



Harmony Wireless Pushbuttons & Ecosystem

Wireless and batteryless pushbuttons

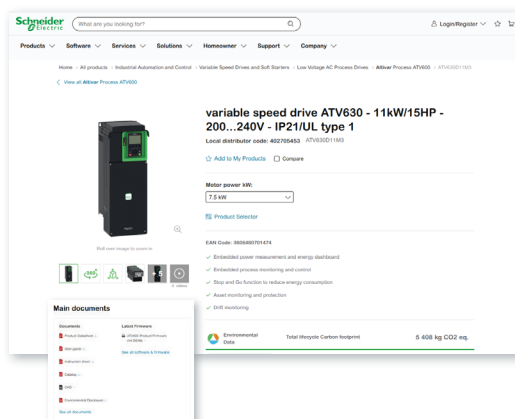


Quick access to product information

Get technical information about your product

Each commercial reference presented in a catalog contains a hyperlink. Click on it to obtain the technical information of the product:

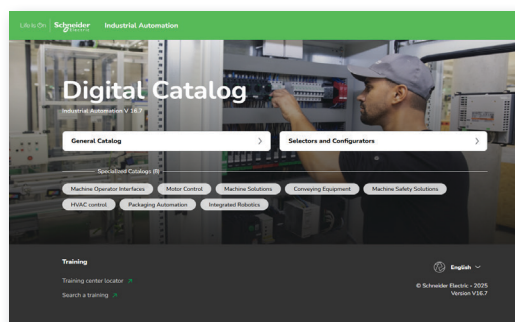
- Characteristics, Dimensions and drawings, Mounting and clearance, Connections and schemas, Performance curves
- Instruction sheets, User guides, Product certifications, End of life manuals, etc



View the Automation Catalog libraries

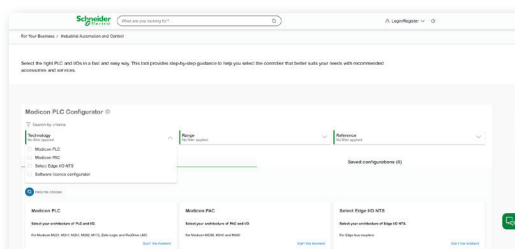
On [Digi-Cat Online](#) you can access the Industrial Automation and Control catalogs, in both English and French

- Up-to-date catalogs
- Optimized search by commercial references
- Integrated product selectors and configurators



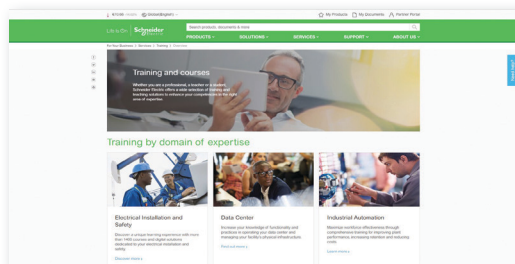
Direct access to Configurators Home pages

- Configure your [motor control and protection solution](#)
- Configure your [control system with a PLC controller and I/O modules](#)
- Configure your [motion control and robotics system](#)



Select your training

- Find the right [Training](#) for your needs on our Global website
- Locate the [Training center](#) with the selector tool





Harmony

Discover [Harmony](#)

Advanced operator interface and industrial relays

Harmony operator interface and industrial relays enhance operational efficiency and equipment availability across industrial and building applications. **Harmony** includes intelligent connected products and edge terminals that visualize, gather and process data, enabling informed operator decisions

Explore our offer

- [Harmony](#) Push Buttons and Switches
- [Harmony](#) HMI Operator Terminals, IPC and EdgeBox
- [Harmony](#) Signaling Devices
- [Harmony](#) Electrical Relays
- [Harmony](#) Safety

General contents

General presentation and selection guide . .

1

Harmony wireless and batteryless
pushbuttons

2

EcoStruxure Panel Server and
Harmony Hub gateways

3

Product reference index

4

General presentation and selection guide

- Harmony Wireless
 - Installation and maintenance page 1/2
 - Performance page 1/3
 - Range of products page 1/3
- EcoStruxure Panel Server and Harmony Hub gateways
 - Installation and maintenance page 1/4
 - Performance and integration page 1/4
 - Architecture solutions page 1/6
 - Range of products page 1/7
- Selection guide page 1/8

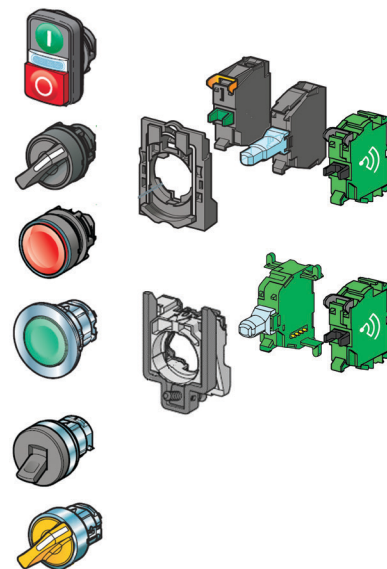
1

Installation made easy with Harmony® plastic and metal wireless and batteryless pushbuttons



Product Selector

Online digital selector
Click to open the selector



Full compatibility except pilot lights and joysticks
Stay put functions may create discrepancy between transmitter and receiver
Not suitable for functional safety applications

The Harmony wireless and batteryless interfaces are used for various building utilities (automatic doors, lighting, etc.) and industrial applications (conveying systems, automotive, MMM, logistics, food and beverage). They are based on two types of device - transmitter and receiver - which communicate via 2.4 GHz radio transmission (free worldwide band). They are Zigbee Green Power certified using an accessory.

Simplified installation

- > Lower installation costs and time
- > No setup needed due to ready-to-use Plug-and-Play package
- > Freedom of mobility around the machine or process
- > Ideal solution when you need to add or move a control function
- > Compatible with all XB5 and XB4 actuators (not suitable for functional safety applications)



Enables end users to considerably reduce installation and maintenance costs

Easy maintenance

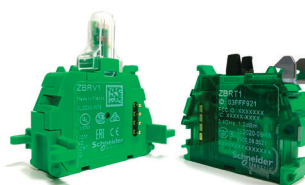
- > Requires no battery maintenance and helps to ensure permanent availability
- > Maximum availability of control functions
- > Visual feedback option to easily check functioning
- > Possibility to change frequency
- > Highest cybersecurity levels using ZBRZ1 tool, mandatory when working with the EcoStruxure Panel Server
- > Zigbee Green Power certified with accessory
- > Minimizes post-installation maintenance



Energy efficient due to non-current consuming transmitter

Designed for industrial environment with proven robustness

- > High resistance to contamination from dust (no cable entry)
- > No risk of cable damage or loose screws on the transmitter
- > Zigbee Green Power using ZBRZ1 tool (mandatory tool when working with the EcoStruxure Panel Server).
- > Ø 22 mm/0.866 in. operating head available in plastic (ZB5) and metal (ZB4) and Ø 40 mm/1.575 in. black spring return mushroom head allowing operation with gloves
- > For automatic doors, the rope pull switch command can be set anywhere
- > Suitable for the most demanding environments, depending on the model, up to IP69, for external use from -40 to 70 °C/-40 to 158 °F



Robust performance



Easy integration into automation products

How to choose the transmitter



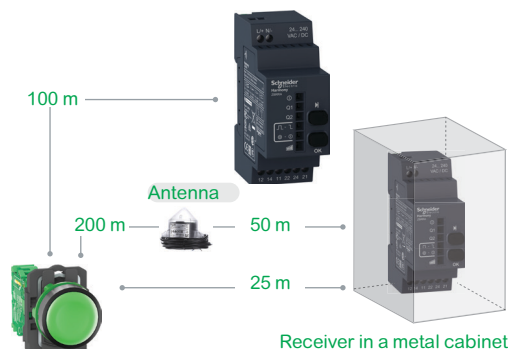
ZBRT1: 1 radio frame sent when pushed
for pulse actuators: pushbuttons, multiple
heads, mushroom heads



ZBRT2: 1 radio frame sent when pushed, 1
radio frame sent when released
For position actuators: selector switches, toggle
switches, etc.

Dependable performance over long distances

- > 25 m/82 ft with the receiver installed in a metal electrical cabinet
- > Boosted to more than 250 m/820 ft with the use of an external relay antenna with the receiver installed in a metal electrical cabinet
- > 100 m/328 ft in free space



- > Peace of mind thanks to optional visual feedback (illuminated actuators only)



A wide range

- > From individual products to ready-to-use packs



Wide range of Harmony Wireless individual products

- > ZBRT transmitters are now fully compatible with any XB4 or XB5 products (not suitable for functional safety applications)
- > Designed to meet the requirements of the most common applications
- > Simple to order with only one reference number
- > Easy to install with factory pre-programmed transmitter and receiver

(1) Plastic head XB5RFB01 Metal head XB4RFB01 Mobile box XB5RMB03 • Transmitter with plastic or metal pushbutton or mobile box • Non-configurable receiver, 1 CO relay output	(2) Metal head XB4RFA02 Plastic head XB5RFA02 Mobile box XB5RMA04 • Transmitter with plastic or metal pushbutton or mobile box + set of caps • Non-configurable receiver, 1 CO relay output
---	---

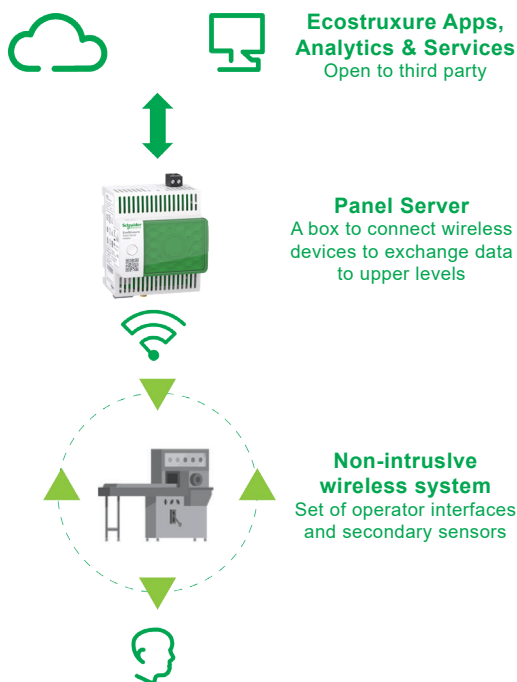
(1) Only one transmitter per receiver
(2) Up to 32 transmitters per receiver



Simple to order with ready-to-use packs

1

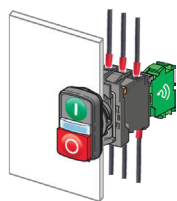
Non-intrusive installation made easy with EcoStruxure Panel Server wireless ecosystem devices



Panel Server schematic diagram

Product Selector

Online digital selector
Click to open the selector



Online digital selector
Click to open the selector



Highest cybersecurity levels using ZBRZ1 commissioning tool (1)

The EcoStruxure Panel Server and Harmony wireless and batteryless ecosystem devices are used for various building utilities (automatic doors, lighting, etc.) and industrial applications (conveying systems, automotive, MMM, logistics, food and beverage, monitoring industrial equipment). These devices communicate via 2.4 GHz radio transmission (free worldwide band).

Non-intrusive installation

- > Lower installation costs and time
- > Freedom of mobility around the machine or process
- > Ideal solution when you need to add or move a monitoring function



Enables end users to considerably reduce installation and maintenance costs



Easy maintenance

- > Requires no battery maintenance and helps to ensure permanent availability
- > Maximum availability of control functions
- > Possibility to change frequency.
- > Highest cybersecurity levels using ZBRZ1 tool (1)
- > Minimizes post-installation maintenance



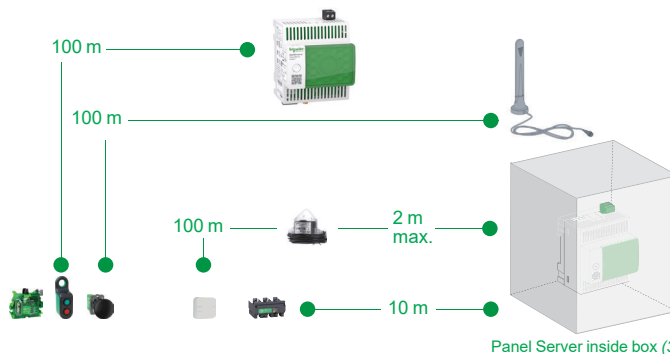
No battery to replace
recycle & recharge



Dependable performance over long distances

The possible distance (2) between a transmitter and the gateway is approximately:

- > 100 m/328 ft when there are no obstacles
- > 250 m/984 ft if a relay antenna is located between the transmitter and the gateway (installed in a metal housing or in a closed metal enclosure)
- > 60 m/197 ft if an external antenna is connected to the gateway
- > 25 m/82 ft with the gateway installed in a metal housing or in a closed metal enclosure



(1) This tool is mandatory for both the commissioning and decommissioning of the EcoStruxure Panel Server.

(2) Typical values, which can be affected by the application environment.

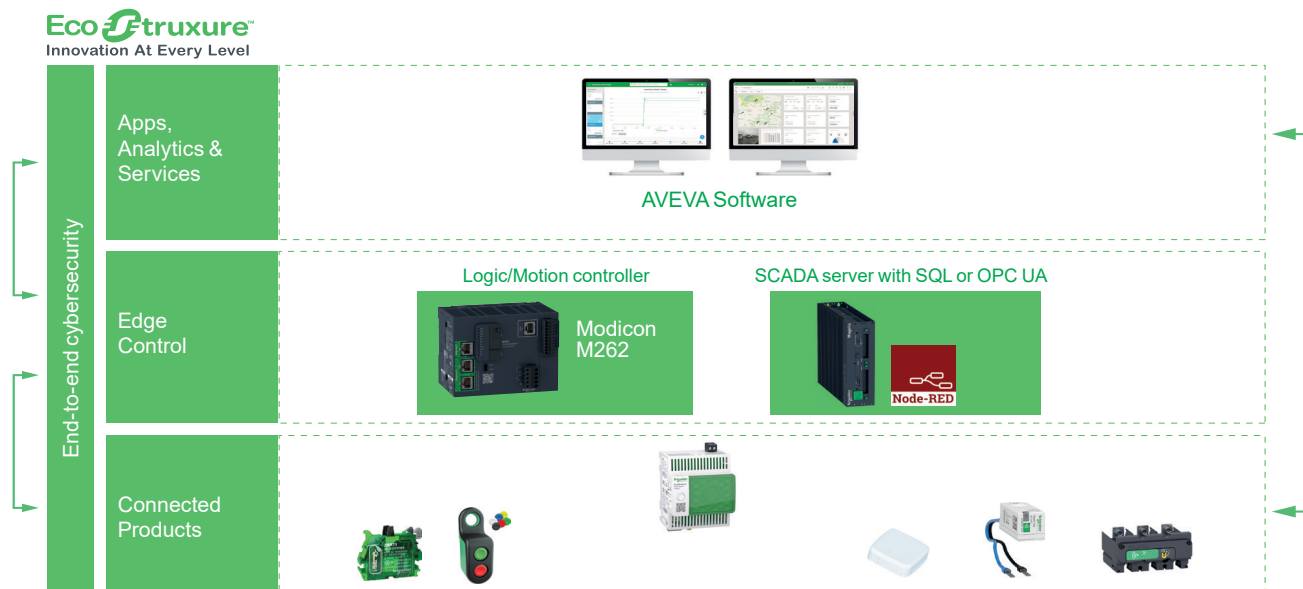
(3) Reduction in distance when the gateway is placed in a metal housing or in a closed metal enclosure.



Easy installation

Smooth integration

Integration into an industrial PC (IT/OT box) via Ethernet link with 2 RJ45 ports.



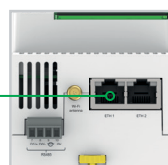
Harmony P6 and Edge Box runs Node-RED to wire devices on the Industrial Internet of Things. Node-RED is a simple, open source graphical programming tool for designing the communication data flow from OT to IT. To enable connectivity to the EcoStruxure platform, you need to have an industrial PC (IT/OT box) to push your collected physical signals and provide immediate access to relevant data. This data-driven approach helps to improve a company's productivity and efficiency.

Compatible Schneider Electric commercial references: HMIBMO●●

For more information, go to: www.se.com/hmi

Commissioning with PAS

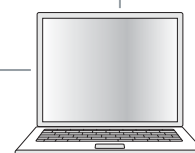
Double RJ45 port enables network continuity without using hubs or switches



Simple and economic with up to **100** transmitters connected on the same web pages



Manual parameter interface
DTM interface



Better commissioning experience through web pages



- 1 EcoStruxure Panel Server PAS800L
- 2 ZBRZ1 commissioning tool
- 3 ZBRT1 transmitter for wireless and batteryless pushbutton

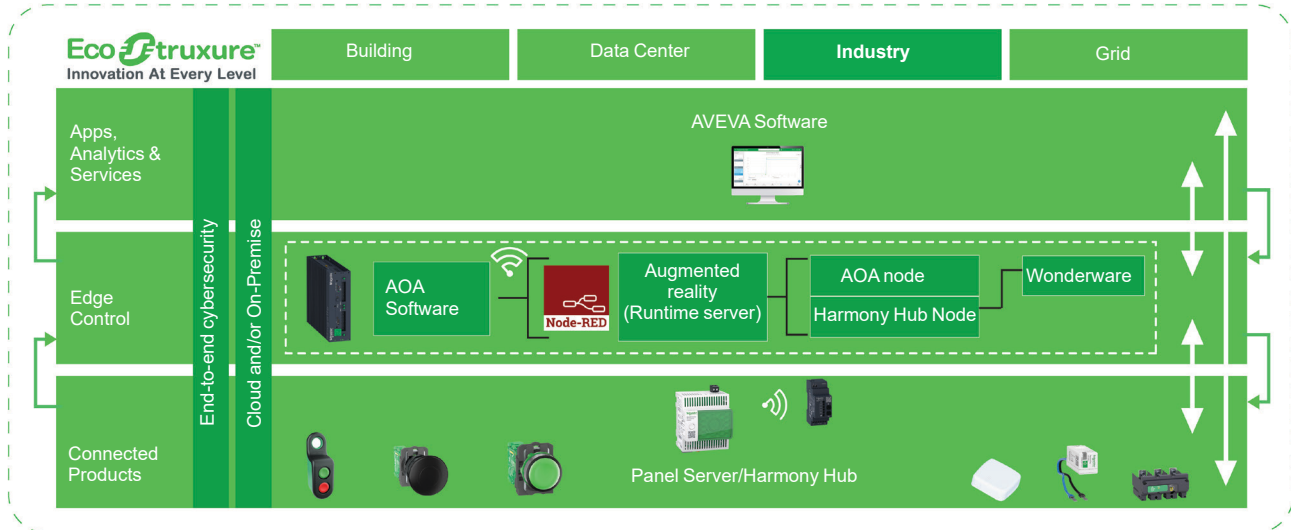


20% lower installation costs compared to a hard-wired solution

1

Architecture solutions

> Call for maintenance EcoStruxure architecture



With EcoStruxure Panel Server ecosystem devices, there are multiple use cases:

- Pushbutton to call for maintenance, call for material, call for finished goods, and call for final products inspection
- Easily open internal automatic doors
- Identify which Emergency stop has been activated
- Help operators to react quickly in case of an anomaly
- Identify anomalies with the predefined threshold

Wide range of product compatibility

Wide range of individual products compatible with the EcoStruxure Panel Server/Harmony Hub (1)



PAS400



PAS600●



PAS800●



ZBRN2



ZBRA1



ZBRA2



ZBRA3



PASA-ANT1

Pushbuttons



ZB5RTA●



ZBRM●



ZBRP1



ZB5RTC●



ZBRT●

Temperature, humidity, CO₂, and energy monitoring sensors



A9XST114



A9MEM●



LV4340●



SED-CO2-G-5045

Wireless receiver



ZBRR●

(1) Please refer to the reference tables on pages 3/3, 3/4, and 3/5.



Product type		Pilot lights			Pushbuttons, selector switches, and pilot lights				Biometric switches		Wireless and batteryless pushbuttons		Pushbuttons, selector switches, and pilot lights		Joystick controllers			Pushbuttons, selector switches, and pilot lights			Cam switches	
																						
Description of range		■ LED pilot lights			■ Pushbuttons ■ Multiple-headed pushbuttons ■ Emergency stop pushbuttons ■ Selector switches and key switches ■ Illuminated pushbuttons ■ Pilot lights ■ Flush mounted pushbuttons, selector switches, and pilot lights (1)				Fingerprint readers 24V ~		■ Wireless and batteryless pushbuttons and rope pull switch ■ Wireless receivers ■ Harmony Hub ■ EcoStruxure Panel Server		■ Pushbuttons ■ Emergency stop and Emergency switching off pushbuttons ■ Selector switches and key switches ■ Illuminated pushbuttons ■ Pilot lights		■ 2- or 4-direction ■ Stay put or spring return			■ Pushbuttons ■ Emergency stop pushbuttons ■ Selector switches and key switches ■ Illuminated pushbuttons ■ Pilot lights			■ Stepping switches ■ Reversing and changeover switches ■ Ammeter switches ■ Voltmeter switches ■ Reversing switches ■ Star-delta and reversing star-delta switches ■ Pole change switches	
Features	Products	Monolithic, compact, low consumption			Complete units or sub-assemblies (body + head)				Monolithic		Ready-to-use packs (2) and "components" range		Monolithic		Complete units or sub-assemblies (body + head with lever)			Complete units or pre-assembled units (body + head)			Complete units or sub-assemblies (body + front panel + head)	
	Bezel	Double insulated			Double insulated (3)				Metal, chromium plated, or black		Double insulated, dark gray		Metal, chromium plated, or double insulated, black		Double insulated, dark gray (or white for pilot lights)			Metal, chromium plated			Double insulated, black	
	Shape of head	Circular			Circular, square, or rectangular				Circular		Circular		Circular		Circular			Hexagonal			Square	
Drill hole or cut-out for fixing		Ø 8 and Ø 12 mm/ 0.315 and 0.472 in.			Ø 16 mm/0.630 in.				Ø 22 mm/0.866 in.		Ø 22 mm/0.866 in.		Ø 22 mm/0.866 in.		Ø 22 mm/0.866 in.			Ø 30 mm/1.181 in.			Ø 16 or Ø 22 mm/0.630 or 0.866 in.: series K10 Ø 22 mm/0.866 in. and multifixing: series K1/K2 4 holes, 48 or 68 centers: series K30...K150	
Degree of protection	Conforming to IEC 60529	IP40 IP65 with seal			IP65				IP66, IP67, IP69, and IP69K		IP65 (control button)		IP65		IP65 (control buttons and pilot lights) IP54 (Emergency switching off pushbuttons)			IP65			IP66	
	Conforming to UL 508, UL 50E and CSA C22-2 No. 14	—			Enclosure type 4, 4X, and 13				Enclosure type 12		Enclosure type 12		Enclosure type 3 (pushbuttons and Emergency stop) and 4 (pilot lights)		Enclosure type 4, 4X, and 13			Enclosure type 4 and 13 (9001K) Enclosure type 4, 4X, and 13 (9001SK) Enclosure type 1, 2, 3, 3R, 4, 4X, 6, 12, and 13 (9001KR18● and 9001SKR18●)			—	
Cabling		Tags for 2.8 x 0.5 mm/0.110 x 0.020 in. connectors or threaded connector			Faston connectors Solder pins for printed circuit boards (4) Fast connector socket (4)				Push-in terminal connections Screw clamp terminal connections Faston connectors Connector with adapter for printed circuit board		Cable or connectors		Wireless (transmitter) Through cable (receiver)		Screw and captive clamp terminal connections Faston clip connections (pilot lights)			Screw and captive clamp terminal connections				
Mounting		Panel thickness 1...8 mm/ 0.039...0.315 in.			1...6 mm/0.039...0.236 in.								1...6 mm/0.039...0.236 in.								0.5...6 mm/0.020...0.236 in. (depending on model)	
Type references		XVLA			XB6, XB6E				XB4		XB5		XB5S		Harmony Wireless			XB7			XD4PA	
																					XD2GA	
																					XD5PA	
																					9001K, 9001SK	
																					K10, K1, K2, K30, K50, K63, K115, K150	

(1) Flush mounted control and signaling units are available for Harmony XB4 and XB5 ranges only.
(2) Wireless and batteryless pushbutton and receiver ready-paired at the factory.
(3) For Harmony XB6 only.
(4) For Harmony XB6E only.

Control and signaling units Ø 22

Harmony Wireless

Wireless and batteryless pushbuttons

Harmony wireless and batteryless pushbuttons

- **Presentation**..... [page 2/2](#)
- **Description**
 - “Ready-to-use packs” ranges [page 2/3](#)
 - “Components” range..... [page 2/4](#)
- **References**
 - Ready-to-use packs [page 2/5](#)
 - Transmitter components for wireless and batteryless pushbuttons..... [page 2/6](#)
 - Transmitter components for wireless and batteryless rope pull switch [page 2/7](#)
 - Configurable receivers..... [page 2/7](#)
 - Mobile boxes [page 2/8](#)
 - Accessories [page 2/9](#)

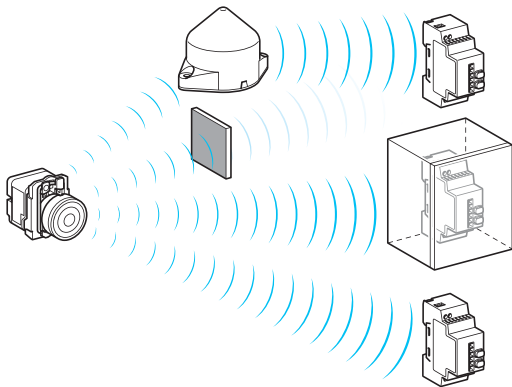


Figure A: Radio transmission between 1 transmitter and 3 receivers

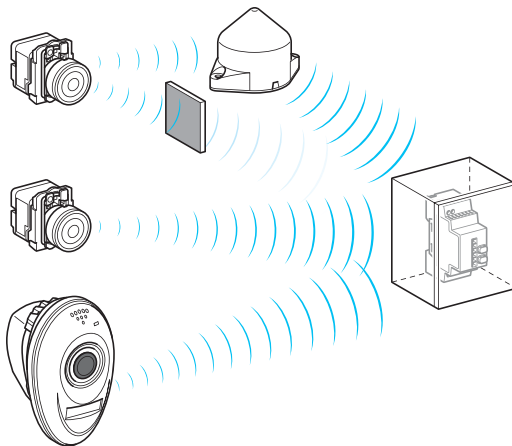


Figure B: Radio transmission between 3 transmitters and 1 receiver

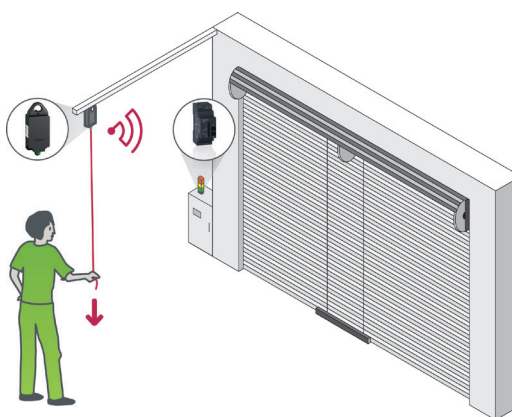


Figure C: Rope pull switch for automatic doors

Presentation

The Harmony wireless and batteryless pushbuttons range enables remote control of a relay (receiver) by means of a pushbutton (transmitter). The control is by radio transmission where the transmitter is equipped with an electric generator that converts mechanical energy, produced when the pushbutton is pressed, to electrical energy. A radio-encoded message with a unique ID code is sent as a single pulse to one or more receivers located several dozen feet away (see Figure A). A single receiver can also be actuated by up to 32 different transmitters (see Figure B).

In order to avoid any conflict of multiple transmission from different transmitters, a minimum time frame of 10 ms is required between each radio transmission. Depending on the application, a relay antenna can be used to get round an obstacle that impedes transmission or to increase the range (see Figure A and Figure B).

The possible distance (1) between a transmitter and a receiver is approximately:

- 100 m/328 ft where there are no obstacles
- 25 m/82 ft if the receiver is installed in a metal housing or in a closed metal enclosure
- 300 m/984 ft if a relay antenna is located between the transmitter and the receiver (receiver installed in a metal housing or in a closed metal enclosure)

These distances could be drastically reduced in industrial environments where factors such as radio interference, obstacles, or electromagnetic interference may impede the signal. As a consequence, some radio frames may not be received by the receiver.

The wireless and batteryless pushbutton reduces installation time and cost since no wiring and associated equipment is required between the transmitters and the control panel.

This technology also allows an operator to be mobile or to have a control mounted on board a vehicle (trolley, truck, etc.). The pushbutton is always available and requires no maintenance (no battery needed).

The mobile box **ZBRM21** or **ZBRM22** associated with its support function is adapted for static and mobile applications mounted on vehicles.

The range also includes a new wireless and batteryless rope pull switch designed for easy operation of automatic doors. This switch can be either mounted directly on the panel or between two ropes close to the automatic door. This enables the forklift driver or pedestrian to open or close the door by pulling the rope, where the mechanical energy produced is transmitted as a radio message to the receiver in the control panel (see Figure C).

This technology (radio-encoded message sent as a single pulse) cannot be used for hoisting applications ("up/down", "right-left" movements, etc.) or functional safety applications (Emergency stop pushbuttons, etc.). For these applications, it is recommended that Harmony XB4 and XB5 wired pushbuttons or the XAC range of pendant control stations be used.

Environment

The performance features of the Harmony Wireless range conform to the following specifications:

- International standards and approvals:
 - Wireless and batteryless pushbuttons: EN/IEC 60947-1, EN/IEC 60947-5-1, and UL 508, and CSA C22-2 No. 14
 - Transmitter/Receiver system: BT 2006/95/EC, CE: R&TTE 1999/5/EC, and EMC 2004/108/EC

- International certifications: UL, CSA, C-Tick, GOST, and CCC

- Radio agreements: ANATEL (Brazil), SRRC (China), FCC (USA), RSS (Canada), ICASA (South Africa), and ARIB T66 (Japan)

For more technical information, please refer to our website www.se.com.

(1) Typical values, which can be affected by the application environment.

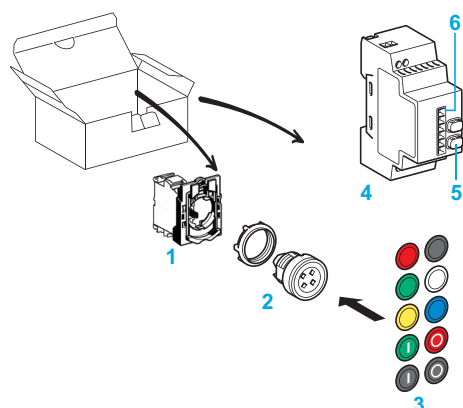


Figure D: Pack with transmitter and configurable receiver

Description of the “Ready-to-use pack” ranges (1)

Pack with configurable receiver (see Figure D)

This pack comprises:

- 1 A transmitter with a fixing collar for assembly with a pushbutton head and mounting in a Ø 22 mm/0.87 in. hole
- 2 A flush, spring return, plastic or metal pushbutton head
- 3 A set of different colored caps that can be clipped onto the pushbutton head
- 4 A 24...240 V ~ configurable receiver, 2 relay outputs, with 2 buttons (teach and parameter setting) 5 and 6 indicating LEDs 6

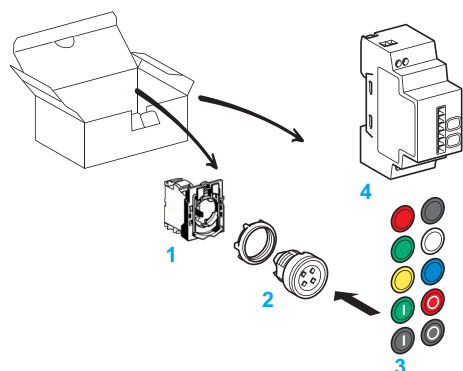


Figure E: Pack with transmitter and non-configurable receiver

Pack with non-configurable receiver (see Figure E) (1)

This pack comprises:

- 1 A transmitter with a fixing collar for assembly with a pushbutton head and mounting in a Ø 22 mm/0.87 in. hole
- 2 A flush, spring return, plastic or metal pushbutton head
- 3 A set of different colored caps that can be clipped onto the pushbutton head
- 4 A 24 V ~ non-configurable receiver, 1 relay output, with no indicating LEDs or buttons

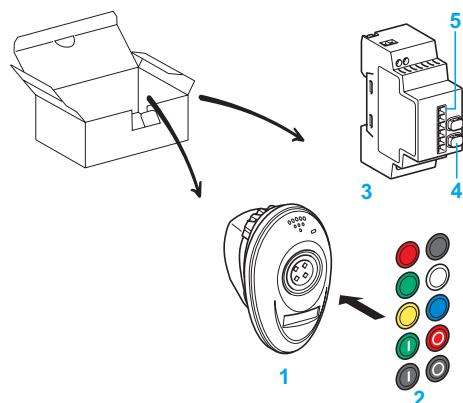


Figure F: Pack with transmitter in handy box and configurable receiver

Pack with handy box and configurable receiver (see Figure F)

This pack comprises:

- 1 A handy box containing a wireless and batteryless pushbutton with plastic head
- 2 A set of 10 different colored caps that can be clipped onto the pushbutton head
- 3 A 24...240 V ~ configurable receiver, 2 relay outputs, with 2 buttons (teach and parameter setting) 4 and 5 indicating LEDs 5

(1) The wireless and batteryless pushbutton and the receiver are factory-paired.

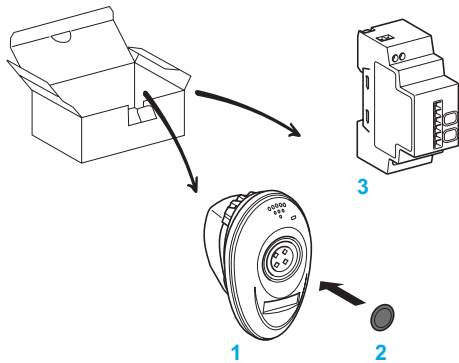


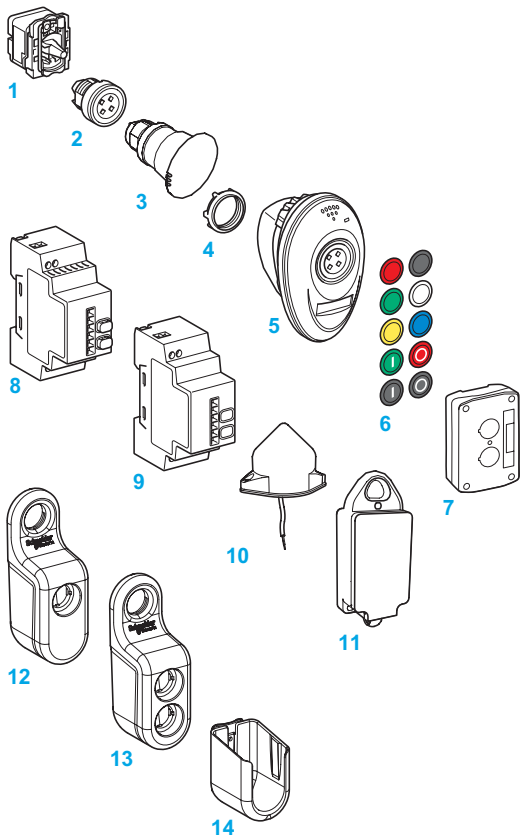
Figure G: Pack with transmitter in handy box and non-configurable receiver

Description of the “Ready-to-use pack” ranges (1) (continued)

Pack with handy box and non-configurable receiver (see Figure G)

This pack comprises:

- 1 A handy box containing a wireless and batteryless pushbutton with plastic head
- 2 A black cap that can be clipped onto the pushbutton head
- 3 A 24 V $\sim$ non-configurable receiver, 1 relay output, with no indicating LEDs or buttons



Description of the “Components” range

Components are sold separately to allow completion of existing applications or creation of specific applications:

- 1 A transmitter for assembly with pushbutton head and mounting in a Ø 22 mm/ 0.87 in. hole
- 2 A flush, spring return, plastic or metal pushbutton head
- 3 A plastic mushroom head
- 4 A plastic or metal fixing collar
- 5 An empty handy box
- 6 A set of different colored caps that can be clipped onto the pushbutton head
- 7 Empty plastic boxes (1 or 2 cut-outs) for wall mounting or on-board applications
- 8 A 24...240 V $\sim$ configurable receiver, 2 relay outputs, with 2 buttons (teach and parameter setting) and 6 indicating LEDs
- 9 A 24 V $\sim$ configurable receiver, 4 PNP outputs, with 2 buttons (teach and parameter setting) and 6 indicating LEDs
- 10 A relay antenna
- 11 A rope pull switch
- 12 ZBRM21 mobile box for 1 pushbutton
- 13 ZBRM22 mobile box for 2 pushbuttons
- 14 ZBRACS support for mobile box

(1) The wireless and batteryless pushbutton and the receiver are factory-paired.



Ready-to-use packs (1)

Description	Transmitter type	Voltage receiver V	Receiver type	Reference	Weight kg/lb
Packs comprising: - 1 wireless and batteryless pushbutton assembled on fixing collar - 1 receiver Pushbutton and receiver are factory-paired	Wireless and batteryless pushbutton + Ø 22 mm/0.87 in. plastic head + 1 set of 10 caps	24...240 ~	Configurable receiver ZBRRA equipped with: - choice of 3 output functions (monostable, bistable, stop/start) - 2 relay outputs type RT 3A (2) - 2 buttons (teach, parameter setting) - 6 indicating LEDs (power ON, function modes, output status, signal strength)	XB5RFA02	0.230/0.507
	Wireless and batteryless pushbutton + Ø 22 mm/0.87 in. metal head + 1 set of 10 caps			XB4RFA02	0.245/0.540
	Wireless and batteryless pushbutton + Ø 22 mm/0.87 in. plastic head + 1 set of 6 caps	24 ---	Non-configurable receiver equipped with monostable output function: - 1 relay output type RT 3A - without button - without indicating LED	XB5RFB01	0.230/0.507
	Wireless and batteryless pushbutton + Ø 22 mm/0.87 in. metal head + 1 set of 6 caps			XB4RFB01	0.245/0.540
Packs comprising: - 1 wireless and batteryless pushbutton assembled on fixing collar, in handy box (3) - 1 receiver Pushbutton and receiver are factory-paired	Wireless and batteryless pushbutton + Ø 22 mm/0.87 in. plastic head mounted in a handy box + 1 set of 10 caps	24...240 ~	Configurable receiver ZBRRA equipped with: - choice of 3 output functions (monostable, bistable, stop/start) - 2 relay outputs type RT 3A (2) - 2 buttons (teach, parameter setting) - 6 indicating LEDs (power ON, function modes, output status, signal strength)	XB5RMA04	0.250/0.551
	Wireless and batteryless pushbutton + Ø 22 mm/0.87 in. plastic head mounted in a handy box + 1 set of 6 caps	24 ---	Non-configurable receiver equipped with monostable output function: - with 1 relay output type RT 3A - without button - without indicating LED	XB5RMB03	0.250/0.551

(1) Wireless and batteryless pushbutton and the receiver are factory-paired.

(2) Receivers are supplied set to monostable output function. The user can configure it to bistable and stop/start functions.

(3) Supplied with a magnet to be stuck on by the customer.



ZBRT1



ZBRV1



ZB5RTA3



ZB5RTC2

Transmitter components for wireless and batteryless pushbuttons

Description	Type of push	Color	Reference	Weight kg/lb
Transmitter for wireless and batteryless pushbutton (1)	1 radio frame sent when button – is pushed		ZBRT1 (2) (3) (4)	0.025/0.055
	1 radio frame sent when button – is pushed 1 radio frame sent when button is released		ZBRT2 (2) (3) (4) (5)	0.025/0.055
Wireless and batteryless pushbutton including: - a transmitter equipped with fixing collar - a spring return mushroom head	Mushroom 40 mm/1.58 in. (plastic)	Black	ZB5RTC2	0.055/0.121
Visual feedback	–	–	ZBRV1 (6)	
Wireless and batteryless pushbuttons including: - a transmitter equipped with fixing collar - a spring return pushbutton head with cap attached (7)	Flush (plastic)	White	ZB5RTA1	0.045/0.099
		Black	ZB5RTA2	0.045/0.099
		Green	ZB5RTA3	0.045/0.099
		White "I" on green background	ZB5RTA331	0.045/0.099
		Red	ZB5RTA4	0.045/0.099
		White "O" on red background	ZB5RTA432	0.045/0.099
		Yellow	ZB5RTA5	0.045/0.099
		Blue	ZB5RTA6	0.045/0.099
	Flush (metal)	White	ZB4RTA1	0.085/0.187
		Black	ZB4RTA2	0.085/0.187
		Green	ZB4RTA3	0.085/0.187
		Red	ZB4RTA4	0.085/0.187
		Yellow	ZB4RTA5	0.085/0.187

(1) Fixing collar **ZB5AZ009** (plastic) or **ZB4BZ009** (metal) to be ordered separately.

(2) Actuators from Harmony XB4 and Harmony XB5 catalogs.

(3) Not suitable for functional safety applications.

(4) This transmitter supports EcoStruxure Panel Server firmware version ≥ 2.2.

(5) This transmitter is only compatible with receiver ZBRR● version ≥ 2.0, relay antenna ZBRA1 version ≥ 2.0, and access point ZBRN● version ≥ 3.32.

(6) This product is only compatible with receiver ZBRR● version ≥ 2.2, relay antenna ZBRA1 version ≥ 3.3, access point ZBRN● version ≥ 3.32, and EcoStruxure Panel Server firmware version ≥ 2.2.

(7) This cap is factory-assembled and cannot be removed (risk of damage).



ZBRP1

Transmitter components for wireless and batteryless rope pull switch

Description	Application	Reference	Weight kg/lb
Rope pull switch with wireless and batteryless transmitter	For automatic doors: The rope pull switch sends a radio message to the receiver in the control panel to open and close the door.	ZBRP1	0.150/0.331



XB5RP1US2

Rope pull switch with wireless and batteryless transmitter, and a universal support accessory	For automatic doors: The rope pull switch sends a radio message to the receiver in the control panel to open and close the door.	XB5RP1US2	0.259/0.571
---	---	-----------	-------------

Configurable receivers



ZBRRA

Description	Output function	Output type	Receiver voltage V	Reference	Weight kg/lb
Configurable receivers (1) equipped with: - 2 buttons (teach and parameter setting) - 6 indicating LEDs (power ON, function modes, output status, signal strength)	Monostable	4 PNP outputs, 200 mA/24 V	24 ---	ZBRRC	0.130/0.287
	Monostable, bistable, stop/start	2 relay outputs type RT 3A (2)	24...240 ~	ZBRRA	0.130/0.287

(1) Each receiver can be actuated by up to 32 transmitters.
(2) Receivers are supplied set to monostable output function. The user can configure it to bistable and stop/start functions.

2



ZBRM22

ZBRACS



ZBRM22A0

Mobile boxes

Product	Application	Description	Sold in lots of	Unit reference	Weight kg/lb
Plastic empty mobile box (1) (2)	For mobile and static applications with wireless and batteryless pushbuttons	1 cut-out	1	ZBRM21	0.109/0.240
		2 cut-outs	1	ZBRM22	0.110/0.243
Plastic mobile box equipped with button(s) and transmitter(s), 1 set of caps	For mobile and static applications with wireless and batteryless pushbuttons	1 button with ZBRT1 transmitter	1	ZBRM21A0	0.150/0.331
		1 button with ZBRT2 transmitter	1	ZBRM21B0	0.151/0.333
		2 buttons with ZBRT1 transmitters	1	ZBRM22A0	0.194/0.428
		2 buttons with ZBRT2 transmitters	1	ZBRM22B0	0.195/0.430
		1 button with ZBRT1 and 1 button with ZBRT2	1	ZBRM22AB0	0.195/0.430
		1 button with ZBRT2 and 1 button with ZBRT1	1	ZBRM22BA0	0.195/0.430
		Special support for tube or wall specific for ZBRM21 and ZBRM22	-	ZBRACS	0.064/0.141

(1) Cannot be used for wired contacts (no cable gland outlet).
(2) Compatible with ZBRT1 and ZBRT2.



ZBRA1



ZBRA2



ZBRA3



PASA-ANT1



XALD02

Accessories					
Product	Application	Description	Sold in lots of	Unit reference	Weight kg/lb
Relay antenna (1)	Between transmitter and receiver Used to increase the range and/or get round obstacles	24...240 V $\approx$ □ 5 m/16.4 ft cable □ 1 power-ON LED □ 2 LEDs reception/transmission	1	ZBRA1	0.200/0.441
External antenna	Connected to the ZBRN2 Harmony Hub Used to increase the distance of transmission	□ 2 m/6.56 ft cable □ 1 RF connector	1	ZBRA2	0.040/0.088
Passive antenna	Passive antenna to pass through a wall, must be close to a relay antenna or a receiver	□ 2 antennas □ 0.9 m/2.95 ft cable □ 2 RF connectors	1	ZBRA3	0.010/0.328
		□ 1 antenna □ 3 m/2.95 ft cable with RP-SMA connector	1	PASA-ANT1	0.015/0.331
Fixing collar	—	Plastic	10	ZB5AZ009	0.038/0.084
		Metal	10	ZB4BZ009	0.038/0.084
Empty plastic boxes for wireless and batteryless pushbuttons (2)	For static or on-board wireless and batteryless pushbuttons	1 cut-out	1	XALD01	0.136/0.300
		2 cut-outs	1	XALD02	0.193/0.426

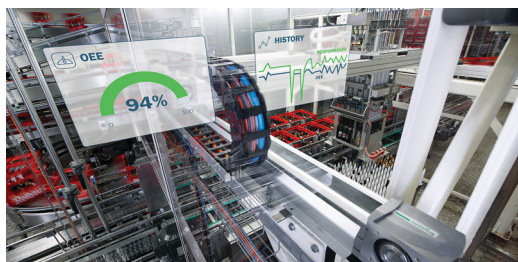
(1) Not wired to the receiver.

(2) Box equipped with cable gland outlets, compatible with Harmony ZB5 pushbutton heads.

Control and signaling units Ø 22
Harmony Wireless
Wireless and batteryless ecosystem devices

EcoStruxure Panel Server/Harmony Hub

- Presentation page 3/2
- Description page 3/2
- References
 - EcoStruxure Panel Server page 3/3
 - Configurable Harmony Hub page 3/3
 - Ready-to-use packs page 3/4
- Compatibility
 - EcoStruxure Panel Server/Harmony Hub page 3/5



OEE monitoring production equipment



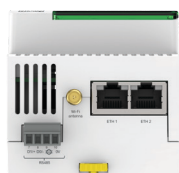
ZBRN2 front view



ZBRN2 underside view



PAS800L front view



PAS800L underside view

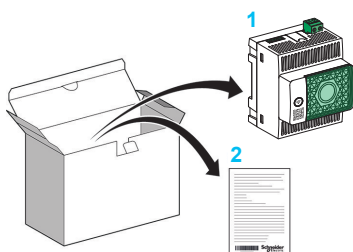


Figure A: EcoStruxure Panel Server PAS...

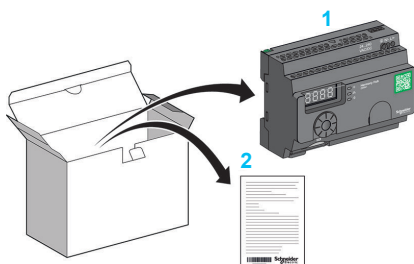


Figure B: ZBRN2 Harmony Hub for Modbus Serial Line communication

Presentation

EcoStruxure Panel Server/Harmony Hub provides network connectivity openness by operating as an intermediate device between the wireless devices and PLCs (programmable logic controllers) or industrial PCs (IT/OT box) that support the Modbus/TCP protocol.

EcoStruxure Panel Server/Harmony Hub can be used with transmitters such as XB4R and XB5R wireless and batteryless pushbuttons, rope pull switches, mushroom head pushbuttons, Emergency stop monitoring, as well as temperature and energy sensors.

EcoStruxure Panel Server/Harmony Hub provides an easy way to digitize your production line to improve overall equipment efficiency (OEE) by using a non-intrusive wireless system that is easy to connect to the IT system.

They collect physical signals from an operator interface or secondary sensing device to generate computed data information for CMMS tools and operation management tools.

Data can be analyzed through our dedicated EcoStruxure platform using "AVEVA Insight" software, "Maintenance Advisor" software, or our "Augmented Operator Advisor" on-premise application.

Depending on the application, an external or relay antenna can be used to improve signal reception. The EcoStruxure Panel Server can support up to 100 radio transmitters.

Description

Standard EcoStruxure Panel Server (see Figure A)

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.

1 PAS... EcoStruxure Panel Server

2 PAS... instruction sheet

Standard Harmony Hub (see Figure B)

Harmony Hub ZBRN2 has two embedded RS485 connectors, which avoids the use of an external hub for RS485 serial line connection. The supported data rates are 1,200 bps, 2,400 bps, 4,800 bps, 9,200 bps, 9,600 bps, 38,400 bps, and 115,200 bps.

1 ZBRN2 Harmony Hub

2 ZBRN2 instruction sheet

Control and signaling units Ø 22

Harmony Wireless

Wireless and batteryless ecosystem devices

EcoStruxure Panel Server/Harmony Hub



PAS400



PAS600L



PAS800



ZBRN2

EcoStruxure™ Panel Server (1) (2)

Description	Power supply V	Reference	Weight kg/lb
EcoStruxure Panel Server Entry			
■ Wi-Fi access point: 2.4 GHz ■ Modbus TCP/IP server and client ■ 1 RJ45 port ■ Up to 20 devices ■ IP20 (IP40 for front face) ■ Compatible with external antenna PASA_ANT1 (3)	110...277 ~	PAS400	0.163/0.359

EcoStruxure Panel Server Universal

■ Wi-Fi access point: 2.4 GHz ■ Modbus TCP/IP server and client ■ Modbus RS485 serial communication ■ 2 digital inputs 24V DC ■ 2 RJ45 port ■ Up to 100 devices ■ IP20 (IP40 for front face) ■ Compatible with external antenna PASA_ANT1 (3)	110...277 ~	PAS600	0.201/0.443
	24 ---	PAS600L	0.181/0.399

EcoStruxure Panel Server Advanced

■ Wi-Fi access point: 2.4 GHz ■ Modbus TCP/IP server and client ■ Modbus RS485 serial communication ■ 2 digital inputs 24V DC ■ 2 RJ45 port ■ Up to 100 devices ■ IP20 (IP40 for front face) ■ 3 year Data Logger with 32 GB memory ■ Compatible with external antenna PASA_ANT1 (3)	110...277 ~/---	PAS800	0.206/0.454
	24 ---	PAS800L	0.186/0.410

Configurable Harmony Hub (4)

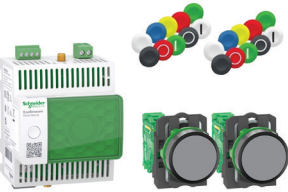
Description	Data function	Output type	Receiver voltage V	Reference	Weight kg/lb
Configurable Harmony Hub equipped with: - 7-segment display - jog dial - 8 LED indicators (Power On, functions mode, communication status, signal strength) - external antenna connector and protective plug	Monostable (adjustable from 100 ms to 1 s)	2 RS485 connectors providing connectivity for Modbus RS485 Serial Line	24...240 ~	ZBRN2	0.263/0.580

(1) Please consult the EcoStruxure™ Panel Server catalog [PLSED310196EN](#).

(2) Industrial wireless and batteryless pushbuttons are compatible with EcoStruxure Panel Server firmware (version ≥ 2.2 only).

(3) See [page 3/8](#).

(4) The ZBRN2 hub has an embedded communication port for Modbus Serial Line.



XB5RPAS01



XB5RPAS02



XB5RPAS04

Ready-to-use packs		
Description	Reference	Weight kg/lb
Pack comprising: - 2 wireless and batteryless pushbuttons assembled on fixing collar (Ø 22 mm/0.87 in.) - 2 sets of 10 caps - 1 gateway PAS600L - 1 commissioning module ZBRZ1 Transmitter and receiver are not factory-paired.	XB5RPAS01	0.281/0.619
Pack comprising: - 1 gateway PAS600L - 1 temperature and humidity sensor ZBRTT1 Transmitter and receiver are not factory-paired.	XB5RPAS02	0.357/0.787
Pack comprising: - 1 transmitter ZBRT1 - 1 gateway PAS600L - 1 commissioning module ZBRZ1 Transmitter and receiver are not factory-paired.	XB5RPAS04	0.206/0.454
Note: See accessories page 3/8 .		



ZBRT1



ZBRV1



ZBRZ1



ZB5RTA3

Ecosystem devices

Transmitter components for wireless and batteryless pushbuttons

Description	Type of push	Color	Reference	Weight kg/lb
Transmitter for wireless and batteryless pushbutton (1)	1 radio frame sent when button – is pushed 1 radio frame sent when button – is pushed 1 radio frame sent when button is released		ZBRT1 (2)	0.025/0.055
			ZBRT2 (2) (3)	0.025/0.055
Wireless and batteryless pushbuttons including: - a transmitter equipped with fixing collar - a spring return pushbutton head with cap attached	Flush (plastic)	Visual feedback	ZBRV1 (4)	0.017/0.037
		Commissioning module	ZBRZ1 (5)	0.050/0.110
		White	ZB5RTA1	0.045/0.099
		Black	ZB5RTA2	0.045/0.099
		Green	ZB5RTA3	0.045/0.099
		White I on green background	ZB5RTA331	0.045/0.099
		Red	ZB5RTA4	0.045/0.099
		White O on red background	ZB5RTA432	0.045/0.099
		Yellow	ZB5RTA5	0.045/0.099
		Blue	ZB5RTA6	0.045/0.099
	Flush (metal)	White	ZB4RTA1	0.085/0.187
		Black	ZB4RTA2	0.085/0.187
		Green	ZB4RTA3	0.085/0.187
		Red	ZB4RTA4	0.085/0.187
		Yellow	ZB4RTA5	0.085/0.187

(1) Fixing collar **ZB5AZ009** (plastic) or **ZB4BZ009** (metal) to be ordered separately.

(2) This transmitter supports EcoStruxure Panel Server firmware version ≥ 2.2 .

(3) This transmitter is only compatible with receiver ZBR● version ≥ 2.0 , relay antenna ZBRA1 version ≥ 2.0 , and Harmony Hub ZBRN● version ≥ 3.32 .

(4) These products are only compatible with receiver ZBR● version ≥ 2.2 , relay antenna ZBRA1 version ≥ 3.3 , access point ZBRN● version ≥ 3.32 , and EcoStruxure Panel Server firmware version ≥ 2.2 .

(5) For commissioning and decommissioning of ZBRT● based products, it is mandatory to use the ZBRZ1 commissioning module.



ZBRP1

Ecosystem devices (continued)			
Transmitter components for wireless and batteryless rope pull switch for Harmony Hub			
Description	Application	Reference	Weight kg/lb
Rope pull switch with wireless and batteryless transmitter	For automatic doors: The rope pull switch sends a radio message to the receiver in the control panel to open and close the door.	ZBRP1	0.150/0.331

3



XB5RP1US2

Rope pull switch with wireless and batteryless transmitter and a universal support accessory	For automatic doors: The rope pull switch sends a radio message to the receiver in the control panel to open and close the door.	XB5RP1US2	0.259/0.571
--	---	-----------	-------------



ZBRM22

ZBRACS



ZBRM22A0

Ecosystem devices (continued)

Mobile boxes

Product	Application	Description	Sold in lots of	Unit reference	Weight kg/lb
Plastic empty mobile box (1) (2)	For mobile and static applications with wireless and batteryless pushbuttons	1 cut-out	1	ZBRM21	0.109/0.240
		2 cut-outs	1	ZBRM22	0.110/0.243
Plastic mobile box equipped with button(s) and transmitter(s), 1 set of caps	For mobile and static applications with wireless and batteryless pushbuttons	1 button with ZBRT1 transmitter	1	ZBRM21A0	0.150/0.331
		1 button with ZBRT2 transmitter	1	ZBRM21B0	0.151/0.333
		2 buttons with 2x ZBRT1 transmitters	1	ZBRM22A0	0.194/0.428
		2 buttons with 2x ZBRT2 transmitters	1	ZBRM22B0	0.195/0.430
		1 button with ZBRT1 and 1 button with ZBRT2	1	ZBRM22AB0	0.195/0.430
		1 button with ZBRT2 and 1 button with ZBRT1	1	ZBRM22BA0	0.195/0.430
		Special support for tube or wall for ZBRM21 and ZBRM22	—	1	ZBRACS

(1) Cannot be used for wired contacts (no cable gland outlet).

(2) Compatible with ZBRT1 and ZBRT2.

Ecosystem devices (continued)

Product	Application	Description	Sold in lots of	Unit reference	Weight kg/lb
Accessories					
Relay antenna (1)	Between transmitter and receiver Used to increase the range and/or get round obstacles	24...240 V ~ □ 5 m/16.4 ft cable □ 1 power-ON LED □ 2 LEDs (reception/transmission)	1	ZBRA1	0.200/0.441
External antenna	Connected to the ZBRN2 Harmony Hub Used to increase the distance of transmission	□ 2 m/6.56 ft cable □ 1 RF connector	1	ZBRA2	0.040/0.088
Passive antenna	Passive antenna to pass through a wall, must be close to a relay antenna or a receiver	□ 2 antennas □ 0.9 m/2.95 ft cable □ 2 RF connectors	1	ZBRA3	0.010/0.0328
		□ 1 antenna □ 3 m/2.95 ft cable with RP-SMA connector	1	PASA-ANT1	0.015/0.0331
Fixing collar	—	Plastic	10	ZB5AZ009	0.038/0.084
		Metal	10	ZB4BZ009	0.038/0.084
Boxes for wireless and batteryless pushbuttons					
Empty plastic boxes for wireless and batteryless pushbuttons (2)	For static or on-board wireless and batteryless pushbuttons	1 cut-out	1	XALD01	0.136/0.300
		2 cut-outs	1	XALD02	0.193/0.426



ZBRA1



ZBRA2



ZBRA3



PASA-ANT1



XALD02

(1) Not wired to the receiver.

(2) Box equipped with cable gland outlets, compatible with Harmony ZB5 pushbutton heads.



ZBRTT1



A9XST114



A9MEM1560



A9MEM1570



LV434020



LV434021



LV434022



LV434023



SED-CO2-G-5045

EcoStruxure Panel Server/Harmony Hub ecosystem devices (continued)

Transmitter components for wireless temperature sensors

ZBRTT1	Temperature and humidity sensor	Wireless smart sensor for continuous environmental condition monitoring, used to measure the: □ temperature of the surface in contact □ relative humidity
A9XST114	Temperature sensor	For measuring the temperature of food storage and processing equipment and rooms in order to maintain the cold chain.

Transmitter components for wireless and energy sensors

A9MEM1560	Energy monitoring sensor	Cut down on installation time with the efficient and simple PowerTag® power sensor units. Designed to reduce downtime and save on costs, they provide the ultimate in convenience and flexibility.
A9MEM1570	Energy monitoring sensor	
LV434020	Energy sensor component	Energy Sensor PowerTag NSX for monitoring a machine's voltage, current, and energy.
LV434021	Energy sensor component	
LV434022	Energy sensor component	
LV434023	Energy sensor component	

Wireless CO₂ sensor with room temperature and humidity

SED-CO2-G-5045	Wireless CO ₂ sensor	This wireless sensor is a wall-mounted device with ambient comfort monitoring and HVAC (1) control applications. It measures CO ₂ , temperature, and relative humidity. Measured data is communicated wirelessly using the ZigBee Green Power protocol.
-----------------------	---------------------------------	---

(1) HVAC: Heating Ventilation and Air Conditioning.

Control and signaling units Ø 22

Harmony Wireless

Wireless and batteryless pushbuttons

Wireless and batteryless ecosystem devices

■ Product reference index.....	page 4/2
■ mySchneider.....	page 4/3
■ Legal information	page 4/4

A		ZB5RTC2		2/6
A9MEM1560	3/9	ZBRA1		2/9
A9MEM1570	3/9			3/8
A9XST114	3/9	ZBRA2		2/9
				3/8
L		ZBRA3		2/9
LV434020	3/9			3/8
LV434021	3/9	ZBRACS		2/8
LV434022	3/9			3/7
LV434023	3/9	ZBRM21		2/8
				3/7
P		ZBRM21A0		2/8
PAS400	3/3			3/7
PAS600	3/3	ZBRM21B0		2/8
PAS600L	3/3			3/7
PAS800	3/3	ZBRM22		2/8
PAS800L	3/3			3/7
PASA-ANT1	2/9	ZBRM22A0		2/8
	3/8			3/7
		ZBRM22AB0		2/8
				3/7
S		ZBRM22B0		2/8
SED-CO2-G-5045	3/9			3/7
		ZBRM22BA0		2/8
				3/7
X		ZBRN2		3/3
XALD01	2/9	ZBRP1		2/7
	3/8			3/6
XALD02	2/9	ZBRRRA		2/7
	3/8	ZBRRC		2/7
XB4RFA02	2/5	ZBRT1		3/5
XB4RFB01	2/5			2/6
XB5RFA02	2/5	ZBRT2		3/5
XB5RFB01	2/5			2/6
XB5RMA04	2/5	ZBRTT1		3/9
XB5RMB03	2/5	ZBRV1		3/5
XB5RP1US2	2/7			2/6
	3/6	ZBRZ1		3/5
XB5RPAS01	3/4			
XB5RPAS02	3/4			
XB5RPAS04	3/4			
Z				
ZB4BZ009	2/9			
	3/8			
ZB4RTA1	2/6			
	3/5			
ZB4RTA2	2/6			
	3/5			
ZB4RTA3	2/6			
	3/5			
ZB4RTA4	2/6			
	3/5			
ZB4RTA5	2/6			
	3/5			
ZB5AZ009	2/9			
	3/8			
ZB5RTA1	2/6			
	3/5			
ZB5RTA2	2/6			
	3/5			
ZB5RTA3	2/6			
	3/5			
ZB5RTA331	2/6			
	3/5			
ZB5RTA4	2/6			
	3/5			
ZB5RTA432	2/6			
	3/5			
ZB5RTA5	2/6			
	3/5			
ZB5RTA6	2/6			
	3/5			

mySchneider, your personalized digital experience

Access an all-in-one customized online experience and benefit from tailored business services, resources, and tools to efficiently support your business operations.

- **Efficiency:** In just a few clicks, find all the information and support you need to get the job done.
- **Simplicity:** Use a single login to access all business services, in one place, available 24/7. You no longer need to log in to multiple platforms.
- **Personalization:** Benefit from content, tools, and business services tailored to your activity, and customize your landing page based on your preferences.

Watch the How-to Videos



Order management

- > [Select Products and Add to Cart](#)
- > [Check for Products' Price and Availability](#)
- > [Order Products with Generic Commercial References](#)



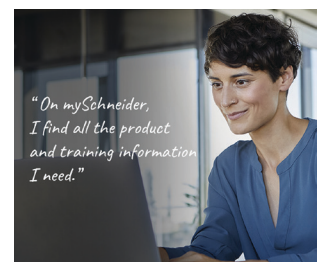
Product information

- > [Find a Product Data Sheet and Related Documents](#)
- > [Select Products and Add to Cart](#)
- > [Stay Up to Date on the Status of My Products](#)



Support

- > [Get Quicker Answers Thanks to Online Support](#)



Training

- > [Access Trainings Dedicated to My Activity](#)

[Create your account](#)

Schneider
Electric™

Legal information

The information provided in this Catalog contains description of Schneider Electric products, solutions and services ("Offer") with technical specifications and technical characteristics of the performance of the corresponding Offer.

The content of this document is subject to revision at any time without notice due to continued progress in methodology, design and manufacturing.

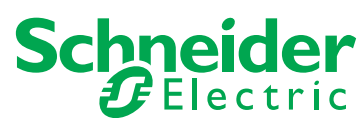
To the extent permitted by applicable law, no responsibility or liability is assumed by Schneider Electric and its subsidiaries for any type of damages arising out of or in connection with (i) informational content of this Catalog not conforming with or exceeding the technical specifications, or (ii) any error contained in this Catalog, or (iii) any use, decision, act or omission made or taken on basis of or in reliance on any information contained or referred to in this Catalog.

SCHNEIDER ELECTRIC MAKES NO WARRANTY OR REPRESENTATION OF ANY KIND, WHETHER EXPRESS OR IMPLIED, AS TO WHETHER THIS CATALOG OR ANY INFORMATION CONTAINED THEREIN SUCH AS PRODUCTS AND SERVICES WILL MEET REQUIREMENTS, EXPECTATIONS OR PURPOSE OF ANY PERSON MAKING USE THEREOF.

Schneider Electric brand and any trademarks of Schneider Electric and its subsidiaries referred to in this Catalog are property of Schneider Electric or its subsidiaries. All other brands are trademarks of their respective owners.

This Catalog and its content are protected under applicable copyright laws and provided for informative use only. No part of this Catalog may be reproduced or transmitted in any form or by any means (electronic, mechanical, photocopying, recording, or otherwise), for any purpose, without the prior written permission of Schneider Electric.

Copyright, intellectual, and all other proprietary rights in the content of this Catalog (including but not limited to software, audio, video, text, and photographs) rests with Schneider Electric or its licensors. All rights in such content not expressly granted herein are reserved. No rights of any kind are licensed or assigned or shall otherwise pass to persons accessing this information.



Learn more about our products at
www.se.com

Design: Schneider Electric
Photos: Schneider Electric

Schneider Electric
1884 Boulevard de la Défense
92000 Nanterre
France

DIA5ED2121214EN
August 2026 - V12.0