

## Technical data sheet

### Inductive switch

Part no.: 50154064

IS D30MM/2NO-30N-M12

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For illustration purposes only



## Technical data

### Basic data

|                                   |               |
|-----------------------------------|---------------|
| Series                            | D30           |
| type. operating range limit $S_n$ | 30 mm         |
| Operating range $S_a$             | 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 $U_B$                     | 10 ... 30 V, DC                                                                                  |
| Residual ripple                          | 0 ... 10 %, From $U_B$                                                                           |
| Open-circuit current                     | 0 ... 15 mA                                                                                      |
| Temperature drift, max. (in % of $S_r$ ) | 15 %, Over the entire operating temperature range                                                |
| Repeatability, max. (in % of $S_r$ )     | 5 %, For $U_B = 20 ... 30$ VDC, ambient temperature $T_a = 23^\circ\text{C} \pm 5^\circ\text{C}$ |
| 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            | $\leq 2.5$ 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 |
| Thread size | M12            |
| Type        | Male           |
| Material    | Metal          |
| No. of pins | 4 -pin         |
| Encoding    | A-coded        |

### Mechanical data

|                                      |                                 |
|--------------------------------------|---------------------------------|
| Design                               | Cylindrical                     |
| Dimension ( $\varnothing \times L$ ) | 30 mm x 80 mm                   |
| Thread size                          | M30 x 1.5 mm                    |
| Type of installation                 | Non-embedded                    |
| Housing material                     | Metal                           |
| Metal housing                        | Copper-nickel alloy             |
| Sensing face material                | Plastic, Polybutylene (PBT)     |
| Net weight                           | 188 g                           |
| Housing color                        | Red, RAL 3000                   |
|                                      | Silver                          |
| Type of fastening                    | Mounting thread                 |
| Standard measuring plate             | 90 x 90 mm <sup>2</sup> , 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

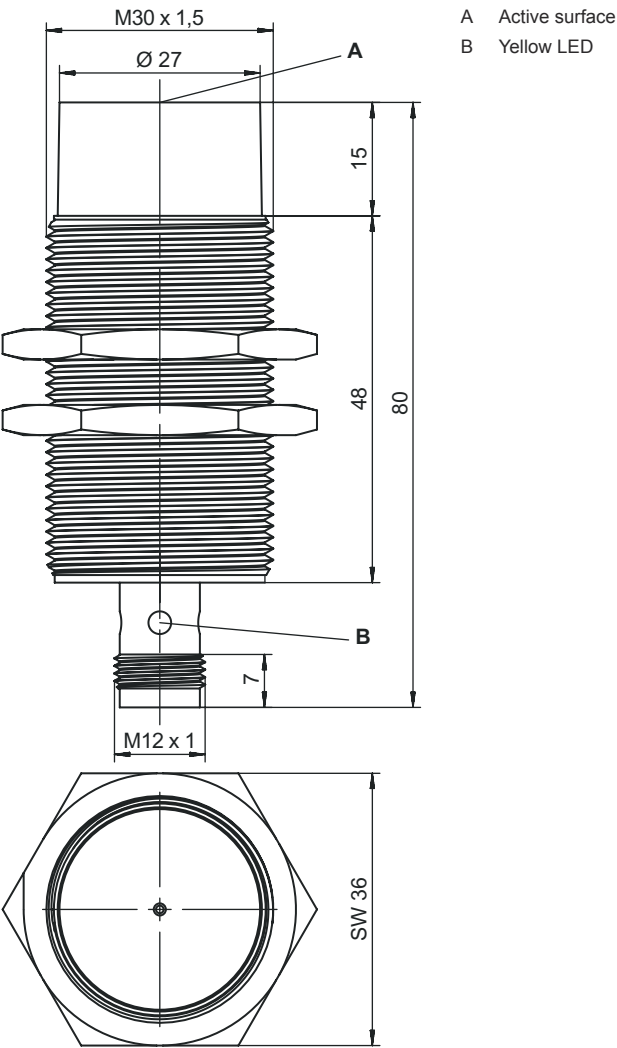
|                 |      |
|-----------------|------|
| Aluminum        | 0.42 |
| Stainless steel | 0.75 |
| Copper          | 0.35 |
| Brass           | 0.45 |
| Fe360 steel     | 1    |

### 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 |
| ECLASS 15.0           | 27274001 |
| ETIM 5.0              | EC002714 |
| ETIM 6.0              | EC002714 |
| ETIM 7.0              | EC002714 |
| ETIM 8.0              | EC002714 |
| ETIM 9.0              | EC002714 |
| ETIM 10.0             | EC002714 |

Dimensioned drawings

All dimensions in millimeters



Electrical connection

Connection 1

|             |                |
|-------------|----------------|
| Function    | Signal OUT     |
|             | Voltage supply |
| Thread size | M12            |
| Type        | Male           |
| Material    | Metal          |
| No. of pins | 4 -pin         |
| Encoding    | A-coded        |

Pin Pin assignment

|   |      |
|---|------|
| 1 | V+   |
| 2 | n.c. |
| 3 | GND  |
| 4 | NO   |

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>D08: series with M8 x 1 external thread<br>D12: series with M12 x 1 external thread<br>D18: series with M18 x 1 external thread<br>D22: series in cubic design with 18 x 18 mm<br>D30: 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>M8.3: 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 [www.leuze.com](http://www.leuze.com).

Notes



Observe intended use!



This product is not a safety sensor and is not intended as personnel protection.

The product may only be put into operation by competent persons.

Only use the product in accordance with its intended use.



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> |