



Main

Range of product	Harmony
Product or component type	Wireless access point
Device short name	ZBRN1
Product specific application	Interface to PLC
Function of module	Monostable
Communication port protocol	Zigbee green power at 2.4 GHz conforming to IEEE 802.15.4

Complementary

[Us] rated supply voltage	24...240 V AC/DC at 50/60 Hz (- 10...10 %)
Immunity to microbreaks	10 ms
Maximum sensing distance	60 m (transmitter in a plastic box type XAL D and use relay-antenna) 40 m (transmitter in box type XAL D, receiver in metal enclosure and use relay-antenna) 25 m (transmitter in a plastic box type XAL D and receiver in a metal enclosure) 100 m (in free field)
Response time	< 30 ms after transmitter clicks
Channels utilisation	<= 60
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 by GB2 circuit breaker
Operating position	Any position without derating
Electrical connection	2 conductors cable 0.2...2.5 mm ² AWG24...AWG18 flexible with cable end conforming to IEC 60947-1 1 conductor cable 0.2...0.75 mm ² AWG24...AWG14 flexible with cable end conforming to IEC 60947-1 2 conductors cable 0.2...1.5 mm ² AWG24...AWG16 solid without cable end conforming to IEC 60947-1 1 conductor cable 0.2...4 mm ² AWG24...AWG12 solid without cable end conforming to IEC 60947-1
Tightening torque	0.35...0.4 N.m conforming to EN/IEC 60947-1
Housing material	Self-extinguishing plastic
Status LED	1 LED (green and yellow) : reception signal 5 LEDs (red) : function mode 1 LED (yellow) : communication network 1 LED (green) : power ON
Mounting support	Mounting plate 35 mm symmetrical DIN rail conforming to EN/IEC 60715
Rated short-duration power frequency withstand voltage	1.5 kV at 50 Hz conforming to EN/IEC 60947-5-1
[Uimp] rated impulse withstand voltage	4 kV
Surge withstand	2 kV (common mode) conforming to IEC 61000-4-5 1 kV (differential mode) conforming to IEC 61000-4-5
Width	122 mm
Height	90 mm
Depth	60 mm
Product weight	0.26 kg

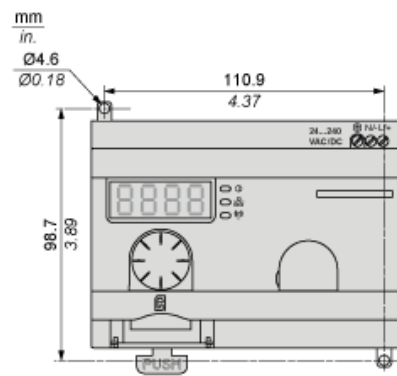
Marking	CE
Integrated connection type	Ethernet Modbus TCP/IP (RJ45 in Modbus TCP network) 10/100 Mbit/s 2 twisted pairs
Data storage equipment	SD card
Topology	Devices linked by daisy-chaining or tap junctions
Port Ethernet	10BASE-T/100BASE-T
Cable length	0...1000 m
Web services	Predefined web pages configuration

Environment

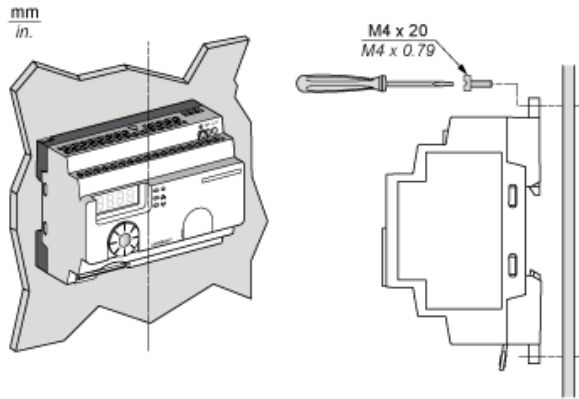
Radio agreement	SRRC RSS category 1 conforming to EN 300-440-1 ICASA FCC category 2 conforming to EN 300-440-1 ANATEL type III conforming to EN 301-489-3
Product certifications	CCC CE CSA C-Tick GOST UL EMC directive 2004/108/EC R&TTE directive 1999/5/EC LVD directive 2006/95/EC
Standards	EN 300328 EN/IEC 60950-1 EN/IEC 61131-2 UL 508 EN 300-440-2 EN 62311 CSA C22.2 No 14
Ambient air temperature for storage	-40...70 °C
Relative humidity	90 % (-25...55 °C) without condensation conforming to EN 300-440-1
Operating altitude	0...2000 m
Storage altitude	0...3000 m
Vibration resistance	2 gn (f= 8...150 Hz) on DIN rail conforming to IEC 60068-2-6 1 gn (f= 5...150 Hz) on panel mounting conforming to IEC 60068-2-6 +/- 3.5 mm (f= 5...14 Hz) 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 (terminals) IP20 (casing) conforming to IEC 60529
Pollution degree	2 conforming to IEC 60664-1
Electromagnetic compatibility	Immunity to microbreaks and voltage drops :10 ms conforming to IEC 61000-4-11 1.2/50 µs shock waves immunity test :2 kV (common mode) conforming to IEC 61000-4-5 1.2/50 µs shock waves immunity test :1 kV (differential mode) conforming to IEC 61000-4-5
Dielectric strength	2150 V DC between input and ground 1500 V AC between input and ground 4250 V DC between input and output 3000 V AC between input and output

Access Point

Dimensions

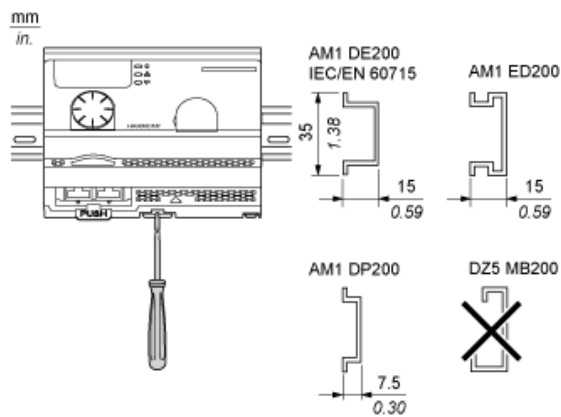


Access Point on a Mounting Panel



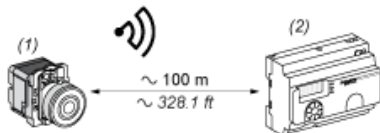
The Access Point is installed according to its vertical axis

Access Point on DIN rail Mounting



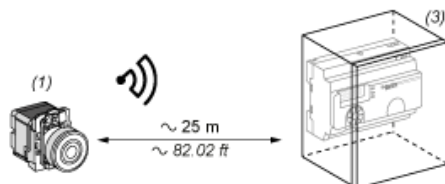
Clearances

Maximum Distance between Transmitter and the Access Point in Free Field Unobstructed



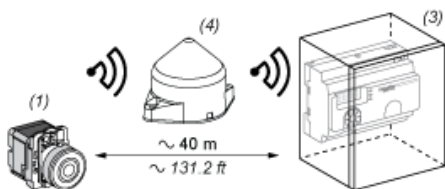
- (1) Transmitter
- (2) Access Point

Maximum Distance between Transmitter and the Access Point in a Metal enclosure without a Relay Antenna



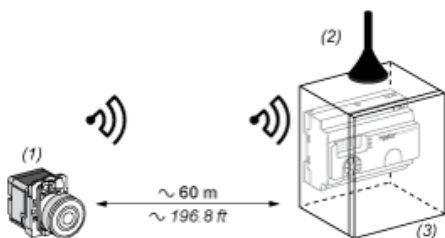
- (1) Transmitter
- (3) Access Point in a Metal enclosure

Maximum Distance between Transmitter and the Access Point in a Metal Enclosure with a Relay Antenna



- (1) Transmitter
- (3) Access Point in a Metal enclosure
- (4) Relay Antenna

Maximum Distance between Transmitter and the Access Point in a Metal Enclosure with a Passive Antenna

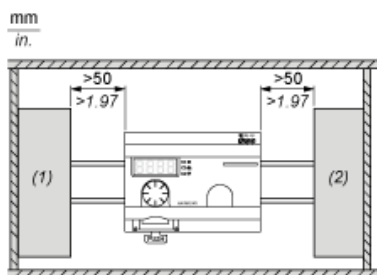


- (1) Transmitter
- (2) External Antenna
- (3) Access Point in a Metal enclosure

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

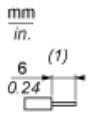
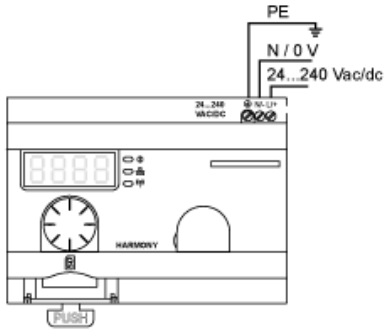
Glass window	10...20 %
Plaster wall	30...45 %
Brick wall	60 %
Concrete wall	70...80 %
Metal structure	50...100 %

Access Point Clearances



- (1) Power Supply
- (2) Programmable Logic Controller

Access Point Wiring Diagram



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