Product datasheet

**Characteristics**

## ZBRN2

Harmony HubWireless to Modbus Serial Line gateway

<table>
<thead>
<tr>
<th>Price*: 4,967,600.00 IDR</th>
</tr>
</thead>
</table>

### Main

- **Range of product**: Harmony
- **Product or component type**: Harmony Hub wireless/Serial Line gateway
- **Device short name**: ZBRN2
- **Product specific application**: Wireless Schneider Electric devices ecosystem
- **Function of module**: Zigbee green power concentrator
- **Antenna type**: Integrated
- **Transmission frequency**: 2405…2480 MHz

### 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**: 24…240 V AC/DC 50/60 Hz - 10…10 %
- **Immunity to microbreaks**: 10 ms
- **Maximum power consumption in W**: 4 W AC/DC
- **Breaking capacity**: 15 W
- **Breaking capacity**: 750 VA
- **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
- **Mounting plate**:
- **Electrical connection**: 1 conductor cable 0.2…4 mm² - AWG 24…AWG 12 - solid - without cable end conforming to IEC 60947-1
- **Electrical connection**: 2 conductors cable 0.2…1.5 mm² - AWG 24…AWG 16 - solid - without cable end conforming to IEC 60947-1

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Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications.

Oct 15, 2019
1 conductor cable 0.2...0.75 mm² - AWG 24...AWG 14 - flexible - with cable end conforming to IEC 60947-1
2 conductors cable 0.2...2.5 mm² - AWG 24...AWG 18 - flexible - with cable end conforming to IEC 60947-1

<table>
<thead>
<tr>
<th><strong>Tightening torque</strong></th>
<th>0.35...0.4 N.m conforming to EN/IEC 60947-1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.09...3.54 lbf.in conforming to EN/IEC 60947-1</td>
</tr>
</tbody>
</table>

**Housing material**
Self-extinguishing plastic

**Status LED**
- 1 LED green for power ON
- 1 LED yellow for communication network
- 5 LEDs red for function mode
- 1 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

![Image: Tightening torque](image)

<table>
<thead>
<tr>
<th><strong>[Uimp] rated impulse withstand voltage</strong></th>
<th>4 kV</th>
</tr>
</thead>
</table>

**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**
0.27 kg

**Antenna gain**
0 dBi

**Integrated connection type**
1 isolated serial link 2 x RJ45 in parallel Modbus Serial line slave Modbus slave RTU asynchronous in baseband RS485, half duplex, 1.2...115.2 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**
- No
- Even
- Odd

### 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**
- GOST
- CE
- UL
- C-Tick
- CSA
- CCC

**Directives**
- 2006/95/EC - low voltage directive
- 2004/108/EC - electromagnetic compatibility
- 1999/5/EC - R&TTE directive

**Standards**
- CSA C22.2 No 14
- EN 62311
- EN/IEC 61131-2
- ETSI EN 300 440-2
- ETSI EN 300 328
- EN/IEC 60950-1
- UL 508

**Ambient air temperature for storage**
-40...70 °C

**Relative humidity**
90 % at -25...55 °C, without condensation conforming to ETSI EN 300 440-1

**Operating altitude**
0...2000 m

**Storage altitude**
0...3000 m

**Vibration resistance**
- +/- 3.5 mm (f = 5...14 Hz) conforming to IEC 60068-2-6
- 1 gn (f = 5...150 Hz)on panel mounting conforming to IEC 60068-2-6
- 2 gn (f = 8...150 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)
<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pollution degree</td>
<td>2 conforming to IEC 60664-1</td>
</tr>
</tbody>
</table>
| Electromagnetic compatibility    | 1.2/50 µs shock waves immunity test - test level: 1 kV (differential mode) conforming to IEC 61000-4-5  
1.2/50 µs shock waves immunity test - test level: 2 kV (common mode) conforming to IEC 61000-4-5  
Immunity to microbreaks and voltage drops - test level: 10 ms conforming to IEC 61000-4-11 |
| 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                                      |

**Offer Sustainability**

| Sustainable offer status         | Green Premium product                                                   |
| REACh Regulation                | REACh Declaration                                                       |
| REACh free of SVHC              | Yes                                                                      |
| EU RoHS Directive               | Pro-active compliance (Product out of EU RoHS legal scope)               
EU RoHS Declaration              |
| Mercury free                    | Yes                                                                      |
| RoHS exemption information      | Yes                                                                      |
| China RoHS Regulation           | China RoHS declaration                                                   |
| Environmental Disclosure        | Product Environmental Profile                                           |
| Circularity Profile             | End of Life Information                                                 |
| WEEE                            | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |
For your information existing access point product is now named “Harmony Hub”
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
2. Harmony Hub in a metal enclosure
3. 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%)

<table>
<thead>
<tr>
<th>Material</th>
<th>Reduction</th>
</tr>
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<tbody>
<tr>
<td>Glass window</td>
<td>10...20 %</td>
</tr>
<tr>
<td>Plaster wall</td>
<td>30...45 %</td>
</tr>
<tr>
<td>Brick wall</td>
<td>60 %</td>
</tr>
<tr>
<td>Concrete wall</td>
<td>70...80 %</td>
</tr>
<tr>
<td>Metal structure</td>
<td>50...100 %</td>
</tr>
</tbody>
</table>
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-)

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