

Technical data sheet

Inductive switch

Part no.: 50129929

IS 108 MM/4NC-2E0

Contents

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



Figure can vary



Technical data

Basic data

| | |
|----------------------------------|--------------|
| Series | 108 |
| Typ. operating range limit S_n | 2 mm |
| Operating range S_a | 0 ... 1.6 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 | 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. | 100 mA |
| Residual current, max. | 0.01 mA |
| Voltage drop | ≤ 2 V |

Switching output 1

| | |
|---------------------|----------------------|
| Switching element | Transistor, PNP |
| Switching principle | NC (normally closed) |

Time behavior

| | |
|---------------------|----------|
| Switching frequency | 3,000 Hz |
|---------------------|----------|

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 | 0.18 mm ² |

Mechanical data

| | |
|--------------------------|---------------------------------|
| Design | Cylindrical |
| Thread size | M8 x 1 mm |
| Dimension (Ø x L) | 8 mm x 45 mm |
| Type of installation | Embedded |
| Housing material | Metal |
| Metal housing | Nickel-plated brass |
| Sensing face material | Plastic, Polyoxymethylene (POM) |
| Housing color | Red, RAL 3000 |
| | Silver |
| Type of fastening | Mounting thread |
| Standard measuring plate | 8 x 8 mm ² , 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

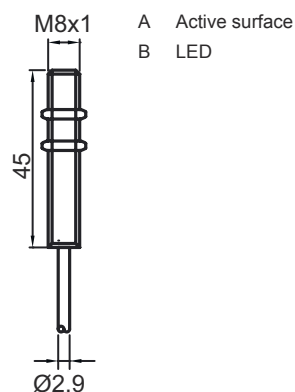
| | |
|-----------------|---------------|
| Fe360 steel | 1 |
| Stainless steel | 0.6 ... 1 |
| Brass | 0.35 ... 0.5 |
| Aluminum | 0.35 ... 0.45 |
| Copper | 0.25 ... 0.45 |

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 |
| ETIM 5.0 | EC002714 |
| ETIM 6.0 | EC002714 |
| ETIM 7.0 | EC002714 |
| ETIM 8.0 | 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 | 0.18 mm ² |

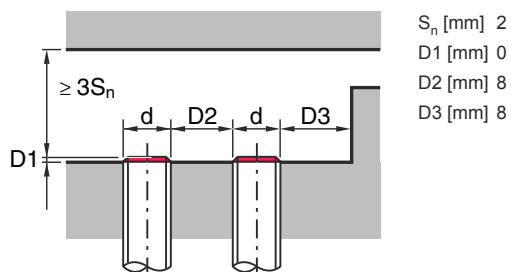
Conductor color

Conductor assignment

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

Diagrams

Embedded 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 | Operating principle / construction IS: inductive switch, standard design ISS: inductive switch, short construction |
| YYY | Series 104: series with Ø 4.0 mm 108: series with M8 x 1 external thread 112: series with M12 x 1 external thread 118: series with M18 x 1 external thread 122: series in cubic design with 18 x 18 mm 130: series with M30 x 1.5 external thread 144: series in cubic design with 40 x 40 mm 180: series in cubic design with 80 x 80 mm |
| XX | Housing MM: metal housing (active surface: plastic) / metric thread PP: Plastic housing MP: metal housing (active surface: plastic) / smooth (without thread) |
| ZZZ | Switching output 4NO: PNP transistor, NO contact 4NC: PNP transistor, NC contact 44: PNP transistor, NO contact / NC contact 2NO: NPN transistor, NO contact 2NC: NPN transistor, NC contact 22: NPN transistor, NO contact / NC contact |
| AAA | Measurement range / type of installation 1E2: typ. range limit 1.2 mm / embedded installation 2E0: typ. range limit 2.0 mm / embedded installation 4E0: typ. range limit 4.0 mm / embedded installation 4N0: typ. range limit 4.0 mm / non-embedded installation 5E0: typ. range limit 5.0 mm / embedded installation 6E0: typ. range limit 6.0 mm / embedded installation 8E0: typ. range limit 8.0 mm / embedded installation 8N0: typ. range limit 8.0 mm / non-embedded installation 10E: typ. range limit 10.0 mm / embedded installation 15N: typ. range limit 15.0 mm / non-embedded installation 16E: typ. range limit 16.0 mm / embedded installation 16N: typ. range limit 16.0 mm / non-embedded installation 20E: typ. range limit 20.0 mm / embedded installation 25N: typ. range limit 25.0 mm / non-embedded installation 30N: typ. range limit 30.0 mm / non-embedded installation 40N: typ. range limit 40.0 mm / non-embedded installation 50N: typ. range limit 50.0 mm / non-embedded installation |
| DDD | Electrical connection n/a: cable, standard length 2000 mm, 3-wire M8.3: M8 connector, 3-pin (plug) M12: M12 connector, 4-pin (plug) TB.4: terminals, 4-pin 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.

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.