![ABB logo]

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abb.com/lowvoltage

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ABB-secure@home

Bidirectional wireless communication
reliable and secure.

Maximum protection, maximum communication

Wireless and with the highest quality standards.

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ABB-secure@home is a security system design by ABB to ensure maximum protection to people and buildings.
The alarm system signals every danger as intrusions, water leak (flooding) and a fire principle. Communication between central unit and devices is wireless based on radio frequency signal, in compliance with European standards EN50131 with a Grade2.

Reliability

ABB-secure@home wireless communication operates at 868.3MHz. It is a frequency band regulated by European norms (ERCREC-70-3E) much less crowded than the traditional one of 434MHz, with a power of 25mW and considered as privileged. In addition the components are ETSI-RED (Radio Equipment Directive) 2014/53/EU compliant. The alarm system uses an ABB owner communication protocol, optimized to the best ratio distance over energy consumption and it is classified as long range wireless communication, since it supports an alarm system up to 300m in free field. The bidirectional transmission let know the status of each single component, because the sensor receives instructions from the central unit and sends back messages when the action is accomplished.

Security

ABB-secure@home counts on a digital encrypted communication with 128 bits and it is supplied with a 65k rolling code remote control which creates unique code each time a command is sent to prevent it from being maliciously copied and replicated. Moreover the bidirectional communication let the central unit know the state of each controlled device, as battery charge state, state of functioning and if any infringement has been done.
The multiple access (CSMA) transmission system, avoid interferences, disturbances and signal collisions.

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- **Bidirectional**
- **Simplified commissioning**
- **Distance up to 300m**
- **128 Bit Proprietary protocol** and **encryption** plus a unique **65k rolling code** for all arming/disarming control
- **CSMA transmition**

Different wireless choices for ABB-free@home and ABB-secure@home

ABB-secure@home and ABB-free@home are different systems, the first one aims at security, the second one at home automation. ABB-free@home is based on a 2.4 GHz proprietary protocol meshed network frequency with an encryption of 128bits. This frequency gives the advantage of a globally approved band, but some potential interferences such as WIFI router, microwaves, fluorescent lamps could occur. ABB-free@home wireless system solves these issues by using a meshed network, which allows to leverage on all the devices to repeat the signal, overcoming the attenuation and interference effects mentioned above.
ABB-secure@home has privileged the choice of an approved frequency in a lower band to maximize security; this choice allows one of the best performances in terms of signal propagation and, at the same time, to be able to communicate directly with every device to better ensure security and data protection with rolling codes and supervision checks. Each ABB-secure@home device communicates bidirectionally with the central unit.
If needed, the repeater can repeat the signal and extend the communication distance.
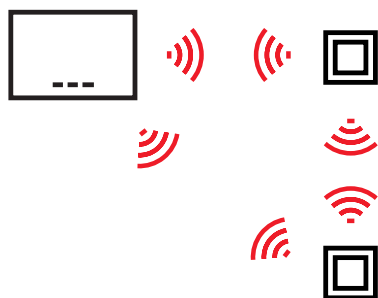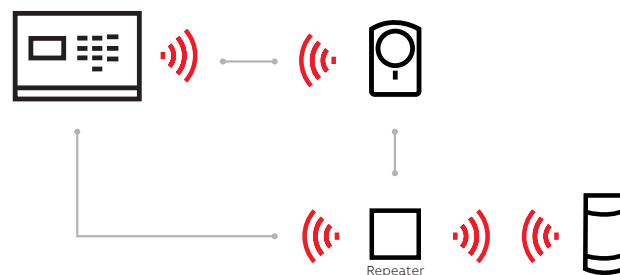
ABB-secure@home

Repeater

ABB-free@home

ABB-secure@home wireless communication, thanks to its characteristics, can be defined secure and reliable, since it has been designed to avoid any interference, fraudulent communication issues, and to monitor the entire system status, ensuring its proper functioning.