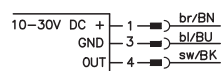


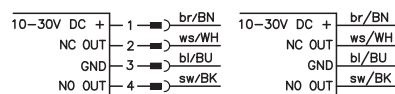


A Active surface
B Yellow indicator diode

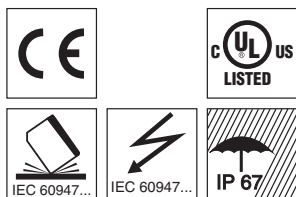
3-conductor design



4-conductor design



- Plastic 40 x 12mm cubical housing
- Built-in short circuit protection, polarity reversal protection
- LED for switching state



(available separately)

- M8 connectors (KD ...)
- Ready-made cables (K-D ...)

Specifications

General specifications

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

IS 240...-4E0...
embedded installation
4.0mm
0 ... 3.2mm

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
 $\leq 250\text{mA}$
 $\leq 10\text{mA}$
 $\leq 100\mu\text{A}$
.../44... PNP transistor, make-contact + break-contact (NO + NC), complementary
.../22... NPN transistor, make-contact + break-contact (NO + NC), complementary
.../4NO... PNP transistor, make-contact (NO)

Voltage drop U_d
Hysteresis H of S_r
Repeatability of S_r

$\leq 2.5\text{V}$
typ. 5%
 $\leq 10\%$ ²⁾

Timing

Switching frequency f
Delay before start-up

$\leq 1400\text{Hz}$
 $\leq 300\text{ms}$

Indicators

Yellow LED

switching state

Mechanical data

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

PA
12 x 12mm², Fe360
PA
approx. 18g/108g
M8 connector,
cable: 2m, PVC, 4 x 0.5mm², \varnothing 5.2mm

Environmental data

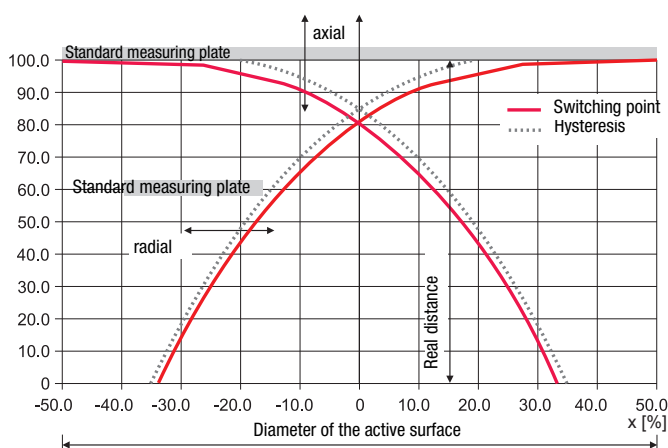
Ambient temperature
Protection class
Protective circuit ³⁾
Standards applied
Electromagnetic compatibility

-25°C ... +70°C
IP 67
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.

$S_n = 4.0\text{mm}$

Designation	Part no.
IS 240 PP/4NO-4E0-S8.3	50117797
IS 240 PP/44-4E0	50114207
IS 240 PP/44-4E0-S8.4	50114208
IS 240 PP/22-4E0	50114203
IS 240 PP/22-4E0-S8.4	50114204

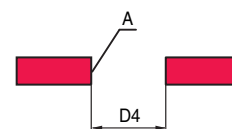
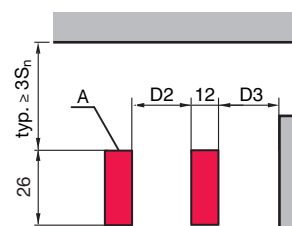
Tables

Reduction factors:
for $S_n = 20.0\text{mm}$

Steel Fe360	1
Copper	0.45
Aluminum	0.40
Brass	0.55
Stainless steel	0.80

Mounting

Embedded installation:



A: active surface

Ferromagnetic and non-ferromagnetic materials				
S_n [mm]	D1 [mm]	D2 [mm]	D3 [mm]	D4 [mm]
4.0	-	0	0	20

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.