



## 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       | 2405...2480 MHz                                    |

## Complementary

|  |   |
|--|---|
| Maximum radio communication distance                   | 328.08 Ft (100 m) in free field<br>820.21 Ft (250 m) if a relay antenna is located between the transmitter and Harmony Hub<br>196.85 Ft (60 m) if an external antenna is connected to Harmony Hub<br>82.02 ft (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                              | 24...240 V AC/DC 50/60 Hz - 10...10 %   |
| Immunity to microbreaks                                | 10 ms   |
| Maximum power consumption in W                         | 4 W AC/DC   |
| Control circuit frequency                              | 50...60 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<br>Mounting plate   |
| Electrical connection                                  | 1 conductor cable 0.00...0.01 in <sup>2</sup> (0.2...4 mm <sup>2</sup> ) - AWG 24...AWG 12 - solid - without cable end IEC 60947-1<br>2 conductors cable 0.00...0.00 in <sup>2</sup> (0.2...1.5 mm <sup>2</sup> ) - AWG 24...AWG 16 - solid - without cable end IEC 60947-1<br>1 conductor cable 0.00...0.00 in <sup>2</sup> (0.2...0.75 mm <sup>2</sup> ) - AWG 24...AWG 14 - flexible - with cable end IEC 60947-1<br>2 conductors cable 0.00...0.00 in <sup>2</sup> (0.2...2.5 mm <sup>2</sup> ) - AWG 24...AWG 18 - flexible - with cable end IEC 60947-1 |
| Tightening torque                                      | 3.10...3.54 Lbf.in (0.35...0.4 N.m) EN/IEC 60947-1<br>3.09...3.54 lbf.in (0.35...0.40 N.m) EN/IEC 60947-1   |
| Housing material                                       | Self-extinguishing plastic  |
| Status LED   | 1 LED Green power ON<br>1 LED Yellow communication network<br>5 LEDs Red function mode<br>1 LED green and yellow reception signal   |
| Rated short-duration power frequency withstand voltage | 1.5 kV 50 Hz EN/IEC 60947-5-1   |
| [Uimp] rated impulse withstand voltage                 | 4 kV  |
| Surge withstand  | 1 KV differential mode IEC 61000-4-5<br>2 kV common mode IEC 61000-4-5  |
| Width  | 4.80 in (122 mm)  |
| Height   | 3.54 in (90 mm)   |
| Depth  | 2.36 in (60 mm)   |
| Net Weight   | 0.57 lb(US) (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 | 3280.84 ft (1000 m)  |

## Environment

|                                     |  |
|-------------------------------------|--|
| Radio agreement                     | ANATEL, type III ETSI EN 301 489-3<br>FCC, category 2 ETSI EN 300 440-1<br>ICASA<br>RSS, category 1 ETSI EN 300 440-1<br>SRRC  |
| Product Certifications              | C-tick<br>CCC<br>CSA<br>GOST<br>UL<br>CE   |
| Directives                          | 2004/108/EC - electromagnetic compatibility<br>1999/5/EC - R&TTE directive<br>2006/95/EC - low voltage directive   |
| Standards                           | ETSI EN 300 328<br>EN/IEC 61131-2<br>CSA C22.2 No 14<br>ETSI EN 300 440-2<br>UL 508<br>EN/IEC 60950-1<br>EN 62311  |
| Ambient Air Temperature for Storage | -40...158 °F (-40...70 °C)   |
| Relative humidity                   | 90 % -13...131 °F (-25...55 °C), without condensation ETSI EN 300 440-1  |
| Operating altitude                  | 0...6561.68 ft (0...2000 m)  |
| Storage altitude                    | 0.00...9842.52 ft (0...3000 m)   |
| Vibration resistance                | +/- 3.5 mm 5...14 Hz) IEC 60068-2-6<br>1 gn 5...150 Hz) on panel mounting IEC 60068-2-6<br>2 gn 8...150 Hz) on DIN rail IEC 60068-2-6  |
| Shock resistance                    | 10 gn 16 ms) 6000 shocks IEC 60068-2-27  |
| IP degree of protection             | IP20 IEC 60529 casing)<br>IP20 terminals)  |
| Pollution degree                    | 2 IEC 60664-1  |
| Electromagnetic compatibility       | 1.2/50 µs shock waves immunity test 1 kV differential mode) IEC 61000-4-5<br>1.2/50 µs shock waves immunity test 2 kV common mode) IEC 61000-4-5<br>Immunity to microbreaks and voltage drops 10 ms IEC 61000-4-11 |
| Dielectric strength                 | 3000 V between input and output AC<br>4250 V between input and output DC<br>1500 V between input and ground AC<br>2150 V between input and ground DC   |

## Ordering and shipping details

|                       |                                 |
|-----------------------|---------------------------------|
| Category              | 22470-XB5R WIRELESS PUSH BUTTON |
| Discount Schedule     | I                               |
| GTIN                  | 3606480528484                   |
| Nbr. of units in pkg. | 1                               |
| Package weight(Lbs)   | 10.93 oz (310.0 g)              |
| Returnability         | Yes                             |
| Country of origin     | ID                              |

## Packing Units

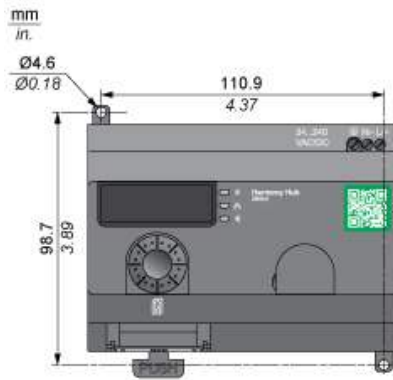
|                              |                        |
|------------------------------|------------------------|
| Unit Type of Package 1       | PCE                    |
| Package 1 Height             | 2.87 in (7.3 cm)       |
| Package 1 width              | 3.78 in (9.6 cm)       |
| Package 1 Length             | 5.12 in (13.0 cm)      |
| Unit Type of Package 2       | S02                    |
| Number of Units in Package 2 | 10                     |
| Package 2 Weight             | 7.98 lb(US) (3.621 kg) |
| Package 2 Height             | 5.91 in (15.0 cm)      |
| Package 2 width              | 11.81 in (30.0 cm)     |
| Package 2 Length             | 15.75 in (40.0 cm)     |

## Offer Sustainability

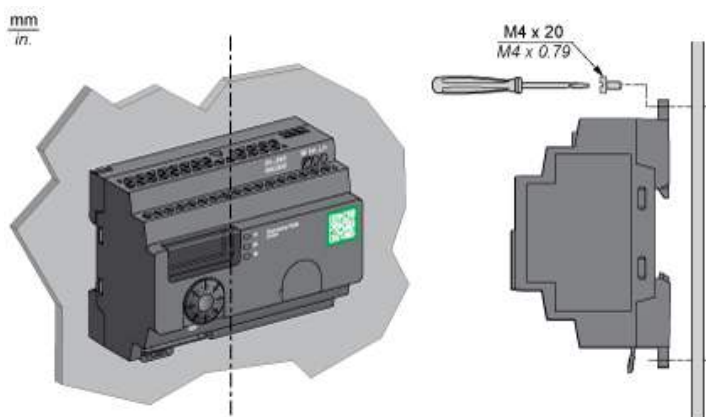
|                            |  |
|----------------------------|--|
| Sustainable offer status   | Green Premium product  |
| California proposition 65  | WARNING: This product can expose you to chemicals including: Nickel compounds, which is known to the State of California to cause cancer, and Di-isodecyl phthalate (DIDP), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> |
| REACH Regulation           | <a href="#">REACH Declaration</a>  |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>   |
| Mercury free               | Yes  |
| RoHS exemption information | <a href="#">Yes</a>  |
| China RoHS Regulation      | <a href="#">China RoHS Declaration</a>   |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>  |
| Circularity Profile        | <a href="#">End Of Life Information</a>  |
| WEEE                       | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.   |

## Dimensions

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

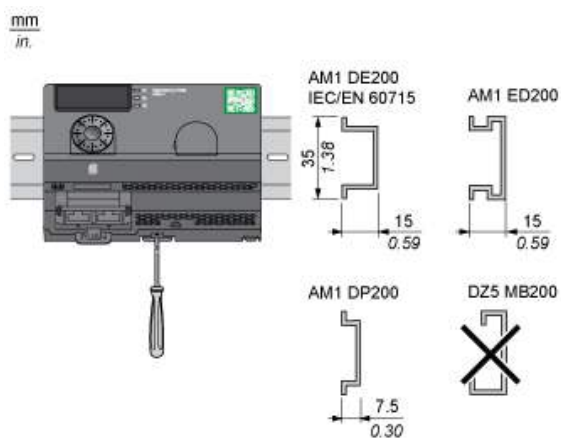


Harmony Hub on a Mounting Panel



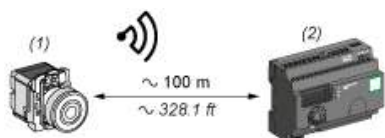
Harmony Hub is installed according to its vertical axis

Harmony Hub on DIN Rail Mounting



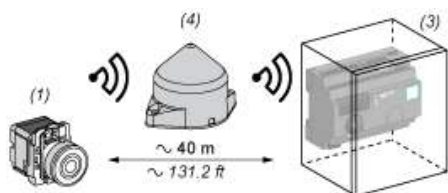
Clearances

Maximum Distance between Transmitter and Harmony Hub in Free Field Unobstructed



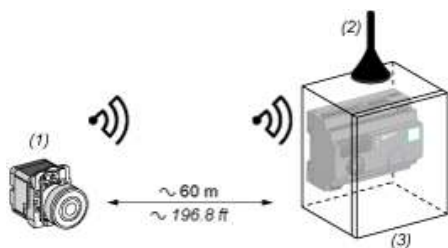
- (1) Transmitter
- (2) Harmony Hub

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



- (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

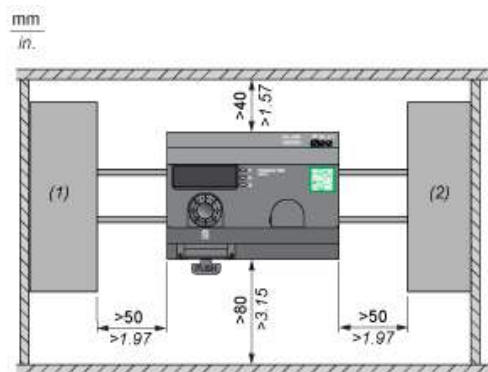


- (1) Transmitter
- (2) External antenna
- (3) Harmony Hub in a metal enclosure

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

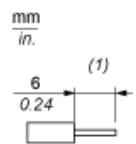
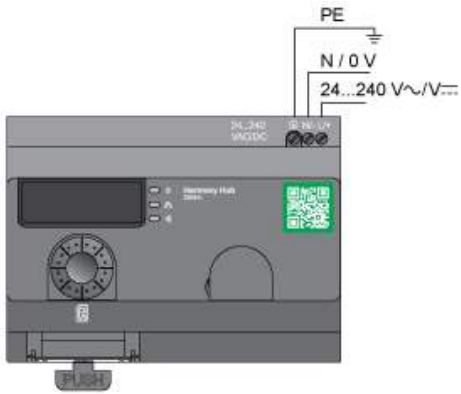
|                 |            |
|-----------------|------------|
| Glass window    | 10...20 %  |
| Plaster wall    | 30...45 %  |
| Brick wall      | 60 %       |
| Concrete wall   | 70...80 %  |
| Metal structure | 50...100 % |

### Harmony Hub Clearances



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

## Harmony Hub Wiring Diagram



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