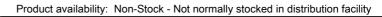
# Product data sheet Characteristics

# ZBRN2 Harmony Hub Wireless to Modbus Serial Line gateway







Main	
Range of product	Harmony
Product or component type	Harmony Hub wireless/Serial Line gateway
Device short name	ZBRN2
Product specific applica- tion	Wireless Schneider Electric devices ecosystem
Function of module	Zigbee green power concentrator
Communication port protocol	Modbus client application
Antenna type	Integrated
Transmission frequency	24052480 MHz

#### Complementary

Complementary	
Maximum radio communication distance	328.08 ft (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 enclo- sure)
Radio response time	< 30 ms
Radio channels utilisation	<= 60 devices
[Us] rated supply voltage	24240 V AC/DC at 50/60 Hz (- 1010 %)
Immunity to microbreaks	10 ms
Power consumption in W	<= 4 W AC/DC
Breaking capacity	15 W
Breaking capacity	750 VA
Control circuit frequency	5060 Hz +/- 10 %
Short-circuit protection	16 A by GB2 circuit breaker
Operating position	Any position
Mounting support	Mounting plate 35 mm symmetrical DIN rail conforming to EN/IEC 60715
Electrical connection	<ol> <li>1 conductor cable 00.01 in² (0.24 mm²) AWG 24AWG 12 solid without cable end IEC 60947-1</li> <li>2 conductors cable 00 in² (0.21.5 mm²) AWG 24AWG 16 solid without cable end IEC 60947-1</li> <li>1 conductor cable 0.20.75 mm² AWG 24AWG 14 flexible with cable end IEC 60947-1</li> <li>2 conductors cable 00 in² (0.22.5 mm²) AWG 24AWG 18 flexible with cable end IEC 60947-1</li> </ol>
Tightening torque	0.350.4 N.m conforming to EN/IEC 60947-1 3.093.54 lbf.in conforming to EN/IEC 60947-1
Housing material	Self-extinguishing plastic
Status LED	1 LED (green): power ON 1 LED (yellow): communication network 5 LEDs (red): function mode 1 LED (green and yellow): reception signal
Rated short-duration power frequency withstand volt- age	1.5 kV at 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	4.8 in (122 mm)
Height	3.54 in (90 mm)



Depth	2.36 in (60 mm)	
Product weight	0.6 lb(US) (0.27 kg)	
Antenna gain	0 dBi	
Integrated connection type	1 isolated serial link (2 x RJ45 in parallel in Modbus Serial line slave) ,Modbus slave RTU asynchronous in baseband RS485 half duplex 1.2115.2 kbauds 2 twisted shielded pairs	
Data storage equipment	SD card	
Topology	Devices linked by daisy-chaining or tap junctions	
Data format	7 or 8 bits, 1 or 2 stop bits	
Parity	Odd Even No	
Environment		
Radio agreement	SRRC ICASA ANATEL type III conforming to ETSI EN 301 489-3 FCC category 2 conforming to ETSI EN 300 440-1 RSS category 1 conforming to ETSI EN 300 440-1	
Product certifications	UL CE CCC CSA GOST C-Tick	
Directives	1999/5/EC - R&TTE directive 2004/108/EC - electromagnetic compatibility 2006/95/EC - low voltage directive	
Standards	EN/IEC 61131-2 CSA C22.2 No 14 UL 508 EN/IEC 60950-1 EN 62311 ETSI EN 300 440-2 ETSI EN 300 328	
Ambient air temperature for storage	-40158 °F (-4070 °C)	
Relative humidity	90 % (-13131 °F (-2555 °C)) without condensation conforming to ETSI EN 300 440-1	
Operating altitude	06561.68 ft (02000 m)	
Storage altitude	09842.52 ft (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 (6000 shocks during 16 ms) 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 :1 kV (differential mode) conforming to IEC 61000-4-5</li> <li>1.2/50 μs shock waves immunity test :2 kV (common mode) conforming to IEC 61000-4-5</li> <li>Immunity to microbreaks and voltage drops :10 ms conforming to IEC 61000-4-11</li> </ul>	
Dielectric strength	3000 V AC between input and output 4250 V DC between input and output 1500 V AC between input and ground 2150 V DC between input and ground	

## Ordering and shipping details

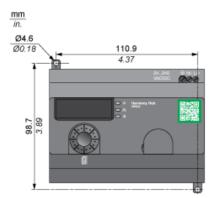
Category	22470 - XB5R WIRELESS PUSH BUTTON	
Discount Schedule	I	
GTIN	00785901193722	
Nbr. of units in pkg.	1	
Package weight(Lbs)	0.70000000000007	
Returnability	Ν	
Country of origin	ID	

#### Offer Sustainability Sustainable offer status Green Premium product RoHS (date code: YYWW) Compliant - since 1402 - Schneider Electric declaration of conformity Schneider Electric declaration of conformity REACh Reference not containing SVHC above the threshold Product environmental profile Available Product end of life instructions Available California proposition 65 WARNING: This product can expose you to chemicals including: Nickel compounds, which is known to the State of California to cause cancer, and ---- Substance 1 Di-isodecyl phthalate (DIDP), which is known to the State of California to cause ---- Substance 2 birth defects or other reproductive harm. ---- More information For more information go to www.p65warnings.ca.gov

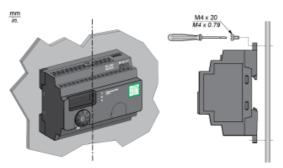
Product data sheet Dimensions Drawings

#### Dimensions

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

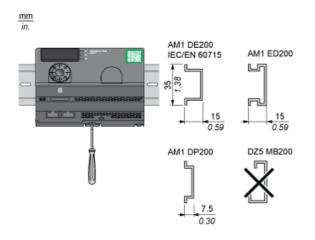


#### Harmony Hub on a Mounting Panel



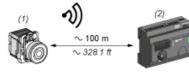
Harmony Hub is installed according to its vertical axis

#### Harmony Hub on DIN Rail Mounting



#### Clearances

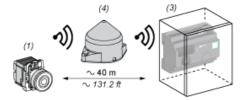
Maximum Distance between Transmitter and Harmony Hub in Free Field Unobstructed



(1) Transmitter(2) Harmony Hub

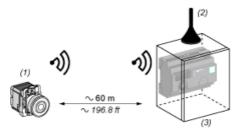
Maximum Distance between Transmitter and Harmony Hub in a Metal Enclosure with a Relay Antenna

ZBRN2



- (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



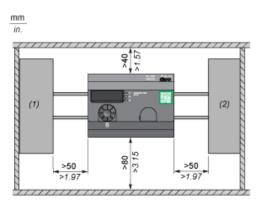
(1) Transmitter

- (2) External antenna(3) Harmony Hub in a
- (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 %
Concrete wall	7080 %
Metal structure	50100 %

#### Harmony Hub Clearances

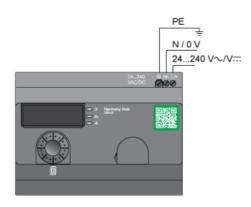


(1) PLC or other devices

(2) Power supply or other devices

**ZBRN2** 

### Harmony Hub Wiring Diagram





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

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Schneider Electric: ZBRN2