



**Proximity switch, capacitive,  $S_n=8\text{mm}$ , 1 N/C, 2L, 20-250VAC, M18, insulated material, M12**

**Part no.** E53KBL18A2SA  
**Catalog No.** 134794  
**Alternate Catalog No.** E53KBL18A2SA

## Delivery program

|                           |       |    |                            |
|---------------------------|-------|----|----------------------------|
| Basic function            |       |    | Capacitive sensors         |
| Product range             |       |    | E53 Capacitive Series      |
| Connection                |       |    | 2-wire                     |
| Design (outer dimensions) |       | mm | M18 x 1                    |
| Rated operational voltage | $U_e$ |    | 20 - 250 V AC              |
| Rated switching distance  | $S_n$ | mm | 8                          |
| Type of mounting          |       |    | Flush                      |
| For connection of:        |       |    | Plug-in connection M12 x 1 |
| <b>Contacts</b>           |       |    |                            |
| N/C = Normally closed     |       |    | 1 NC                       |
| 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                                                       | $S_n$ | mm  | 8                          |
| Repetition accuracy of $S_n$                                                   |       | %   | 10                         |
| Temperature drift of $S_n$                                                     |       | %   | 10                         |
| Switching hysteresis of $S_n$                                                  |       | %   | 20                         |
| Rated operational voltage                                                      | $U_e$ |     | 20 - 250 V AC              |
| Supply frequency                                                               |       |     | 50 - 60                    |
| Residual ripple of $U_e$                                                       |       | %   | 10                         |
| Maximum load current                                                           | $I_e$ | mA  | < 300                      |
| Operating current in the switched state at 24 V DC                             | $I_b$ | mA  | 2.5                        |
| Voltage drop at $I_e$                                                          | $U_d$ | V   | 9                          |
| Switching Frequency                                                            |       | Hz  | 15                         |
| Min. load current                                                              | $I_e$ | mA  | 5                          |
| Short-time current (10 ms, 5 Hz)                                               |       | A   | 5                          |
| Residual current through the load in the blocked state at 230 V AC and 24 V DC | $I_r$ | mA  | 2.5                        |
| Switching state display                                                        |       | LED | Red                        |
| Connection                                                                     |       |     | 2-wire                     |
| Contacts                                                                       |       |     |                            |
| N/C = Normally closed                                                          |       |     | 1 NC                       |
| Style                                                                          |       |     |                            |
| Design (outer dimensions)                                                      |       | mm  | M18 x 1                    |
| For connection of:                                                             |       |     | Plug-in connection M12 x 1 |
| Material                                                                       |       |     | Insulated material         |

## Design verification as per IEC/EN 61439

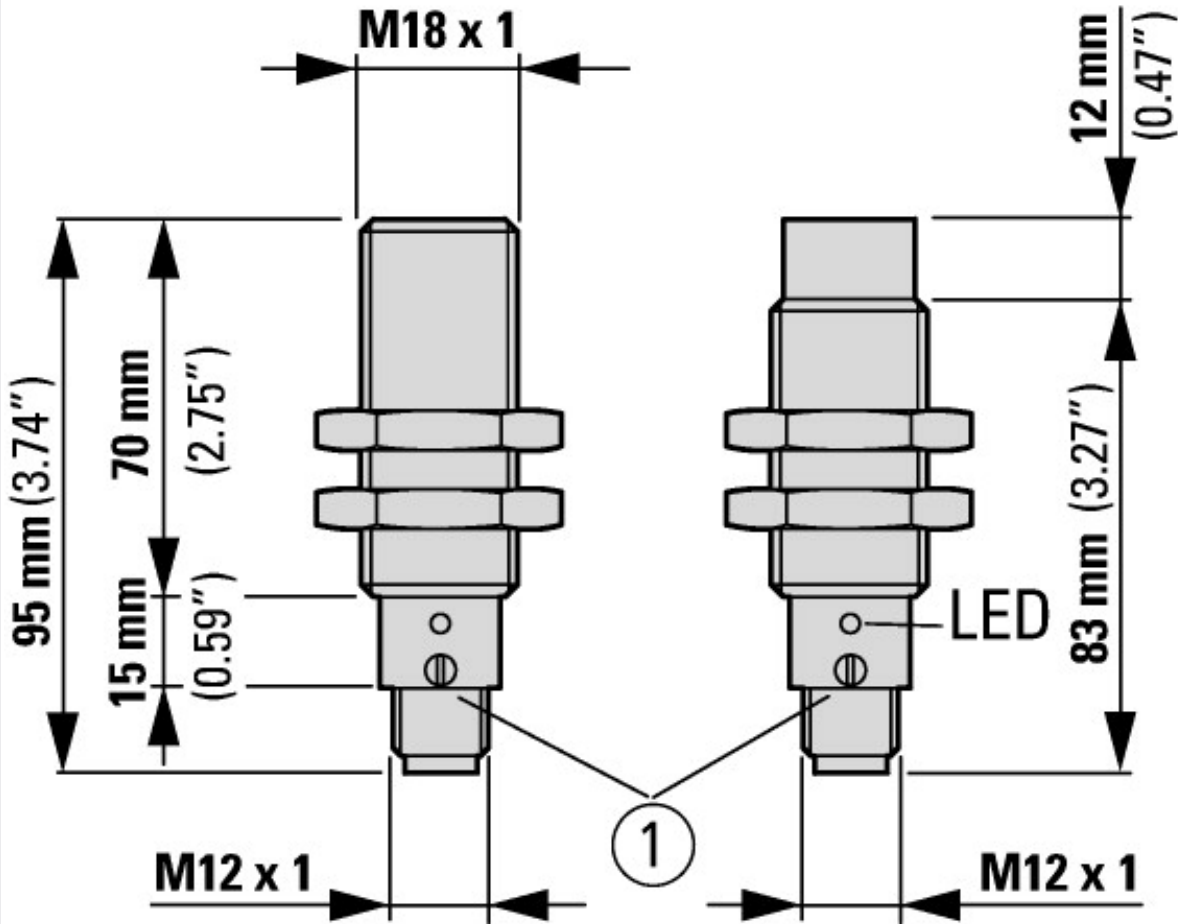
|                                        |  |    |     |
|----------------------------------------|--|----|-----|
| Technical data for design verification |  |    |     |
| Operating ambient temperature min.     |  | °C | -25 |
| Operating ambient temperature max.     |  | °C | 70  |

## Technical data ETIM 7.0

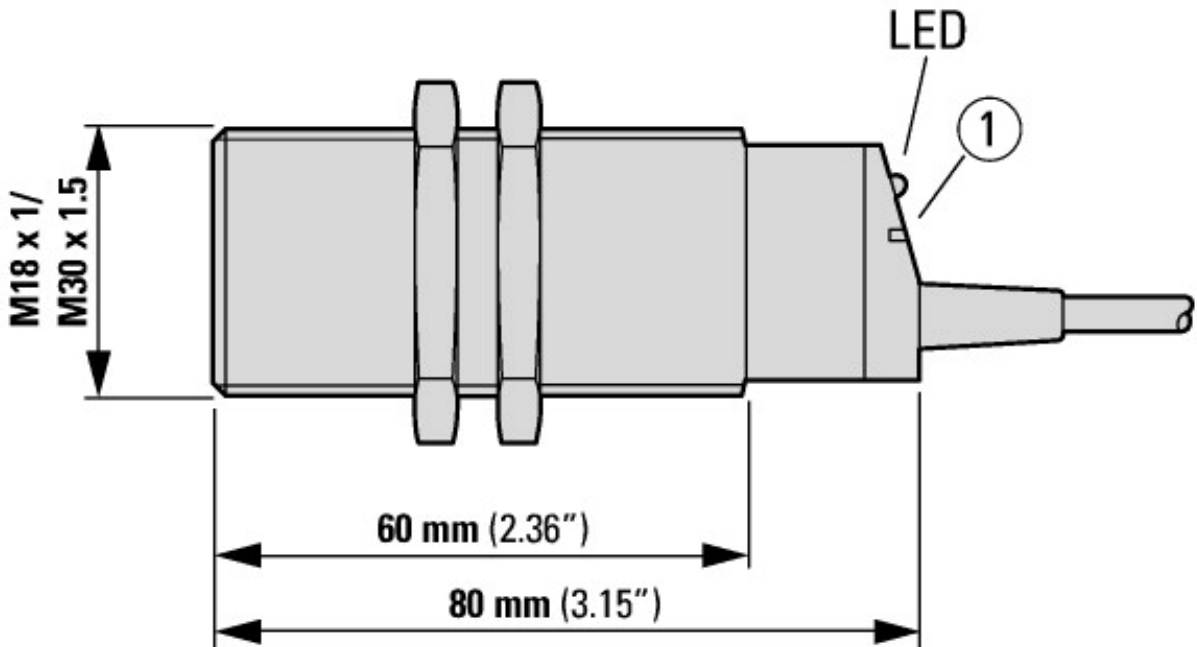
|                                                                                                                                                                                                                    |  |    |                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----|------------------------|
| 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 | 18                     |
| Mechanical mounting condition for sensor                                                                                                                                                                           |  |    | Concise                |
| Switching distance                                                                                                                                                                                                 |  | mm | 8                      |
| Suitable for safety functions                                                                                                                                                                                      |  |    | No                     |
| Type of switch function                                                                                                                                                                                            |  |    | Breaker contact        |
| Type of switching output                                                                                                                                                                                           |  |    | Two-wire               |
| Type of electric connection                                                                                                                                                                                        |  |    | Connector M12          |
| 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  | 20 - 250               |
| Rated control supply voltage Us at AC 50HZ                                                                                                                                                                         |  | V  | 20 - 250               |
| Rated control supply voltage Us at AC 60HZ                                                                                                                                                                         |  | V  | 20 - 250               |
| Rated control supply voltage Us at DC                                                                                                                                                                              |  | V  | 0 - 0                  |
| Voltage type                                                                                                                                                                                                       |  |    | AC                     |
| Switching frequency                                                                                                                                                                                                |  | Hz | 15                     |
| 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 |



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 | <a href="ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05307002Z2018_05.pdf">ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05307002Z2018_05.pdf</a> |