

## Technical data sheet

### Inductive switch

Part no.: 50146265

IS C30MM/2NO-30N

#### Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Diagrams
- Operation and display
- Part number code
- Notes
- Accessories



For illustration purposes only



Technical data

Basic data

|                                           |               |
|-------------------------------------------|---------------|
| Series                                    | C30           |
| Typ. operating range limit S <sub>n</sub> | 30 mm         |
| Operating range S <sub>a</sub>            | 0 ... 24.3 mm |

Characteristic parameters

|      |           |
|------|-----------|
| MTTF | 280 years |
|------|-----------|

Electrical data

|                    |                              |
|--------------------|------------------------------|
| Protective circuit | Inductive protection         |
|                    | Polarity reversal protection |
|                    | Short circuit protected      |

Performance data

|                                                   |                                                                                            |
|---------------------------------------------------|--------------------------------------------------------------------------------------------|
| Supply voltage U <sub>B</sub>                     | 10 ... 30 V, DC                                                                            |
| Residual ripple                                   | 0 ... 10 %, From U <sub>B</sub>                                                            |
| Open-circuit current                              | 0 ... 15 mA                                                                                |
| Temperature drift, max. (in % of S <sub>r</sub> ) | 15 %, Over the entire operating temperature range                                          |
| Repeatability, max. (in % of S <sub>r</sub> )     | 5 %, For U <sub>B</sub> = 20 ... 30 VDC, ambient temperature T <sub>a</sub> = 23 °C ± 5 °C |
| Switching hysteresis                              | 15 %                                                                                       |

Outputs

|                                     |            |
|-------------------------------------|------------|
| Number of digital switching outputs | 1 Piece(s) |
|-------------------------------------|------------|

Switching outputs

|                         |        |
|-------------------------|--------|
| Voltage type            | DC     |
| Switching current, max. | 200 mA |
| Residual current, max.  | 0.1 mA |
| Voltage drop            | ≤ 2 V  |

Switching output 1

|                     |                    |
|---------------------|--------------------|
| Switching element   | Transistor, NPN    |
| Switching principle | NO (normally open) |

Time behavior

|                     |        |
|---------------------|--------|
| Switching frequency | 100 Hz |
| Readiness delay     | 100 ms |

Connection

|                       |            |
|-----------------------|------------|
| Number of connections | 1 Piece(s) |
|-----------------------|------------|

Connection 1

|                      |                |
|----------------------|----------------|
| Function             | Signal OUT     |
|                      | Voltage supply |
| Type of connection   | Cable          |
| Cable length         | 2,000 mm       |
| Sheathing material   | PVC            |
| Cable color          | Gray           |
| Number of conductors | 3 -wire        |
| Wire cross section   | 0.3 mm²        |

Mechanical data

|                          |                             |
|--------------------------|-----------------------------|
| Design                   | Cylindrical                 |
| Thread size              | M30 x 1.5 mm                |
| Dimension (Ø x L)        | 30 mm x 39 mm               |
| Type of installation     | Non-embedded                |
| Housing material         | Metal                       |
| Metal housing            | Copper-nickel alloy         |
| Sensing face material    | Plastic, Polybutylene (PBT) |
| Net weight               | 0.192 g                     |
| Housing color            | Red, RAL 3000               |
|                          | Silver                      |
| Type of fastening        | Mounting thread             |
| Standard measuring plate | 90 x 90 mm², Fe360          |

Operation and display

|                 |            |
|-----------------|------------|
| Type of display | LED        |
| Number of LEDs  | 1 Piece(s) |

Environmental data

|                                |               |
|--------------------------------|---------------|
| Ambient temperature, operation | -25 ... 70 °C |
| Ambient temperature, storage   | -25 ... 70 °C |

Certifications

|                                                    |               |
|----------------------------------------------------|---------------|
| Degree of protection                               | IP 67         |
| Protection class                                   | II            |
| Test procedure for EMC in accordance with standard | IEC 61000-4-2 |
|                                                    | IEC 61000-4-3 |
|                                                    | IEC 61000-4-4 |
| Standards applied                                  | IEC 60947-5-2 |

Correction factors

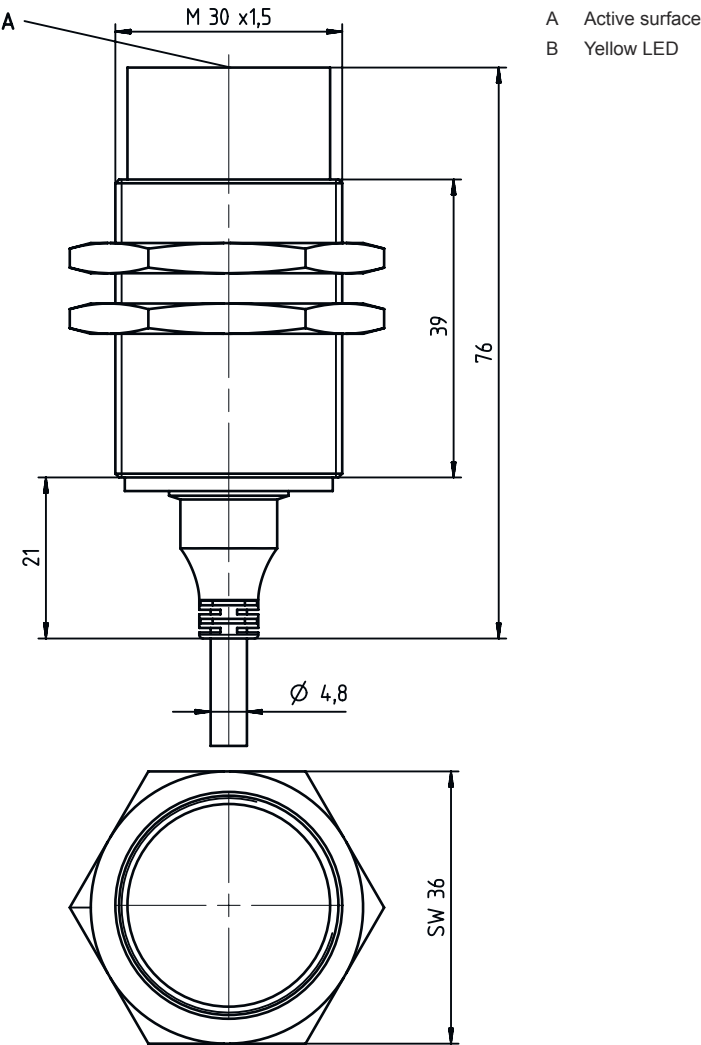
|                 |      |
|-----------------|------|
| Aluminum        | 0.4  |
| Stainless steel | 0.75 |
| Copper          | 0.45 |
| Brass           | 0.35 |
| Fe360 steel     | 1    |

Classification

|                       |          |
|-----------------------|----------|
| Customs tariff number | 85365019 |
| ECLASS 5.1.4          | 27270101 |
| ECLASS 8.0            | 27270101 |
| ECLASS 9.0            | 27270101 |
| ECLASS 10.0           | 27270101 |
| ECLASS 11.0           | 27270101 |
| ECLASS 12.0           | 27274001 |
| ECLASS 13.0           | 27274001 |
| ECLASS 14.0           | 27274001 |
| ETIM 5.0              | EC002714 |
| ETIM 6.0              | EC002714 |
| ETIM 7.0              | EC002714 |
| ETIM 8.0              | EC002714 |
| ETIM 9.0              | EC002714 |

Dimensioned drawings

All dimensions in millimeters



Electrical connection

Connection 1

|                      |                |
|----------------------|----------------|
| Function             | Signal OUT     |
|                      | Voltage supply |
| Type of connection   | Cable          |
| Cable length         | 2,000 mm       |
| Sheathing material   | PVC            |
| Cable color          | Gray           |
| Number of conductors | 3 -wire        |
| Wire cross section   | 0.3 mm²        |

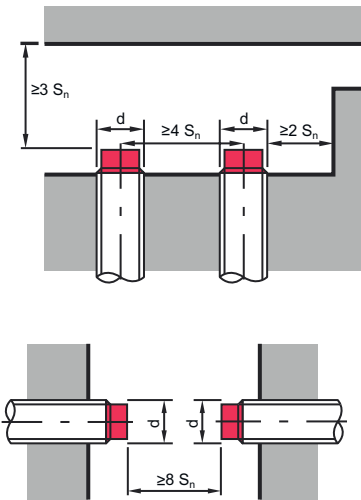
Conductor color

Conductor assignment

|       |       |
|-------|-------|
| Brown | V+    |
| Blue  | GND   |
| Black | OUT 1 |

Diagrams

Non-embedded installation



Operation and display

| LED | Display                  | Meaning                          |
|-----|--------------------------|----------------------------------|
| 1   | Yellow, continuous light | Switching output/switching state |

Part number code

Part designation: IS AAABB/CCC-DDD-EEE

|     |                                                                                                                                                                                                                                               |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IS  | <b>Operating principle / construction</b><br>IS: inductive switch, standard design                                                                                                                                                            |
| AAA | <b>Series</b><br>C08: series with M8 x 1 external thread<br>C12: series with M12 x 1 external thread<br>C18: series with M18 x 1 external thread<br>C22: series in cubic design with 18 x 18 mm<br>C30: series with M30 x 1,5 external thread |
| BB  | <b>Housing</b><br>MM: metal housing (active surface: plastic) / metric thread<br>PP: Plastic housing                                                                                                                                          |
| CCC | <b>Output current / supply</b><br>2NC: NPN transistor, NC contact<br>2NO: NPN transistor, NO contact<br>4NC: PNP transistor, NC contact<br>4NO: PNP transistor, NO contact                                                                    |

Part number code

|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DDD | <b>Measurement range / type of installation</b><br>2E0: typ. range limit 2.0 mm / embedded installation<br>2N5: typ. range limit 2.5 mm / non-embedded installation<br>4E0: typ. range limit 4.0 mm / embedded installation<br>4N0: typ. range limit 4.0 mm / non-embedded installation<br>5E0: typ. range limit 5.0 mm / embedded installation<br>8E0: typ. range limit 8.0 mm / embedded installation<br>8N0: typ. range limit 8.0 mm / non-embedded installation<br>10E: typ. range limit 10.0 mm / embedded installation<br>12N: typ. range limit 12.0 mm / non-embedded installation<br>15E: typ. range limit 15.0 mm / embedded installation<br>15N: typ. range limit 15.0 mm / non-embedded installation<br>16N: typ. range limit 16.0 mm / non-embedded installation<br>30N: typ. range limit 30.0 mm / non-embedded installation |
| EEE | <b>Electrical connection</b><br>n/a: cable, standard length 2000 mm, 3-wire<br>M8: M8 connector, 3-pin (plug)<br>M12: M12 connector, 4-pin (plug)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| Note                                                                             |                                                                                                                                |
|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
|  | A list with all available device types can be found on the Leuze website at <a href="http://www.leuze.com">www.leuze.com</a> . |

Notes

|  Observe intended use! |                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         | <ul style="list-style-type: none"><li>This product is not a safety sensor and is not intended as personnel protection.</li><li>The product may only be put into operation by competent persons.</li><li>Only use the product in accordance with its intended use.</li></ul> |

|  For UL applications: |                                                                                                                     |
|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
|                        | For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code). |

Accessories

Mounting technology - Other

|                                                                                    | Part no. | Designation | Article | Description                                                                                                                                                                                                         |
|------------------------------------------------------------------------------------|----------|-------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 50111503 | MC 030K     | Clamp   | Diameter, inner: 30 mm<br>Design of mounting device: Mounting clamp<br>Fastening, at system: Through-hole mounting<br>Mounting bracket, at device: Clampable<br>Type of mounting device: Rigid<br>Material: Plastic |

Accessories

| Note                                                                             |                                                                                                                                  |
|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
|  | <p>A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.</p> |