

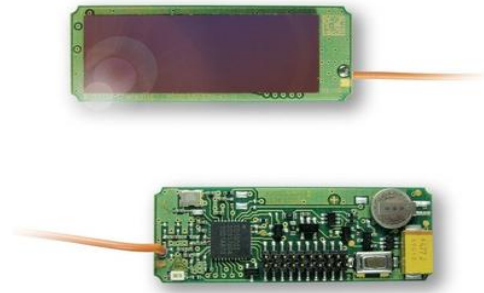
Sensor Transmitter Module  
STM 330 / STM 331 / STM 331U / STM 332U / STM 333U  
(Stepcode DE and later)

**STM 33x 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 solar cell or optional by an external 3V battery. An energy storage is installed to bridge periods of darkness.

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, the set point values or if the external occupancy button is pressed. It can be configured to use the enhanced secure mode.



Exemplary image

Type	Ordering Code
STM 330	S3001-D330
STM 331	S3001-D331
STM 331U	S3051-D331
STM 332U	S3051-D332
STM 333U	S3051-D333

#### Available variants

frequency, antenna, learn button

STM 330: 868.3 MHz, whip, back button  
STM 331: 868.3 MHz, helical, back button  
STM 331U: 902.875 MHz, helical, back button  
STM 332U: 902.875 MHz, whip, side button  
STM 333U: 902.875 MHz, helical, side button

#### Data rate/Modulation type

125 kbps / ASK (868 MHz), FSK (902 MHz)

#### Radiated output power

STM 330: +8 dBm<sup>1</sup> (EIRP) ± 2.5 dB<sup>2</sup>  
STM 331: +5 dBm (EIRP) ± 2.5 dB  
STM 331U: +99 dBμV/m ± 2 dB  
STM 332U: +101 dBμV/m ± 2 dB  
STM 333U: +99 dBμV/m ± 2 dB

#### Power supply @ VDD

Pre-installed solar cell

#### Operation time in darkness @ 25°C

min. 10 days, if energy storage fully charged<sup>3</sup>

#### Operation start up time with empty energy store

typ. <2.5 min @ 400 lux / 25 °C  
incandescent or fluorescent light

#### Input channels

Internal: temperature sensor, LRN button  
External: 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

#### EnOcean Equipment Profiles

configurable EEPs: A5-02-05 (default), A5-02-30,  
A5-10-05, A5-10-03  
and with HSM 100: A5-04-01, A5-10-10, A5-10-12  
SIGNAL 0x0E (Entering Transport Mode)

#### Connector

20 pins, grid 1.27 mm, □ 0.4 mm

#### Radio regulations

RED (EU): STM 330 / STM331  
FCC (US) / ISED (CA): STM 331U / STM 332U / 333U

<sup>1</sup> Measured in test laboratory, measurement uncertainty 2.7 dB

<sup>2</sup> Tolerance of measurement in production at 50 Ω

<sup>3</sup> At 25°C with default configuration (wake-up cycle 100 s, transmission cycle 1000 s).

Energy storage performance degrades over life time, especially if energy storage is long time exposed to very high temperatures. High temperatures will accelerate aging. Very low temperature will temporary reduce capacity of energy store and this leads to considerable shorter dark time operation.