

## Safety switch Series CSMS

Type designation **CSMS-SET-R-L-KA**

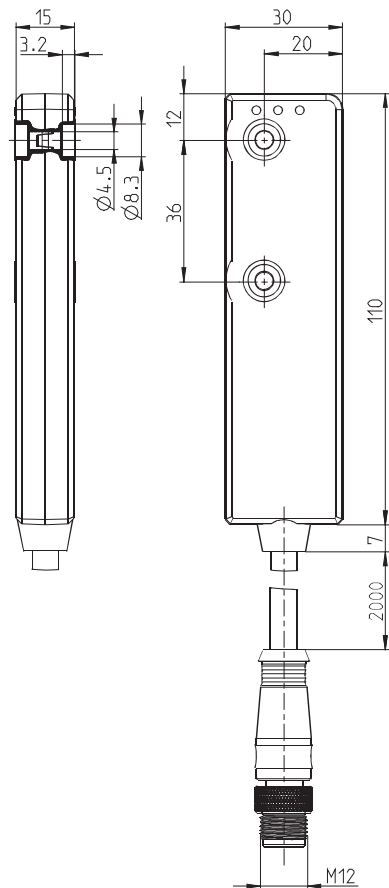
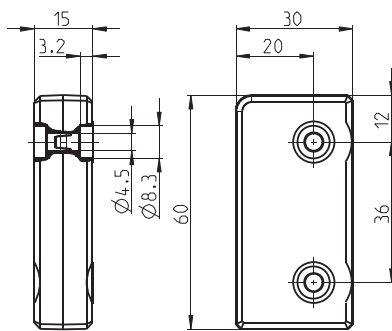
Article number **6075988069**

### Set bestehend aus

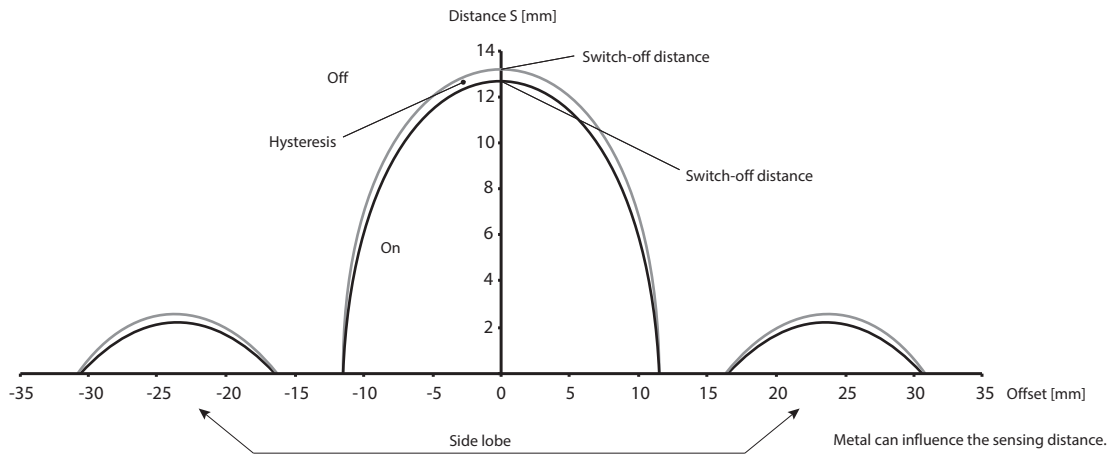
| Article number    | Type designation     | Designation                                    |
|-------------------|----------------------|--|
| <b>6075985063</b> | <b>CSMS-M-R-L-KA</b> | <b>CSMS, cable version with plug connector</b> |
| <b>6075980065</b> | <b>CSMS-S-L</b>      | <b>Actuator</b>                                |

**6075980065**

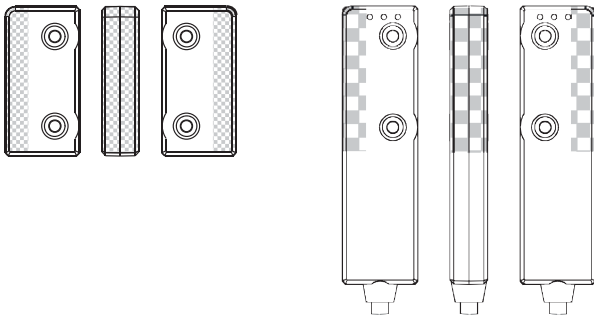
**6075985063**



| Sensing distance               |          |       |        |       |
|--------------------------------|----------|-------|--------|-------|
|                                |          | min.  | typ.   | max.  |
| Rated sensing distance         | $S_n$    |       | 13 mm  |       |
| Assured sensing distance – On  | $S_{ao}$ | 10 mm |        |       |
| Hysteresis                     | H        |       | 0,5 mm |       |
| Assured sensing distance – Off | $S_{ar}$ |       |        | 19 mm |

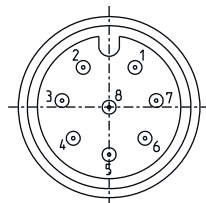


Active surfaces



Connection

- Pin 1 – DI - WH
- Pin 2 – I1 - BN
- Pin 3 – I2 / Q3 - GN
- Pin 4 – DO - YE
- Pin 5 – Q1 - GY
- Pin 6 – Q2 - PK
- Pin 7 – - - BU
- Pin 8 – + - RD



| Electrical Data  |            |  |
|--|------------|--|
| Rated operating voltage                                  | $U_e$      | 24 V, Reverse polarity protection, +10 %, -15 %      |
| Voltage level  |            | according to Typ 3 EN 61131-2                        |
| Rated insulation voltage                                 | $U_i$      | 75 V DC  |
| Rated impulse withstand voltage                          | $U_{imp}$  | 500 V  |
| Rated conditional short circuit current                  |            | 100 A  |
| No-load current  | $I_0$      | ≤ 55 mA  |
| Transponder frequency                                    |            | 6,78 MHz   |
| Repeatability  |            | 0,1 x S (within the limits $S_{min}$ and $S_{max}$ ) |
| Operating frequency                                      |            | ≤ 1Hz  |
| Switch-off   | $t_a$      | 13 ms + 200 μs x following CSMS                      |
| Time delay   | $t_v$      | 320 ms + 50 ms x following CSMS                      |
| Electromagnetic interference                             |            | according to EN IEC 60947-5-2 and EN 61326-3-1       |
| Inputs I1,I2, Di (digital inputs according to EN61131-2) |            |  |
| Voltage  | $U_{Hmax}$ | 30 V   |
|  | $U_{Hmin}$ | 11 V   |
|  | $U_{Lmin}$ | -3 V   |
|  | $U_{Lmax}$ | 5 V  |
| Outputs Q1,Q2  |            |  |
| Switching element function                               |            | pnp NO   |
| Rated operating current                                  | $I_e$      | 250 mA   |
| Minimum operating current                                | $I_m$      | 1 mA DC  |
| Leakage current  | $I_r$      | 0,5 mA DC  |
| Switching elements                                       |            | Sustained short-circuit and overload protection      |
| Voltage drop   | $U_d$      | ≤ 1 V  |
| Type of short circuit protection                         |            | Clocking   |
| Utilization category                                     |            | DC-13  |
| Output Do  |            |  |
| Rated operating current                                  | $I_e$      | Source: 2 mA, sink: 1 mA                             |
| Data rate  |            | 2400 Bit/s   |
| Switching elements                                       |            | Sustained short-circuit and overload protection      |
| Voltage at Do  | $V_{High}$ | ≥ $U_e - 3V$   |
| Voltage at Do  | $V_{Low}$  | ≤ 3V   |
| Utilization category                                     |            | thermal, current limited                             |

| Mechanical Data                       |  |
|---------------------------------------|--|
| Enclosure                             | Macromelt, red / PA 6, black   |
| Mounting                              | 2 holes Ø 4,5 (for M4 screws)  |
| Tightening torque (max.)              | 1Nm  |
| Indication                            | 3 LEDs (for diagnosis)   |
| Shock and Swing                       | acc. to EN IEC 60947-5-2   |
| Ambient temperature                   | -25°C ... +70°C  |
| Storage temperature                   | -25°C ... +70°C  |
| Maximum relative humidity             | 90 % @ 40 °C without condensation  |
| Altitude                              | ≤ 2000 m NHN   |
| Connection                            | Cable with plug connector M12 male                                       |
| Mass                                  | 6075985063: 185 g, 6075980065: 27 g                                      |
| Type of protection                    | IP67   |
| Protection class acc. to EN IEC 61558 | III  |
| Pollution degree                      | 3 (metallic pollution can cause impairments of the operating distances.) |

| Safety data (according to EN ISO 13849-1) |                                     |
|---|-------------------------------------|
| Up to PL                                  | e                                   |
| Category                                  | 4                                   |
| Service life                              | 20 years                            |
| PFH module 1                              | $2.05 \cdot 10^{-9}$ 1/h            |
| PFH cascaded modules 2 ... n              | $1.70 \cdot 10^{-9}$ 1/h per module |
| MTTFd                                     | High                                |
| SIL                                       | 3 (according to EN 62061:2005)      |

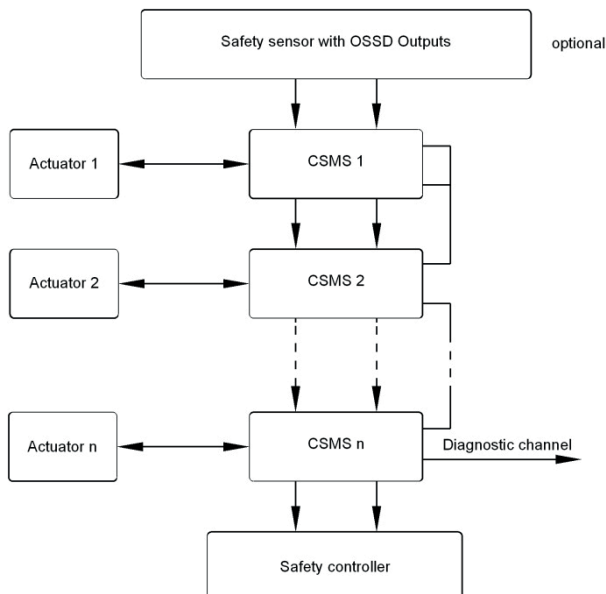
| Standards |  |
|-----------|--|
|           | EN 60947-1, EN 60947-5-2, EN 61326-3-1         |
|           | EN ISO 13849-1, EN ISO 13849-2, EN 61508       |
|           | EN 60947-5-3, EN 60204-1, EN 61131-2, EN 62061 |
|           | ETSI EN 300330-1, ETSI EN 300330-2             |

| EU-Conformity |                                   |
|---------------|-----------------------------------|
|               | according to Directive 2006/42/EG |
|               | according to Directive 1999/5/EG  |

| Approvals |                  |
|-----------|------------------|
|           | TÜV Nord, cCSAus |

| Notes  |  |
|--|--|
| The specified protection classification (IP code) applies only when an appropriate plug connector is used. |  |

| Intended use   |  |
|--|--|
| Application with feedback loop with or without start button (for Stand Alone Applications) |  |



Application without return circuit