Technical data sheet
Inductive switch
Part no.: 50114209
IS 240PP/44-8N0

For Illustration purposes only

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Technical data

Leuze

Basic data

Series	240
type. operating range limit S_n	8 mm
Operating range S_a	0 ... 6.4 mm

Characteristic parameters

MTTF	1,530 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 ... 20 %, From U_B
Open-circuit current	0 ... 20 mA
Repeatability, max. (in % of S_r)	10 %, For U_B = 20 … 30 V DC, ambient temperature T_a = 23 °C ± 5 °C
Switching hysteresis	5 %

Outputs

Number of digital switching outputs	2 Piece(s)

Switching outputs

Voltage type	DC
Switching current, max.	250 mA
Residual current, max.	0.01 mA
Voltage drop	≤ 2 V

Switching output 1

Switching element	Transistor, PNP
Switching principle	NO contact – Antivalent

Switching output 2

Switching element	Transistor, PNP
Switching principle	NC contact – Antivalent

Time behavior

Switching frequency	1,400 Hz
Readiness delay	300 ms

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	4 -wire
Wire cross section	0.5 mm²

Mechanical data

Design	Cubic
Dimension (W x H x L)	12 mm x 40 mm x 26 mm
Type of installation	Non-embedded/non-flush
Housing material	Plastic
Plastic housing	PA 66
Sensing face material	Plastic, Polyamide (PA 66)
Net weight	110 g
Housing color	Black
	Red, RAL 3000
Type of fastening	Fastening on back
	Through-hole mounting
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
Protection class	II
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

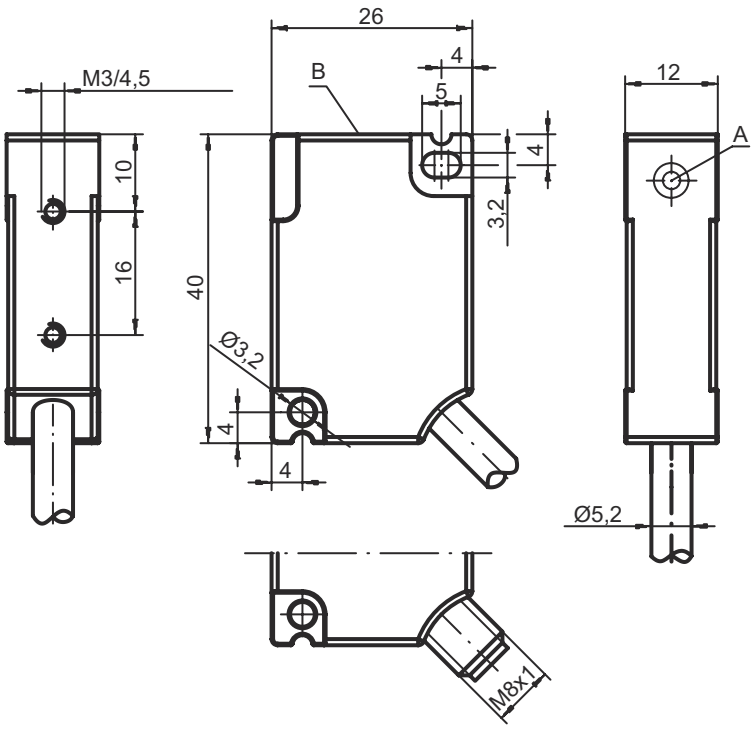
Aluminum	0.4
Stainless steel	0.8
Copper	0.45
Brass	0.55
Fe360 steel	1

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
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



A Active surface
B Yellow LED

Electrical connection

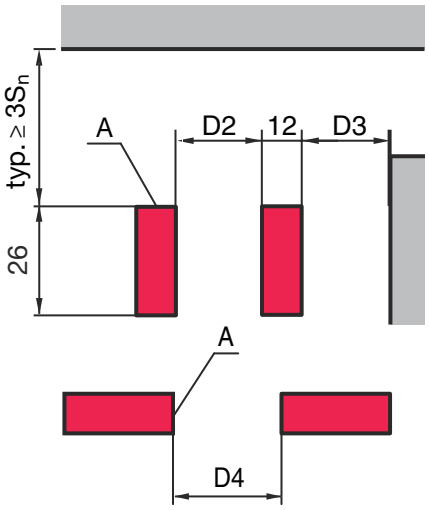
Connection 1

Function	Signal OUT
	Voltage supply
Type of connection	Cable
Cable length	2,000 mm
Sheathing material	PVC
Cable color	Black
Number of conductors	4 -wire
Wire cross section	0.5 mm²

Conductor color	Conductor assignment
Brown	V+
White	OUT 2
Blue	GND
Black	OUT 1

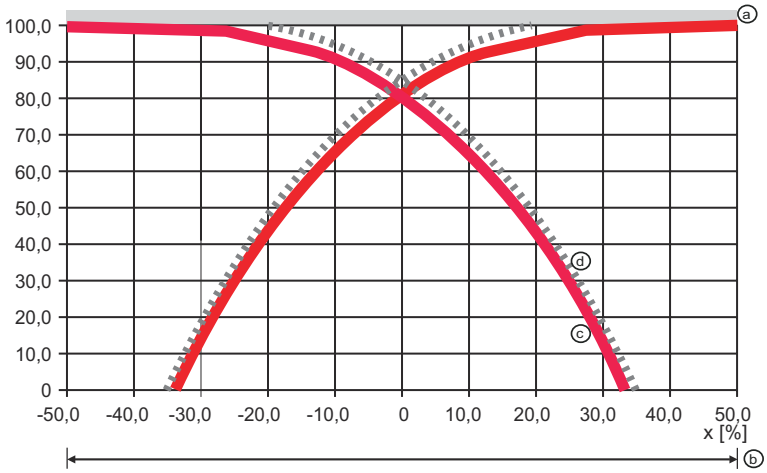
Diagrams

Non-embedded/non-flush installation



S_n [mm] 4
D1 [mm] 0
D2 [mm] 10
D3 [mm] 8
D4 [mm] 25

Typical approach curve



a Standard measuring plate
b Diameter of the active surface
c Switching point
d Hysteresis

Operation and display

LED	Display	Meaning
1	Yellow, continuous light	Switching output/switching state

Part number code

Part designation: **ISX YYY ZZ/AAA.BB-CCC-DDD-DDD**

ISX	**Operating principle / construction** IS: inductive switch, standard design ISS: inductive switch, short construction

Part number code

YYY	**Series** 203: series with Ø 3 mm 204: series with Ø 4 mm 205: series with M5 x 0.5 external thread 206: series with Ø 6.5 mm 208: series with M8 x 1 external thread 212: series with M12 x 1 external thread 218: series with M18 x 1 external thread 230: series with M30 x 1.5 external thread 240: series in cubic design 244: series in cubic design 255: series with 5 x 5 mm² cross section 288: series with 8 x 8 mm² cross section
ZZ	**Housing / thread** MM: metal housing (active surface: plastic) / metric thread FM: Full-metal housing (active surface: stainless steel AISI 316L) / metric thread MP: metal housing (active surface: plastic) / smooth (without thread) .2: New version
AAA	**Output current / supply** 4NO: PNP transistor, NO contact 4NC: PNP transistor, NC contact 2NO: NPN transistor, NO contact 2NC: NPN transistor, NC contact 1NO: relay, NO contact / AC/DC 1NC: Relay, NC contact / AC/DC 44: 2 PNP transistor switching outputs, antivalent (NO + NC) 22: 2 NPN transistor switching outputs, antivalent (NO + NC) L: IO-Link interface X: pin not used
BB	**Special equipment** n/a: no special equipment 5F: Food version 5: housing material V2A (1.4305, AISI 303)
CCC	**Measurement range / type of installation** 1E0: typ. range limit 1.0 mm / embedded/flush installation 1E5: typ. range limit 1.5 mm / embedded/flush installation 2E0: typ. range limit 2.0 mm / embedded/flush installation 3E0: typ. range limit 3.0 mm / embedded/flush installation 4E0: typ. range limit 4.0 mm / embedded/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 10E: typ. range limit 10.0 mm / embedded/flush installation 12E: typ. range limit 12.0 mm / embedded/flush installation 15E: typ. range limit 15.0 mm / embedded/flush installation 20E: typ. range limit 20.0 mm / embedded/flush installation 22E: typ. range limit 22.0 mm / embedded/flush installation 2N5: typ. range limit 2.5 mm / non-embedded/non-flush installation 4N0: typ. range limit 4.0 mm / non-embedded/non-flush installation 8N0: typ. range limit 8.0 mm / non-embedded/non-flush installation 10N: typ. range limit 10.0 mm / non-embedded/non-flush installation 12N: typ. range limit 12.0 mm / non-embedded/non-flush installation 14N: typ. range limit 14.0 mm / non-embedded/non-flush installation 15N: typ. range limit 15.0 mm / non-embedded/non-flush installation 20N: typ. range limit 20.0 mm / non-embedded/non-flush installation 22N: typ. range limit 22.0 mm / non-embedded/non-flush installation 25N: typ. range limit 25.0 mm / non-embedded/non-flush installation 40N: typ. range limit 40.0 mm / non-embedded/non-flush installation
DDD	**Electrical connection** n/a: cable, standard length 2000 mm S12: M12 connector, 4-pin, axial 200-S12: cable, length 200 mm with M12 connector, 4-pin, axial 200-S8.3: cable, length 200 mm with M8 connector, 3-pin, axial S8.3: M8 connector, 3-pin, axial 005-S8.3: cable, length 500 mm with M8 connector, 3-pin, axial 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.

	For UL applications:
	↳ For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).