# **Product datasheet**

Specification





Harmony Hub wireless ethernet gateway, Harmony XB5R, Zigbee green power gateway, wireless to modbus TCP, 24...240V AC DC

ZBRN1

## Main

Range Of Product	Harmony	
Product Or Component Type	Harmony Hub Wireless/Ethernet gateway	
Device Short Name	ZBRN1	
Product Specific Application	Wireless Schneider Electric devices ecosystem	
Function Of Module	Zigbee green power gateway	
Communication Port Protocol	Modbus/TCP client application, with ZBRCETH module	
Antenna Type	Integrated	
Transmission Frequency	24052480 MHz	

#### **Complementary**

Complementary		
Maximum Radio Communication Distance	100 m in free field 250 m if a relay antenna is located between the transmitter and Harmony Hub 60 m if an external antenna is connected to Harmony Hub 25 m with Harmony Hub installed in a metal housing or in a closed metal enclosure	
Radio Response Time	< 30 ms	
Radio Channels Utilisation	<= 60 devices	
[Us] Rated Supply Voltage	24240 V AC/DC 50/60 Hz - 1010 %	
Immunity To Microbreaks	10 ms	
Maximum Power Consumption In W	4 W AC/DC	
Control Circuit Frequency	5060 Hz +/- 10 %	
Short-Circuit Protection	16 A GB2 circuit breaker	
Operating Position	Any position	
Mounting Support	35 mm symmetrical DIN rail conforming to EN/IEC 60715 Mounting plate	
Electrical Connection	1 conductor cable 0.24 mm² - AWG 24AWG 12 - solid - without cable end conforming to IEC 60947-1 2 conductors cable 0.21.5 mm² - AWG 24AWG 16 - solid - without cable end conforming to IEC 60947-1 1 conductor cable 0.20.75 mm² - AWG 24AWG 14 - flexible - with cable end conforming to IEC 60947-1 2 conductors cable 0.22.5 mm² - AWG 24AWG 18 - flexible - with cable end conforming to IEC 60947-1	
Tightening Torque	0.350.4 N.m conforming to EN/IEC 60947-1 0.350.40 N.m conforming to EN/IEC 60947-1	
Housing Material	Self-extinguishing plastic	

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Status Led	LED green for power ON     LED yellow for communication network     LEDs red for function mode     LED green and yellow for reception signal	
Rated Short-Duration Power Frequency Withstand Voltage	1.5 kV 50 Hz conforming to EN/IEC 60947-5-1	
[Uimp] Rated Impulse Withstand Voltage	4 kV	
Surge Withstand	1 kV differential mode conforming to IEC 61000-4-5 2 kV common mode conforming to IEC 61000-4-5	
Width	122 mm	
Height	90 mm	
Depth	60 mm	
Net Weight	0.26 kg	
Antenna Gain	0 dBi	
Integrated Connection Type	Ethernet Modbus TCP/IP RJ45 Modbus TCP network, 10/100 Mbit/s, 2 twisted pairs	
Data Storage Equipment	SD card	
Topology	Devices linked by daisy-chaining or tap junctions	
Port Ethernet	10BASE-T/100BASE-T	
Maximum Cable Distance Between Devices	1000 m	
Environment		
Radio Agreement	ANATEL, type III conforming to ETSI EN 301 489-3 FCC, category 2 conforming to ETSI EN 300 440-1 ICASA RSS, category 1 conforming to ETSI EN 300 440-1 SRRC	
Product Certifications	C-Tick CCC CSA GOST UL CE	
Directives	2004/108/EC - electromagnetic compatibility 1999/5/EC - R&TTE directive 2006/95/EC - low voltage directive	
Standards	ETSI EN 300 328 EN/IEC 61131-2 CSA C22.2 No 14 ETSI EN 300 440-2 UL 508 EN/IEC 60950-1 EN 62311	
Ambient Air Temperature For Storage	-4070 °C	
Relative Humidity	90 % at -2555 °C, without condensation conforming to ETSI EN 300 440-1	
Operating Altitude	02000 m	
Storage Altitude	03000 m	
Vibration Resistance	+/- 3.5 mm (f = 514 Hz) conforming to IEC 60068-2-6 1 gn (f = 5150 Hz) on panel mounting conforming to IEC 60068-2-6 2 gn (f = 8150 Hz) on DIN rail conforming to IEC 60068-2-6	
Shock Resistance	10 gn (duration = 16 ms) for 6000 shocks conforming to IEC 60068-2-27	
Ip Degree Of Protection	IP20 (casing) conforming to IEC 60529 IP20 (terminals)	
Pollution Degree	2 conforming to IEC 60664-1	

Electromagnetic Compatibility	<ul> <li>1.2/50 μs shock waves immunity test - test level: 1 kV (differential mode) conforming to IEC 61000-4-5</li> <li>1.2/50 μs shock waves immunity test - test level: 2 kV (common mode) conforming to IEC 61000-4-5</li> <li>Immunity to microbreaks and voltage drops - test level: 10 ms conforming to IEC 61000-4-11</li> </ul>	
Dielectric Strength	3000 V between input and output AC	
	4250 V between input and output DC	
	1500 V between input and ground AC	
	2150 V between input and ground DC	

# **Packing Units**

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	7.300 cm
Package 1 Width	9.600 cm
Package 1 Length	13.000 cm
Package 1 Weight	310.000 g
Unit Type Of Package 2	S02
Number Of Units In Package 2	10
Package 2 Height	15.000 cm
Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	3.524 kg

# Sustainability Green Premium"

**Green Premium**<sup>TM</sup> **label** is Schneider Electric's commitment to delivering products with best-inclass environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO<sub>2</sub> products.

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Learn more about Green Premium >

Guide to assess a product's sustainability >





Transparency RoHS/REACh

## Well-being performance



Mercury Free



Rohs Exemption Information

Yes

## **Certifications & Standards**

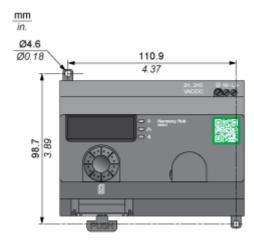
Reach Regulation	Pro-active compliance (Product out of EU RoHS legal scope)	
Eu Rohs Directive		
China Rohs Regulation	China RoHS declaration	
Environmental Disclosure	Product Environmental Profile	
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins	
Circularity Profile	End of Life Information	

#### **ZBRN1**

## **Dimensions Drawings**

#### **Dimensions**

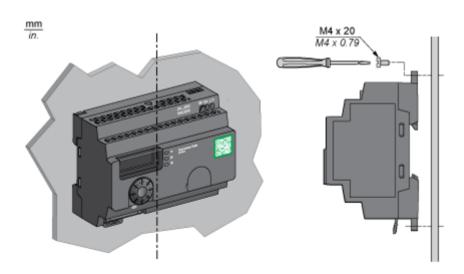
For your information existing access point product is now named "Harmony Hub"



# **ZBRN1**

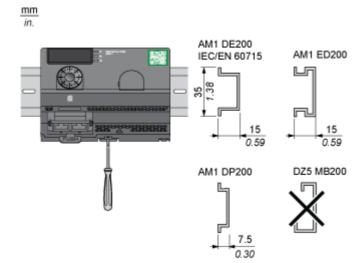
## Mounting and Clearance

## **Harmony Hub on a Mounting Panel**



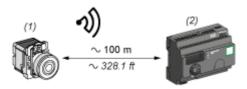
Harmony Hub is installed according to its vertical axis

#### **Harmony Hub on DIN Rail Mounting**



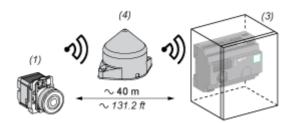
#### Clearances

#### Maximum Distance between Transmitter and Harmony Hub in Free Field Unobstructed



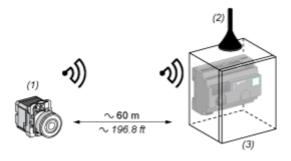
- (1) Transmitter
- (2) Harmony Hub

# Maximum Distance between Transmitter and Harmony Hub in a Metal Enclosure with a Relay Antenna



- (1) Transmitter
- (3) Harmony Hub in a metal enclosure
- (4) Relay antenna

# Maximum Distance between Transmitter and Harmony Hub in a Metal Enclosure with a Passive Antenna



- (1) Transmitter
- (2) External antenna
- (3) Harmony Hub in a metal enclosure

The range is reduced if the transmitter is placed in a metal enclosure (reduction factor : approx 10%)

Glass window	1020 %
Plaster wall	3045 %
Brick wall	60 %

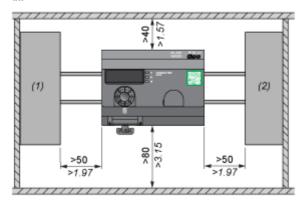
# **Product datasheet**

## **ZBRN1**

Concrete wall	7080 %
Metal structure	50100 %

#### **Harmony Hub Clearances**

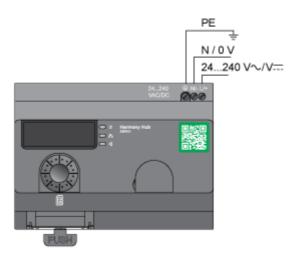
mm



- (1) PLC or other devices
- (2) Power supply or other devices

## Connections and Schema

## **Harmony Hub Wiring Diagram**





(1) Wire sizes for Power Supply terminals (L/+, N/-)