



**Proximity switch, capacitive, S<sub>n</sub>=25mm, 1N/O, 3L, NPN, 10-30VDC, M30, insulated material, line 2m**

**Part no.** E53KAL30T110E  
**Catalog No.** 134774  
**Alternate Catalog No.** E53KAL30T110E

## Delivery program

|                           |                |    |                       |
|---------------------------|----------------|----|-----------------------|
| Basic function            |                |    | Capacitive sensors    |
| Product range             |                |    | E53 Capacitive Series |
| Connection                |                |    | 3-wire                |
| Design (outer dimensions) |                | mm | M30 x 1.5             |
| Rated operational voltage | U <sub>e</sub> |    | 10 - 30 V DC          |
| Rated switching distance  | S <sub>n</sub> | mm | 25                    |
| Type of mounting          |                |    | Non-flush             |
| Switching type            |                |    | NPN                   |
| For connection of:        |                |    | 2 m connection cable  |
| <b>Contacts</b>           |                |    |                       |
| N/O = Normally open       |                |    | 1 N/O                 |
| Material                  |                |    | Insulated material    |
| Degree of Protection      |                |    | IP65                  |

## Technical data

### General

|                             |  |   |                            |
|-----------------------------|--|---|----------------------------|
| Standards                   |  |   | IEC/EN 60947-5-2-EMC       |
| Ambient temperature         |  |   | -25 - +70                  |
| Mechanical shock resistance |  | g | 30<br>Shock duration 11 ms |
| Degree of Protection        |  |   | IP65                       |

### Characteristics

|                                                                                |                |     |                                                                                                             |
|--------------------------------------------------------------------------------|----------------|-----|-------------------------------------------------------------------------------------------------------------|
| Rated switching distance                                                       |                |     |                                                                                                             |
| Rated switching distance                                                       | S <sub>n</sub> | mm  | 25                                                                                                          |
| Repetition accuracy of S <sub>n</sub>                                          |                | %   | 10                                                                                                          |
| Temperature drift of S <sub>n</sub>                                            |                | %   | 10                                                                                                          |
| Switching hysteresis of S <sub>n</sub>                                         |                | %   | 20                                                                                                          |
| Rated operational voltage                                                      | U <sub>e</sub> |     | 10 - 30 V DC                                                                                                |
| Residual ripple of U <sub>e</sub>                                              |                | %   | 10                                                                                                          |
| Maximum load current                                                           | I <sub>e</sub> | mA  | < 300                                                                                                       |
| Operating current in the switched state at 24 V DC                             | I <sub>b</sub> | mA  | 10                                                                                                          |
| Voltage drop at I <sub>e</sub>                                                 | U <sub>d</sub> | V   | 2                                                                                                           |
| Switching Frequency                                                            |                | Hz  | 250                                                                                                         |
| Residual current through the load in the blocked state at 230 V AC and 24 V DC | I <sub>r</sub> | mA  | 0.1                                                                                                         |
| Switching state display                                                        |                | LED | Red                                                                                                         |
| Protective functions                                                           |                |     | Short-circuit protective device<br>Protection against polarity reversal<br>Protection against wire breakage |
| Connection                                                                     |                |     | 3-wire                                                                                                      |
| Contacts                                                                       |                |     |                                                                                                             |
| N/O = Normally open                                                            |                |     | 1 N/O                                                                                                       |
| Style                                                                          |                |     |                                                                                                             |
| Design (outer dimensions)                                                      |                | mm  | M30 x 1.5                                                                                                   |
| For connection of:                                                             |                |     | 2 m connection cable                                                                                        |
| Material                                                                       |                |     | Insulated material                                                                                          |

Design verification as per IEC/EN 61439

|                                        |  |    |     |
|----------------------------------------|--|----|-----|
| Technical data for design verification |  |    |     |
| Operating ambient temperature min.     |  | °C | -25 |
| Operating ambient temperature max.     |  | °C | 70  |

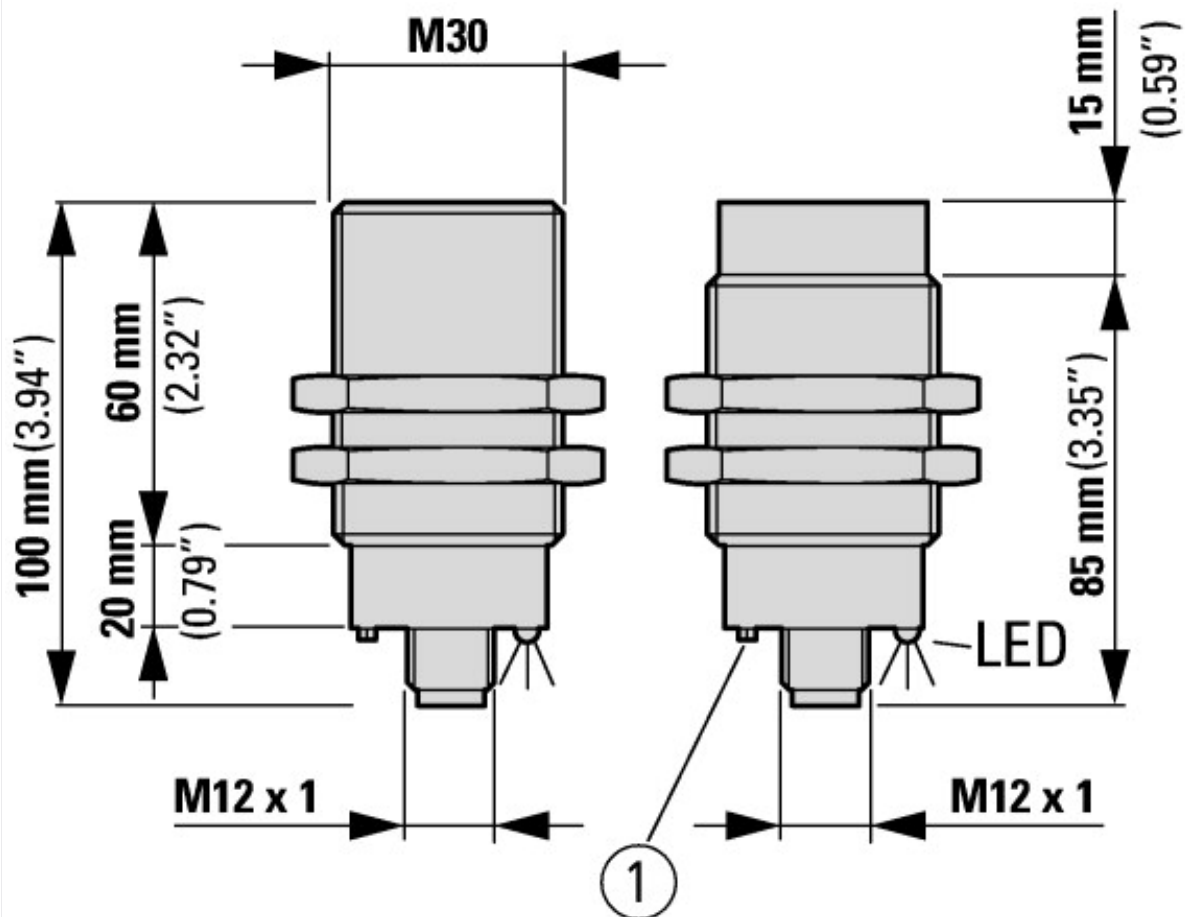
Technical data ETIM 7.0

|                                                                                                                                                                                                                    |  |    |                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----|------------------------|
| Sensors (EG000026) / Capacitive proximity switch (EC002715)                                                                                                                                                        |  |    |                        |
| Electric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Proximity switch / Capacitive proximity switch (ecI@ss10.0.1-27-27-01-02 [AGZ377015]) |  |    |                        |
| Width sensor                                                                                                                                                                                                       |  | mm | 0                      |
| Height of sensor                                                                                                                                                                                                   |  | mm | 0                      |
| Length of sensor                                                                                                                                                                                                   |  | mm | 80                     |
| Diameter sensor                                                                                                                                                                                                    |  | mm | 30                     |
| Mechanical mounting condition for sensor                                                                                                                                                                           |  |    | Not flat               |
| Switching distance                                                                                                                                                                                                 |  | mm | 25                     |
| Suitable for safety functions                                                                                                                                                                                      |  |    | No                     |
| Type of switch function                                                                                                                                                                                            |  |    | Normally open contact  |
| Type of switching output                                                                                                                                                                                           |  |    | NPN                    |
| Type of electric connection                                                                                                                                                                                        |  |    | Cable                  |
| Number of semiconductor outputs with signalling function                                                                                                                                                           |  |    | 1                      |
| Number of contact energized outputs with signalling function                                                                                                                                                       |  |    | 0                      |
| Number of protected semiconductor outputs                                                                                                                                                                          |  |    | 0                      |
| Number of protected contact energized outputs                                                                                                                                                                      |  |    | 0                      |
| Type of actuation                                                                                                                                                                                                  |  |    | Other                  |
| Type of interface                                                                                                                                                                                                  |  |    | None                   |
| Type of interface for safety communication                                                                                                                                                                         |  |    | None                   |
| Construction type housing                                                                                                                                                                                          |  |    | Cylinder, screw-thread |
| Coating housing                                                                                                                                                                                                    |  |    | Other                  |
| Cascadable                                                                                                                                                                                                         |  |    | No                     |
| Category according to EN 954-1                                                                                                                                                                                     |  |    | B                      |
| SIL according to IEC 61508                                                                                                                                                                                         |  |    | None                   |
| Performance level acc. EN ISO 13849-1                                                                                                                                                                              |  |    | None                   |
| Max. output current at protected output                                                                                                                                                                            |  | mA | 0                      |
| Supply voltage                                                                                                                                                                                                     |  | V  | 10 - 30                |
| Rated control supply voltage Us at AC 50HZ                                                                                                                                                                         |  | V  | 0 - 0                  |
| Rated control supply voltage Us at AC 60HZ                                                                                                                                                                         |  | V  | 0 - 0                  |
| Rated control supply voltage Us at DC                                                                                                                                                                              |  | V  | 10 - 30                |
| Voltage type                                                                                                                                                                                                       |  |    | DC                     |
| Switching frequency                                                                                                                                                                                                |  | Hz | 250                    |
| With monitoring function downstream switching devices                                                                                                                                                              |  |    | No                     |
| With status indication                                                                                                                                                                                             |  |    | Yes                    |
| Material housing                                                                                                                                                                                                   |  |    | Plastic                |
| Compression-resistant                                                                                                                                                                                              |  |    | No                     |
| Explosion safety category for gas                                                                                                                                                                                  |  |    | None                   |
| Explosion safety category for dust                                                                                                                                                                                 |  |    | None                   |

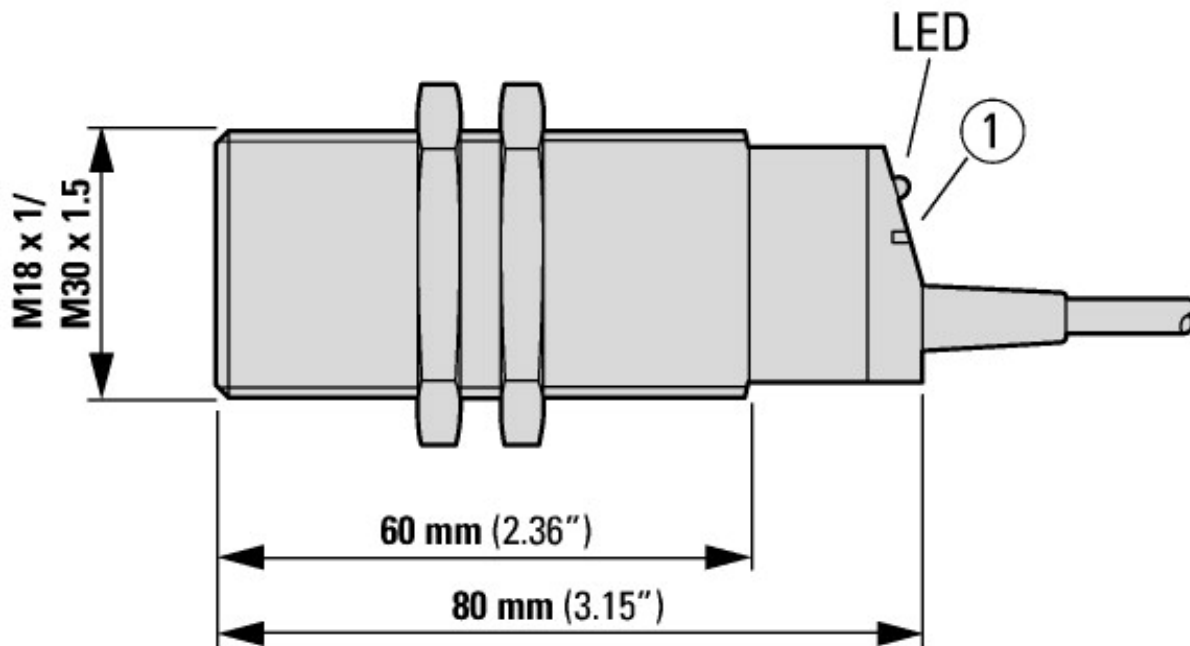
Approvals

|                      |  |  |                                   |
|----------------------|--|--|-----------------------------------|
| Product Standards    |  |  | CE marking                        |
| Max. Voltage Rating  |  |  | 250 V AC, 30 V DC                 |
| Degree of Protection |  |  | IEC: IP65; UL/CSA: NEMA 4, 12, 13 |

## Dimensions



① Sensitivity setting



## Assets (links)

[Declaration of CE Conformity](#)

00003141

[Instruction Leaflets](#)

IL05307002Z2018\_05

## Additional product information (links)

IL05307002Z E53 Series Capacitive Sensors

IL05307002Z E53 Series Capacitive Sensors

[ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL05307002Z2018\\_05.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05307002Z2018_05.pdf)

