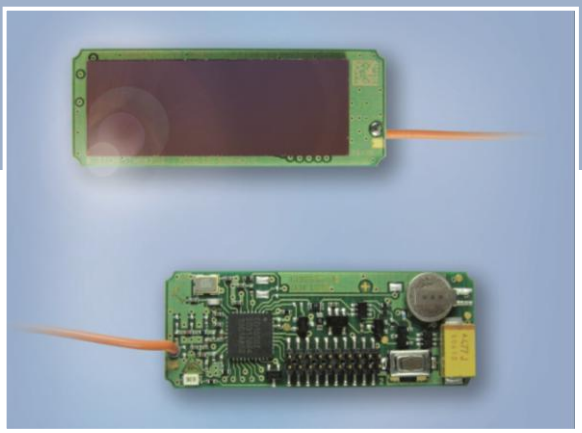
Sensor Transmitter Module STM 330F



The extremely power saving RF transmitter module STM 330F of EnOcean is optimized for realization of wireless and maintenance free temperature sensors, or room operating panels including set point dial and occupancy button with a minimum number of external components.
The module provides an integrated calibrated temperature sensor.

Functional Principle

Power supply is provided by a small pre-installed solar cell, an external energy harvester, or an external 3V battery.
An energy storage element is installed to bridge periods with no supply from the energy harvester. The module provides a user configurable cyclic wake up.
After wake up a radio telegram will be transmitted in case of a significant change of measured temperature or set point values or if the external occupancy button is pressed.
In case of no relevant input change a redundant retransmission signal is sent after a user configurable number of wake-ups to announce all current values.
The firmware can be configured to use different EEPs according to feature availability.

Features Overview

Power supply	Pre-installed solar cell
Antenna	pre-installed whip antenna
Frequency	868.3 MHz
Radiated output power	typ. 5 dBm (EIRP)
Data rate / Modulation type	125 kbps / ASK
Start-up time with empty energy storage	typ. <2.5 min @ 400 lux, 25 °C
Initial operation time in darkness @25°C[1]	typ. 4 days, if energy storage fully charged wake-up every 100 s, transmission every 1000 s on average
Input Channels	Internal: temperature sensor, LRN button External via 20 pin connector: occupancy button, set point dial, HSM 100
Temperature sensor	Measurement range 0-40 °C, resolution 0.16 K Accuracy typ. ±0.5 K between 17 °C and 27 °C, typ. ±1 K between 0 °C and 40°C
Transmission indicator	1x LED
Module dimensions	43 x 16 x 8 mm
Operating temperature[1]	-20 up to +60 °C

[1] Full performance is achieved after several days of operation (up to two weeks) at good illumination level.
Performance degrades over life time, especially if energy storage is exposed to higher temperatures.
Each 10 K drop in temperature doubles the expected life span.