

## Technical data sheet

### Inductive switch

Part no.: 50136010

ISS 118MM/2NO-8E0

#### 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                            | 118           |
| type. operating range limit $S_n$ | 8 mm          |
| Operating range $S_a$             | 0 ... 6.48 mm |

### Electrical data

|                    |                              |
|--------------------|------------------------------|
| Protective circuit | Overload 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 ... 10 mA            |
| Temperature drift, max. (in % of $S_r$ ) | 10 %                   |
| Repeatability, max. (in % of $S_r$ )     | 1 %                    |
| 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.  | 0.01 mA |
| Voltage drop            | ≤ 2 V   |

### Switching output 1

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

### Time behavior

|                     |          |
|---------------------|----------|
| Switching frequency | 3,000 Hz |
| Readiness delay     | 25 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          | Black                |
| Number of conductors | 3 -wire              |
| Wire cross section   | 0.35 mm <sup>2</sup> |

### Mechanical data

|                          |                                 |
|--------------------------|---------------------------------|
| Design                   | Cylindrical                     |
| Dimension (Ø x L)        | 18 mm x 40 mm                   |
| Thread size              | M18 x 1 mm                      |
| Type of installation     | Embedded/flush                  |
| Housing material         | Metal                           |
| Metal housing            | Nickel-plated brass             |
| Sensing face material    | Plastic, Polybutylene (PBT)     |
| Net weight               | 102 g                           |
| Housing color            | Red, RAL 3000                   |
|                          | Silver                          |
| Type of fastening        | Mounting thread                 |
| Standard measuring plate | 24 x 24 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         |
| Standards applied    | IEC 60947-5-2 |

### Correction factors

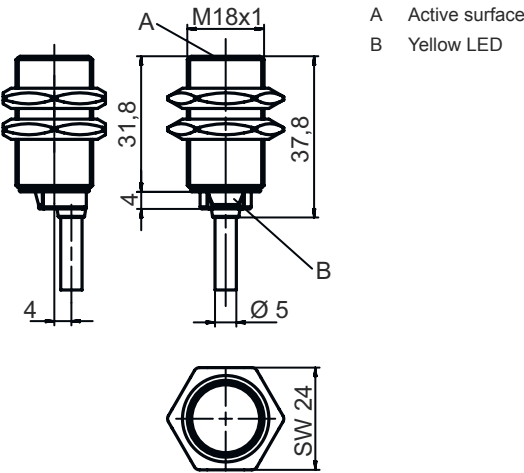
|             |   |
|-------------|---|
| Fe360 steel | 1 |
|-------------|---|

### 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 |
| ECLASS 16.0           | 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 |
| Type of connection   | Cable          |
| Cable length         | 2,000 mm       |
| Sheathing material   | PVC            |
| Cable color          | Black          |
| Number of conductors | 3 -wire        |
| Wire cross section   | 0.35 mm²       |

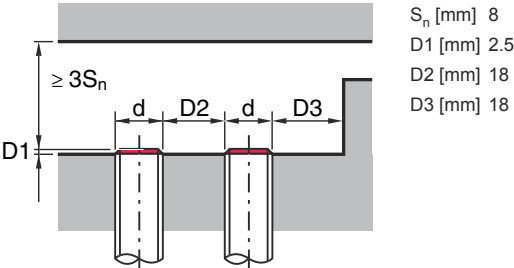
Conductor color

Conductor assignment

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

Diagrams

Embedded/flush installation



## Operation and display

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

## Part number code

Part designation: ISX YYY XX/ZZZ-AAA-BBBB

|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ISX | <b>Operating principle / construction</b><br>IS: inductive switch, standard design<br>ISS: inductive switch, short construction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| YYY | <b>Series</b><br>104: series with Ø 4.0 mm<br>108: series with M8 x 1 external thread<br>112: series with M12 x 1 external thread<br>118: series with M18 x 1 external thread<br>122: series in cubic design with 18 x 18 mm<br>130: series with M30 x 1.5 external thread<br>144: series in cubic design with 40 x 40 mm<br>180: series in cubic design with 80 x 80 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| XX  | <b>Housing</b><br>MM: metal housing (active surface: plastic) / metric thread<br>PP: Plastic housing<br>MP: metal housing (active surface: plastic) / smooth (without thread)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| ZZZ | <b>Switching output</b><br>4NO: PNP transistor, NO contact<br>4NC: PNP transistor, NC contact<br>44: PNP transistor, NO contact / NC contact<br>2NO: NPN transistor, NO contact<br>2NC: NPN transistor, NC contact<br>22: NPN transistor, NO contact / NC contact<br>1NO: relay, NO contact / AC/DC<br>1NC: Relay, NC contact / AC/DC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| AAA | <b>Measurement range / type of installation</b><br>1E2: typ. range limit 1.2 mm / embedded/flush installation<br>2E0: typ. range limit 2.0 mm / embedded/flush installation<br>4E0: typ. range limit 4.0 mm / embedded/flush installation<br>4N0: typ. range limit 4.0 mm / non-embedded/non-flush installation<br>5E0: typ. range limit 5.0 mm / embedded/flush installation<br>6E0: typ. range limit 6.0 mm / embedded/flush installation<br>8E0: typ. range limit 8.0 mm / embedded/flush installation<br>8N0: typ. range limit 8.0 mm / non-embedded/non-flush installation<br>10E: typ. range limit 10.0 mm / embedded/flush installation<br>15N: typ. range limit 15.0 mm / non-embedded/non-flush installation<br>16E: typ. range limit 16.0 mm / embedded/flush installation<br>16N: typ. range limit 16.0 mm / non-embedded/non-flush installation<br>20E: typ. range limit 20.0 mm / embedded/flush installation<br>25N: typ. range limit 25.0 mm / non-embedded/non-flush installation<br>30N: typ. range limit 30.0 mm / non-embedded/non-flush installation<br>40N: typ. range limit 40.0 mm / non-embedded/non-flush installation<br>50N: typ. range limit 50.0 mm / non-embedded/non-flush installation<br>2E5: Typ. range limit 2.5 mm / embedded/flush installation |
| DDD | <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)<br>TB.4: terminals, 4-pin<br>050: cable, standard length 5000 mm, 3-wire                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

### 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.

Accessories

Mounting technology - Other

|                                                                                  | Part no. | Designation | Article | Description                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------|----------|-------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 50111501 | MC 018K     | Clamp   | Diameter, inner: 18 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 |

Note





A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.