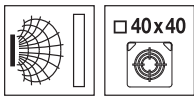


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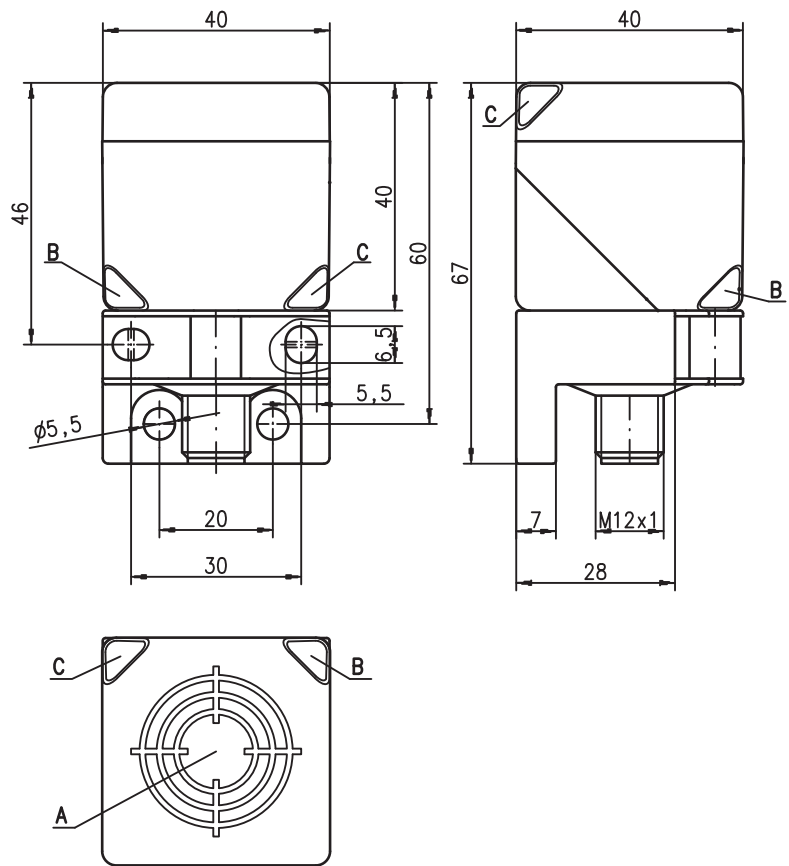
**20mm**



**embedded**

- Short 40 x 40 mm cubical housing
- Light plastic housing
- Built-in short circuit protection, polarity reversal protection
- LED for switching state

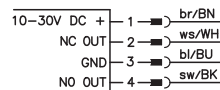
**Dimensioned drawing**



**Tightening torque of the fastening screws < 1.8Nm !**

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

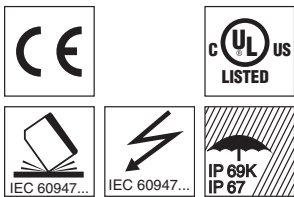
**Electrical connection**



**Accessories:**

(available separately)

- M12 connectors (KD ... )
- Ready-made cables (K-D ... )



We reserve the right to make changes • ISS\_244\_E\_en.fm

**Specifications**

**General specifications**

Type of installation embedded installation  
 Typ. operating range limit  $S_n$  20.0mm  
 Operating range  $S_a$  0 ... 16.2mm

**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  $I_0$   $\leq 20$ mA  
 Residual current  $I_r$   $\leq 500$  $\mu$ A  
 Switching output/function .../44... PNP transistor, make-contact + break-contact (NO + NC), complementary  
 .../22... NPN transistor, make-contact + break-contact (NO + NC), complementary  
 Voltage drop  $U_d$   $\leq 2$ V  
 Hysteresis H of  $S_r$  typ. 5 %  
 Repeatability of  $S_r$   $\leq 10\%$  2)

**Timing**

Switching frequency  $f$   $\leq 150$ Hz  
 Delay before start-up  $\leq 300$ ms

**Indicators**

Yellow LED (visible from 360°) switching state

**Mechanical data**

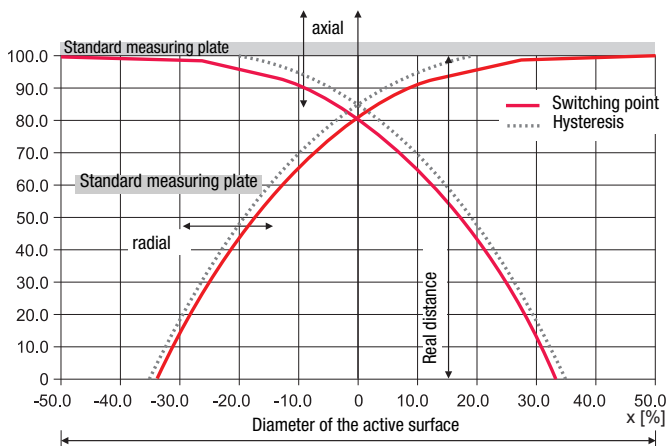
Housing PA  
 Standard measuring plate 60 x 60mm<sup>2</sup>, Fe360  
 Active surface PA  
 Weight (M12 plug/cable) approx. 130g  
 Connection type M12 connector

**Environmental data**

Ambient temperature -25°C ... +85°C  
 Protection class IP 67, IP 69K  
 Protective circuit 3) 1, 2  
 Standards applied IEC/EN 60947-5-2  
 IEC 61000-4-2  
 IEC 61000-4-3  
 IEC 61000-4-4  
 Air 8kV (ESD)  
 10V/m (RFI)  
 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) For  $U_B$  ambient temperature  $T_a = 23^\circ\text{C} \pm 5^\circ\text{C}$
- 3) 1=polarity reversal protection, 2=short-circuit protection, for all outputs

**Typical approach curve:**



**Order guide**

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

$S_n = 20$ mm	Designation	Part No.
	ISS 244 PP/44-20E-S12	50114217
	ISS 244 PP/22-20E-S12	50114215

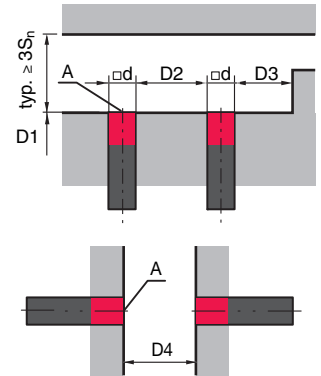
**Tables**

Reduction factors:  
for  $S_n = 20.0$ mm

Material	Reduction factor
Steel Fe360	1
Copper	0.31
Aluminum	0.33
Brass	0.41
Stainless steel	0.74

**Mounting**

**Embedded installation:**



A: active surface

Ferromagnetic and non-ferromagnetic materials				
$S_n$ [mm]	D1 [mm]	D2 [mm]	D3 [mm]	D4 [mm]
20	0	40	10	70

**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.