Technical data sheet
Inductive switch
Part no.: 50136030
ISS 112MM/2NO-4E0-M12

Figure can vary

Contents

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)

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)

Timing

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	Connector
Thread size	M12
Type	Male
Material	Metal
No. of pins	4 -pin
Encoding	A-coded

Mechanical data

Design	Cylindrical
Thread size	M12 x 1 mm
Dimension (Ø x L)	12 mm x 50 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 mm², 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

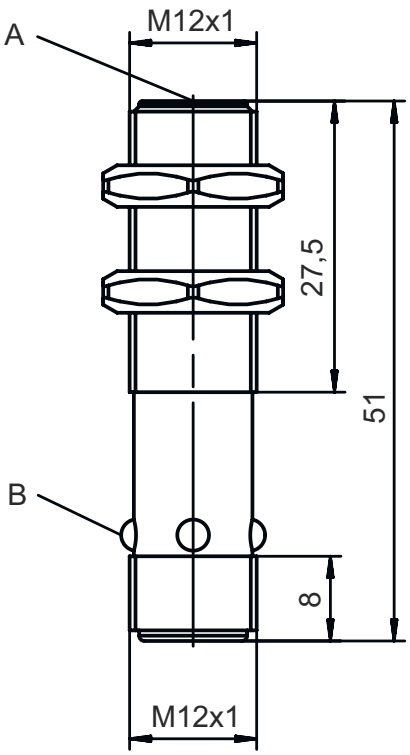
Fe360 steel	1
Stainless steel	0.6 ... 1
Brass	0.35 ... 0.5
Aluminum	0.35 ... 0.45
Copper	0.25 ... 0.45

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



A Active surface
B Yellow LED

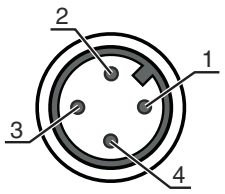
Electrical connection

Connection 1

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

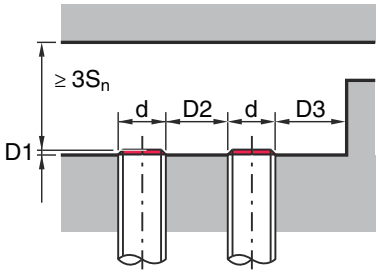
Electrical connection

Pin	Pin assignment
1	V+
2	n.c.
3	GND
4	OUT 1



Diagrams

Embedded installation



S_n [mm] 4
D1 [mm] 1
D2 [mm] 12
D3 [mm] 12

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

Part number code

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.

Accessories

Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50130654	KD U-M12-4A-P1-020	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 2,000 mm Sheathing material: PUR
	50130657	KD U-M12-4A-P1-050	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PUR

Accessories

	Part no.	Designation	Article	Description
	50130648	KD U-M12-4A-V1-020	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 2,000 mm Sheathing material: PVC
	50130652	KD U-M12-4A-V1-050	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC

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.