

## Technical data sheet

### Inductive switch

Part no.: 50136025

ISS 112MM/4NC-4E0

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- Dimensioned drawings
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Figure can vary



## Technical data

### Basic data

Series	112
Typ. operating range limit $S_n$	4 mm
Operating range $S_a$	0 ... 3.24 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)
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### 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, PNP
Switching principle	NC (normally closed)

### Timing

Switching frequency	3,000 Hz
Readiness delay	25 ms

### Connection

Number of connections	1 Piece(s)
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### 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
Thread size	M12 x 1 mm
Dimension (Ø x L)	12 mm x 34 mm
Type of installation	Embedded
Housing material	Metal
Metal housing	Nickel-plated brass
Sensing face material	Plastic, Polybutylene (PBT)
Housing color	Red, RAL 3000
	Silver
Type of fastening	Mounting thread
Standard measuring plate	12 x 12 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

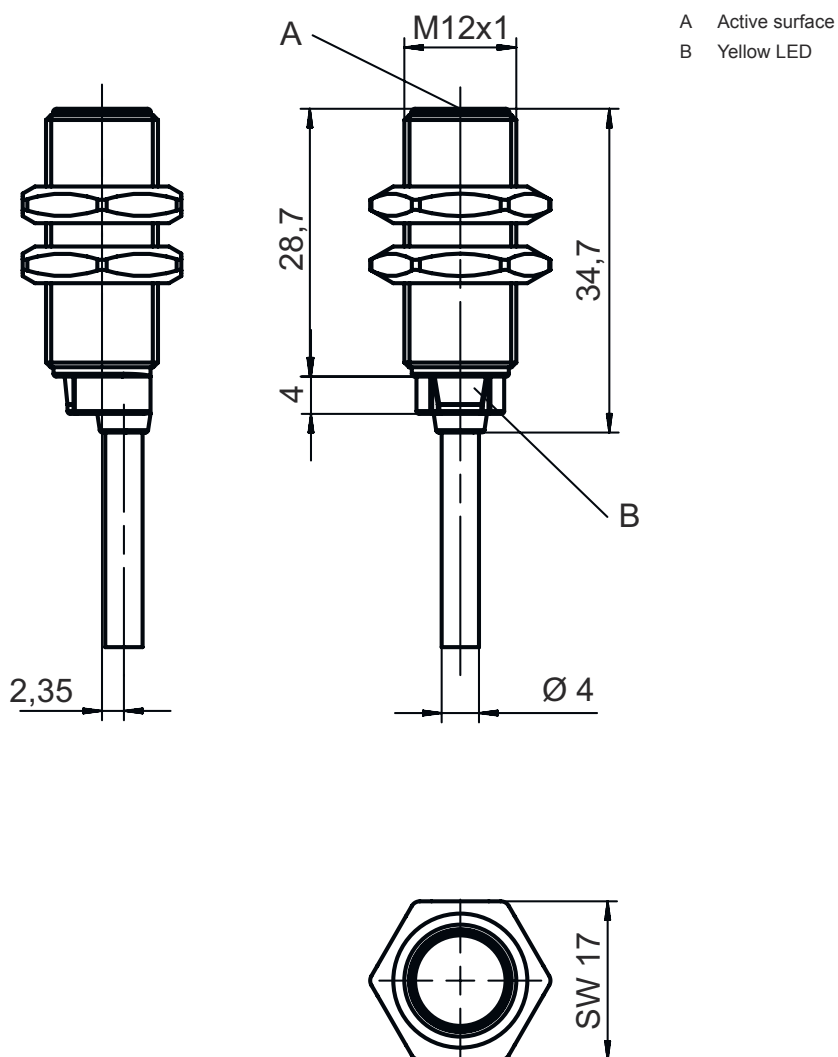
Fe360 steel	1
Stainless steel	0.6 ... 1
Brass	0.35 ... 0.5
Aluminum	0.35 ... 0.45
Copper	0.25 ... 0.45

### Classification

Customs tariff number	85365019
eCl@ss 5.1.4	27270101
eCl@ss 8.0	27270101
eCl@ss 9.0	27270101
eCl@ss 10.0	27270101
eCl@ss 11.0	27270101
ETIM 5.0	EC002714
ETIM 6.0	EC002714
ETIM 7.0	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 mm <sup>2</sup>

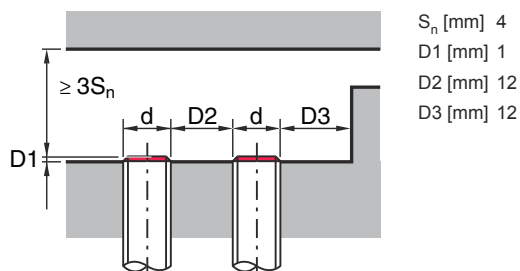
### Conductor color

### 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**

<b>ISX</b>	<b>Operating principle / construction</b> IS: inductive switch, standard design ISS: inductive switch, short construction
<b>YYY</b>	<b>Series</b> 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
<b>XX</b>	<b>Housing</b> MM: metal housing (active surface: plastic) / metric thread PP: Plastic housing MP: metal housing (active surface: plastic) / smooth (without thread)
<b>ZZZ</b>	<b>Switching output</b> 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
<b>AAA</b>	<b>Measurement range / type of installation</b> 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

## Part number code

<b>DDD</b>	<b>Electrical connection</b> 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
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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>

## Accessories

### Mounting technology - Other

	Part no.	Designation	Article	Description
	50132728	AC D12M-CS	Clamp	Diameter, inner: 12 mm Design of mounting device: Mounting clamp Fastening, at system: Screw type, Through-hole mounting Mounting bracket, at device: insertable, Clampable with limit stop Type of mounting device: Clampable, With limit stop Material: Metal
	50111499	MC 012K	Clamp	Diameter, inner: 12 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.