

## EMCS - Wireless Magnet Contact Sensor (Stepcode DE and later)

**EMCS is an energy-harvesting wireless magnet contact sensor for EnOcean systems. Powered by a solar cell, EMCS works absolutely maintenance-free. An integrated energy store allows operation for several days in total darkness. In dark surroundings, a coin cell battery can be retrofitted.**

The small housing is easy to be mount on windows, on doorframes or on cabinets using the included double-sided adhesive pad or using the also included mounting plate. The ultra-slim magnet has a preassembled adhesive pad.

EMCS supervises an integrated reed contact and reports every status change immediately (open<>closed). In addition, a sign of life signal is send at regular intervals. EMCS provides the option to use Enhanced Security mode with encrypted communication and Rolling Code.



Type	Ordering Code
EMCSA	S3001-C320 (single packs)
	S3001-T320 (tray pack)
EMCSA-G	S3001-G320 (tray pack)
EMCSU	S3051-C320 (single pack)
EMCSJ	S3061-T420 (tray pack)

<b>Primary power supply</b>	Solar harvesting of indoor light (incandescent or fluorescent)
<b>Backup power supply</b>	Optional battery (CR1225 not included)
<b>Radio standard / frequency / transmission power</b>	EMCSA: EnOcean / 868.300 MHz / +6.4 dBm, EMCSU: EnOcean / 902.875 MHz / +99 dBμV/m, EMCSJ: EnOcean / 928.350 MHz / 0 dBm
<b>Antenna / Transmission range</b>	Internal helix antenna / 300m free field, typ. 30 m indoor
<b>EnOcean Equipment Profile (EEP)</b>	D5-00-01, SIGNAL 0x0E (Entering Transport Mode)
<b>EnOcean module integrated</b>	STM 320 (EMCSA), STM 320U (EMCSU), STM 420J (EMCSJ)
<b>Supported security algorithms</b>	VAES 128, CMAC, RLC counter
<b>Reed contact</b>	1 x internal (marking on housing side)
<b>Start-up time with empty energy storage</b>	typ. <2.5 min @ 400 lux, 25°C
<b>Sustain condition for battery free operation</b>	min. 400 lxh per day (signs-of-life only, 25°C)
<b>Operation time in darkness</b>	> 10 days (energy storage fully charged, signs-of-life only, 25° <sup>(1)</sup> )
<b>Teach-in telegram trigger and indicator</b>	Pushbutton and LED
<b>Sign-of-life transmission</b>	Contact status update every around 20...30 minutes
<b>Dimensions of unit with mounting plate</b>	79 x 23.8 x 18.6 mm
<b>Dimensions of unit without mounting plate</b>	76.2 x 22 x 15 mm
<b>Dimensions of housing adhesive</b>	50 x 18 x 0.8 mm
<b>Dimensions of magnet (incl. adhesive)</b>	20 x 10 x 1.5 mm
<b>Housing color</b>	White similar RAL9010 (EMCSx), Grey similar RAL7016 (EMCSA-G)
<b>Operating conditions</b>	-20...+60°C <sup>(1)</sup> , 0...93% r.h., non-condensing, IP 40, indoor use only
<b>Storage conditions</b>	Recommended: +10...30 °C, <60% r.h., max. 36 months in transport mode <sup>(2)</sup>
<b>Approvals</b>	EU: CE, RED (EMCSA), US/CA: FCC, ISED (EMCSU), JN: ARIB STD-T108 (EMCSJ)
<b>Single unit packaging</b>	50 single unit card boxes 32 x 32 x 99 mm (sensor unit, mounting plate, magnet, adhesive, instructions) stacked in transport card box 232 x 176 x 174 mm, total 2.0 kg
<b>Tray packaging</b>	56 units (sensor unit, mounting plate, magnet, adhesive, NO instructions) over 7 trays stacked in card box 232 x 176 x 174 mm, total 2.2 kg

*Note 1:* Following effects lead to shorter dark time operation: Long time exposure of the unit to temperatures higher 30°C will gradually degrade the energy storage performance over life time. Lower temperatures than 0°C will noticeable reduce capacity of energy store, but temporarily only.

*Note 2:* Recharge energy storage after 36 months in total darkness to maintain its performance.