

# EcoStruxure™ Panel Server

## IoT for an intelligent power network

The EcoStruxure™ Panel Server is the next generation of gateway, providing a seamless connection of wired or unwired smart IoT devices to your edge control software or cloud-based applications and analytics. It is a foundational enabler for Schneider Electric EcoStruxure™ solutions.

### Electrical safety

Panel Server is an integral part of Schneider Electric's continuous thermal monitoring application, helping reduce risk of electrical fires, increase people and assets protection. Implement the thermal monitoring of your electrical panel by connecting thermal and heat sensors to your Panel Server.

### Power availability

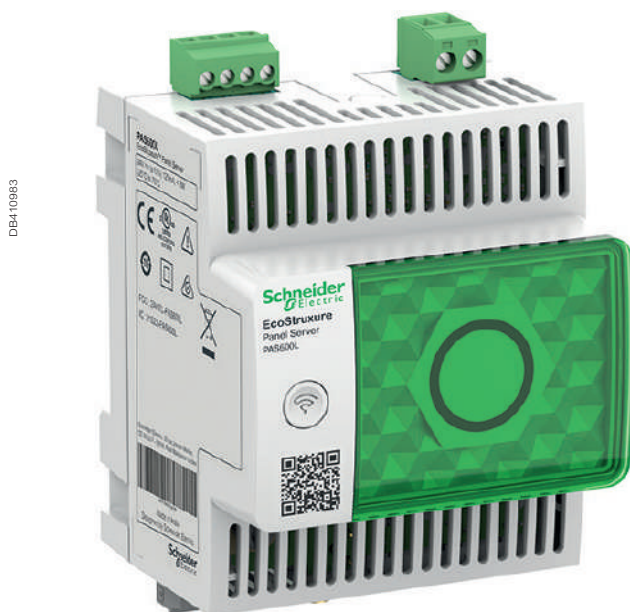
Electrical distribution monitoring and power event analysis help avoid unplanned downtime caused by electrical failure. Panel Server collects real-time data and alarms, presenting information through embedded webpages, making it available to edge control software or cloud-based applications and analytics for electrical system diagnostics. Use embedded webpages for first-level monitoring or monitor from your edge control system.

### Optimize energy efficiency

Improve your facility's energy efficiency and reduce energy consumption with energy usage analysis and performance tracking. Panel Server collects and shares energy data to help achieve your energy conservation initiatives. It is part of an energy data management system certified for compliance with ISO 50001, 50002, 50006 requirements.

### Cybersecurity

Guarding your electrical assets and systems against cyber attacks is vital. Panel Server is an IEC 62443 compliant device and is central to the IEC 62443-3-3 SL1 certified EcoStruxure™ Power system. Use Cybersecurity Admin Expert to manage user accounts, define your cybersecurity policy and retrieve security logs.



EcoStruxure Panel Server gives you access to the information you need to protect, maximize and optimize your power system.



Help keep people and assets safer



Maximize power availability



Optimize energy efficiency



Improve cybersecurity

### All-in-one gateway

- Separates your OT network from your IT network
- Wireless data concentrator
- Modbus RS485 to Modbus TCP/IP
- Supports multiple Ethernet connections for serving information to edge control software and cloud applications

### Simple commissioning

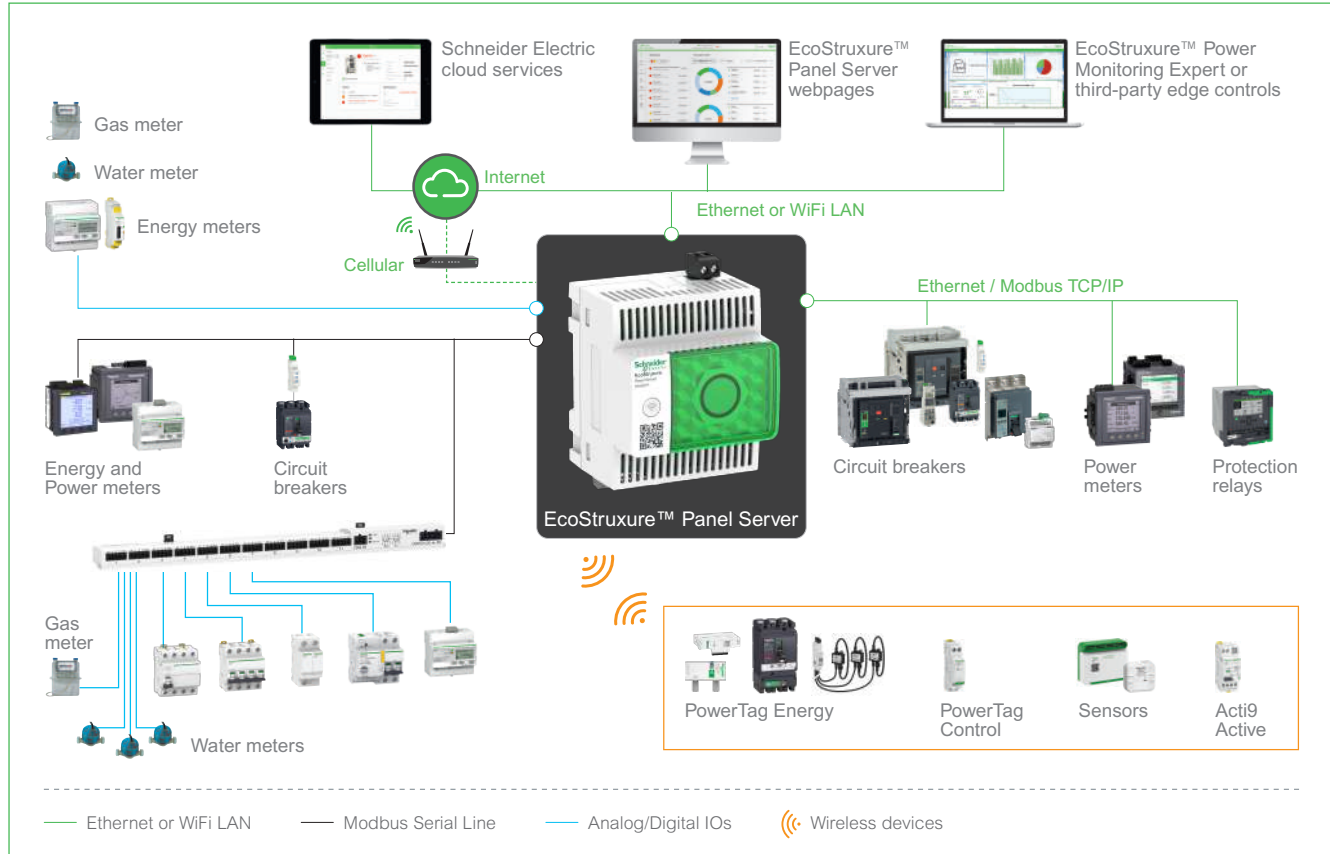
- EcoStruxure™ Power Commission software
- Device auto discovery
- Generation of acceptance reports to validate gateway configuration
- Commission via WiFi

### Intuitive operation

- User-friendly webpages offer first-level monitoring
- Contextualized data and operational insights
- Simple alarm setup for email notification
- Standardized IEC 62974-1 compliant datalogger and energy server



## Architecture overview



# Panel Server Entry\*

DBA10078



Panel Server Entry - Front ISO view

### Standards & certifications

- IEC 61010-1 Ed.2010
- UL 61010-1 Ed.2012
- IEC 61974
- IEC 62443



### Functions

- Optimized gateway to retrieve data from your wireless devices.
- Connect to your monitoring and control software such as EcoStruxure™ Power Monitoring Expert, EcoStruxure™ Power Operation or to your Building Management System.
- Connect to Schneider Electric cloud applications such as EcoStruxure™ Facility Expert or Asset Advisor.
- Ease of commissioning with EcoStruxure™ Power Commission software, enabling device plug-and-play and auto-discovery features.
- Ease of operation with user friendly embedded webpages, and data contextualization for more relevant analytics.

### Main features

- Power Supply 110 to 277 V AC/DC
- Designed to match with electrical switchboard environment (temperature, humidity electromagnetic compatibility)
- One Ethernet 10Base-T/100Base-T port
- Wi-Fi
- IEEE 802.15.4 wireless communication
- Modbus TCP/IP server
- Support of HTTPS, NTP, SNTP, DHCP client with proxy management
- Wireless devices concentrator to Modbus TCP/IP
- Designed through a Secured Development Life Cycle in accordance to IEC 62443-4-1
- Commissioning through EcoStruxure™ Power Commission or through Embedded Web-Pages
- Speed-up commissioning through device list import and configuration export to the monitoring software
- Fully integrated in Cybersecurity Admin Expert tool to facilitate the management of cybersecurity in your electrical network's (User Management with Role Base Access and other security features such as enabling/disabling communication means).
- Embedded web server for real-time measurement visualization, power consumption by usage
- Customizable alarm with alarm log
- Alarms can be viewed in the web-pages and notified by e-mail

Comm. Reference	Description
PAS400	Panel Server Entry 110-277 V AC/DC

\* Commercialised in Q3, 2022

# Panel Server Entry

## Panel Server Entry technical specification

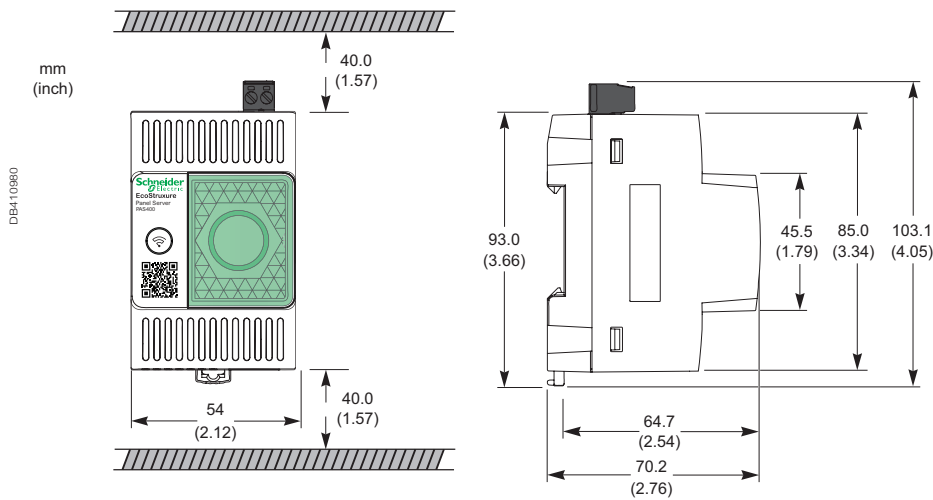
Technical data		EcoStruxure™ Panel Server Entry
Commercial Reference		PAS400
Power Supply		
Voltage		110-277 V AC/DC
Tolerance		± 10%
Frequency		45-65 Hz
Maximum consumption		3 W, 10 VA
Ethernet & Wi-Fi		
Ethernet 10/100base T	Number of Ports	Single RJ45 Port
	PoE 802.3af & 802.3at Class 0	N.A.
Wi-Fi	Supported Frequency	2.4 & 5 GHz
TCP/IP		Yes
IP V4 / IP V6		Yes
DPWS		Yes
DHCP	Client	Yes
	Server (Separate Network)	No
Modbus TCP/IP Server	Max. number of client connection	64 <sup>(+2)</sup>
Modbus TCP/IP Client	Max. number of Modbus TCP/IP devices	N.A.
Schneider Electric Cloud Services		Yes
HTTPS		Yes
External Wi-Fi/Antenna		No
Wireless Devices (IEEE 802.15.4)		
Number of devices	Total	20 devices
	PowerTag Energy & Ambient <sup>(+1)</sup>	20 devices
	Other type of devices <sup>(+1)</sup>	20 devices
External IEEE 802.15.4 Antenna		No
Serial Ports		
Modbus RS485 Master	Max. number of devices w/o repeater	N.A.
	Max. number of devices with repeater	N.A.
	Maximum Length	N.A.
	Baud Rate	N.A.
Functionality		
Data Buffering for cloud applications		1 month
Data Logger and Web-Server	Data Logging	No
	Event logging	Yes <sup>(+2)</sup>
	Simple Monitoring Web-Pages	Yes
	Monitoring Web-Pages with historical data	No
Time Management	RTC (with battery)	Yes
	TimeUpdate (NTP & SNTP)	Yes
Digital inputs		
Two DI	WAGES & Dry-Contact	No
Environmental		
Protection Degree	Front Face	IP40
	Others	IP20
Overvoltage Category		OVC III
Pollution Degree		2
Temperature	Operation	-25 °C to +60 °C
	Storage	-40 °C to +85 °C
Altitude Max.		2000 m
Relative Humidity		5 to 95 %
Mechanical		
Form factor		Acti9
Installation		Din Rail
Width		54 mm
Weight		TBC
Standard & Certification		
Certifications		CE, CULus, RCM, UKCA, FCC, IC
Standards		IEC 61010-2, UL 61010-2, CSA C22.2, IEC 62974-1, IEC 62443-4-1, IEC 61326-1, EN 301-489, EN 55032, CISPR 11, EN 300-328, IEEE 802.15.4, IEEE 802.11 a/b/g/n

<sup>(+1)</sup> Consult the User Manual or other documentations to check the limit applicable to your wireless device.

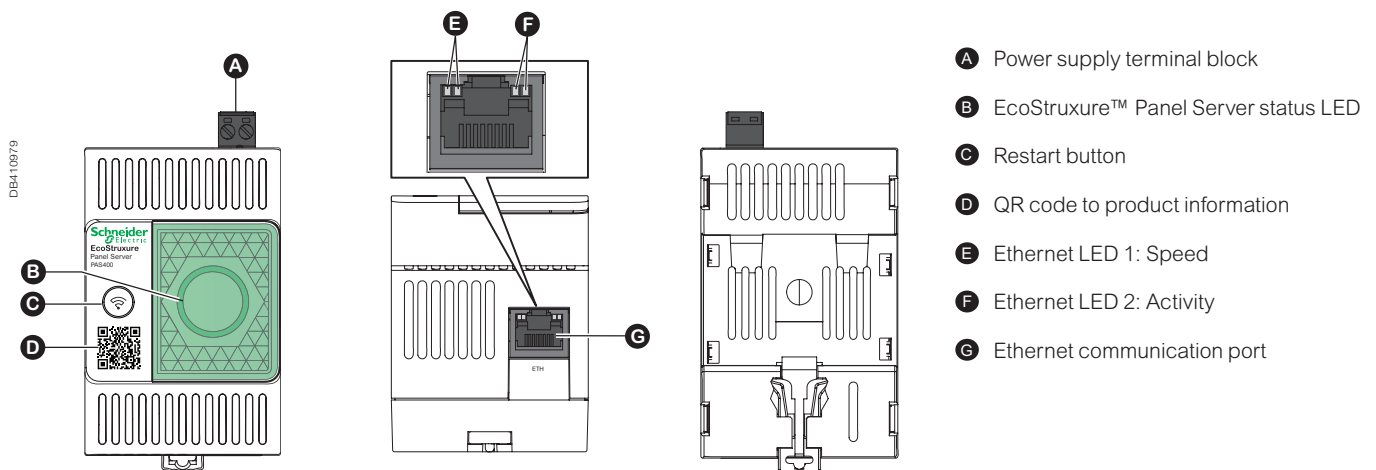
<sup>(+2)</sup> Lower limits may apply depending the firmware version, consult the User Manual, Release Notes or other documentations.

# Panel Server Entry

## Panel Server Entry dimensions



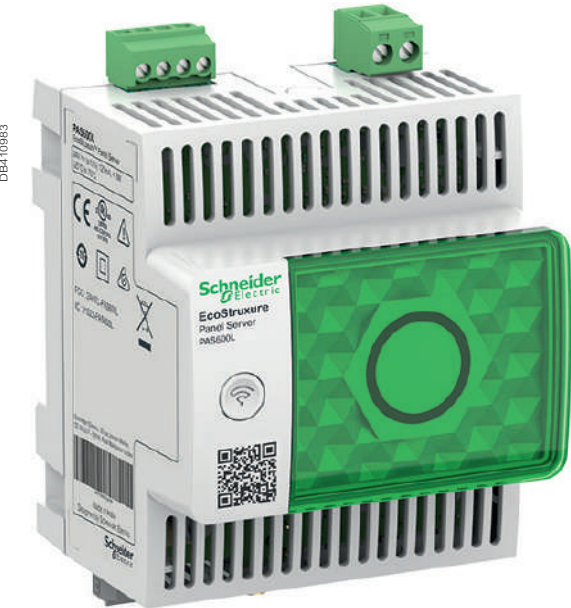
## Panel Server Entry physical descriptions



Please see the appropriate **Installation Guide** for accurate and complete information on the installation of this product.



# Panel Server Universal



Panel Server Universal - Front ISO view

### Standards & certifications

- IEC 61010-1 Ed.2010
- UL 61010-1 Ed.2012
- IEC 61974
- IEC 62443



### Functions

- An all-in-one gateway to retrieve data from both your IEEE 802.15.4 and Modbus devices.
- Connect to your monitoring and control software such as EcoStruxure™ Power Monitoring Expert, EcoStruxure™ Power Operation or to your Building Management System.
- Connect to Schneider Electric cloud applications such as EcoStruxure™ Facility Expert or Asset Advisor.
- Ease of commissioning with EcoStruxure™ Power Commission software, enabling device plug-and-play and auto-discovery features.
- Ease of operation with user friendly embedded webpages, and data contextualization for more relevant analytics.

### Main features

- Power Supply 24 V DC, 110 to 240 V AC/DC, 110 to 277 V AC/DC
- Designed to match demanding electrical switchboard environment (temperature, humidity electromagnetic compatibility)
- Two Ethernet 10Base-T/100Base-T port (supporting switched or separated network topology)
- Wi-Fi
- Modbus RS485 serial communication
- IEEE 802.15.4 wireless communication
- Modbus TCP/IP server and client
- Support of HTTPS, NTP, SNTP, DHCP client and server with proxy management
- Modbus RS485 to Modbus TCP/IP Gateway
- Wireless devices concentrator to Modbus TCP/IP
- Two digital inputs (24VDC version only) for contact information or WAGES pulse meter
- Designed through a Secured Development Life Cycle in accordance to IEC 62443-4-1
- Commissioning through EcoStruxure™ Power Commission or through Embedded Web-Pages
- Speed-up commissioning through device list import and configuration export to the monitoring software
- Fully integrated in Cybersecurity Admin Expert tool to facilitate the management of cybersecurity in your electrical network's (User Management with Role Base Access and other security features such as enabling/disabling communication means)
- Embedded web server for real-time measurement visualization, power consumption by usage
- Customizable alarm with alarm log
- Alarms can be viewed in the web-pages and notified by e-mail

### Compatible accessories

- Wi-Fi external antenna (PASA-ANT1)

Comm. Reference	Description
PAS600L	Panel Server Universal with 24 V DC power supply
PAS600T	Panel Server Universal with 110-240 V AC/DC power supply
PAS600	Panel Server Universal with 110-277 V AC/DC power supply

# Panel Server Universal

## Panel Server Universal technical specification

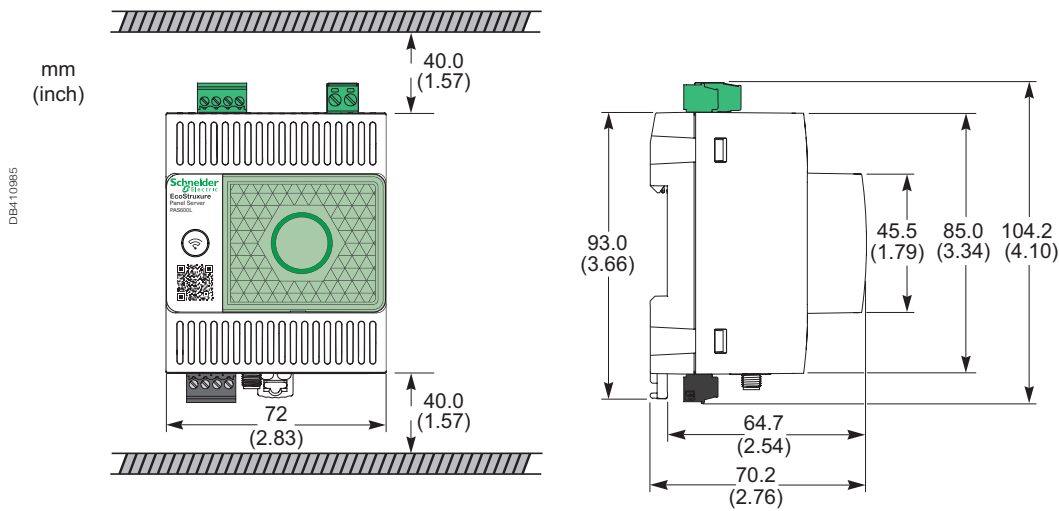
Technical data		EcoStruxure™ Panel Server Universal		
Commercial Reference		PAS600L	PAS600T	PAS600
Power Supply				
Voltage		24 V DC	110-240 V AC/DC	110-277 V AC/DC
Tolerance		± 10%		
Frequency		N.A.	47-63 Hz	45-65 Hz
Maximum consumption		3 W	3 W / 10 VA	
Ethernet & Wi-Fi				
Ethernet 10/100base T	Number of Ports	Two RJ45 ports		
	PoE 802.3af & 802.3at Class 0	No		
Wi-Fi	Supported Frequency	2.4 GHz		
TCP/IP		Yes		
IP V4 / IP V6		Yes		
DPWS		Yes		
DHCP	Client	Yes		
	Server (Separate Network)	Yes		
Modbus TCP/IP Server	Max. number of client connection	64 <sup>(+2)</sup>		
Modbus TCP/IP Client	Max. number of Modbus TCP/IP devices	64 <sup>(+2)</sup>		
Schneider Electric Cloud Services		Yes		
HTTPS		Yes		
External Wi-Fi/Antenna		PASA-ANT1		
Wireless Devices (IEEE 802.15.4)				
Number of devices	Total	up to 100 devices <sup>(+2)</sup>		
	PowerTag Energy & Ambient <sup>(+1)</sup>	up to 100 devices <sup>(+2)</sup>		
	Other type of devices <sup>(+1)</sup>	20 devices <sup>(+2)</sup>		
Serial Ports				
Modbus RS485 Master	Max. number of devices w/o repeater	32 devices		
	Max. number of devices with repeater	128 devices		
	Maximum Length	1000 m		
	Baud Rate	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200		
Functionality				
Data Buffering for cloud applications		1 month		
Data Logger and Web-Server	Data Logging	No		
	Event logging	Yes <sup>(+2)</sup>		
	Simple Monitoring Web-Pages	Yes		
	Monitoring Web-Pages with historical data	No		
Time Management	RTC (with battery)	Yes		
	TimeUpdate (NTP & SNTP)	Yes		
Digital inputs				
Two DI	WAGES & Dry-Contact	Yes	No	
Environmental				
Protection Degree	Front Face	IP40		
	Others	IP20		
OverVoltage Category		NA	OVC III	
Pollution Degree		3	2	
Temperature	Operation	-25°C to +70°C		
	Storage	-40°C to +85°C		
Altitude Max.		2000 m		
Relative Humidity		5 to 95 %		
Mechanical				
Form factor		Acti9		
Installation		Din Rail		
Width		72 mm		
Weight		TBC		
Standard & Certification				
Certifications		CE, CULus, RCM, UKCA, FCC, IC		
Standards		IEC 61010-2, UL 61010-2, CSA C22.2, IEC 62974-1, IEC 62443-4-1, IEC 61326-1, EN 301-489, EN 55032, CISPR 11, EN 300-328, IEEE 802.15.4, IEEE 802.11 a/b/g/n		

<sup>(+1)</sup> Consult the User Manual or other documentations to check the limit applicable to your wireless device.

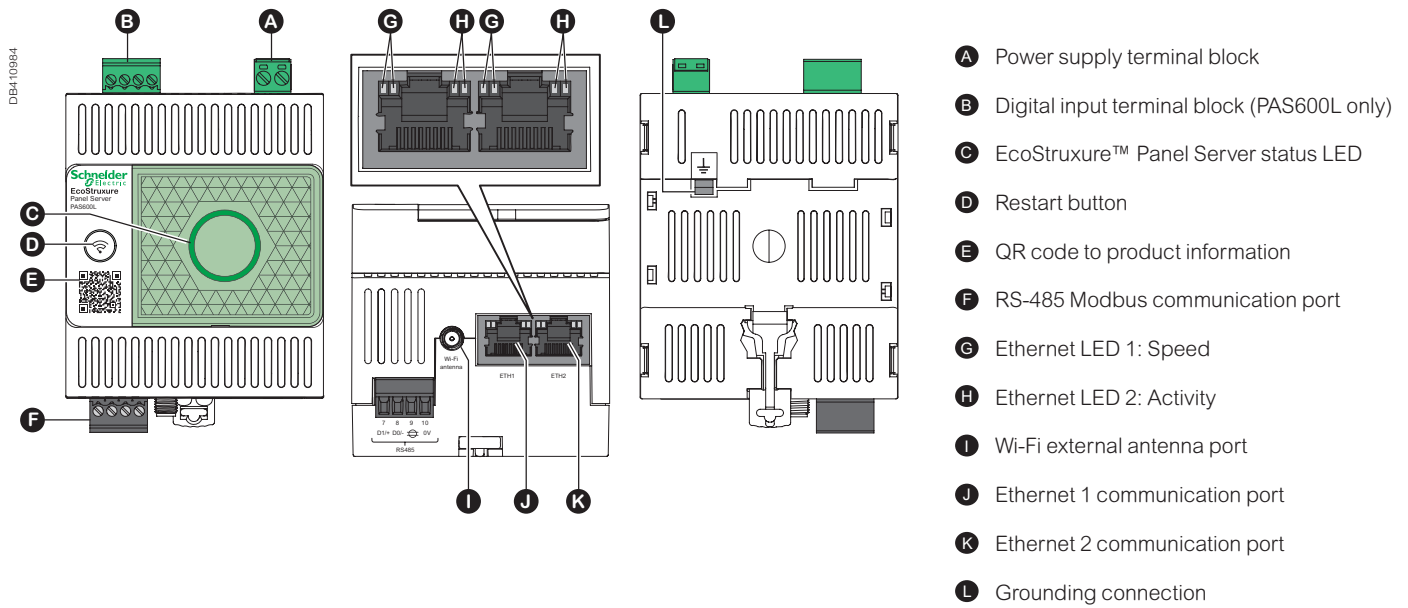
<sup>(+2)</sup> Lower limits may apply depending the firmware version, consult the User Manual, Release Notes or other documentations.

# Panel Server Universal

## Panel Server Universal dimensions



## Panel Server Universal physical descriptions



Please see the appropriate **Installation Guide** for accurate and complete information on the installation of this product.



# Panel Server Advanced



Panel Server Advanced- Front ISO view

### Standards & certifications

- IEC 61010-1 Ed.2010
- UL 61010-1 Ed.2012
- IEC 61974
- IEC 62443



### Functions

- An all-in-one gateway to retrieve data from both your wireless IEEE 802.15.4 devices and Modbus devices.
- Connect to your monitoring and control software such as EcoStruxure™ Power Monitoring Expert, EcoStruxure™ Power Operation or to your Building Management System.
- Connect to Schneider Electric cloud applications such as EcoStruxure™ Facility Expert or Asset Advisor.
- Ease of commissioning with EcoStruxure™ Power Commission software, enabling device plug-and-play and auto-discovery features.
- Ease of operation with user friendly embedded webpages, and data contextualization for more relevant analytics.

### Main features

- Power Supply 24 V DC, 110 to 277 V AC/DC, PoE-PD (CLASS 0,IEEE802.3af/at)
- Designed to match demanding electrical switchboard environment (temperature, humidity electromagnetic compatibility)
- Two Ethernet 10Base-T/100Base-T port (supporting switched or separated network topology)
- Wi-Fi
- Modbus RS485 serial communication
- IEEE 802.15.4 wireless communication
- Modbus TCP/IP server and client
- Support of HTTPS, NTP, SNTP, DHCP client and server with proxy management
- Modbus RS485 to Modbus TCP/IP Gateway
- Wireless devices concentrator to Modbus TCP/IP
- Two digital inputs (24 V DC version only) for contact information or WAGES pulse meter
- Designed through a Secured Development Life Cycle in accordance to IEC 62443-4-1
- Commissioning through EcoStruxure™ Power Commission or through Embedded Web-Pages
- Speed-up commissioning through device list import and configuration export to the monitoring software
- Fully integrated in Cybersecurity Admin Expert tool for security settings (Role Base Access and other security features such enabling/disabling communication means)
- Embedded web server for real-time measurement and alarm visualization, energy & power consumption by usage and location, 3 years historical trending and dashboarding
- 3 years Data Logger with 32 GB memory
- Customizable alarm with alarm log
- Alarms can be viewed in the web-pages and notified by e-mail

### Compatible accessories

- Wi-Fi external antenna (PASA-ANT1)
- IEEE 802.15.4 external antenna (PASA-ANT1)

Comm. Reference	Description
PAS800L	Panel Server Advanced with 24 V DC power supply
PAS800P	Panel Server Advanced with PoE power supply
PAS800	Panel Server Advanced with 110-277 V AC/DC power supply

# Panel Server Advanced

## Panel Server Advanced technical specification

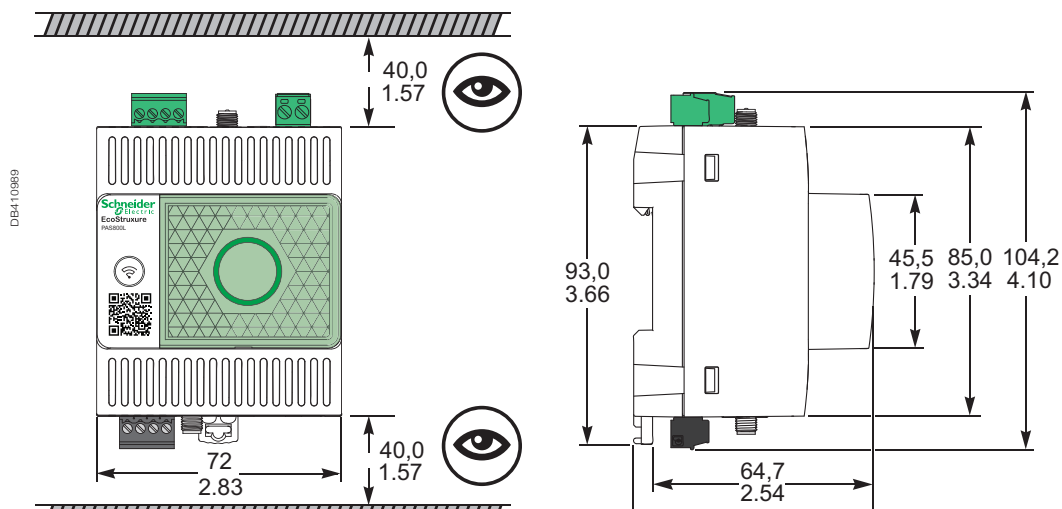
Technical data		EcoStruxure™ Panel Server Advanced		
Commercial Reference		PAS800L	PAS800P	PAS800
Power Supply				
Voltage		24 V DC	PoE	110-277 V AC/DC
Tolerance		± 10 %		± 10 %
Frequency		N.A.		45-65 Hz
Maximum consumption		3 W	3.5 W	3 W / 10 VA
Ethernet & Wi-Fi				
Ethernet 10/100base T	Number of Ports	Two RJ45 ports		
	PoE 802.3af & 802.3at Class 0	No	1 port (PD)	No
Wi-Fi	Supported Frequency	2.4 & 5 GHz		
TCP/IP		Yes		
IP V4 / IP V6		Yes		
DPWS		Yes		
DHCP	Client	Yes		
	Server (Separate Network)	Yes		
Modbus TCP/IP Server	Max. number of client connection	64 <sup>(+2)</sup>		
Modbus TCP/IP Client	Max. number of Modbus TCP/IP devices	64 <sup>(+2)</sup>		
Schneider Electric Cloud Services		Yes		
HTTPS		Yes		
External Wi-Fi/Antenna		PASA-ANT1		
Wireless Devices (IEEE 802.15.4)				
Number of devices	Total	up to 100 devices <sup>(+2)</sup>		
	PowerTag Energy & Ambient <sup>(+1)</sup>	up to 100 devices <sup>(+2)</sup>		
	Other type of devices <sup>(+1)</sup>	20 devices <sup>(+2)</sup>		
External IEEE 802.15.4 Antenna		PASA-ANT1		
Serial Ports				
Modbus RS485 Master	Max. number of devices w/o repeater	32 devices		
	Max. number of devices with repeater	128 devices		
	Maximum Length	1000 m		
	Baud Rate	1200, 4800, 9600, 19200, 38400, 57600, 115200		
Functionality				
Data Buffering for cloud applications		1 month		
Data Logger and Web-Server	Data Logging	3 years		
	Event logging	Yes <sup>(+2)</sup>		
	Simple Monitoring Web-Pages	Yes		
	Monitoring Web-Pages with historical data	Yes		
Time Management	RTC (with battery)	Yes		
	TimeUpdate (NTP & SNTP)	Yes		
Digital inputs				
Two DI	WAGES & Dry-Contact	Yes	No	
Environmental				
Protection Degree	Front Face	IP40		
	Others	IP20		
OverVoltage Category		NA	OVC III	
Polution Degree		3	2	
Temperature	Operation	-25°C to +70°C		
	Storage	-40°C to +85°C		
Altitude Max.		2000 m		
Relative Humidity		5 to 95 %		
Mechanical				
Form factor		Acti9		
Installation		Din Rail		
Width		72 mm		
Weight		TBC		
Standard & Certification				
Certifications		CE, CULus, RCM, UKCA, FCC, IC		
Standards		IEC 61010-2, UL 61010-2, CSA C22.2, IEC 62974-1, IEC 62443-4-1, IEC 61326-1, EN 301-489, EN 55032, CISPR 11, EN 300-328, IEEE 802.15.4, IEEE 802.11 a/b/g/n		
			IEEE 802.3 af/at	

<sup>(+1)</sup> Consult the User Manual or other documentations to check the limit applicable to your wireless device.

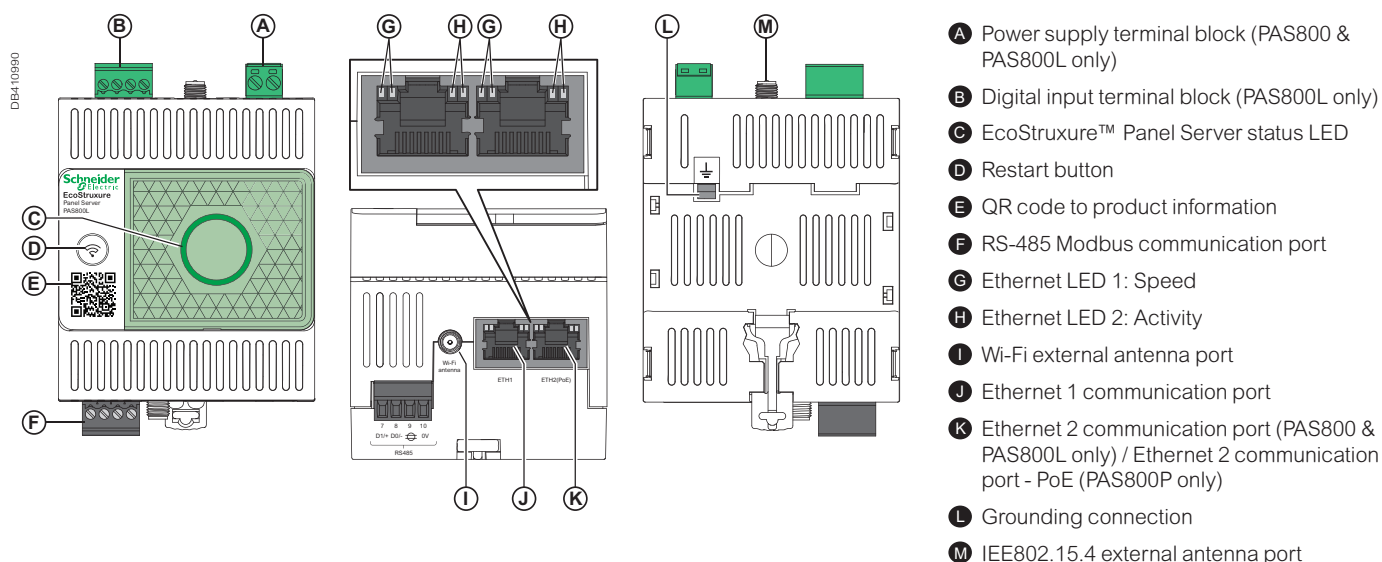
<sup>(+2)</sup> Lower limits may apply depending the firmware version, consult the User Manual, Release Notes or other documentations.

# Panel Server Advanced

## Panel Server Advanced dimensions



## Panel Server Advanced physical descriptions



Please see the appropriate **Installation Guide** for accurate and complete information on the installation of this product.



[www.se.com](http://www.se.com)

Schneider Electric Industries SAS  
35, Rue Joseph Monier  
CS 30323  
92506 Rueil Malmaison Cedex

RCS Nanterre 954 503 439  
Capital social 928 298 512 €  
[www.se.com](http://www.se.com)

October 2022  
Ecostruxure™ Panel Server  
**PLSED310196EN**

© 2022 - Schneider Electric. All rights reserved.  
All trademarks are owned by Schneider Electric  
Industries SAS or its affiliated companies.

As standards, specifications and designs develop from time to time, please  
ask for confirmation of the information given in this document.

Over 75 % of Schneider Electric products  
have been awarded the Green Premium ecolabel.

