

Technical data sheet

Inductive switch

Part no.: 50153115

IS D08MM/4NO-2E0-M8.3

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 | D08 |
| type. operating range limit S_n | 2 mm |
| Operating range S_a | 0 ... 1.6 mm |

Characteristic parameters

| | |
|------|-----------|
| MTTF | 340 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. | 100 mA |
| Residual current, max. | 0.1 mA |
| Voltage drop | ≤ 2 V |

Switching output 1

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

Time behavior

| | |
|---------------------|----------|
| Switching frequency | 1,500 Hz |
| Readiness delay | 100 ms |

Connection

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

Connection 1

| | |
|--------------------|-----------------|
| Function | Signal OUT |
| | Voltage supply |
| Type of connection | Connector |
| Thread size | M8 |
| Type | Male |
| Material | Stainless steel |
| No. of pins | 3 -pin |

Mechanical data

| | |
|--------------------------------------|---------------------------------|
| Design | Cylindrical |
| Dimension ($\varnothing \times L$) | 8 mm x 45 mm |
| Thread size | M8 x 1 mm |
| Type of installation | Embedded |
| Housing material | Stainless steel |
| Stainless steel housing | V2A |
| Sensing face material | Plastic, Polybutylene (PBT) |
| Net weight | 9 g |
| Housing color | Red, RAL 3000 |
| | Silver |
| Type of fastening | Mounting thread |
| | Via optional mounting device |
| Standard measuring plate | 12 x 12 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 |
| Protection class | III |
| Approvals | c UL US |
| 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

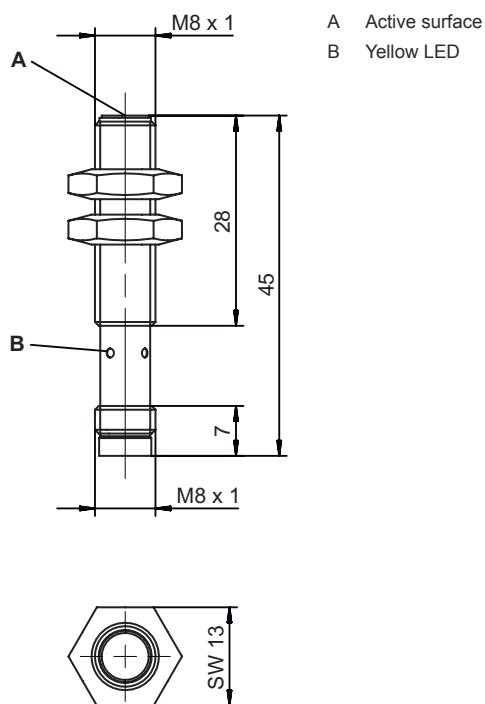
| | |
|-----------------|------|
| Aluminum | 0.38 |
| Stainless steel | 0.71 |
| Copper | 0.31 |
| Brass | 0.41 |
| Fe360 steel | 1 |

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

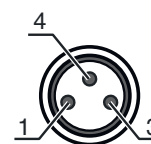


Electrical connection

Connection 1

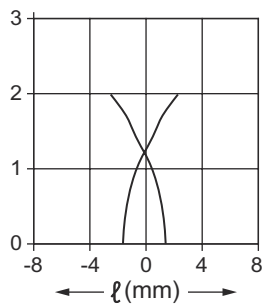
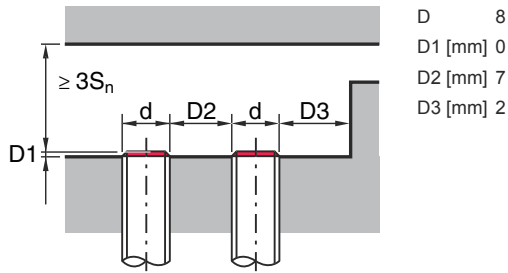
| | |
|--------------------|-----------------|
| Function | Signal OUT |
| | Voltage supply |
| Type of connection | Connector |
| Thread size | M8 |
| Type | Male |
| Material | Stainless steel |
| No. of pins | 3 -pin |

| Pin | Pin assignment |
|-----|----------------|
| 1 | V+ |
| 3 | GND |
| 4 | OUT 1 |

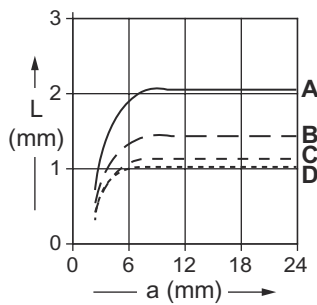
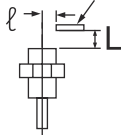


Diagrams

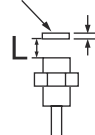
Embedded installation



8mm x 8mm x t1mm



amm x amm x t1mm



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 | Operating principle / construction IS: inductive switch, standard design |
| AAA | Series D08: series with M8 x 1 external thread D12: series with M12 x 1 external thread D18: series with M18 x 1 external thread D22: series in cubic design with 18 x 18 mm D30: series with M30 x 1.5 external thread |
| BB | Housing MM: metal housing (active surface: plastic) / metric thread PP: Plastic housing |
| CCC | Output current / supply 2NC: NPN transistor, NC contact 2NO: NPN transistor, NO contact 4NC: PNP transistor, NC contact 4NO: PNP transistor, NO contact |

Part number code

| | |
|------------|---|
| DDD | Measurement range / type of installation 2E0: typ. range limit 2.0 mm / embedded installation 2N5: typ. range limit 2.5 mm / non-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 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 12N: typ. range limit 12.0 mm / non-embedded installation 15E: typ. range limit 15.0 mm / embedded installation 15N: typ. range limit 15.0 mm / non-embedded installation 16N: typ. range limit 16.0 mm / non-embedded installation 30N: typ. range limit 30.0 mm / non-embedded installation |
| EEE | Electrical connection n/a: cable, standard length 2000 mm, 3-wire M8.3: M8 connector, 3-pin (plug) 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 . |

Notes

| ⚠ Observe intended use! | |
|-------------------------|---|
| | <ul style="list-style-type: none"> ↪ 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

Connection technology - Connection cables

| | Part no. | Designation | Article | Description |
|--|----------|-------------------|------------------|---|
| | 50130842 | KD U-M8-3A-P1-020 | Connection cable | Connection 1: Connector, M8, Axial, Female, 3 -pin Connector, LED: No Connection 2: Open end Shielded: No Cable length: 2.000 mm Sheathing material: PUR |

Accessories

| | Part no. | Designation | Article | Description |
|--|----------|-------------------|------------------|--|
| | 50130844 | KD U-M8-3A-P1-050 | Connection cable | Connection 1: Connector, M8, Axial, Female, 3 -pin Connector, LED: No Connection 2: Open end Shielded: No Cable length: 5.000 mm Sheathing material: PUR |
| | 50130837 | KD U-M8-3A-V1-020 | Connection cable | Connection 1: Connector, M8, Axial, Female, 3 -pin Connector, LED: No Connection 2: Open end Shielded: No Cable length: 2.000 mm Sheathing material: PVC |
| | 50130860 | KD U-M8-3W-V1-020 | Connection cable | Connection 1: Connector, M8, Angled, Female, 3 -pin Connector, LED: No Connection 2: Open end Shielded: No Cable length: 2.000 mm Sheathing material: PVC |

Mounting technology - Other

| | Part no. | Designation | Article | Description |
|--|----------|-------------|---------|--|
| | 50111497 | MC 008K | Clamp | Diameter, inner: 8 mm Design of mounting device: Mounting clamp Fastening, at system: Through-hole mounting Mounting bracket, at device: Clampable Type of mounting device: Rigid 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.