LCIE SUD EST
Laboratoire de Moirans
Z.I. Centr'Alp
170, Rue de Chatagnon
38430 MOIRANS - FRANCE

GENERAL INFORMATION

FCCID: **Y7HZBRA1-V2**

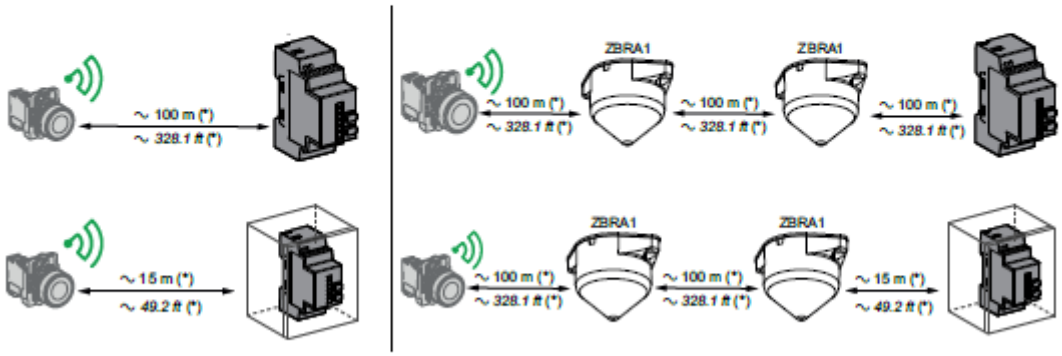
1.1. Product description

General Installation Instruction for Harmony XB5R

Maximum Distances

Maximum distances between:

- Transmitters: Generic ZBRT1 and ZBRT2, Antenna, ZBRV1, ZBRP1
- Receivers: ZBRRA, ZBRRC



(*) Free field (unobstructed).

NOTE:

- The range may be increased by adding one or several antennas ZBRA1.
- The range is reduced if the transmitter is placed in a metal box.

Typical values are subject to change by the application environment.

⚠WARNING

LOSS OF COMMUNICATION

Once wiring is complete, perform a comprehensive commissioning test to verify correct operation in all possible active areas.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

The level of signal attenuation depends on the materials through which the signal will pass:

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

(*) Values for indication purposes only. Actual values depend on the thickness and nature of the material.

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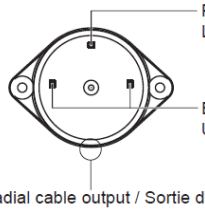
E Installation conditions
Conditions d'installation / Installation conditions / Condiciones de la instalación

Operating temperature	Température d'utilisation	Temperatura de funcionamiento	Temperatura de funcionamento	-25...+55°C *(-13...+131°F)*

Radio / Radio / Radio / Radio
Wireless Communication IEEE 802.15.4 2.4 GHz (channel 11..26) compliant / Communication sans fil conforme à la norme IEEE 802.15.4 2,4 GHz (canaux 11 à 26) / Drahtlose Kommunikation IEEE 802.15.4 2,4 GHz (Kanal 11..26) konform / Comunicación inalámbrica compatible con IEEE 802.15.4 2,4 GHz (canales 11-26)

F LED Diagnostic
Voyant de diagnostic / LED-Diagnose / LED de diagnóstico



Power LED / LED Alimentation / Betriebs-LED / LED de encendido

Emission/reception LED / LED Réception/Emission / Übertragungs-/Empfangs-LED / LED de emisión/recepción

Radial cable output / Sortie de câble radial / Radialkabelausgang / Salida del cable radial

Consult the Expert Instruction Sheet on:
Consulter l'Instruction de Service Expert sur :
Lesen Sie das Experten-Anweisungsblatt auf:
Consulte la hoja de instrucciones del experto en:
www.se.com

(en) EIO0000000812
(fr) EIO0000000813
(de) EIO0000000814
(es) EIO0000000815

Scan the tag with your smartphone to access the Web site:

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1.2. Tested System Details

802.15.4:	ZigBee
Chipset / RF Module	EFR32MG24A010F1536IM40-BR
Frequency band:	[2400 – 2483.5] MHz
Spectrum Modulation:	DSSS
Number of Channel:	16
Spacing channel:	5MHz
Channel bandwidth:	2MHz
Antenna Type:	Internal
Antenna connector:	None
Transmit chains:	1
Receiver chains	1
Adaptivity mode:	No

CHANNEL PLAN	
Channel	**Frequency (MHz)**
Cmin: 11	2405
12	2410
13	2415
14	2420
15	2425
16	2430
17	2435
Cmid: 18	2440
19	2445
20	2450
21	2455
22	2460
23	2465
24	2470
25	2475
Cmax: 26	2480

DATA RATE		
Data Rate (Mbps)	**Modulation Type**	**Worst Case Modulation**
0.25	O-QPSK	☑

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1.3. Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4 or/and ANSI C63.10, FCC Part 15 SubPart 15C.
Radiated testing was performed at an antenna to EUT distance of 10 meters. During testing, all equipment's and cables were moved relative to each other in order to identify the worst case set-up.

1.4. Test facility

Tests have been performed: **April 22, 2025 to April 30, 2025**

This test facility has been fully described in a report and accepted by FCC as compliant with the radiated and AC line conducted test site criteria in ANSI C63.4 or/and ANSI C63.10.
This test facility has also been accredited by COFRAC (French accreditation authority for European Union test lab accreditation organization) according to NF EN ISO/IEC 17025, as compliant with test site criteria and competence in 47 CFR Part 15/ANSI C63.4 and EN55032/CISPR32 norms for 89/336/EEC European EMC Directive application. All pertinent data for this test facility remains unchanged.