

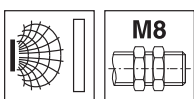
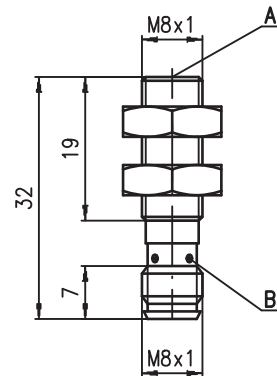
ISS 208 (short construction)

Inductive switches

en 01-2011/09 50117146



Dimensioned drawing



M8  
2mm



10 - 30 V  
DC  
5 kHz  
embedded

- Slim and short cylindrical metal housing M8
- Stainless steel housing
- Built-in short circuit protection, inductive protection and polarity reversal protection
- LED for switching state visible from 360°

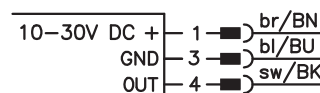


Tightening torque of the fastening nuts < 10Nm !

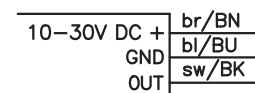
- A Active surface
- B Yellow indicator diode

Electrical connection

M8 connector



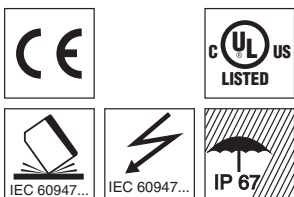
Cable



Accessories:

(available separately)

- M8 connectors (D M8...)
- Ready-made cables (K-D ...)
- Mounting clamp (MC 008...)



We reserve the right to make changes • DS\_ISS\_208\_E\_en.fm

## Specifications

### General specifications

Type of installation	
Typ. operating range limit $S_n$	2.0mm
Operating range $S_a$	0 ... 1.6mm

### Electrical data

Operating voltage $U_B$ 1)	10 ... 30VDC
Residual ripple $\sigma$	$\leq 20\%$ of $U_B$
Output current $I_L$	$\leq 200$ mA
Open-circuit current $I_0$	$\leq 10$ mA
Residual current $I_r$	$\leq 100$ $\mu$ A
Switching output/function	.../4NO... PNP transistor, make-contact (NO) .../4NC... PNP transistor, break-contact (NC) .../2NO... NPN transistor, make-contact (NO) .../2NC... NPN transistor, break-contact (NC)

Voltage drop $U_d$		
Hysteresis H of $S_r$		$\leq 10\%$
Temperature drift of $S_r$	$\leq 10\%$ 2)	
Repeatability	$\leq 4.7\%$ 3)	$\leq 5\%$

### Timing

Switching frequency f	5kHz
Delay before start-up	$\leq 50$ ms

### Indicators

Yellow LED (visible from 360°)	switching state
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### Mechanical data

Housing	stainless steel
Standard surface plate	8 x 8mm <sup>2</sup> , Fe360
Active surface	PA12
Weight (M8 plug/cable)	approx. 8g/approx. 70g
Connection type	M8 connector, 3-pin or cable: 2m, PVC, 3 x 0.14mm <sup>2</sup> , $\varnothing$ 3.5mm

### Environmental data

Ambient temperature	-25°C ... +70°C
Protection class	IP 67
Protective circuit 4)	1, 2, 3
Standards applied	IEC/EN 60947-5-2
Electromagnetic compatibility	IEC 60255-5 1kV IEC 61000-4-2 Level 3 air 8kV (ESD) IEC 61000-4-3 Level 3 10V/m (RFI) IEC 61000-4-4 Level 3 2kV (Burst)

- 1) Observe the safety regulations and installation instructions regarding power supply and wiring; for UL applications: only for use in "Class 2" circuits acc. to NEC
- 2) Over the entire operating temperature range
- 3) For  $U_B = 20 \dots 30$ VDC, ambient temperature  $T_a = 23^\circ\text{C} \pm 5^\circ\text{C}$
- 4) 1=polarity reversal protection, 2=short circuit protection, 3=inductive protection for all outputs

## Order guide

The sensors listed here are preferred types; current information at [www.leuze.com](http://www.leuze.com).

	Designation	Part No.
$S_n = 2$ mm	ISS 208 MM/4NO-2E0-S8.3	50117201

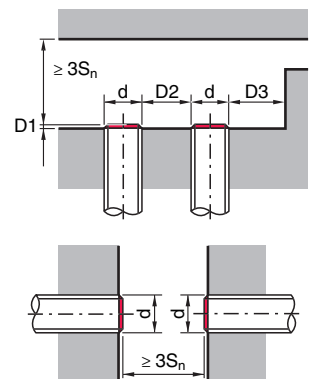
## Tables

Reduction factors:  
for  $S_n = 2.0$ mm

Steel Fe360	1
Copper	0.25
Aluminum	0.25
Brass	0.35
Stainless steel	0.65

## Mounting

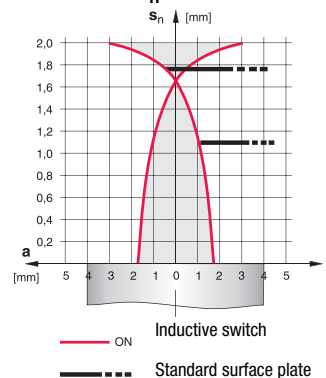
### Embedded installation:



Ferromagnetic and non-ferromagnetic materials			
$S_n$ [mm]	D1 [mm]	D2 [mm]	D3 [mm]
2.0	0	4.0	2.0

## Diagrams

Models with  $S_n = 2.0$ mm



**ISS 208 (short construction)**

**Inductive switches**

**Part number code**

I	S	S	2	0	8	M	M	/	4	N	0	-	2	E	0	-	S	8	.	3
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**Operating principle / construction**

**ISS** Inductive switch / short construction

**Series**

**208** Series with M8 x 1 external thread

**Housing / thread**

**MM** Metal housing (active surface: plastic) / metric thread

**Output function**

**4NO** PNP transistor, make-contact (NO)

**4NC** PNP transistor, break-contact (NC)

**2NO** NPN transistor, make-contact (NO)

**2NC** NPN transistor, break-contact (NC)

**Measurement range / type of installation**

**2E0** Typ. scan range limit 2.0mm / embedded installation

**Electrical connection**

**N/A** Cable, PVC, standard length 2000mm

**S8.3** M8 connector, 3-pin, axial

**Remarks**

● **Approved purpose:**

This product may only be used by qualified personnel and must only be used for the approved purpose.

This sensor is not a safety sensor and is not to be used for the protection of persons.

