

## 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)    |

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| <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,<br>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.