

ZBRN1

Harmony HubWireless to Modbus/TCP Ethernet Gateway



Main

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|------------------------------|---|
| 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 |
| Antenna type | Integrated |
| Transmission frequency | 2405...2480 MHz |

Complementary

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| 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 mm ² - AWG 24...AWG 12 - solid - without cable end conforming to IEC 60947-1 2 conductors cable 0.2...1.5 mm ² - AWG 24...AWG 16 - solid - without cable end conforming to IEC 60947-1 |

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| | 1 conductor cable 0.2...0.75 mm ² - AWG 24...AWG 14 - flexible - with cable end conforming to IEC 60947-1 2 conductors cable 0.2...2.5 mm ² - AWG 24...AWG 18 - flexible - with cable end conforming to IEC 60947-1 |
| Tightening torque | 0.35...0.4 N.m conforming to EN/IEC 60947-1 3.09...3.54 lbf.in conforming to EN/IEC 60947-1 |
| 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 |
| [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 |
| Product 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

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| 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 | -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) |
| Pollution degree | 2 conforming to IEC 60664-1 |

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| Electromagnetic compatibility | 1.2/50 μ s shock waves immunity test - test level: 1 kV (differential mode) conforming to IEC 61000-4-5 1.2/50 μ s 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

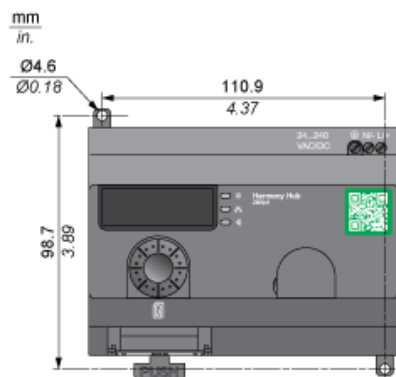
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|----------------------------|---|
| Sustainable offer status | Green Premium product |
| REACH free of SVHC | Yes |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration |
| Mercury free | Yes |
| RoHS 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 |

Contractual warranty

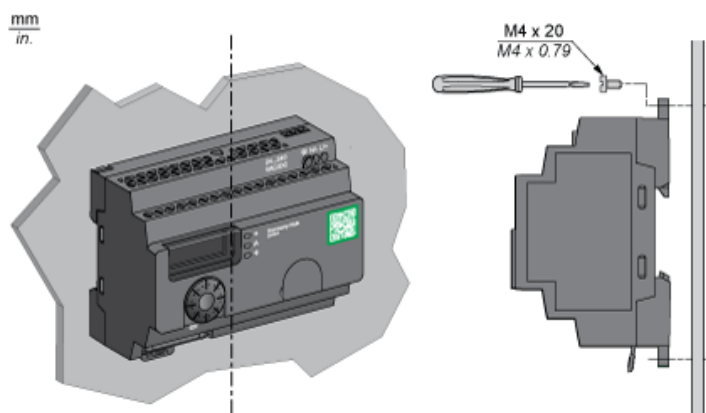
| | |
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| Warranty | 18 months |
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Dimensions

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

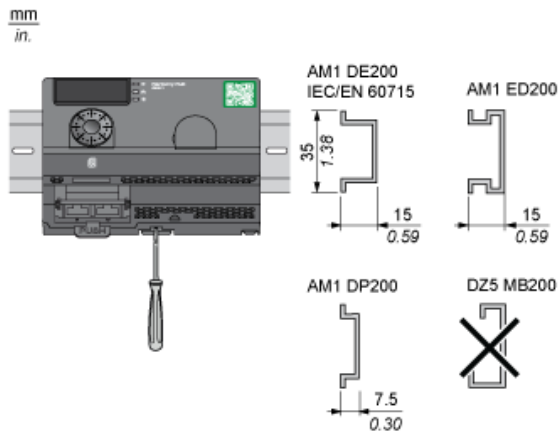


Harmony Hub on a Mounting Panel



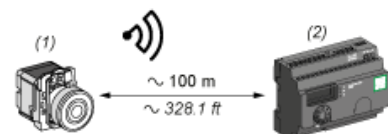
Harmony Hub is installed according to its vertical axis

Harmony Hub on DIN Rail Mounting



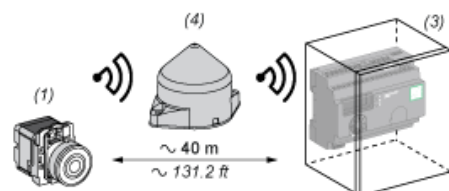
Clearances

Maximum Distance between Transmitter and Harmony Hub in Free Field Unobstructed



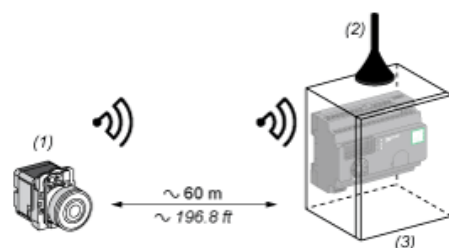
- (1) Transmitter
- (2) Harmony Hub

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

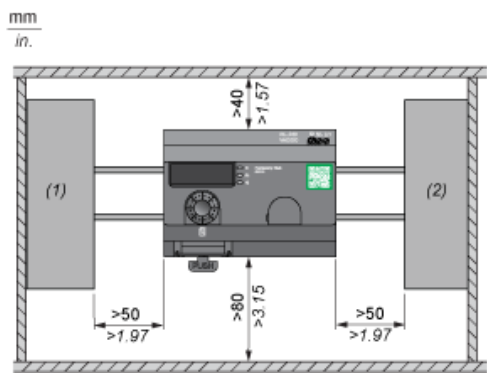


- (1) Transmitter
- (2) External antenna
- (3) Harmony Hub in a metal enclosure

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

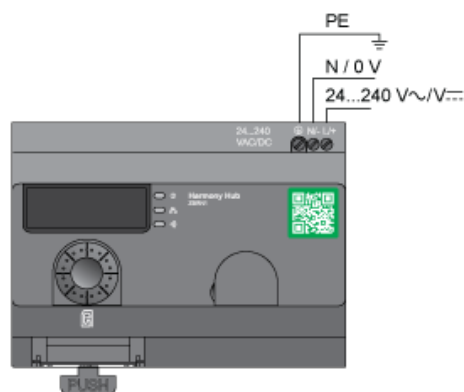
| | |
|-----------------|------------|
| Glass window | 10...20 % |
| Plaster wall | 30...45 % |
| Brick wall | 60 % |
| Concrete wall | 70...80 % |
| Metal structure | 50...100 % |

Harmony Hub Clearances

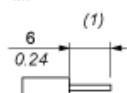


- (1) PLC or other devices
(2) Power supply or other devices

Harmony Hub Wiring Diagram



mm
in.



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