

## Technical data sheet

### Inductive switch

Part no.: 50130010

ISS 144 PP/4NO-30N-M12

#### Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Diagrams
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For illustration purposes only



## Technical data

### Basic data

Series	144
type. operating range limit $S_n$	30 mm
Operating range $S_a$	0 ... 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	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	NO (normally open)

### Time behavior

Switching frequency	300 Hz
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### Connection

Number of connections	1 Piece(s)
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### 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	Cubic
Dimension (W x H x L)	54 mm x 40 mm x 65 mm
Type of installation	Non-embedded/non-flush
Housing material	Plastic
Plastic housing	Polybutylene (PBT)
Sensing face material	Plastic, Polybutylene (PBT)
Net weight	145 g
Housing color	Black
	Red, RAL 3000
Type of fastening	Through-hole mounting
Standard measuring plate	90 x 90 mm <sup>2</sup> , Fe360

### Operation and display

Type of display	LED
Number of LEDs	2 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

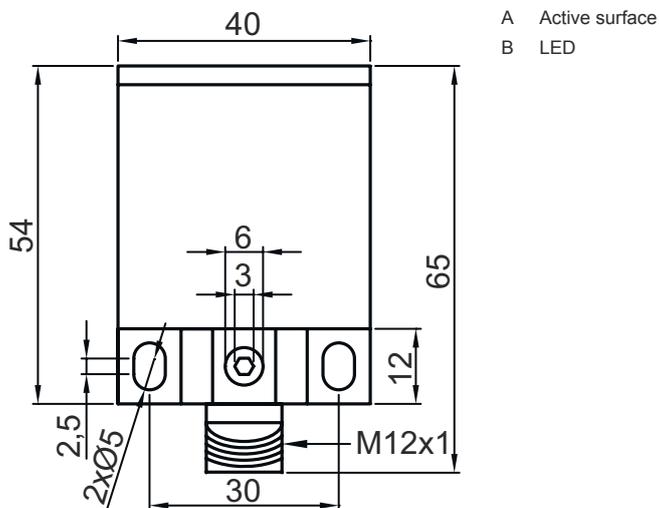
Fe360 steel	1
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### Classification

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

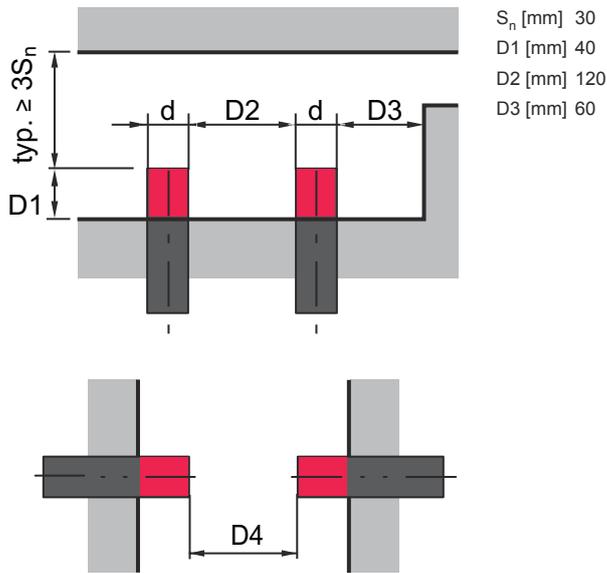
Function	Signal OUT
	Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	Metal
No. of pins	4 -pin
Encoding	A-coded

### Pin Pin assignment

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

# Diagrams

## Non-embedded/non-flush installation



## Operation and display

LED	Display	Meaning
1	Yellow, continuous light	Switching output/switching state
2	Green, continuous light	Operational readiness

## 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 $\varnothing$ 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 1NO: relay, NO contact / AC/DC 1NC: Relay, NC contact / AC/DC

## Part number code

<b>AAA</b>	<p><b>Measurement range / type of installation</b></p> <p>1E2: typ. range limit 1.2 mm / embedded/flush installation                  2E0: typ. range limit 2.0 mm / embedded/flush installation                  4E0: typ. range limit 4.0 mm / embedded/flush installation                  4N0: typ. range limit 4.0 mm / non-embedded/non-flush installation                  5E0: typ. range limit 5.0 mm / embedded/flush installation                  6E0: typ. range limit 6.0 mm / embedded/flush installation                  8E0: typ. range limit 8.0 mm / embedded/flush installation                  8N0: typ. range limit 8.0 mm / non-embedded/non-flush installation                  10E: typ. range limit 10.0 mm / embedded/flush installation                  15N: typ. range limit 15.0 mm / non-embedded/non-flush installation                  16E: typ. range limit 16.0 mm / embedded/flush installation                  16N: typ. range limit 16.0 mm / non-embedded/non-flush installation                  20E: typ. range limit 20.0 mm / embedded/flush installation                  25N: typ. range limit 25.0 mm / non-embedded/non-flush installation                  30N: typ. range limit 30.0 mm / non-embedded/non-flush installation                  40N: typ. range limit 40.0 mm / non-embedded/non-flush installation                  50N: typ. range limit 50.0 mm / non-embedded/non-flush installation                  2E5: Typ. range limit 2.5 mm / embedded/flush installation</p>
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<b>DDD</b>	<p><b>Electrical connection</b></p> <p>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</p>
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### 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.