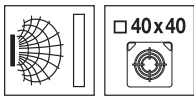
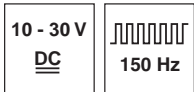


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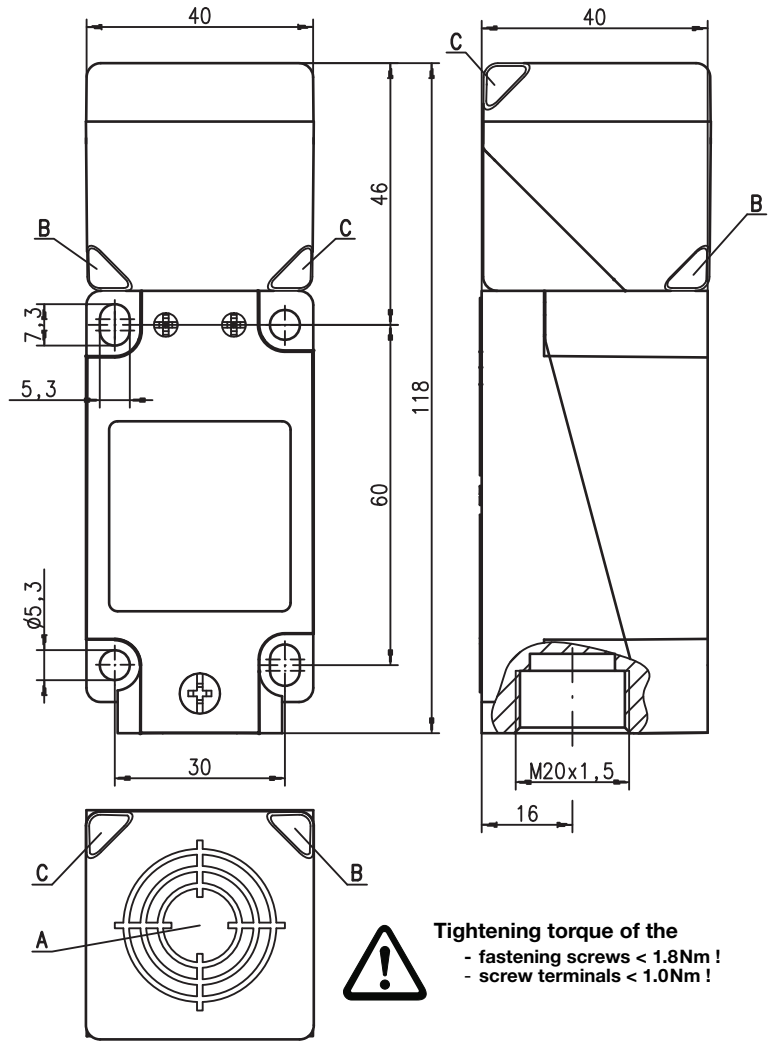
**20mm**



**embedded**

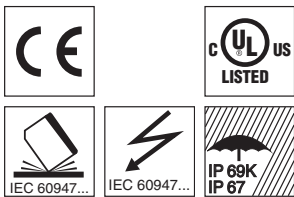
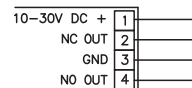
- Plastic 40 x40mm cubical housing
- Connection via screw terminals
- Built-in short circuit protection, polarity reversal protection
- LED for switching state

**Dimensioned drawing**



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

**Electrical connection**



**Accessories:**  
(available separately)

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

## Specifications

### General specifications

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

**IS 244...-20E...**  
embedded installation  
20.0mm  
0 ... 16.2mm

### Electrical data

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

10 ... 30VDC  
 $\leq 20\%$  of  $U_B$   
 $\leq 200$ mA  
 $\leq 20$ mA  
 $\leq 500\mu$ A  
.../44... PNP transistor, make-contact + break-contact (NO + NC), complementary  
.../22... NPN transistor, make-contact + break-contact (NO + NC), complementary

Voltage drop  $U_d$   
Hysteresis H of  $S_r$   
Repeatability of  $S_r$

$\leq 2$ V  
typ. 5 %  
 $\leq 10\%$  2)

### Timing

Switching frequency  $f$   
Delay before start-up

$\leq 150$ Hz  
 $\leq 300$ ms

### Indicators

Yellow LED (visible from 360°)

switching state

### Mechanical data

Housing  
Standard measuring plate  
Active surface  
Weight (M12 plug/cable)  
Connection type

PA, metal  
60 x 60mm<sup>2</sup>, Fe360  
PA  
approx. 225g  
M20 terminal compartment, wire cross section  $\leq 2.5$ mm<sup>2</sup>

### Environmental data

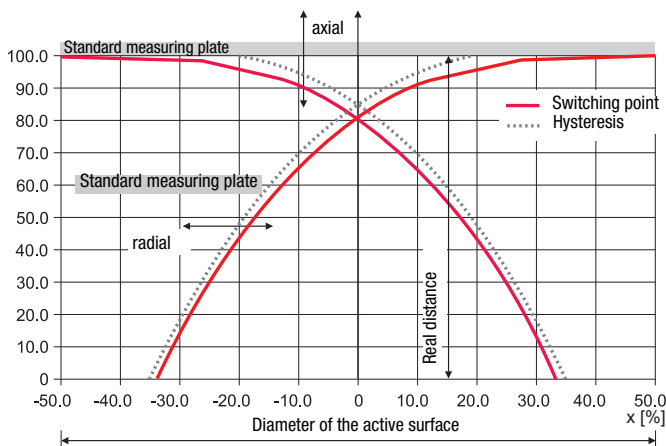
Ambient temperature  
Protection class  
Protective circuit 3)  
Standards applied  
Electromagnetic compatibility

-25°C ... +85°C  
IP 67, IP 69K  
1, 2  
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.
	IS 244 PP/44-20E-TB.4	50114213
	IS 244 PP/22-20E-TB.4	50114211

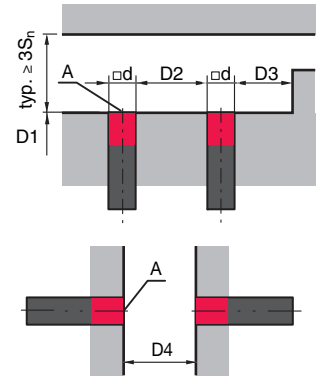
## Tables

Reduction factors:  
for  $S_n = 40.0$ mm

Steel Fe360	1
Copper	0.31
Aluminum	0.33
Brass	0.38
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	5	50

## 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.