Technical data sheet
Inductive switch
Part no.: 50114214
IS 244PP/44-40N-TB.4

For Illustration purposes only

Contents

Technical data

Leuze

Basic data

Series	244
Typ. operating range limit S_n	40 mm
Operating range S_a	0 ... 32.4 mm

Special version

Special version	Antivalent

Characteristic parameters

MTTF	1,230 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
Switching hysteresis	5 %

Outputs

Number of digital switching outputs	2 Piece(s)

Switching outputs

Voltage type	DC
Switching current, max.	200 mA
Residual current, max.	0.5 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	180 Hz
Readiness delay	80 ms

Connection

Number of connections	1 Piece(s)

Connection 1

Function	Signal OUT
	Voltage supply
Type of connection	Terminal
No. of pins	4 -pin

Mechanical data

Design	Cubic
Dimension (W x H x L)	40 mm x 40 mm x 118 mm
Type of installation	Non-embedded
Housing material	Plastic
Plastic housing	PA 66
Sensing face material	Plastic, Polyamide (PA 66)
Net weight	225 g
Housing color	Black
Type of fastening	Through-hole mounting
Standard measuring plate	120 x 120 mm², Fe360

Operation and display

Type of display	LED
Number of LEDs	4 Piece(s)

Environmental data

Ambient temperature, operation	-25 ... 85 °C
Ambient temperature, storage	-25 ... 85 °C

Certifications

Degree of protection	IP 68
	IP 69K
Protection class	II
Certifications	c UL US
Standards applied	IEC 60947-5-2

Correction factors

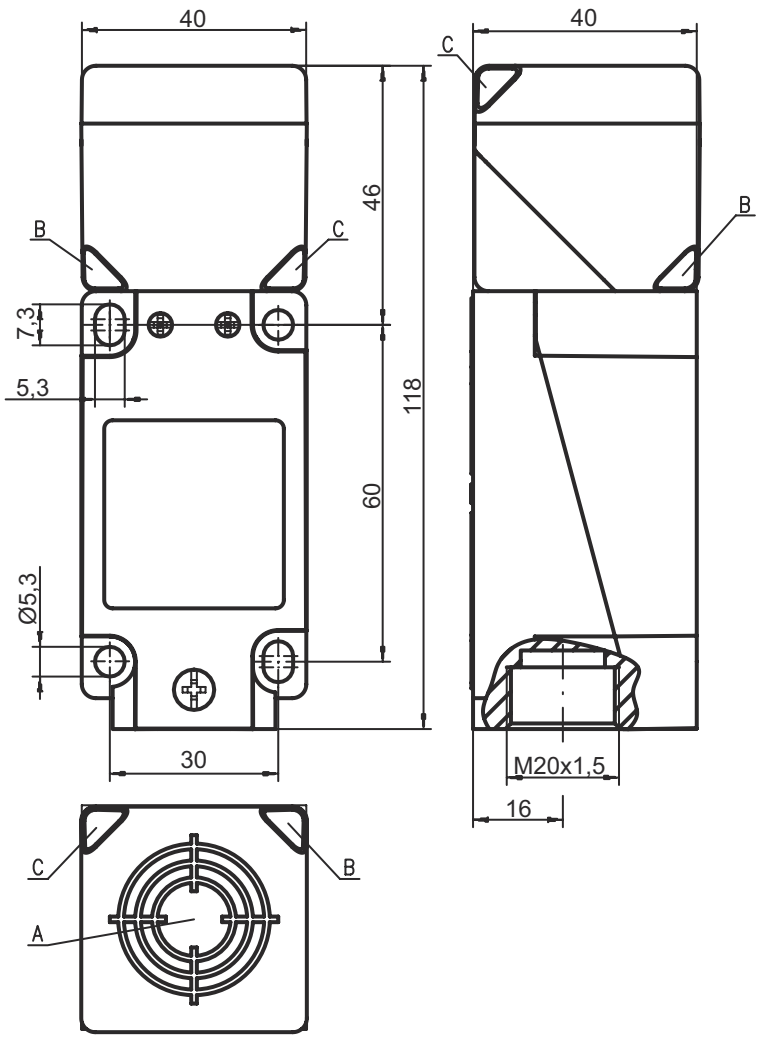
Aluminum	0.31
Stainless steel	0.74
Copper	0.3
Brass	0.39

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
ETIM 5.0	EC002714
ETIM 6.0	EC002714
ETIM 7.0	EC002714
ETIM 8.0	EC002714
ETIM 9.0	EC002714

Dimensioned drawings

All dimensions in millimeters



A Active surface
B Yellow LED
C Green LED

Electrical connection

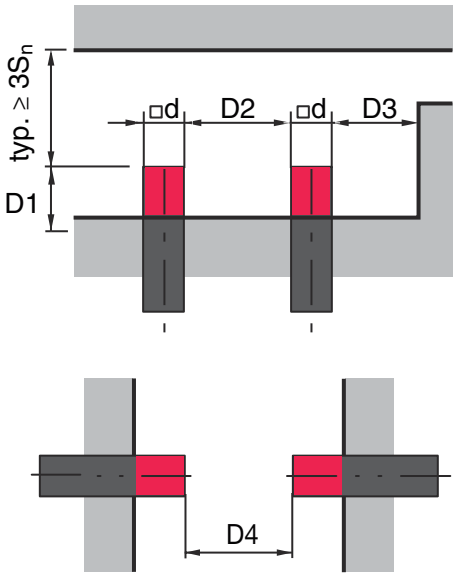
Connection 1

Function	Signal OUT
	Voltage supply
Type of connection	Terminal
No. of pins	4 -pin

Terminal	Assignment
1	V+
2	OUT 2
3	GND
4	OUT 1

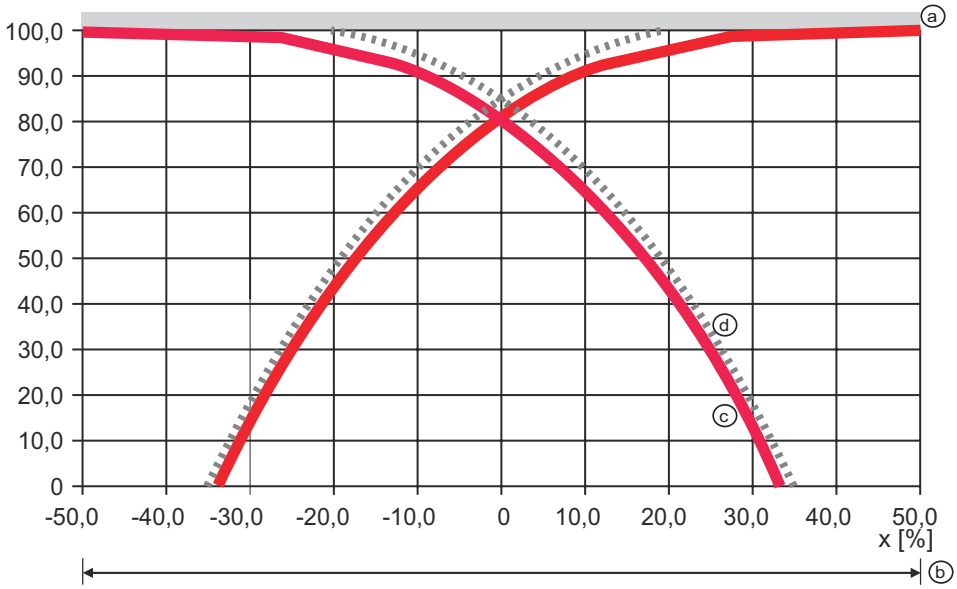
Diagrams

Non-embedded installation



S_n [mm] 40
D1 [mm] 40
D2 [mm] 160
D3 [mm] 42
D4 [mm] 300

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
2	Green, continuous light	Operational readiness
3	Yellow, continuous light	Switching output/switching state
4	Green, continuous light	Operational readiness

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
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)
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)
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 installation 1E5: typ. range limit 1.5 mm / embedded installation 2E0: typ. range limit 2.0 mm / embedded installation 3E0: typ. range limit 3.0 mm / embedded installation 4E0: typ. range limit 4.0 mm / 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 10E: typ. range limit 10.0 mm / embedded installation 12E: typ. range limit 12.0 mm / embedded installation 15E: typ. range limit 15.0 mm / embedded installation 20E: typ. range limit 20.0 mm / embedded installation 22E: typ. range limit 22.0 mm / embedded installation 2N5: typ. range limit 2.5 mm / non-embedded installation 4N0: typ. range limit 4.0 mm / non-embedded installation 8N0: typ. range limit 8.0 mm / non-embedded installation 10N: typ. range limit 10.0 mm / non-embedded installation 12N: typ. range limit 12.0 mm / non-embedded installation 14N: typ. range limit 14.0 mm / non-embedded installation 15N: typ. range limit 15.0 mm / non-embedded installation 20N: typ. range limit 20.0 mm / non-embedded installation 22N: typ. range limit 22.0 mm / non-embedded installation 25N: typ. range limit 25.0 mm / non-embedded installation 40N: typ. range limit 40.0 mm / non-embedded 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).