

Energy Harvesting Magnet Contact Transmitter Module
 STM 320 / STM 329 / STM 320U

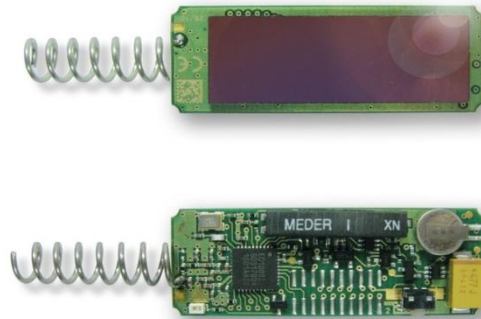
The radio transmitter module STM 32x enables the implementation of a wireless magnet contact sensor. Powered by a solar cell, it works absolutely maintenance-free. An integrated energy store allows operation for several days even in total darkness. Key applications are window and door sensors.

Functional Principle

The STM 32x supervises an integrated reed contact and reports every status change immediately (open<>closed). In addition a sign of life signal is transmitted every 20-30 minutes.

STM 32x is available in following variants –
 STM 320 / STM 329 using 868MHz and STM 320U using 902MHz.

Additionally the STM 320 and STM 329 in 868 MHz include the enhanced secure mode. In enhanced secure mode the communication is protected by encryption.



Type	Ordering Code
STM320	S3001-D320
STM329	S3001-D329
STM320U	S3051-D320

Features Overview

Power supply	solar cell
Antenna	helix antenna
Frequency / Learn Button	STM 320: 868.3 MHz, side button STM 329: 868.3 MHz, backside button STM 320U: 902.875 MHz, side button
Radiated output power	STM 320: typ. 5 dBm (EIRP) STM 329: typ. 5 dBm (EIRP) STM 320U: +99 dB μ V/m \pm 2 dB ²
Data rate / Modulation type	125kBit/s / ASK (868.3 MHz) / FSK (902.875 MHz)
EnOcean Equipment Profile	D5-00-01
Start-up time with empty energy storage	typ. <2.5 min @ 400 lux, 25°C
Initial operation time in darkness @25°C¹	typ. 6 days, if energy storage fully charged
Reed contact	1x internal, Meder MK23-90-BV14496 or MK01-I
Teach-in button	1x internal
Transmission indicator	1x LED
Module dimensions	43 x 16 x 6 mm
Operating temperature¹	-20 up to +60 °C
Encryption Algorithms	VAES 128, CMAC – STM 320 / STM 329

¹ Tolerance of measurement in production at 50 Ω

² 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.