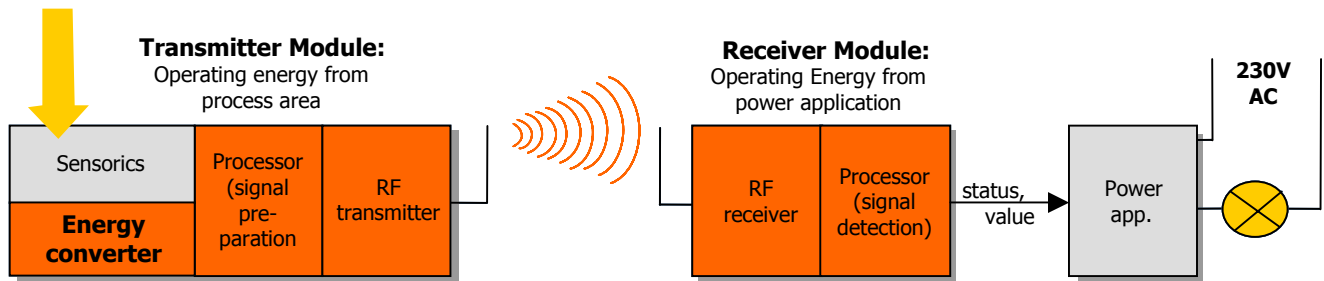


RF Technology Without Batteries



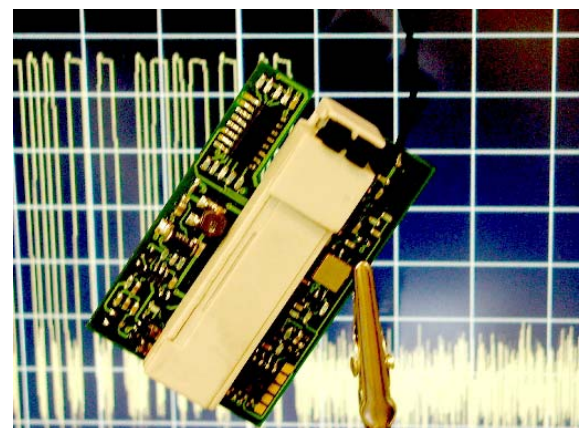
Schematics of EnOcean transmitter and receiver modules

Highly innovative RF modules for controlling, monitoring and signaling systems

- **Radio transmitters without batteries, maintenance free:** The required operating energy is 50 μ Ws per action only, comparable to lifting a mass of 1 gram up a 5 mm altitude
- **General-purpose transmitters and receivers,** easy to integrate
- **High transmission range:** 300m free field (length of three soccer fields)
- **Minimal radiation energy:** One million times less a mobile phone
- **Reliable signal transmission, suited for systems with hundreds of sensors** (since signal transmission time is three thousandths of a second only)
- **Reliable against external disturbances:** Repeated RF signal transmission delayed at random, using of a regulated frequency range approved for pulsed signals only
- **Prearranged transmitter to receiver assignment:** Four billion code numbers are fixed, easy learning procedure (push receiver learn button and activate transmitters)

Operating energy is generated by pressure, vibrations, light, movements, temperature, etc.

Frequency: 868.3 MHz
Transmission power: max. 10 mW EIRP
Modulation type:ASK
Data rate:120 kHz
Channel bandwidth:280 kHz
Transmission range:300 m free field
Duty Cycle: < 1%
Radio telegram: 53 to 130 Bit sensor type depending (32 Bit sensor ID, up to 4 Byte sensor data, checksum)
Transmission time: approx. 30 ms for three identical radio telegrams, 0.5 ms each, delayed at random



The EnOcean products are CE certified and are conform to the R&TTE EU-Directive on radio equipment