

Energy Harvesting Magnet Contact Transmitter Module STM 320 / STM 329 / STM 320U (Stepcode DE and later)

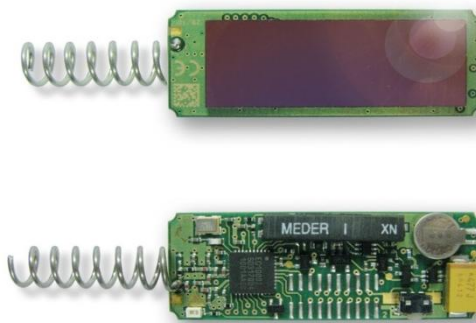
The radio transmitter module STM 32x enables the implementation of a wireless magnet contact sensor.

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. In enhanced secure mode the communication is protected by encryption.

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



Exemplary image

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, back button STM 320U: 902.875 MHz, side button
Radiated output power	STM 320: max. 6.4 dBm (EIRP) STM 329: max. 5 dBm (EIRP) STM 320U: +99 dBµV/m ± 2 dB
Data rate / Modulation type	125 kBit/s / ASK (868.3 MHz) / FSK (902.875 MHz)
EnOcean Equipment Profile	D5-00-01 SIGNAL 0x0E (Entering Transport Mode)
Start-up time with empty energy storage	typ. <2.5 min @ 400 lux, 25°C
Initial operation time in darkness @25°C¹	min. 10 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
Radio approvals	STM 320 (max. radiated power +6.4dBm whip): RED (EU) STM 329 (max. radiated power+5 dBm helix) : RED (EU) STM 320U: FCC (US) / ISED (CA)

¹ At 25°C with default configuration (average transmission cycle 1.500 s, 20 – 30 min).

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.

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