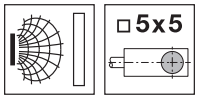
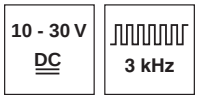
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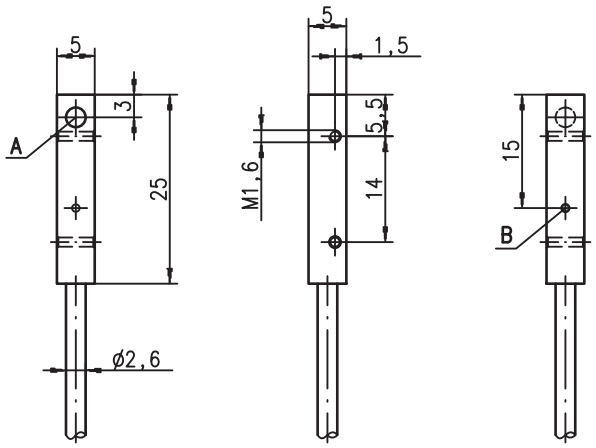
1,5mm



Embedded

- Slim and short 5x5mm cubical metal housing
- Chromium-plated brass housing
- Built-in short circuit protection, inductive protection and polarity reversal protection
- LED for switching state

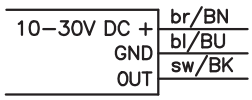
Dimensioned drawing

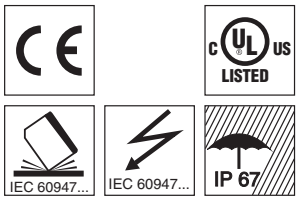


A Active surface
B Yellow indicator diode

Electrical connection

Cable





Accessories:

(available separately)

We reserve the right to make changes • DS_IS255MP_en.fm

Specifications

General specifications		**IS 255…-1E5…**
Type of installation		embedded installation
Typ. operating range limit S_n		1.5mm
Operating range S_a		0 … 1.2mm
Electrical data		
Operating voltage U_B 1)		10 … 30VDC
Residual ripple σ		≤ 20% of U_B
Output current I_L		≤ 200mA
Open-circuit current I_0		≤ 10mA
Residual current I_r		≤ 100µA
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		≤ 2V
Hysteresis H of S_r		≤ 10%
Temperature drift of S_r		≤ 10% 2)
Repeatability		≤ 2% 3)
Timing		
Switching frequency f		3kHz
Delay before start-up		≤ 10ms
Indicators		
Yellow LED		switching state
Mechanical data		
Housing		chromium-plated brass
Standard surface plate		5 x 5mm², Fe360
Active surface		PA66
Weight (M8 plug/cable)		approx. 34g
Connection type		cable: 2m, PUR, 3 x 0.055mm², Ø 2.6mm
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 2 air 4kV (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 … 30VDC, ambient temperature T_a = 23°C ± 5°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.

	Designation	Part No.
S_n = 1.5mm	IS 255 MP/4NO-1E5	50113209
	IS 255 MP/2NO-1E5	50113210

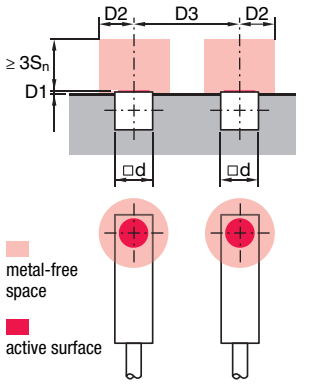
Tables

Reduction factors: for S_n = 1.5mm

Steel Fe360	1
Copper	0.60
Aluminum	0.60
Brass	0.70
Stainless steel	0.85

Mounting

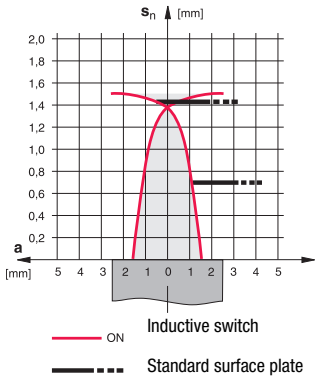
Embedded installation:



Ferromagnetic and non-ferromagnetic materials			
S_n [mm]	D1 [mm]	D2 [mm]	D3 [mm]
1.5	0	4	6

Diagrams

Models with **s_n = 1.5mm**



IS 255 — Inductive switches

Type key

I	S		2	5	5		M	P	/	4	N	O	-	1	E	5					

Operating principle / construction

IS	Inductive switch / Standard

Series

255	Cubic series with 5 x 5 mm² cross section

Housing / thread

MP	Metal housing (active surface: plastic) / smooth

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

1E5	Typ. scan range limit 1.5 mm / embedded installation

Electrical connection

N/A	Cable, PUR, standard length 2000 mm

Remarks

- **Approved purpose**:
  The inductive switches are electronic sensors for the inductive, contactless detection of objects.
  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.