Technical data sheet

Inductive switch

Part no.: 50141480

ISS 218MM/44-8N0

Leuze

Figure can vary

Contents

CE

c(UL)us

IP 67

Technical data

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Basic data

Series	218
Typ. operating range limit S_n	8 mm
Operating range S_a	0 ... 6.48 mm

Special design

Special design	Antivalent

Characteristic parameters

MTTF	850 years

Electrical data

Protective circuit	Polarity reversal protection
	Short circuit protected
	Transient protection

Performance data

Supply voltage U_B	10 ... 36 V, DC
Residual ripple	0 ... 10 %, From U_B
Open-circuit current	0 ... 16 mA
Temperature drift, max. (in % of S_r)	19 %
Repeatability, max. (in % of S_r)	10 %
Switching hysteresis	20 %

Outputs

Number of digital switching outputs	2 Piece(s)

Switching outputs

Voltage type	DC
Switching current, max.	200 mA
Residual current, max.	0.05 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

Timing

Switching frequency	1,500 Hz
Readiness delay	50 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	Gray
Number of conductors	4 -wire
Wire cross section	0.25 mm²

Mechanical data

Design	Cylindrical
Thread size	M18 x 1 mm
Dimension (Ø x L)	18 mm x 63 mm
Type of installation	Non-embedded
Housing material	Metal, Nickel-plated brass
Sensing face material	Plastic, Polybutylene (PBT)
Net weight	85 g
Housing color	Gray
	Silver
Type of fastening	Mounting thread
Standard measuring plate	24 x 24 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	-30 ... 80 °C

Certifications

|	
Degree of protection	IP 67
Protection class	II
Certifications	c UL US
Test procedure for EMC in accordance with standard	EN 61000-4-2, -3, -4, -8

Correction factors

Aluminum	0.5
Stainless steel	0.7
Copper	0.3
Brass	0.5
Fe360 steel	1

Classification

Customs tariff number	85365019
eCl@ss 8.0	27270101
eCl@ss 9.0	27270101
ETIM 5.0	EC002714
ETIM 6.0	EC002714

Dimensioned drawings

All dimensions in millimeters

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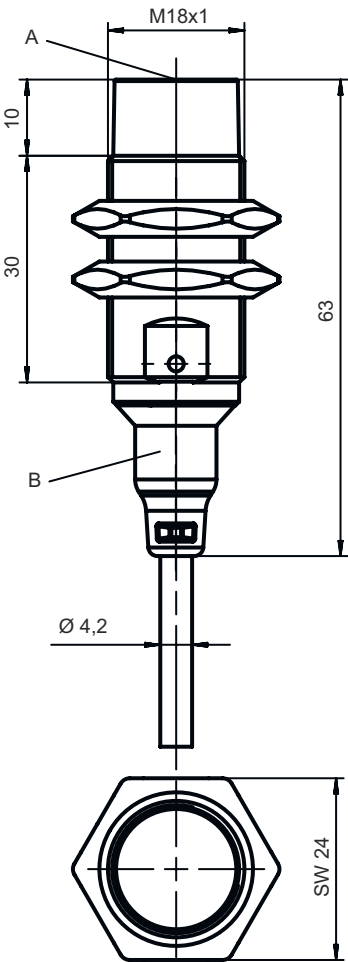
Electrical connection

Connection 1

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

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Diagrams

Non-embedded installation

S_n [mm] Typ. operating range limit

d   Diameter / distance
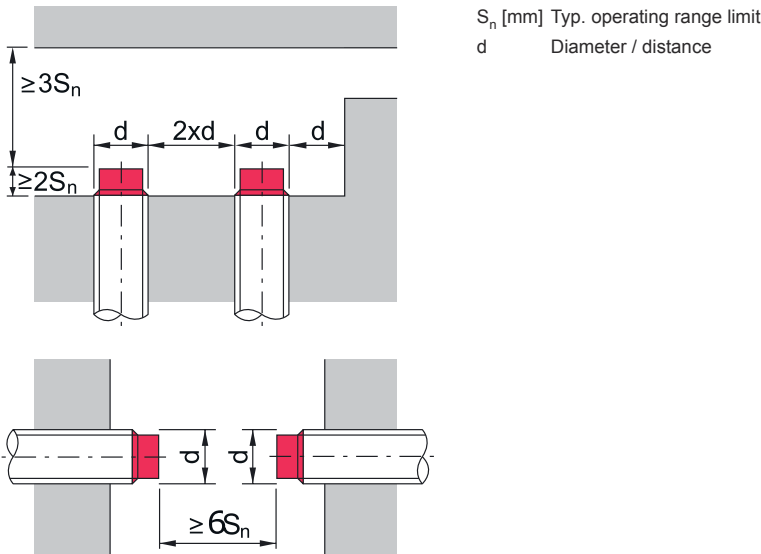
Operation and display

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

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)

We reserve the right to make technical changes

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Part number code

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

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).

Accessories

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Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
	50113548	BT D18M.5	Mounting bracket	Diameter, inner: 18 mm Design of mounting device: Angle, L-shape Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Rigid Material: Stainless steel

Mounting technology - Rod mounts

	Part no.	Designation	Article	Description
	50117490	BTU D18M-D12	Mounting system	Design of mounting device: Mounting system Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal

Mounting technology - Other

	Part no.	Designation	Article	Description
	50132729	AC D18M-CS	Clamp	Diameter, inner: 18 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
	50111501	MC 018K	Clamp	Diameter, inner: 18 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
	50111502	MC 018K-LS	Clamp	Diameter, inner: 18 mm Design of mounting device: Mounting clamp Fastening, at system: Through-hole mounting Mounting bracket, at device: Clampable with limit stop 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.