, UL94 5 V (Plenum rated)	UL94 V-0
HOA Switches (DO/AO)	No	No	No
Digital Status LEDs	No	No	No
Display	Via S-Link Sensor	Via S-Link Sensor	Via S-Link Sensor
Intelligent Sensors	Sensor Link (S-Link)	Sensor Link (S-Link)	Sensor Link (S-Link)
Service Port	LonWorks Network Jack via S-Link Sensor	LonWorks Network Jack	LonWorks Network Jack via S-Link Sensor
Terminals			
I/O Terminals	Fixed terminal	Terminal base	Fixed terminal
I/O Expansion	No	No	No
A/D Conversion - Inputs	Yes	Yes	Yes
A/D Conversion - Outputs	Yes	Yes	Yes
External Enclosure/Mounting			
Enclosure class	N/A	N/A	N/A
Conduit knockouts	No	No	No
Mounting	Wall mount	DIN-rail or wall mount	DIN-rail or wall mount
Certifications			
LonMark	LonMark certified: Fan Coil 8020, Heat Pump, Roof Top, Satellite	LonMark certified: Fan Coil 8020, Heat Pump, Roof Top, Satellite	LonMark certified: Fan Coil 8020
FCC	47 CFR § 15, Class B (Emission)	47 CFR § 15, Class B (Emission)	47 CFR § 15, Class B (Emission)
Industry Canada (IC)	Yes	Yes	Yes
UL	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)	UL-873 (Temperature Indicating and Regulating Equipment) Recognized component and UL-916 (Energy Management Equipment) Recognized
C-UL US	Yes	Yes	Yes
CE - EU	Yes	Yes	Yes
WEEE - Directive of the European Union	No	No	No
RoHS Directive	No	No	No
RCM	Yes	Yes	Yes

MNL Series Controllers, continued

MNL-130
Fan Coil Zone Controller

MNL-150
Fan Coil, Heat Pump, Roof Top, Satellite Zone Controllers

MNL-200
Fan Coil, Heat Pump, Roof Top, Satellite Zone Controllers

	MNL-130	MNL-150	MNL-200
Part Number	**MNL-13RF3**	**MNL-15RF3, MNL-15RH3, MNL-15RR3, MNL-15RS3, MNL-15RS4**	**MNL-20RF3, MNL-20RH3, MNL-20RR3, MNL-20RS3, MNL-20RS4**
Communications			
Protocol	LonTalk communication protocol	LonTalk communication protocol	LonTalk communication protocol
Communication Interface	TP/FT-10, 78 kbps	TP/FT-10, 78 kbps	TP/FT-10, 78 kbps
Software			
Pre loaded Application/ASC	Yes	Yes	Yes
Programmability	WorkPlace Tech programmable	WorkPlace Tech programmable	WorkPlace Tech programmable
Physical			
Dimensions	154.9 W x 107 H x 50 D mm (6.1 W x 4.2 H x 2.0 D in.)	109 W x 111 H x 51 D mm (4.37 W x 4.29 H x 2.00 D in.)	109 W x 111 H x 51 D mm (4.37 W x 4.29 H x 2.00 D in.)
Weight (including baseplate)	N/A	N/A	N/A
Power			
Power	24 VAC +25% -15%, 50/60 Hz	24 VAC +25% -15%, 50/60 Hz	24 VAC +25% -15%, 50/60 Hz
Consumption	21.5 VA	15 VA	15 VA
Environmental			
Operating Range	-40 °C to 55 °C (-40 °F to 131 °F) 0-95% RH (non-condensing)	-40 °C to 60 °C (-40 °F to 140 °F) 5-95% RH (non-condensing)	-40 °C to 60 °C (-40 °F to 140 °F) 5-95% RH (non-condensing)
CPU Internals			
CPU	Neuron FT5000	Neuron FT5000	Neuron FT5000
Memory	Flash = 64 byte or 512 k bit, EEProm 6 k bit or 8 k byte	Flash = 64 byte or 512 k bit, EEProm 6 k bit or 8 k byte	Flash = 64 byte or 512 k bit, EEProm 6 k bit or 8 k byte
Battery	N/A	N/A	N/A
Real time clock	No	No	No
External Features			
Enclosure rating	UL94 V-0	NEMA-1, UL94 5 V (Plenum rated)	NEMA-1, UL94 5 V (Plenum rated)
HOA Switches (DO/AO)	No	No	No
Digital Status LEDs	No	No	No
Display	Via S-Link Sensor	Via S-Link Sensor	Via S-Link Sensor
Intelligent Sensors	Sensor Link (S-Link)	Sensor Link (S-Link)	Sensor Link (S-Link)
Service Port	LonWorks Network Jack via S-Link Sensor	LonWorks Network Jack	LonWorks Network Jack
Terminals			
I/O Terminals	Fixed terminal	Terminal base	Terminal base
I/O Expansion	No	No	No
A/D Conversion - Inputs	Yes	Yes	Yes
A/D Conversion - Outputs	Yes	Yes	Yes
External Enclosure/Mounting			
Enclosure class	N/A	N/A	N/A
Conduit knockouts	No	No	No
Mounting	DIN-rail or wall mount	DIN-rail or wall mount	DIN-rail or wall mount
Certifications			
LonMark	LonMark certified: Fan Coil 8020	LonMark certified: Fan Coil 8020, Heat Pump, Roof Top, Satellite	LonMark certified: Fan Coil 8020, Heat Pump, Roof Top, Satellite
FCC	47 CFR § 15, Class B (Emission)	47 CFR § 15, Class B (Emission)	47 CFR § 15, Class B (Emission)
Industry Canada (IC)	Yes	Yes	Yes
UL	UL-873 (Temperature Indicating and Regulating Equipment) Recognized component and UL-916 (Energy Management Equipment) Recognized	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)
C-UL US	Yes	Yes	Yes
CE - EU	Yes	Yes	Yes
WEEE - Directive of the European Union	No	No	No
RoHS Directive	No	No	No
RCM	Yes	Yes	Yes

MNL Series Controllers, continued

MNL-800
Local Controller

MNL-V1RVx
VAV Zone Controller

MNL-V2RVx
VAV Zone Controller

	MNL-800	MNL-V1RVx	MNL-V2RVx
Part Number	**MNL-800-102**	**MNL-V1RV3-2**	**MNL-V2RV3-2**
Communications			
Protocol	LonTalk communication protocol	LonTalk communication protocol	LonTalk communication protocol
Communication Interface	TP/FT-10, 78 kbps	TP/FT-10, 78 kbps	TP/FT-10, 78 kbps
Software			
Pre loaded Application/ASC	Yes	Yes	Yes
Programmability	WorkPlace Tech programmable	WorkPlace Tech programmable	WorkPlace Tech programmable
Physical			
Dimensions	216 W x 262 H x 101 D mm (8.5 W x 10.875 H x 4.25 D in.)	159 W x 197 H x 63 D mm (6.25 W x 7.75 H x 2.50 D in.)	159 W x 197 H x 63 D mm (6.25 W x 7.75 H x 2.50 D in.)
Weight (including baseplate)	N/A	N/A	N/A
Power			
Power	24 VAC +25% -15%, 50/60 Hz	24 VAC +25% -15%, 50/60 Hz	24 VAC +25% -15%, 50/60 Hz
Consumption	20 VA	12 VA	12 VA (84 VA with DO loads @24 VA each)
Environmental			
Operating Range	-40 °C to 60 °C (-40 °F to 140 °F) 5-95% RH (non-condensing)	0 °C to 55 °C (32 °F to 131 °F) 5-95% RH (non-condensing)	0 °C to 55 °C (32 °F to 131 °F) 5-95% RH (non-condensing)
CPU Internals			
CPU	SAF-C161, 10 MHz Clock speed, 16 bit word size	Neuron FT5000	Neuron FT5000
Memory	EPROM = 512; RAM = 128; EEPROM = 32	Flash = 64 byte or 512 k bit, EEProm 6 k bit or 8 k byte	Flash = 64 byte or 512 k bit, EEProm 6 k bit or 8 k byte
Battery	Rechargeable, 3 days for clock and RAM	N/A	N/A
Real time clock	±30 minutes/year at 25 °C (77 °F)	No	No
External Features			
Enclosure rating	N/A	NEMA-1, UL94 5 V (Plenum rated)	NEMA-1, UL94 5 V (Plenum rated)
HOA Switches (DO/AO)	No	No	No
Digital Status LEDs	No	No	No
Display	Via S-Link Sensor	Via S-Link Sensor	Via S-Link Sensor
Intelligent Sensors	Sensor Link (S-Link)	Sensor Link (S-Link)	Sensor Link (S-Link)
Service Port	LonWorks Network Jack	LonWorks Network Jack via S-Link Sensor	LonWorks Network Jack via S-Link Sensor
Terminals			
I/O Terminals	Terminal base	Fixed terminal	Fixed terminal
I/O Expansion	No	No	No
A/D Conversion - Inputs	Yes	Yes	Yes
A/D Conversion - Outputs	Yes	Yes	Yes
External Enclosure/Mounting			
Enclosure class	Open class (separate enclosure required)	N/A	N/A
Conduit knockouts	Yes - On enclosure	No	No
Mounting	Wall mount	Wall mount	Wall mount
Certifications			
LonMark	LonMark certified	LonMark certified: VAV 8010	LonMark certified: VAV 8010
FCC	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class B (Emission)	47 CFR § 15, Class B (Emission)
Industry Canada (IC)	Yes	Yes	Yes
UL	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)
C-UL US	Yes	Yes	Yes
CE - EU	Yes	Yes	Yes
WEEE - Directive of the European Union	No	No	No
RoHS Directive	No	No	No
RCM	Yes	Yes	Yes

MNL Series Controllers, continued

MNL-V3RV3
VAV Zone Controller

	MNL-V3RV3
Part Number	**MNL-V3RV3**
Communications	
Protocol	LonTalk communication protocol
Communication Interface	TP/FT-10, 78 kbps
Software	
Pre loaded Application/ASC	Yes
Programmability	WorkPlace Tech programmable
Physical	
Dimensions	114 W x 127 H x 41 D mm (4.5 W x 5.0 H x 1.625 D in.)
Weight (including baseplate)	N/A
Power	
Power	24 VAC +25% -15%, 50/60 Hz
Consumption	12VA (102 VA with DO loads @24 VA each and triac load @18 VA each)
Environmental	
Operating Range	0 °C to 55 °C (32 °F to 131 °F) 5-95% RH (non-condensing)
CPU Internals	
CPU	Neuron FT5000
Memory	Flash = 64 byte or 512 k bit, EEProm 6 k bit or 8 k byte
Battery	N/A
Real time clock	No
External Features	
Enclosure rating	NEMA-1, UL94 5 V (Plenum rated)
HOA Switches (DO/AO)	No
Digital Status LEDs	No
Display	Via S-Link Sensor
Intelligent Sensors	Sensor Link (S-Link)
Service Port	LonWorks Network Jack via S-Link Sensor
Terminals	
I/O Terminals	Fixed terminal
I/O Expansion	No
A/D Conversion - Inputs	Yes
A/D Conversion - Outputs	Yes
External Enclosure/Mounting	
Enclosure class	N/A
Conduit knockouts	No
Mounting	Wall mount
Certifications	
LonMark	LonMark certified: VAV 8010
FCC	47 CFR § 15, Class B (Emission)
Industry Canada (IC)	Yes
UL	UL-916 (Energy Management Equipment)
C-UL US	Yes
CE - EU	Yes
WEEE - Directive of the European Union	No
RoHS Directive	No
RCM	Yes

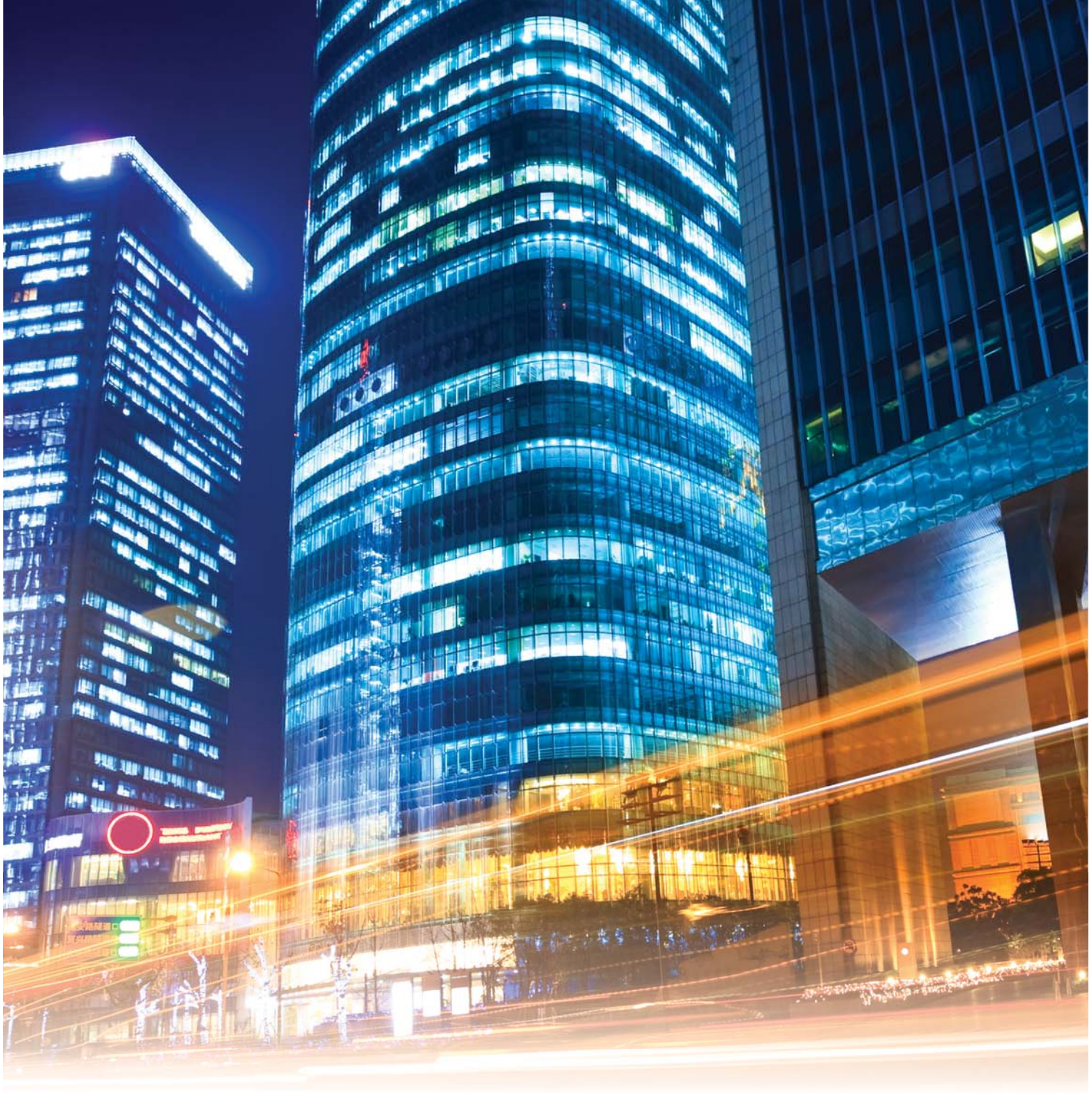
MNL Series Controllers - Inputs and Outputs

	MNL-50	MNL-100	MNL-110	MNL-130	MNL-150
Part Number	MNL-5RF3, MNL-5RH3, MNL-5RR3, MNL-5RS3, MNL-5RS4	MNL-10RF3, MNL-10RH3, MNL-10RR3, MNL-10RS3, MNL-10RS4	MNL-11RF3	MNL-13RF3	MNL-15RF3, MNL-15RH3, MNL-15RR3, MNL-15RS3, MNL-15RS4
Universal Inputs	1	2	3	3	3
Digital Contact	•	•	•	•	•
Digital Counter - Low Speed					
Digital Counter - Medium Speed					
Digital Counter - High Speed					
Digital Supervised					
Analog Voltage - 0-1 V					
Analog Voltage - 0-5 V	•	•	•	•	•
Analog Voltage - 0-10 V					
Analog Voltage - 2-10 V					
Analog Current - 0-20 mA	•	•	•	•	•
Analog Current - 4-20 mA					
Analog Resistance	•	•	•	•	•
Analog Thermistor - 10 k					
Analog Thermistor - 1.8 k					
Analog Thermistor - 1 k	•	•	•	•	•
Digital Inputs	1	1			
Digital Contact	•	•			
Counter - Low Speed					
Counter - Medium Speed					
Counter - High Speed					
Analog Inputs					
Voltage - 0-5 V					
Voltage - 0-10 V					
Velocity Pressure					
Analog Thermistor - 10 k					
Analog Thermistor - 1.8 k					
Analog Thermistor - 1 k					
Digital Outputs	3	4	5	7	2
Form A, SPST	•	•	1 channel	3 channel	•
Form C, SPDT					
Triac			4 channel	4 channel	
Analog Outputs					2
Voltage - 0-10 V					
Current - 0-20 mA					•
Damper Outputs					
Form K, Triac					
Voltage					
Intelligent Sensors	1	1	1	1	1
S-Link (MN-Sx for MNL)	•	•	•	•	•

MNL Series Controllers - Inputs and Outputs, continued

	MNL-200	MNL-800	MNL-V1RVx	MNL-V2RVx	MNL-V3RV3
Part Number	**MNL-20RF3, MNL-20RH3, MNL-20RR3, MNL-20RS3, MNL-20RS4**	**MNL-800-102**	**MNL-V1RV3-2**	**MNL-V2RV3-2**	**MNL-V3RV3**
Universal Inputs	3	8	1	1	1
Digital Contact	•	•	•	•	•
Digital Counter - Low Speed					
Digital Counter - Medium Speed					
Digital Counter - High Speed					
Digital Supervised					
Analog Voltage - 0-1 V					
Analog Voltage - 0-5 V	•	•	•	•	•
Analog Voltage - 0-10 V					
Analog Voltage - 2-10 V					
Analog Current - 0-20 mA	•	•	•	•	•
Analog Current - 4-20 mA					
Analog Resistance	•	•	•	•	•
Analog Thermistor - 10 k					
Analog Thermistor - 1.8 k					
Analog Thermistor - 1 k	•	•	•	•	•
Digital Inputs	2	5	1	1	1
Digital Contact	•	•	•	•	•
Counter - Low Speed					
Counter - Medium Speed		4 channel			
Counter - High Speed		1 channel			
Analog Inputs			1	1	1
Voltage - 0-5 V					
Voltage - 0-10 V					
Velocity Pressure			internal	internal	internal
Analog Thermistor - 10 k					
Analog Thermistor - 1.8 k					
Analog Thermistor - 1 k					
Digital Outputs	6	8		3	5
Form A, SPST	•			•	3 channel
Form C, SPDT		•			
Triac					2 channel
Analog Outputs	2	4		1	1
Voltage - 0-10 V					
Current - 0-20 mA	•	•		•	•
Damper Outputs			1	1	
Form K, Triac			internal	internal	
Voltage					
Intelligent Sensors	1	1	1	1	1
S-Link (MN-Sx for MNL)	•	•	•	•	•

BACnet controllers



BACnet b3 Series

Schneider Electric's b3 controllers support the most advanced BACnet services, addressing all five interoperability areas: data sharing, scheduling, trending, alarming, and device management. Every BACnet controller in the b3 system is compliant with the ASHRAE standard and interoperate with third party BACnet devices.

b3 Series Controllers

b3608
Local Controller

b3624
Local Controller

b3800
Local Controller

Part Number	b3608	b3624	b3800
Communications			
Protocol	BACnet Open Protocol	BACnet Open Protocol	BACnet Open Protocol
Communication Interface	MS/TP, 9600 -76,800 bit/s	MS/TP, 9600 -76,800 bit/s	MS/TP, 9600 -76,800 bit/s
Software			
Programmability	Script Programmable	Script Programmable	Script Programmable
Physical			
Dimensions	153 W x 229 H x 54 D mm (6.01 W x 9.03 H x 2.14 D in.)	153 W x 229 H x 54 D mm (6.01 W x 9.03 H x 2.14 D in.)	153 W x 229 H x 54 D mm (6.01 W x 9.03 H x 2.14 D in.)
Weight (including baseplate)	0.54 kg (1.19 lb.)	0.54 kg (1.19 lb.)	0.61 kg (1.34 lb.)
Power			
Power	24 VAC +10% -15%, 50/60 Hz Class 2 limited power, 12-24 VDC (auto sensing AC/DC)	24 VAC +10% -15%, 50/60 Hz Class 2 limited power, 12-24 VDC (auto sensing AC/DC)	24 VAC +10% -15%, 50/60 Hz Class 2 limited power, 12-24 VDC (auto sensing AC/DC)
Consumption	25 VA (3 A fuse overload MOV protected)	25 VA (3 A fuse overload MOV protected)	25 VA (3 A fuse overload MOV protected)
Environmental			
Operating Range	0 °C to 49 °C (32 °F to 120 °F) 10-95% RH (non-condensing)	0 °C to 49 °C (32 °F to 120 °F) 10-95% RH (non-condensing)	-23 °C to 60 °C (-10 °F to 140 °F) 10-95% RH (non-condensing)
CPU Internals			
CPU	Motorola Coldfire 32-bit, 10 Mhz	Motorola Coldfire 32-bit, 10 Mhz	Motorola Coldfire 32-bit, 10 Mhz
Memory	1 MB flash, 128 kB SRAM	1 MB flash, 128 kB SRAM	1 MB flash, 128 kB SRAM
Battery	Replaceable, non-rechargeable lithium battery. Provides 5 years typical accumulated power failure backup of RAM memory.	Replaceable, non-rechargeable lithium battery. Provides 5 years typical accumulated power failure backup of RAM memory.	Replaceable, non-rechargeable lithium battery. Provides 5 years typical accumulated power failure backup of RAM memory.
Real time clock	Synchronized via BACnet service	Synchronized via BACnet service	Synchronized via BACnet service
External Features			
Enclosure rating	UL94 5 V (Plenum rated), IP 10 (<50 mm protection)	UL94 5 V (Plenum rated), IP 10 (<50 mm protection)	UL94 5 V (Plenum rated), IP 10 (<50 mm protection)
HOA Switches (DO/AO)	No	No	No
Digital Status LEDs	No	No	Yes
Display	No	No	No
Intelligent Sensors	Smart Sensor	Smart Sensor	Smart Sensor
Service Port	b3	b3	b3
Terminals			
I/O Terminals	Fixed terminal	Fixed terminal	Fixed terminal
I/O Expansion	No	No	No
External Enclosure/Mounting			
Enclosure class	Open class (separate enclosure required)	Open class (separate enclosure required)	Open class (separate enclosure required)
Mounting	Wall mount	Wall mount	Wall mount
Certifications			
BTL	BTL: BACnet Advanced Application Controllers (B-AAC) with trending	BTL: BACnet Advanced Application Controllers (B-AAC) with trending	BTL: BACnet Advanced Application Controllers (B-AAC) with trending
FCC	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class A (Emission)
Industry Canada (IC)	ICES-003 (Emission)	ICES-003 (Emission)	ICES-003 (Emission)
UL	UL-916 (Energy Management Equipment), Optional UL-864 (Smoke Control System Equipment) UUKL	UL-916 (Energy Management Equipment), Optional UL-864 (Smoke Control System Equipment) UUKL	UL-916 (Energy Management Equipment), Optional UL-864 (Smoke Control System Equipment) UUKL
C-UL US	Yes	Yes	Yes
CE - EU	Yes	Yes	Yes
WEEE - Directive of the European Union	Yes	Yes	Yes
RoHS Directive	Yes	Yes	Yes
RCM	Yes	Yes	Yes

b3 Series Controllers, continued

b3804
Local Controller

b3810
Local Controller

b3814
Local Controller

Part Number	b3804	b3810	b3814
Communications			
Protocol	BACnet Open Protocol	BACnet Open Protocol	BACnet Open Protocol
Communication Interface	MS/TP, 9600 -76,800 bit/s	MS/TP, 9600 -76,800 bit/s	MS/TP, 9600 -76,800 bit/s
Software			
Programmability	Script Programmable	Script Programmable	Script Programmable
Physical			
Dimensions	153 W x 229 H x 54 D mm (6.01 W x 9.03 H x 2.14 D in.)	184 W x 241 H x 54 D mm (7.26 W x 9.51 H x 2.14 D in.)	184 W x 241 H x 54 D mm (7.26 W x 9.51 H x 2.14 D in.)
Weight (including baseplate)	0.61 kg (1.34 lb.)	0.75 kg (1.65 lb.)	0.75 kg (1.65 lb.)
Power			
Power	24 VAC +10% -15%, 50/60 Hz Class 2 limited power, 12-24 VDC (auto sensing AC/DC)	24 VAC +10% -15%, 50/60 Hz Class 2 limited power, 12-24 VDC (auto sensing AC/DC)	24 VAC +10% -15%, 50/60 Hz Class 2 limited power, 12-24 VDC (auto sensing AC/DC)
Consumption	25 VA (3 A fuse overload MOV protected)	30 VA (3 A fuse overload MOV protected)	30 VA (3 A fuse overload MOV protected)
Environmental			
Operating Range	-23 °C to 60 °C (-10 °F to 140 °F) 10-95% RH (non-condensing)	0 °C to 49 °C (32 °F to 120 °F) 10-95% RH (non-condensing)	0 °C to 49 °C (32 °F to 120 °F) 10-95% RH (non-condensing)
CPU Internals			
CPU	Motorola Coldfire 32-bit, 10 Mhz	Motorola Coldfire 32-bit, 10 Mhz	Motorola Coldfire 32-bit, 10 Mhz
Memory	1 MB flash, 128 kB SRAM	1 MB flash, 256 kB SRAM	1 MB flash, 256 kB SRAM
Battery	Replaceable, non-rechargeable lithium battery. Provides 5 years typical accumulated power failure backup of RAM memory.	Replaceable, non-rechargeable lithium battery. Provides 5 years typical accumulated power failure backup of RAM memory.	Replaceable, non-rechargeable lithium battery. Provides 5 years typical accumulated power failure backup of RAM memory.
Real time clock	Synchronized via BACnet service	Synchronized via BACnet service	Synchronized via BACnet service
External Features			
Enclosure rating	UL94 5 V (Plenum rated), IP 10 (<50 mm protection)	UL94 5 V (Plenum rated), IP 10 (<50 mm protection)	UL94 5 V (Plenum rated), IP 10 (<50 mm protection)
HOA Switches (DO/AO)	No	Yes - (8/0)	Yes - (4/4)
Digital Status LEDs	Yes	Yes	Yes
Display	No	No	No
Intelligent Sensors	Smart Sensor	Smart Sensor	Smart Sensor
Service Port	b3	b3	b3
Terminals			
I/O Terminals	Fixed terminal	Two-piece terminal	Two-piece terminal
I/O Expansion	No	Up to 2 xP expansion modules	Up to 2 xP expansion modules
External Enclosure/Mounting			
Enclosure class	Open class (separate enclosure required)	Open class (separate enclosure required)	Open class (separate enclosure required)
Mounting	Wall mount	Wall mount	Wall mount
Certifications			
BTL	BTL: BACnet Advanced Application Controllers (B-AAC) with trending	BTL: BACnet Advanced Application Controllers (B-AAC) with trending	BTL: BACnet Advanced Application Controllers (B-AAC) with trending
FCC	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class A (Emission)
Industry Canada (IC)	ICES-003 (Emission)	ICES-003 (Emission)	ICES-003 (Emission)
UL	UL-916 (Energy Management Equipment), Optional UL-864 (Smoke Control System Equipment) UUKL	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)
C-UL US	Yes	Yes	Yes
CE - EU	Yes	Yes	Yes
WEEE - Directive of the European Union	Yes	Yes	Yes
RoHS Directive	Yes	Yes	Yes
RCM	Yes	Yes	Yes

b3 Series Controllers, continued

b3850
Fan Coil, Heat Pump, VAV Zone Controller

b3851
Fan Coil & Heat Pump Zone Controller

b3853
Fan Coil, Heat Pump, Dual VAV Zone Controller

Part Number	b3850	b3851	b3853
Communications			
Protocol	BACnet Open Protocol	BACnet Open Protocol	BACnet Open Protocol
Communication Interface	MS/TP, 9600 -76,800 bit/s	MS/TP, 9600 -76,800 bit/s	MS/TP, 9600 -76,800 bit/s
Software			
Programmability	Script Programmable	Script Programmable	Script Programmable
Physical			
Dimensions	207 W x 139 H x 62 D mm (8.16 W x 5.47 H x 2.44 D in.)	207 W x 139 H x 62 D mm (8.16 W x 5.47 H x 2.44 D in.)	207 W x 139 H x 62 D mm (8.16 W x 5.47 H x 2.44 D in.)
Weight (including baseplate)	0.51 kg (1.08 lb)	0.51 kg (1.08 lb)	0.51 kg (1.08 lb)
Power			
Power	24 VAC +10% -15%, 50/60Hz Class 2 limited power	24 VAC +10% -15%, 50/60Hz Class 2 limited power	24 VAC +10% -15%, 50/60Hz Class 2 limited power
Consumption	20 VA (2A fuse overload MOV protected)	20 VA (2A fuse overload MOV protected)	20 VA (2A fuse overload MOV protected)
Environmental			
Operating Range	0°C to 49°C (32°F to 120°F) 10-95% RH (non-condensing)	0°C to 49°C (32°F to 120°F) 10-95% RH (non-condensing)	0°C to 49°C (32°F to 120°F) 10-95% RH (non-condensing)
CPU Internals			
CPU	Motorola Coldfire 32-bit, 10Mhz	Motorola Coldfire 32-bit, 10Mhz	Motorola Coldfire 32-bit, 10Mhz
Memory	1 MB flash, 128 kB SRAM	1 MB flash, 128 kB SRAM	1 MB flash, 128 kB SRAM
Battery	Replaceable, non-rechargeable lithium battery. Provides 5 years typical accumulated power failure backup of RAM memory.	Replaceable, non-rechargeable lithium battery. Provides 5 years typical accumulated power failure backup of RAM memory.	Replaceable, non-rechargeable lithium battery. Provides 5 years typical accumulated power failure backup of RAM memory.
Real time clock	Synchronized via BACnet service	Synchronized via BACnet service	Synchronized via BACnet service
External Features			
Enclosure rating	UL94 5V (Plenum rated), IP 10 (<50 mm protection)	UL94 5V (Plenum rated), IP 10 (<50 mm protection)	UL94 5V (Plenum rated), IP 10 (<50 mm protection)
HOA Switches (DO/AO)	No	No	No
Digital Status LEDs	No	No	No
Display	Option - xP Display	Option - xP Display	Option - xP Display
Intelligent Sensors	Smart Sensor	Smart Sensor	Smart Sensor
Service Port	b3	b3	b3
Terminals			
I/O Terminals	Fixed terminal	Fixed terminal	Fixed terminal
I/O Expansion	Up to 2 xP expansion modules	Up to 2 xP expansion modules	Up to 2 xP expansion modules
External Enclosure/Mounting			
Enclosure class	Open class (separate enclosure required)	Open class (separate enclosure required)	Open class (separate enclosure required)
Mounting	Wall mount	Wall mount	Wall mount
Certifications			
BTL	BTL: BACnet Advanced Application Controllers (B-AAC) with trending	BTL: BACnet Advanced Application Controllers (B-AAC) with trending	BTL: BACnet Advanced Application Controllers (B-AAC) with trending
FCC	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class A (Emission)
Industry Canada (IC)	ICES-003 (Emission)	ICES-003 (Emission)	ICES-003 (Emission)
UL	UL-916 (Energy Management Equipment), Optional UL-864 (Smoke Control System Equipment) UUKL	UL-916 (Energy Management Equipment), Optional UL-864 (Smoke Control System Equipment) UUKL	UL-916 (Energy Management Equipment), Optional UL-864 (Smoke Control System Equipment) UUKL
C-UL US	Yes	Yes	Yes
CE - EU	Yes	Yes	Yes
WEEE - Directive of the European Union	Yes	Yes	Yes
RoHS Directive	Yes	Yes	Yes
RCM	Yes	Yes	Yes

b3 Series Controllers, continued

b3865-V
VAV Zone Controller

b3866-V
VAV Zone Controller

b3867
Terminal Controller

Part Number	b3865-V	b3866-V	b3867
Communications			
Protocol	BACnet Open Protocol	BACnet Open Protocol	BACnet Open Protocol
Communication Interface	MS/TP, 9600 -76,800 bit/s	MS/TP, 9600 -76,800 bit/s	MS/TP, 9600 -76,800 bit/s
Software			
Programmability	Script Programmable	Script Programmable	Script Programmable
Physical			
Dimensions	159 W x 197 H x 63 D mm (6.25 W x 7.75 H x 2.50 D in.)	159 W x 197 H x 63 D mm (6.25 W x 7.75 H x 2.50 D in.)	157 W x 89 H x 64 D mm (6.20 W x .3.50 H x 2.50 D in.)
Weight (including baseplate)	1.04 kg (2.50 lb.)	1.04 kg (2.50 lb.)	0.29 kg (0.64 lb.)
Power			
Power	24 VAC +10% -15%, 50/60 Hz Class 2 limited power	24 VAC +10% -15%, 50/60 Hz Class 2 limited power	24 VAC +10% -15%, 50/60 Hz Class 2 limited power
Consumption	<10 VA (fused overload MOV protected)	<10 VA (fused overload MOV protected)	4 VA (2 A fuse overload MOV protected)
Environmental			
Operating Range	0 °C to 50 °C (32 °F to 122 °F) 10-90% RH (non-condensing)	0 °C to 50 °C (32 °F to 122 °F) 10-90% RH (non-condensing)	0 °C to 49 °C (32 °F to 120 °F) 10-95% RH (non-condensing)
CPU Internals			
CPU	Motorola Coldfire 32-bit, 10 Mhz	Motorola Coldfire 32-bit, 10 Mhz	Motorola Coldfire 32-bit, 10 Mhz
Memory	512 kB flash, 128 kB SRAM, programs/data max 56 kB, parameters 64 kB	512 kB flash, 128 kB SRAM, programs/data max 56 kB, parameters 64 kB	1 MB flash, 128 kB SRAM
Battery	Replaceable, rechargeable battery. Provides 30 days typical accumulated power failure backup of RAM memory. All data stored in Flash on power loss.	Replaceable, rechargeable battery. Provides 30 days typical accumulated power failure backup of RAM memory. All data stored in Flash on power loss.	Replaceable, non-rechargeable lithium battery. Provides 5 years typical accumulated power failure backup of RAM memory.
Real time clock	No	No	Synchronized via BACnet service
External Features			
Enclosure rating	N/A	N/A	UL94 5 V (Plenum rated), IP 10 (<50 mm protection)
HOA Switches (DO/AO)	No	No	No
Digital Status LEDs	No	No	No
Display	No	No	No
Intelligent Sensors	Smart Sensor	Smart Sensor	Smart Sensor
Service Port	b3	b3	b3
Terminals			
I/O Terminals	Two-piece terminal	Two-piece terminal	Two-piece terminal
I/O Expansion	No	No	No
External Enclosure/Mounting			
Enclosure class	Open class (separate enclosure required)	Open class (separate enclosure required)	Open class (separate enclosure required)
Mounting	Wall mount	Wall mount	Wall mount
Certifications			
BTL	BTL: BACnet Advanced Application Controllers (B-AAC) with trending	BTL: BACnet Advanced Application Controllers (B-AAC) with trending	BTL: BACnet Advanced Application Controllers (B-AAC) with trending
FCC	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class A (Emission)
Industry Canada (IC)	ICES-003 (Emission)	ICES-003 (Emission)	ICES-003 (Emission)
UL	UL-916 (Energy Management Equipment), Optional UL-864 (Smoke Control System Equipment) UUKL	UL-916 (Energy Management Equipment), Optional UL-864 (Smoke Control System Equipment) UUKL	UL-916 (Energy Management Equipment), Optional UL-864 (Smoke Control System Equipment) UUKL
C-UL US	Yes	Yes	Yes
CE - EU	Yes	Yes	Yes
WEEE - Directive of the European Union	Yes	Yes	Yes
RoHS Directive	Yes	Yes	Yes
RCM	Yes	Yes	Yes

b3 Series Controllers, continued

b3885-V
VAV Zone Controller

b3887 (without enclosure)
Terminal Controller

b3887-L-230
Terminal Controller

Part Number	b3885-V	b3887	b3887-L-115, b3887-L-230
Communications			
Protocol	BACnet Open Protocol	BACnet Open Protocol	BACnet Open Protocol
Communication Interface	MS/TP, 9600 -76,800 bit/s	MS/TP, 9600 -76,800 bit/s	MS/TP, 9600 -76,800 bit/s
Software			
Programmability	Script Programmable	Script Programmable	Script Programmable
Physical			
Dimensions	159 W x 197 H x 63 D mm (6.25 W x 7.75 H x 2.50 D in.)	130 W x 111 H x 30 D mm (5.13 W x 4.40 H x 1.15 D in.)	186 W x 111 H x 59 D mm (7.32 W x 4.40 H x 2.31 D in.)
Weight (including baseplate)	1.04 kg (2.50 lb.)	0.23 kg (0.50 lb.)	1.19 kg (2.63 lb.)
Power			
Power	24 VAC +10% -15%, 50/60 Hz Class 2 limited power	24 VAC +10% -15%, 50/60 Hz Class 2 limited power	115/230 VAC +10% -15%, 50/60 Hz
Consumption	<10 VA (fused overload MOV protected)	10 VA (1 A fuse overload MOV protected)	32 VA (1 A fuse overload MOV protected)
Environmental			
Operating Range	0 °C to 50 °C (32 °F to 122 °F) 10-90% RH (non-condensing)	0 °C to 49 °C (32 °F to 120 °F) 10-95% RH (non-condensing)	0 °C to 49 °C (32 °F to 120 °F) 10-95% RH (non-condensing)
CPU Internals			
CPU	Motorola Coldfire 32-bit, 10 Mhz	Motorola Coldfire 32-bit, 10 Mhz	Motorola Coldfire 32-bit, 10 Mhz
Memory	512 kB flash, 128 kB SRAM, programs/data max 56 kB, parameters 64 kB	1 MB flash, 512 kB SRAM	1 MB flash, 512 kB SRAM
Battery	Replaceable, rechargeable battery. Provides 30 days typical accumulated power failure backup of RAM memory. All data stored in Flash on power loss.	Replaceable, non-rechargeable lithium battery. Provides 5 years typical accumulated power failure backup of RAM memory.	Replaceable, non-rechargeable lithium battery. Provides 5 years typical accumulated power failure backup of RAM memory.
Real time clock	No	Synchronized via BACnet service	Synchronized via BACnet service
External Features			
Enclosure rating	N/A	UL94 5 V (Plenum rated), IP 10 (<50 mm protection)	UL94 5 V (Plenum rated), IP 10 (<50 mm protection)
HOA Switches (DO/AO)	No	No	No
Digital Status LEDs	No	No	No
Display	No	No	No
Intelligent Sensors	Smart Sensor	Smart Sensor	Smart Sensor
Service Port	b3	b3	b3
Terminals			
I/O Terminals	Two-piece terminal	Fixed terminal	Fixed terminal
I/O Expansion	No	No	No
External Enclosure/Mounting			
Enclosure class	Open class (separate enclosure required)	Open class (separate enclosure required)	Open class (separate enclosure required)
Mounting	Wall mount	Wall mount	Wall mount
Certifications			
BTL	BTL: BACnet Advanced Application Controllers (B-AAC) with trending	BTL: BACnet Advanced Application Controllers (B-AAC) with trending	BTL: BACnet Advanced Application Controllers (B-AAC) with trending
FCC	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class A (Emission)
Industry Canada (IC)	ICES-003 (Emission)	ICES-003 (Emission)	ICES-003 (Emission)
UL	UL-916 (Energy Management Equipment), Optional UL-864 (Smoke Control System Equipment) UUKL	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)
C-UL US	Yes	Yes	Yes
CE - EU	Yes	Yes	Yes
WEEE - Directive of the European Union	Yes	Yes	Yes
RoHS Directive	Yes	Yes	Yes
RCM	Yes	Yes	Yes

b3 Series Controllers, continued

b3887-L-115-C, b3887-L-230-C Terminal Controllers

b3920 System Controller

Part Number	b3887-L-115-C, b3887-L-230-C	b3920, b3920-D
Communications		
Protocol	BACnet Open Protocol	BACnet Open Protocol
Communication Interface	MS/TP, 9600 -76,800 bit/s	MS/TP, 9600 -76,800 bit/s
Software		
Programmability	Script Programmable	Script Programmable
Physical		
Dimensions	186 W x 111 H x 59 D mm (7.32 W x 4.40 H x 2.31 D in.)	270.8 W x 330.2 H x 69.0 D mm (10.66 W x 13.00 H x 2.72 D in.)
Weight (including baseplate)	1.19 kg (2.63 lb.)	1.58 kg (3.50 lb.)
Power		
Power	115/230 VAC +10% -15%, 50/60 Hz	115/230 VAC +10% -15%, 50/60 Hz
Consumption	32 VA (1 A fuse overload MOV protected)	45 VA (3 A fuse overload MOV protected)
Environmental		
Operating Range	0 °C to 49 °C (32 °F to 120 °F) 10-95% RH (non-condensing)	0 °C to 49 °C (32 °F to 120 °F) 10-95% RH (non-condensing)
CPU Internals		
CPU	Motorola Coldfire 32-bit, 10 Mhz	Motorola Coldfire 32-bit, 10 Mhz
Memory	1 MB flash, 512 kB SRAM	2 MB flash, 1 MB SRAM
Battery	Replaceable, non-rechargeable lithium battery. Provides 5 years typical accumulated power failure backup of RAM memory.	Replaceable, non-rechargeable lithium battery. Provides 5 years typical accumulated power failure backup of RAM memory.
Real time clock	Synchronized via BACnet service	Synchronized via BACnet service
External Features		
Enclosure rating	UL94 5 V (Plenum rated), IP 20 (<12.5 mm protection)	UL94 5 V (Plenum rated), IP 10 (<50 mm protection)
HOA Switches (DO/AO)	No	Yes - (8/8)
Digital Status LEDs	No	Yes
Display	No	Option - xP Display
Intelligent Sensors	Smart Sensor	Smart Sensor
Service Port	b3	b3
Terminals		
I/O Terminals	Fixed terminal	Two-piece terminal
I/O Expansion	No	Up to 2 xP expansion modules
External Enclosure/Mounting		
Enclosure class	Closed class	Open class (separate enclosure required)
Mounting	Wall mount	Wall mount
Certifications		
BTL	BTL: BACnet Advanced Application Controllers (B-AAC) with trending	BTL: BACnet Advanced Application Controllers (B-AAC) with trending
FCC	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class A (Emission)
Industry Canada (IC)	ICES-003 (Emission)	ICES-003 (Emission)
UL	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment), Optional UL-864 (Smoke Control System Equipment) UUKL
C-UL US	Yes	Yes
CE - EU	Yes	Yes
WEEE - Directive of the European Union	Yes	Yes
RoHS Directive	Yes	Yes
RCM	Yes	Yes

b3 Series xP Expansion I/O Modules

xPDI8
8 Channel Digital Output
Expansion Module

xPUI4
4 Channel Universal Input
Expansion Module

xPDO2
2 Channel Digital Output
Expansion Module

Part Number	xPDI8	xPUI4	xPDO2
Communications			
Protocol	xP Bus	xP Bus	xP Bus
Physical			
Dimensions	180 W x 82 H x 41 D mm (7.10 W x 3.21 H x 1.60 D in.)	180 W x 82 H x 41 D mm (7.10 W x 3.21 H x 1.60 D in.)	180 W x 82 H x 41 D mm (7.10 W x 3.21 H x 1.60 D in.)
Weight (including baseplate)	0.22 kg (0.48 lb.)	0.22 kg (0.48 lb.)	0.22 kg (0.48 lb.)
Power			
Power	From xP bus with 400 mA power supply	From xP bus with 400 mA power supply	From xP bus with 400 mA power supply
Consumption	25 mA	50 mA	60 mA
Environmental			
Operating Range	0 °C to 49 °C (32 °F to 120 °F) 10-95% RH (non-condensing)	0 °C to 49 °C (32 °F to 120 °F) 10-95% RH (non-condensing)	0 °C to 49 °C (32 °F to 120 °F) 10-95% RH (non-condensing)
External Features			
Enclosure rating	UL94 5VB, IP 10 (<50 mm protection)	UL94 5VB, IP 10 (<50 mm protection)	UL94 5VB, IP 10 (<50 mm protection)
HOA Switches (DO/AO)	No	No	Yes - (2/0)
Digital Status LEDs	Yes	Yes	Yes
Terminals			
I/O Terminals	Two-piece terminal	Two-piece terminal	Two-piece terminal
I/O Expansion	N/A	N/A	N/A
External Enclosure/Mounting			
Enclosure class	Open class (separate enclosure required)	Open class (separate enclosure required)	Open class (separate enclosure required)
Mounting	Wall mount	Wall mount	Wall mount
Certifications			
BTL	No	No	No
FCC	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class A (Emission)
Industry Canada (IC)	ICES-003 (Emission)	ICES-003 (Emission)	ICES-003 (Emission)
UL	UL-916 (Energy Management Equipment), Optional UL-864 (Smoke Control System Equipment) UUKL	UL-916 (Energy Management Equipment), Optional UL-864 (Smoke Control System Equipment) UUKL	UL-916 (Energy Management Equipment), Optional UL-864 (Smoke Control System Equipment) UUKL
C-UL US	Yes	Yes	Yes
CE - EU	Yes	Yes	Yes
WEEE - Directive of the European Union	Yes	Yes	Yes
RoHS Directive	Yes	Yes	Yes
RCM	Yes	Yes	Yes

b3 Series xP Expansion I/O Modules, continued

xPDO4
4 Channel Digital Output
Expansion Module

xPAO2
2 Channel Analog Output
Expansion Module

xPAO4
4 Channel Analog Output
Expansion Module

Part Number	xPDO4	xPAO2	xPAO4
Communications			
Protocol	xP Bus	xP Bus	xP Bus
Physical			
Dimensions	180 W x 82 H x 41 D mm (7.10 W x 3.21 H x 1.60 D in.)	180 W x 82 H x 41 D mm (7.10 W x 3.21 H x 1.60 D in.)	180 W x 82 H x 41 D mm (7.10 W x 3.21 H x 1.60 D in.)
Weight (including baseplate)	0.22 kg (0.48 lb.)	0.22 kg (0.48 lb.)	0.22 kg (0.48 lb.)
Power			
Power	From xP bus with 400 mA power supply	From xP bus with 400 mA power supply	From xP bus with 400 mA power supply
Consumption	100 mA	80 mA	120 mA
Environmental			
Operating Range	0 °C to 49 °C (32 °F to 120 °F) 10-95% RH (non-condensing)	0 °C to 49 °C (32 °F to 120 °F) 10-95% RH (non-condensing)	0 °C to 49 °C (32 °F to 120 °F) 10-95% RH (non-condensing)
External Features			
Enclosure rating	UL94 5VB, IP 10 (<50 mm protection)	UL94 5VB, IP 10 (<50 mm protection)	UL94 5VB, IP 10 (<50 mm protection)
HOA Switches (DO/AO)	Yes - (4/0)	Yes - (0/2)	Yes - (0/4)
Digital Status LEDs	Yes	Yes	Yes
Terminals			
I/O Terminals	Two-piece terminal	Two-piece terminal	Two-piece terminal
I/O Expansion	N/A	N/A	N/A
External Enclosure/Mounting			
Enclosure class	Open class (separate enclosure required)	Open class (separate enclosure required)	Open class (separate enclosure required)
Mounting	Wall mount	Wall mount	Wall mount
Certifications			
BTL	No	No	No
FCC	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class A (Emission)	47 CFR § 15, Class A (Emission)
Industry Canada (IC)	ICES-003 (Emission)	ICES-003 (Emission)	ICES-003 (Emission)
UL	UL-916 (Energy Management Equipment), Optional UL-864 (Smoke Control System Equipment) UUKL	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment)
C-UL US	Yes	Yes	Yes
CE - EU	Yes	Yes	Yes
WEEE - Directive of the European Union	Yes	Yes	Yes
RoHS Directive	Yes	Yes	Yes
RCM	Yes	Yes	Yes

b3 Series Controllers - Inputs and Outputs

Part Number	b3608	b3624	b3800	b3804	b3810	b3814
Universal Inputs	8	24	8	8	8	8
Digital Contact	•	•	•	•	•	•
Digital Counter - Low Speed	•	•	•	•	•	•
Digital Counter - Medium Speed						
Digital Counter - High Speed						
Digital Supervised	•	•	•	•	•	•
Analog Voltage - 0-1 V						
Analog Voltage - 0-5 V	•	•	•	•		
Analog Voltage - 0-10 V					•	•
Analog Voltage - 2-10 V						
Analog Current - 0-20 mA						
Analog Current - 4-20 mA	•	•	•	•	•	•
Analog Resistance						
Analog Thermistor - 10 k	•	•	•	•	•	•
Analog Thermistor - 1.8 k						
Analog Thermistor - 1 k						
Analog Inputs						
Voltage - 0-5 V						
Voltage - 0-10 V						
Velocity Pressure						
Analog Thermistor - 10 k						
Analog Thermistor - 1.8 k						
Analog Thermistor - 1 k						
Digital Outputs			8	4	8	4
Form A, SPST						
Form C, SPDT			•	•	•	•
Triac						
Analog Outputs				4		4
Voltage - 0-10 V				•		•
Current - 0-20 mA						•
Damper Outputs						
Form K, Triac						
Voltage						
Intelligent Sensors	1	1	1	1	1	1
Smart Sensor (b3)	•	•	•	•	•	•

b3 Series Controllers - Inputs and Outputs, continued

Part Number	b3850	b3851	b3853	b3865-V	b3866-V	b3867
Universal Inputs	4	4	4	4	4	4
Digital Contact	•	•	•	•	•	•
Digital Counter - Low Speed	•	•	•	•	•	•
Digital Counter - Medium Speed						
Digital Counter - High Speed						
Digital Supervised	•	•	•	•	•	•
Analog Voltage - 0-1 V						
Analog Voltage - 0-5 V	•	•	•	•	•	•
Analog Voltage - 0-10 V						
Analog Voltage - 2-10 V						
Analog Current - 0-20 mA	•	•	•			
Analog Current - 4-20 mA				•	•	•
Analog Resistance						
Analog Thermistor - 10 k	•	•	•	•	•	•
Analog Thermistor - 1.8 k						
Analog Thermistor - 1 k						
Analog Inputs	1		2	1	1	
Voltage - 0-5 V						
Voltage - 0-10 V						
Velocity Pressure	internal		internal	internal	internal	
Analog Thermistor - 10 k						
Analog Thermistor - 1.8 k						
Analog Thermistor - 1 k						
Digital Outputs	4	4	4	3	3	5
Form A, SPST	3ch	3ch	3ch			
Form C, SPDT						
Triac	1ch	1ch	1ch	•	•	•
Analog Outputs					2	2
Voltage - 0-10 V					•	•
Current - 0-20 mA						
Damper Outputs				1	1	
Form K, Triac				internal		
Voltage					internal	
Intelligent Sensors	1	1	1	1	1	1
Smart Sensor (b3)	•	•	•	•	•	•

b3 Series Controllers - Inputs and Outputs, continued

Part Number	b3885-V	b3887	b3887-L-115, b3887-L-230	b3887-L-115-C, b3887-L-230-C	b3920, b3920-D
Universal Inputs	2	3	3	3	16
Digital Contact	•	•	•	•	•
Digital Counter - Low Speed		•	•	•	•
Digital Counter - Medium Speed					
Digital Counter - High Speed	•				
Digital Supervised	•	•	•	•	•
Analog Voltage - 0-1 V					
Analog Voltage - 0-5 V	•	•	•	•	
Analog Voltage - 0-10 V					•
Analog Voltage - 2-10 V					
Analog Current - 0-20 mA					
Analog Current - 4-20 mA	•	•	•	•	•
Analog Resistance					
Analog Thermistor - 10 k	•	•	•	•	•
Analog Thermistor - 1.8 k					
Analog Thermistor - 1 k					
Analog Inputs	1				
Voltage - 0-5 V					
Voltage - 0-10 V					
Velocity Pressure	internal				
Analog Thermistor - 10 k					
Analog Thermistor - 1.8 k					
Analog Thermistor - 1 k					
Digital Outputs	2	5	5	5	8
Form A, SPST		1 channel	1 channel	1 channel	
Form C, SPDT					•
Triac	•	4 channel	4 channel	4 channel	
Analog Outputs					8
Voltage - 0-10 V					•
Current - 0-20 mA					•
Damper Outputs	1				
Form K, Triac	internal				
Voltage					
Intelligent Sensors	1	1	1	1	1
Smart Sensor (b3)	•	•	•	•	•

b3 Series xP Expansion I/O Modules - Inputs and Outputs

Part Number	xPDI8	xPUI4	xPDO2	xPDO4	xPAO2	xPAO4
Universal Inputs		4				
Digital Contact		•				
Digital Counter - Low Speed		3 channel				
Digital Counter - Medium Speed						
Digital Counter - High Speed		1 channel				
Digital Supervised		•				
Analog Voltage - 0-1 V						
Analog Voltage - 0-5 V		•				
Analog Voltage - 0-10 V						
Analog Voltage - 2-10 V						
Analog Current - 0-20 mA						
Analog Current - 4-20 mA		•				
Analog Resistance						
Analog Thermistor - 10 k		•				
Analog Thermistor - 1.8 k						
Analog Thermistor - 1 k						
Digital Inputs	8					
Digital Contact	•					
Counter - Low Speed						
Counter - Medium Speed						
Counter - High Speed	•					
Digital Outputs			2	4		
Form A, SPST						
Form C, SPDT			•	•		
Triac						
Analog Outputs					2	4
Voltage - 0-10 V					•	•
Current - 0-20 mA					•	•

The PCS enables offline engineering and project configuration of StruxureWare Building Operation without the need for live equipment or for an engineer or technician to be onsite. Save time and reduce costs by engineering automation servers and the Enterprise Server offline and later deploying when live onsite.

Search keyword: Project Configuration Server

MNB Series

Now native in SmartStruxure solution, the MNB series of MicroNet controllers are designed in accordance with BACnet® standards. When programmed or loaded with a pre-engineered application, these controllers provide control for packaged rooftops, heat pumps, fan coils, unit ventilators, and similar applications.

MNB Series Controllers

MNB-1000

MNB-300

Part Number	MNB-70	MNB-300	MNB-1000
Communications			
Protocol	BACnet Open Protocol	BACnet Open Protocol	BACnet Open Protocol
Communication Interface	MS/TP, 9600-76,800 bit/s	MS/TP, 9600-76,800 bit/s	MS/TP, 9600-76,800 bit/s
Software			
Preloaded Application/ASC	No	No	No
Programability	WorkPlace Tech programmable	WorkPlace Tech programmable	WorkPlace Tech programmable
Physical			
Dimensions	127 W x 92 H x 41 D mm (5 W x 3.625 H x 1.594 D in.)	178 W x 100 H x 56 D mm (7.0 W x 3.94 H x 2.19 D in.)	213 W x 278 H x 58 D mm (8.375 W x 10.937 H x 2.281 D in.)
Weight (including baseplate)	1.1 lb.	1.5 lb	3.95 lb.
Power			
Power	20.4 to 30 VAC, 50/60Hz	20.4 to 30 VAC, 50/60Hz	20.4 to 30 VAC, 50/60Hz
Consumption	15 VA (plus DO loads)	16VA	50VA
Environmental			
Operating Range	0°C to 55°C (32°F to 131°F) 5-95% RH (non-condensing)	-40°C to 60°C (-40°F to 140°F) 5-95% RH (non-condensing)	-40°C to 60°C (-40°F to 140°F) 5-95% RH (non-condensing)
CPU Internals			
CPU	8 Bit	8 Bit	32 Bit
Memory	"Flash: 256K EEPROM: 4K"	"Flash: 256K EEPROM: 4K"	"DDR: 64M NOR Flash: 16M"
Battery	N/A	N/A	72 hour
Real time clock	N/A	N/A	Yes
External Features			
Enclosure rating	NEMA-1, UL94 5V (Plenum rated)	N/A	N/A
HOA Switches (DO/AO)	No	No	No
Digital Status LEDs	Yes	Yes	Yes
Display	Via S-Link Sensor	Via S-Link Sensor	Via S-Link Sensor
Intelligent Sensors	Sensor Link (S-Link)	Sensor Link (S-Link)	Sensor Link (S-Link)
Service Port	MS/TP jack on controller	MS/TP jack on controller	MS/TP jack on controller
Terminals			
I/O Terminals	Fixed terminal	Fixed terminal	Fixed terminal
I/O Expansion	No	No	Up to 8 MNB-15s, each with 15 I/O points
A/D Conversion - Inputs	12-bit	12-bit	12-bit
A/D Conversion - Outputs	8-bit	8-bit	8-bit
External Enclosure/Mounting			
Enclosure class	N/A	NEMA-1	NEMA-1
Conduit knockouts	No	Yes	Yes
Mounting	Panel Mount	Panel Mount	Panel Mount
Certifications			
BTL	BTL: BACnet Application Specific Controller (B-ASC)	BTL: BACnet Application Specific Controller (B-ASC)	BTL: BACnet Application Specific Controller (B-ASC)
FCC	Part 15, Class A	Part 15, Class A	Part 15, Class A
Industry Canda (IC)	CAN/CSA 22.2, ULC/ ORD-C100-92, CAN-ULC-S527	CAN/CSA 22.2, ULC/ ORD-C100-92, CAN-ULC-S527	CAN/CSA 22.2, ULC/ ORD-C100-92, CAN-ULC-S527
UL	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment), UL-864 (Smoke Control)	UL-916 (Energy Management Equipment), UL-864 (Smoke Control)
C-UL US	UL Listed to Canadian Safety Standards (CAN/CSA 22.2).	UL Listed to Canadian Safety Standards (CAN/CSA 22.2).	UL Listed to Canadian Safety Standards (CAN/CSA 22.2).
CE - EU	89/336/EEC, EN61326	89/336/EEC, EN61326	89/336/EEC, EN61326
WEEE - Directive of the European Union	2012/19/EU	2012/19/EU	2012/19/EU
RoHS Directive	RoHS II	RoHS II	RoHS II
RCM	Yes	Yes	Yes

MNB Series Controllers, continued

MNB-V1

MNB-V2

Part Number	MNB-1000-15	MNB-V1-2	MNB-V2-2
Communications			
Protocol	Modbus	BACnet Open Protocol	BACnet Open Protocol
Communication Interface	RS-485	MS/TP, 9600-76,800 bit/s	MS/TP, 9600-76,800 bit/s
Software			
Preloaded Application/ASC	No	No	No
Programability	Program resides on parent controller	WorkPlace Tech programmable	WorkPlace Tech programmable
Physical			
Dimensions	178 W x 100 H x 56 D mm (7.0 W x 3.94 H x 2.19 D in.)	"159 W x 197 H x 63 D mm (6.25 W x 7.75 H x 2.50 D in.)"	"159 W x 197 H x 63 D mm (6.25 W x 7.75 H x 2.50 D in.)"
Weight (including baseplate)	1.5 lb.	2.68 lb.	2.65 lb.
Power			
Power	20.4 to 30 VAC, 50/60Hz	20.4 to 30 VAC, 50/60Hz	20.4 to 30 VAC, 50/60Hz
Consumption	16VA	15VA	15VA
Environmental			
Operating Range	-40°C to 60°C (-40°F to 140°F) 5-95% RH (non-condensing)	0°C to 55°C (32°F to 131°F) 5-95% RH (non-condensing)	0°C to 55°C (32°F to 131°F) 5-95% RH (non-condensing)
CPU Internals			
CPU	8 Bit	8 Bit	8 Bit
Memory	"Flash: 256K EEPROM: 4K"	"Flash: 256K EEPROM: 4K"	"Flash: 256K EEPROM: 4K"
Battery	N/A	N/A	N/A
Real time clock	N/A	N/A	N/A
External Features			
Enclosure rating	N/A	UL94 5V (Plenum rated)	UL94 5V (Plenum rated)
HOA Switches (DO/AO)	No	No	No
Digital Status LEDs	Yes	Yes	Yes
Display	No	Via S-Link Sensor	Via S-Link Sensor
Intelligent Sensors	No	Sensor Link (S-Link)	Sensor Link (S-Link)
Service Port	No	MS/TP jack on controller	MS/TP jack on controller
Terminals			
I/O Terminals	Fixed terminal	Fixed terminal	Fixed terminal
I/O Expansion	No	No	No
A/D Conversion - Inputs	12-bit	12-bit	12-bit
A/D Conversion - Outputs	8-bit	N/A	8-bit
External Enclosure/Mounting			
Enclosure class	NEMA-1	NEMA-1	NEMA-1
Conduit knockouts	Yes	Yes	Yes
Mounting	Panel Mount	Shaft mount	Shaft mount
Certifications			
BTL	N/A	BTL: BACnet Application Specific Controller (B-ASC)	BTL: BACnet Application Specific Controller (B-ASC)
FCC	Part 15, Class A	Part 15, Class A	Part 15, Class A
Industry Canda (IC)	CAN/CSA 22.2	CAN/CSA 22.2, ULC/ ORD-C100-92, CAN-ULC-S527	CAN/CSA 22.2, ULC/ ORD-C100-92, CAN-ULC-S527
UL	UL-916 (Energy Management Equipment)	UL-916 (Energy Management Equipment), UL-864 (Smoke Control)	UL-916 (Energy Management Equipment), UL-864 (Smoke Control)
C-UL US	UL Listed to Canadian Safety Standards (CAN/CSA 22.2).	UL Listed to Canadian Safety Standards (CAN/CSA 22.2).	UL Listed to Canadian Safety Standards (CAN/CSA 22.2).
CE - EU	89/336/EEC, EN61326	89/336/EEC, EN61326	89/336/EEC, EN61326
WEEE - Directive of the European Union	2012/19/EU	2012/19/EU	2012/19/EU
RoHS Directive	RoHS II	RoHS II	RoHS II
RCM	Yes	Yes	Yes

MNB Series Controllers – Inputs and Outputs

Base Part Number	MNB-70	MNB-300	MNB-1000	MNB-1000-15	MNB-V1-2	MNB-V2-2
Universal Inputs	3	6	12	6	3	3
Digital Contact	•	•	•	•	•	•
Digital Counter - Low Speed						
Digital Counter - Medium Speed		•				
Digital Counter - High Speed		•				
Digital Supervised						
Analog Voltage - 0-1V						
Analog Voltage - 0-5V	•	•	•	•	•	•
Analog Voltage - 0-10V						
Analog Voltage - 2-10V						
Analog Current - 0-20mA	•	•	•	•	•	•
Analog Current - 4-20mA						
Analog Resistance	•	•	•	•	•	•
Analog Thermistor - 10k	•	•	•	•	•	•
Analog Thermistor - 1.8k						
Analog Thermistor - 1k	•	•	•	•	•	•
Digital Inputs			4			
Digital Contact			•			
Counter - Low Speed						
Counter - Medium Speed						
Counter - High Speed			•			
Analog Inputs						
Voltage - 0-5V						
Voltage - 0-10V						
Velocity Pressure						
Analog Thermistor - 10k						
Analog Thermistor - 1.8k						
Analog Thermistor - 1k						
Universal Outputs	1	3	8	3		1
Digital Contact	•	•		•		•
Digital Counter - Low Speed						
Digital Counter - Medium Speed						
Digital Counter - High Speed						
Digital Supervised						
Analog Voltage - 0-1V						
Analog Voltage - 0-5V						
Analog Voltage - 0-10V	•	•	•	•		•
Analog Voltage - 2-10V						
Analog Current - 0-20mA	•	•	•	•		•
Analog Current - 4-20mA						
Analog Resistance						
Analog Thermistor - 10k						
Analog Thermistor - 1.8k						
Analog Thermistor - 1k						
Digital Outputs	3	6	8	6		3
Form A, SPST						
Form C, SPDT						
Triac	•	•	•	•		•
Analog Outputs						
Voltage - 0-10V						
Current - 0-20mA						
Damper Outputs					1	1
Form K, Triac					internal	internal
Voltage						
Intelligent Sensors						
S-Link (MN-Sx for MNB)	•	•	•		•	•

Additional EcoBuilding Resources

Digital sales tools to enable your success!

Tools, platforms, and services for an increasingly mobile workforce. Drive collaboration within and across the organization and with customers in an always on, global environment.

The Exchange - EcoBuilding's Partner & Employee Extranet

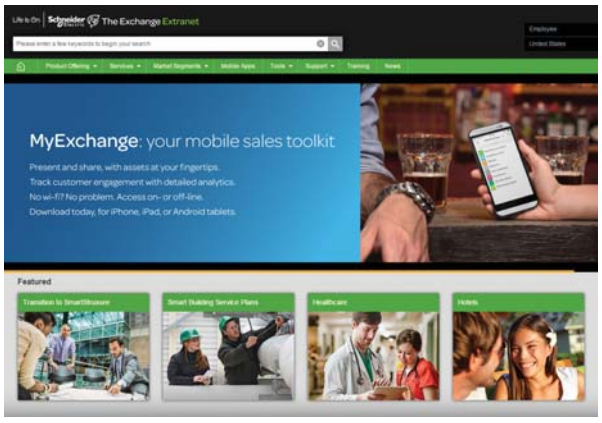
Attractive interface; user-friendly access 20,000+ assets

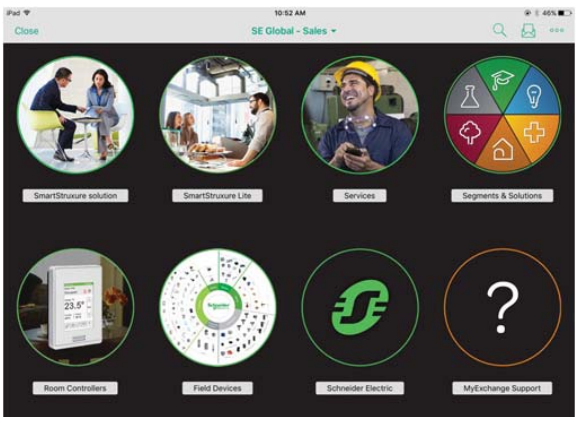
- Sales enablement, marcom, product & technical documentation
- Constantly refreshed with new content; all EcoBuilding lines of business represented
- Access to the Communities and technical & product support

MyExchange Mobile App

Easily access and view the latest assets from The Exchange online with iOS or Android devices

- Download assets for availability while offline
- Electronically highlight and mark up assets and save your notations
- Manage a personal "channel" with your own content
- Email assets to customers, and manage sharing activities/history
- Receive news and notifications on updates directly on your device





Modernize your BMS with SmartStruxure

Building automation technology is changing rapidly. New building management systems help deliver occupant satisfaction and productivity, are more secure, and provide better financial and operational performance!

Future-ready your customers' buildings. Minimize the risk, downtime and cost of modernizing a BMS, and take advantage of new features and benefits, with SmartStruxure™ solution's transition tools and services.

Customer benefits:

- Update and make your buildings IoT-ready while preserving existing site investments
- Leverage the benefits of Schneider Electric's pre-eminent building management system, including: a new user experience, new technology and new feature sets

System integrator benefits:

- Protect valued customer relationships with best-in-class solutions and conversion tools to ease customer site transitions
- Save time and labor costs by re-using components (controllers, sensors, wiring) and system design and configuration

Mutual benefits:

- Choose from multiple modernization path options to meet specific needs, schedules and budgets
- Enable access to connected offers; facilitate predictive and preventative cloud-enabled connected services

Tools are available to support transition from any legacy system:

TAC I/A Series™ – transitioniaseries
TAC I/NET™ – transitioninet
TAC Vista™ – transitionvista
Satchwell Sigma™ – transitionsigma
Andover Continuum™ – transitioncontinuum
NETWORK 8000™ – transitionnw8000

Use the keywords to find all assets on The Exchange

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Smart Building Service Plans

Increase building performance, efficiency and reliability with our best-in-class people, processes and technology.

Leveraging the newest technologies and years of industry experience, we offer an integrated approach to building maintenance. Advanced analytics through cutting-edge secure access continuously monitor building data to deliver actionable information behind the scenes.

Our best-in-class technology and processes are backed by certified service technicians and remote bureau analytics specialized in anticipating and addressing all of your customer's building challenges.

Smart Building Service Plans are tailored to your SmartStruxure solution needs, delivering:

StruxureWare Building Operation (SBO) Cloud Backup

- Automatically backs up the building database in the cloud, making sure it remains safe, secure, reliable, up-to-date and always available.

Building Analytics

- Evaluate performance, comfort, energy and maintenance data to identify prioritized areas for improvement and to validate repairs for optimal building performance.

Performance Plans

	Plus	Prime	Ultra
Alarm Monitoring Event Handling &	✔	✔	✔
Condition Monitoring	✔	✔	✔
Software Based Diagnostics	✔	✔	✔
On-site Diagnostics		✔	✔
Preventive Maintenance		✔	✔
Predictive Maintenance			✔

Insight Plans

	Plus	Prime	Ultra
Energy Dashboard	✔	✔	✔
Energy Analysis Tool	✔	✔	✔
Energy Consumption Report	✔	✔	✔
Energy ROI Report		✔	✔
Efficiency Improvement		✔	✔
Expert Consulting			✔

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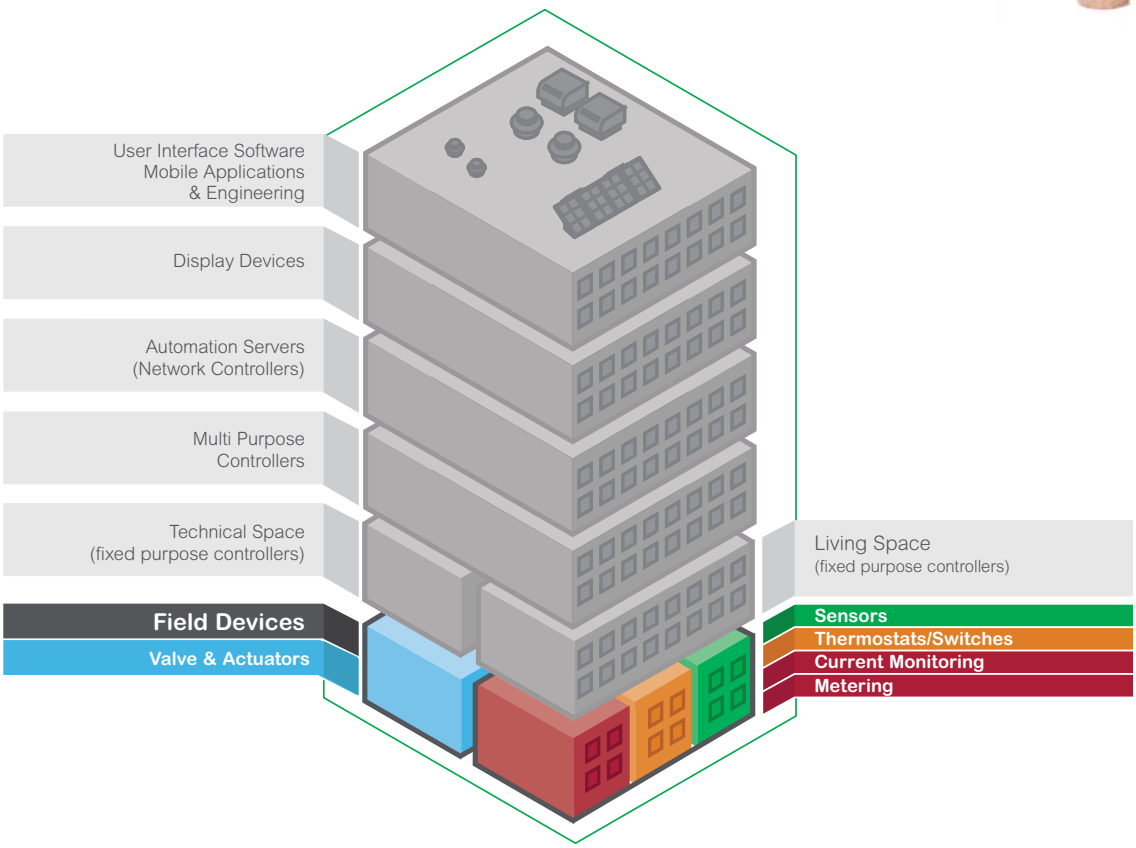
Smart starts at the foundation of the BMS

Control devices deliver critical data on system conditions to the BMS and react to needed adjustments to ensure optimal performance.

Our sensors, valves and actuators are the foundation of a comprehensive, integrated BMS. Input/output devices interpret critical data points, sending real-time responses to changes in the physical environment. Measurement of control at the Field Device level is critical for a BMS to perform at optimal efficiency.



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SmartStruxure™ Lite

Get control. Get efficient. Get value.
Efficiency for small and medium-sized buildings, and historic building retrofits

SmartStruxure Lite solution is a fast, easy way to future-fit buildings with a smaller footprint, delivering energy savings and comfort through web and wireless technology to control HVAC, lighting, and metering. It is powered by StruxureWare™ Building Expert, a fully programmable, no license-fee software, and hosted directly by the Multi-Purpose Manager (MPM). The MPM also serves as a wireless gateway for seamless communication to SmartStruxure solution in historic site retrofits or other buildings where wiring is prohibitive.

Save energy, save time, and improve comfort with minimal impact on operations.

Application-specific Room Controllers

SE7000 and SE8000 Series.
Cost effective alternative to direct digital controls.

Schneider Electric room controllers bridge the gap between the cost of stand-alone thermostats and the performance of DDC systems. They simplify installation and commissioning to control rooftop units, fan coil units, terminal units and heat pump applications in a wide variety of facilities. Our series of intelligent room controllers provide comfort and energy savings using their native application-specific control sequences, PID algorithms, occupancy detection and schedule management.

SE8000 Series

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 BMSs as well as to communicate wirelessly for ease of installation, flexibility and scalability.

SE7000 Series

The SE7000 digital controllers offer easy-to-install, thermostat-like functionality that sense occupancy and adjust set-point or fan speed control. Easily integrate into most BMSs. The wireless versions of the SE7000 provide a simple yet powerful solution which targets retrofit installations where running new communication wiring is prohibitive.

Power Manager for SmartStruxure solution

Monitor, measure, and optimize power in buildings in the same way as your HVAC, lighting, and fire safety systems with this embedded power management option.

Power Manager enhances SmartStruxure™ solution with electrical systems management that enables organizations specifically with non-critical electrical network applications to better monitor, manage and optimize their buildings from a single system interface. Leveraging Schneider's expertise in power management, it helps facility and building operators improve building energy performance, optimize maintenance staff effectiveness, and leverage fault diagnostics to prevent downtime and maintain power availability.

Ensure electrical network health

- Monitor electrical equipment and key assets
- Improve response to power related issues

Increase power quality awareness

- Power factor, harmonics and voltage disturbances
- Detect faults and diagnose key electrical problems

Improve energy usage accountability

- Track energy consumption and allocate costs
- Achieve energy conservation objectives

Power Meters

Optimize power uptime and building performance

Power is a complex factor within a building's operation and monitoring it as part of building management is crucial. Power meters provide insight that helps owners and managers ensure electrical network health, increase power quality awareness, and improve energy accountability.

Schneider Electric offers a wide range of meters that collect data from key points within the electrical infrastructure of a building and seamlessly serve it up to Power Manager for SmartStruxure.

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Engineering efficiency tools: Increase simplicity. Save time.

SmartStruxure solution engineering efficiency tools.

Graphic Development Support

Outsource graphics development for building management system and user interface needs to our expert team of highly skilled graphic developers, ACAD engineers and Revit/ MEP specialists. They possess expertise in BMS graphics development, Building Information Modeling (BIM), 3D graphics and image rendering.

Search keyword: Graphic Development Support

Technician Tool

Technician Tool mobile app for iOS and Android offers building maintenance and facilities personnel a convenient way to access SmartStruxure solution using WiFi locally, or WiFi or 3G over the Internet. Browse the system to get real-time or historical trend data, change setpoints, force input and output values, see and acknowledge alarms and edit time schedules.

Search keyword: Technician Tool

Automated Engineering Tool (AET)

This PC-based software platform provide SmartStruxure solution engineers the features and functions to gain efficiency and standardization when generating application content for servers (e.g. Enterprise Server, SmartX Controller AS-P, Automation Server, Project Configuration Server). It is designed to improve engineering quality and consistency of HVAC applications while reducing development and deployment time.

Search keyword: AET

Expert Tool

This PC-based software application helps visualize the configuration of SmartStruxure solution Enterprise Server and Automation Servers. The tool enables design commissioning or support engineers to see the relationship between the objects on the folder structure and generate documentation to support the commissioning or support process.

Search keyword: Expert Tool

Project Configuration Server

The PCS enables offline engineering and project configuration of StruxureWare Building Operation without the need for live equipment or for an engineer or technician to be onsite. Save time and reduce costs by engineering automation servers and the Enterprise Server offline and later deploying when live onsite.

Search keyword: Project Configuration Server

Smart Building Service Plan Selection Tool App

Services sales teams can identify customer's facility maintenance pain points, get a service plan recommendation, and (once the plan is agreed upon), produce an email with a PDF file showing the recommended plan and each pain point addressed. The app also allows sales team members to explore other options as well as the features included with each of the Smart Building Service Plans.

Search keyword: ESP

Selection Tools

Find a range of product selection tools on The Exchange, including SE8000 and SE7000 Series Room Controllers, SmartStruxure Lite, Heat and Flow Meters, and HVAC Sensors.

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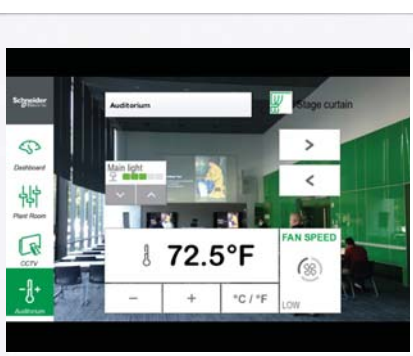
AdaptiApps Custom End User App Development Kit

Now, enhancing customer value is as simple as: Design, Deploy, Operate.

AdaptiApps is a custom end user app development kit that allows your customers to expand building connectivity and control to any occupant, not only BMS professionals. AdaptiApps puts seamless, aggregated data from multiple systems and services in the hands of building occupants using a single, secure, aesthetic app accessible via their smartphones or tablets.

AdaptiApps helps system integrators differentiate their business and build customer loyalty, while enabling managers of hotels, apartment complexes and healthcare facilities to ensure the best possible experience for their customers.



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January 2017

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