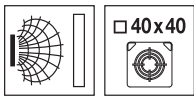


en 01-2010/11 50114422

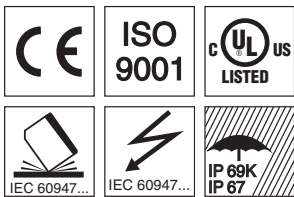


20mm



embedded

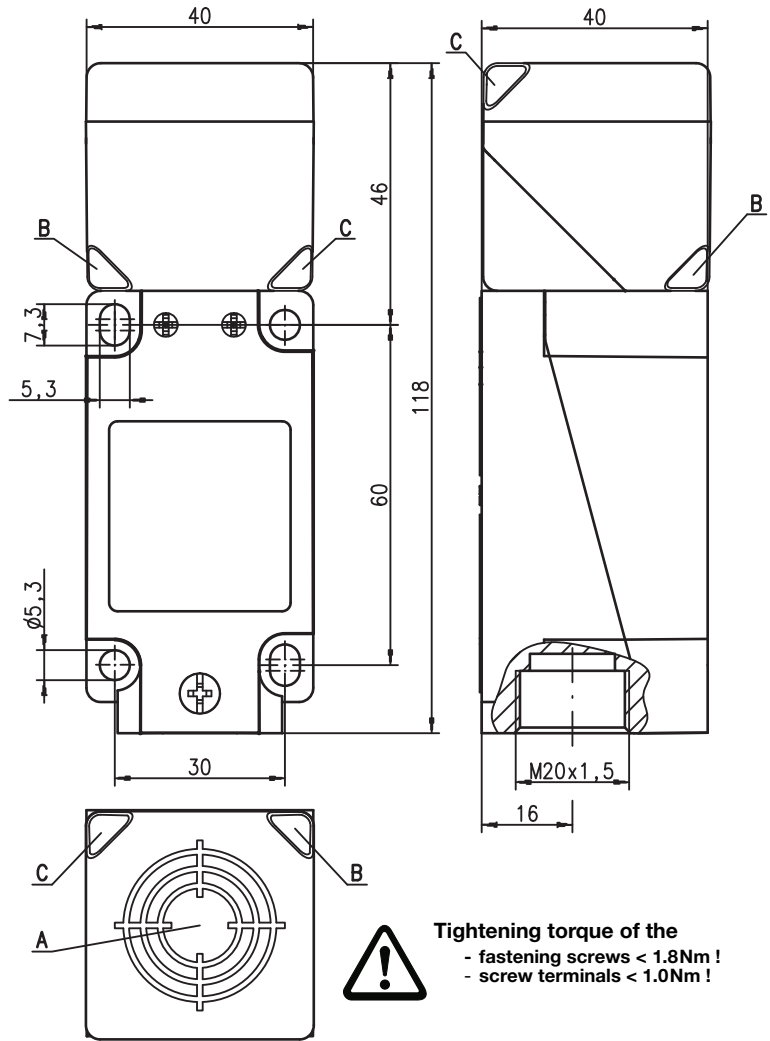
- Plastic 40 x40mm cubical housing
- Connection via screw terminals
- Built-in short circuit protection, polarity reversal protection
- LED for switching state



Accessories:

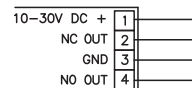
(available separately)

Dimensioned drawing



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

Electrical connection



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 σ
Output current I_L
Open-circuit current I_0
Residual current I_r
Switching output/function

10 ... 30VDC
 $\leq 20\%$ of U_B
 ≤ 200 mA
 ≤ 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

≤ 2 V
typ. 5 %
 $\leq 10\%$ 2)

Timing

Switching frequency f
Delay before start-up

≤ 150 Hz
 ≤ 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 60mm², Fe360
PA
approx. 225g
M20 terminal compartment, wire cross section ≤ 2.5 mm²

Environmental data

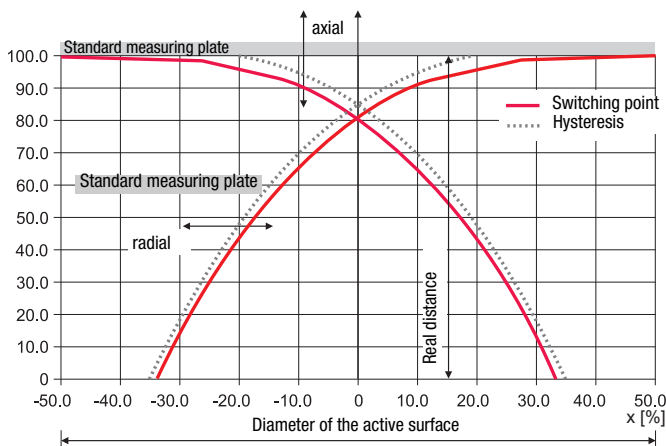
Ambient temperature
Protection class
Protective circuit 3)
Standards applied
Electromagnetic compatibility

-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.

$S_n = 20$ mm	Designation	Part No.
	IS 244 PP/44-20E-TB.4	50114213
	IS 244 PP/22-20E-TB.4	50114211

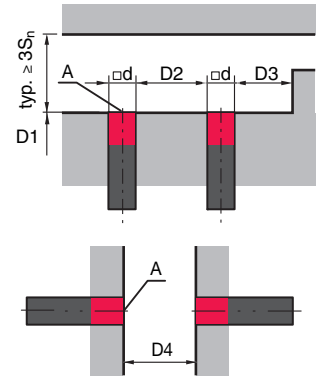
Tables

Reduction factors:
for $S_n = 40.0$ mm

Material	Reduction factor
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.