

## Technical data sheet

### Inductive switch

Part no.: 50141478

ISS 218MM/44-5E0

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- Electrical connection
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Figure can vary



## Technical data

### Basic data

Series	218
Typ. operating range limit $S_n$	5 mm
Operating range $S_a$	0 ... 4.05 mm

### Special version

Special version	Antivalent
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### Characteristic parameters

MTTF	850 years
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### 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)
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### Switching outputs

Voltage type	DC
Switching current, max.	200 mA
Residual current, max.	0.05 mA
Voltage drop	$\leq 2$ 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)
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### 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 mm <sup>2</sup>

### Mechanical data

Design	Cylindrical
Thread size	M18 x 1 mm
Dimension ( $\varnothing$ x L)	18 mm x 53 mm
Type of installation	Embedded
Housing material	Metal
Metal housing	Nickel-plated brass
Sensing face material	Plastic, Polybutylene (PBT)
Net weight	82 g
Housing color	Gray
	Silver
Type of fastening	Mounting thread
Standard measuring plate	18 x 18 mm <sup>2</sup> , 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

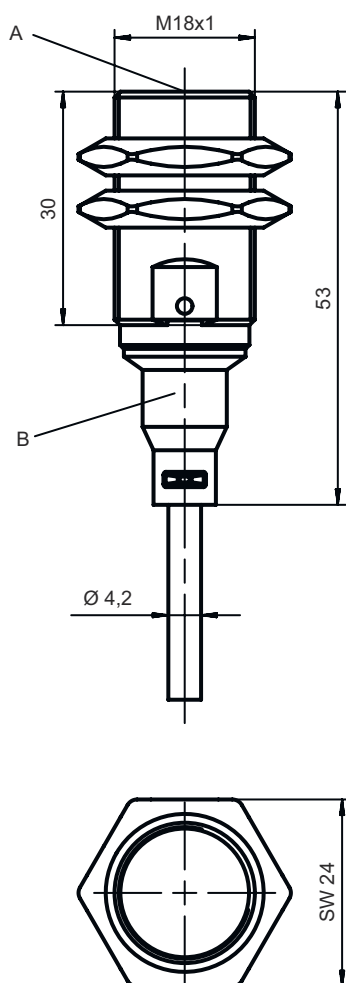
Aluminum	0.5
Stainless steel	0.7
Copper	0.3
Brass	0.5
Fe360 steel	1

### Classification

Customs tariff number	85365019
eCl@ss 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



## Electrical connection

### 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 mm <sup>2</sup>

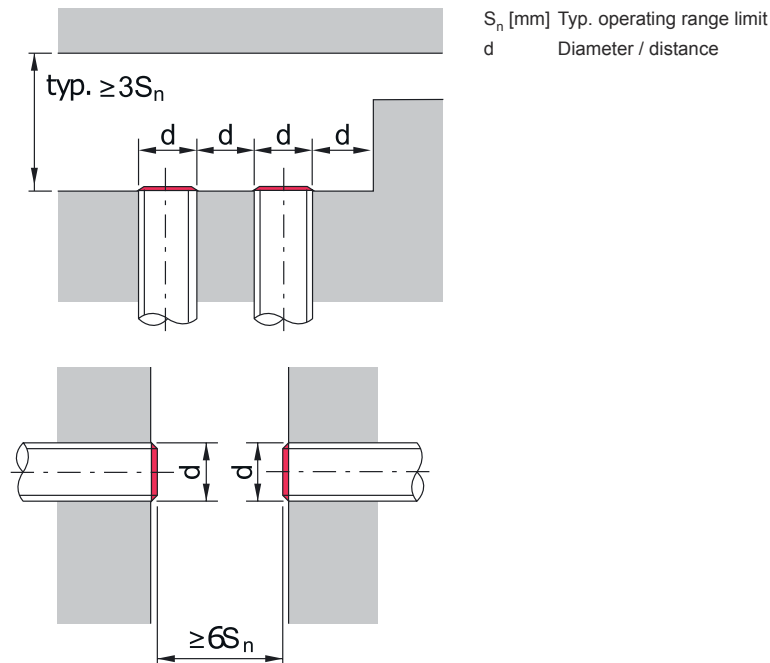
### Conductor color

### Conductor assignment

Brown	V+
White	OUT 2
Blue	GND
Black	OUT 1

# Diagrams

## Embedded installation



## 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

<b>ISX</b>	<b>Operating principle / construction</b> IS: inductive switch, standard design ISS: inductive switch, short construction
<b>YYY</b>	<b>Series</b> 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 mm <sup>2</sup> cross section 288: series with 8 x 8 mm <sup>2</sup> cross section
<b>ZZ</b>	<b>Housing / thread</b> 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)

## Part number code

<b>AAA</b>	<b>Output current / supply</b> 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)
<b>BB</b>	<b>Special equipment</b> n/a: no special equipment 5F: food version 5: housing material V2A (1.4305, AISI 303)
<b>CCC</b>	<b>Measurement range / type of installation</b> 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
<b>DDD</b>	<b>Electrical connection</b> 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!**


	<ul style="list-style-type: none"> <li>⚡ This product is not a safety sensor and is not intended as personnel protection.</li> <li>⚡ The product may only be put into operation by competent persons.</li> <li>⚡ Only use the product in accordance with its intended use.</li> </ul>
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**For UL applications:**


	<ul style="list-style-type: none"> <li>⚡ For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).</li> </ul>
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## Accessories




### 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.