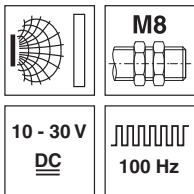


IS 208 factor 1

Inductive switches

en_01-2015/01 50128376

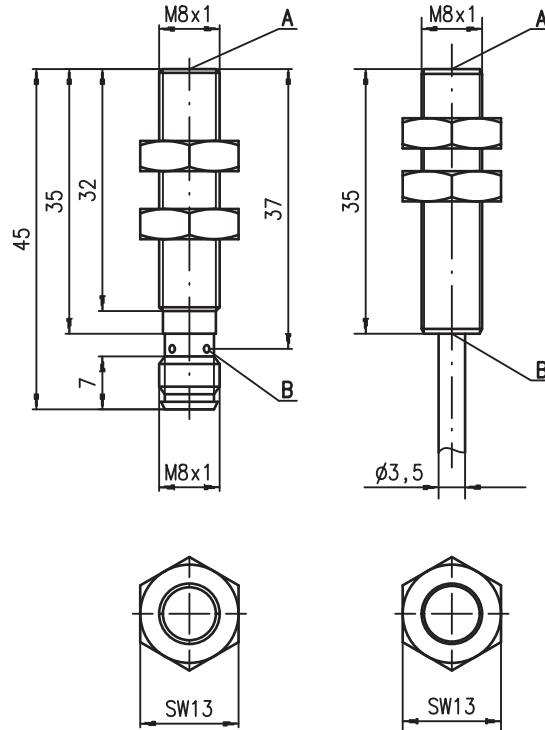


2 mm

Embedded

- Switching distance independent of object property (factor 1 sensor)
- Slim and short cylindrical metal housing M8
- V2A / AISI 303 stainless steel housing
- Built-in short circuit protection, inductive protection and polarity reversal protection
- LED for switching state visible from 360°

Dimensioned drawing

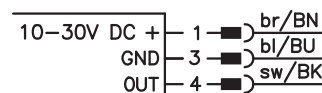


Tightening torque of the fastening nuts < 10Nm !

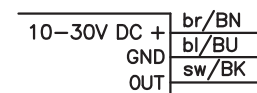
- A** Active surface
- B** Yellow indicator diode

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_IS208E_F1_en_50128376.fm

Specifications

General specifications

Type of installation
Typ. operating range limit S_n
Operating range S_a

IS 208...-2E0...
embedded installation
2.0mm
0 ... 1.6mm

Electrical data

Operating voltage U_B 1)
Residual ripple σ
Output current I_L
Open-circuit current I_0
Residual current I_r
Switching output/function

10 ... 30VDC
 $\leq 20\%$ of U_B
 $\leq 200\text{mA}$
 $\leq 10\text{mA}$
 $\leq 100\mu\text{A}$
.../4NO... PNP transistor, NO contact
.../4NC... PNP transistor, NC contact
.../2NO... NPN transistor, NO contact
.../2NC... NPN transistor, NC contact

Voltage drop U_d
Hysteresis H of S_r
Temperature drift of S_r
Repeatability

$\leq 2\text{V}$
 $\leq 20\%$
 $\leq 10\%$ 2)
 $\leq 5\%$ 3)

Timing

Switching frequency f
Delay before start-up

100Hz
 $\leq 30\text{ms}$

Indicators

Yellow LED (visible from 360°)

switching state 4)

Mechanical data

Housing
Standard measuring plate
Active surface
Weight (M8 plug/cable)
Connection type

V2A stainless steel (1.4305, AISI 303)
8 x 8mm², Fe360
V2A stainless steel (1.4305, AISI 303)
approx. 15g/approx. 50g
M8 connector, 3-pin, or
cable: 2m, PUR, 3 x 0.14mm², \varnothing 3.5mm

Environmental data

Ambient temperature
Degree of protection
Protective circuit 5)
Standards applied
Electromagnetic compatibility

-25°C ... +70°C
IP 67, IP 68
1, 2, 3
IEC/EN 60947-5-2
IEC 60255-5
IEC 61000-4-2
IEC 61000-4-3
IEC 61000-4-4
1kV
Level 4 air 8kV (ESD)
Level 3 10V/m (RFI)
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 $U_B = 20 \dots 30\text{VDC}$, ambient temperature $T_a = 23^\circ\text{C} \pm 5^\circ\text{C}$
- 4) Continuous LED: $0 \leq S \leq 0.8S_r$; flashing LED: $0.8S_r \leq S \leq S_r$
- 5) 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.

$S_n = 2\text{mm}$	Designation	Part no.
	IS 208 FM/2NO.5-2E0	50128184
	IS 208 FM/4NO.5-2E0	50128182
	IS 208 FM/2NO.5-2E0-S8.3	50128183
	IS 208 FM/4NO.5-2E0-S8.3	50128181
	Additional types on request	

Tables

Reduction factors for surface plates made of:
for $S_n = 2.0\text{mm}$

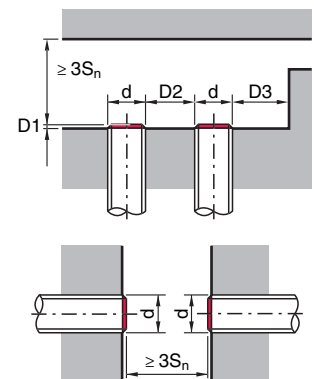
Steel Fe360	1
Copper	0.8
Aluminum	1
Brass	1.4
Stainless steel	0.4

Reduction factors for installation in:
for $S_n = 2.0\text{mm}$

Steel Fe360	0.9
Aluminum	0.8
Brass	0.8
Stainless steel	0.9

Mounting

Embedded installation:

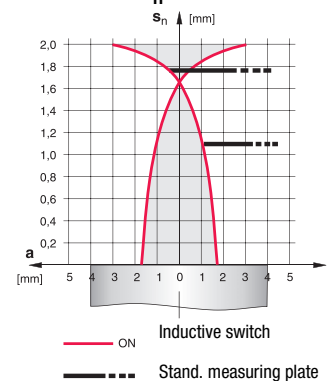


Ferromagnetic and non-ferromagnetic materials

S_n [mm]	D1 [mm]	D2 [mm]	D3 [mm]
2.0	0	12.0	1.0

Diagrams

Models with $S_n = 2.0\text{mm}$



Remarks

Operate in accordance with 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 the intended use.

Part number code

I	S	2	0	8	F	M	/	4	N	0	.	5	-	2	E	0	-	S	8	.	3
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Operating principle / construction

IS Inductive switch / Standard

Series

208 Series with M8 x 1 external thread

Housing / thread

FM Full-metal housing (one piece, gap-free) / metric thread

Output function

4NO PNP transistor, NO contact

4NC PNP transistor, NC contact

2NO NPN transistor, NO contact

2NC NPN transistor, NC contact

Properties / Special equipment

5 Housing material V2A (1.4305, AISI 303)

Measurement range / type of installation

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

Electrical connection

N/A Cable, PUR, standard length 2000mm

S8.3 M8 connector, 3-pin, axial

