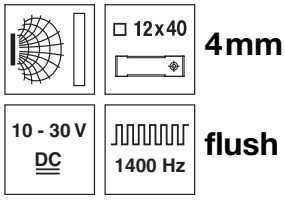
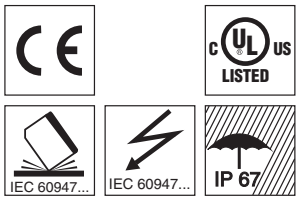
IS 240

Inductive switches

en 02-2012/08 50114420



- Plastic 40 x12mm cubical housing
- Built-in short circuit protection, polarity reversal protection
- LED for switching state

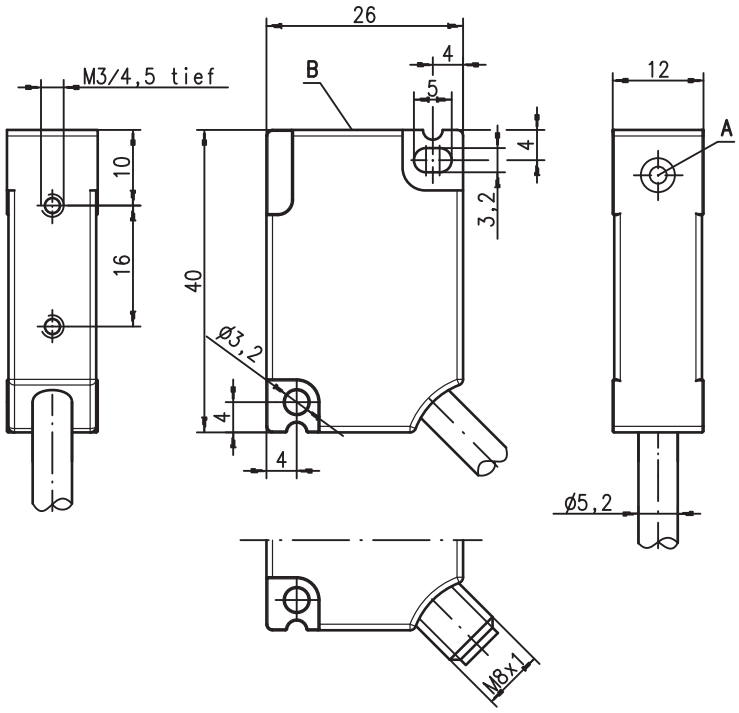


Accessories:

(available separately)

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

Dimensioned drawing

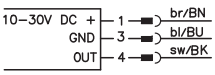


Tightening torque of the fastening screws < 1.1 Nm !

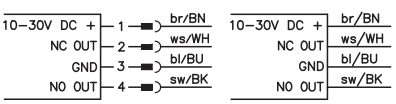
A Active surface
B Yellow indicator diode

Electrical connection

3-conductor design



4-conductor design



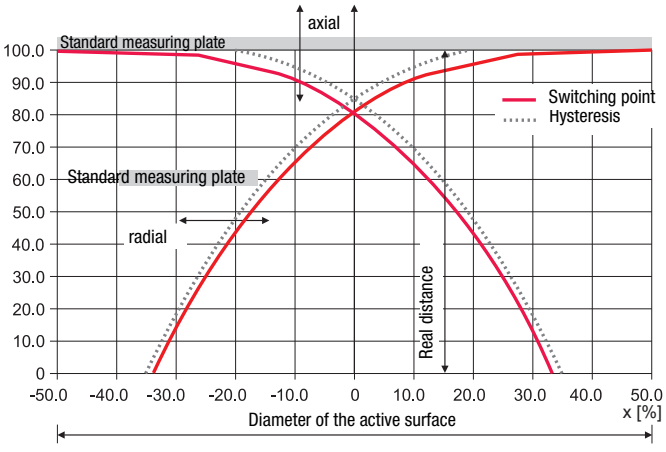
We reserve the right to make changes • DS_IS240E_en_50114420.fm

Specifications

General specifications		**IS 240…-4E0…**
Type of installation		embedded installation
Typ. operating range limit S_n		4.0mm
Operating range S_a		0 … 3.2mm
Electrical data		
Operating voltage U_B 1)		10 … 30VDC
Residual ripple σ		≤ 20% of U_B
Output current I_L		≤ 250mA
Open-circuit current I_0		≤ 10mA
Residual current I_r		≤ 100µA
Switching output/function	…/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		≤ 2.5V
Hysteresis H of S_r		typ. 5%
Repeatability of S_r		≤ 10% 2)
Timing		
Switching frequency f		≤ 1400Hz
Delay before start-up		≤ 300ms
Indicators		
Yellow LED		switching state
Mechanical data		
Housing		PA
Standard measuring plate		12 x 12mm², Fe360
Active surface		PA
Weight (M8 plug/cable)		approx. 18g/108g
Connection type		M8 connector, cable: 2m, PVC, 4 x 0.5mm², Ø 5.2mm
Environmental data		
Ambient temperature		-25°C … +70°C
Protection class		IP 67
Protective circuit 3)		1, 2
Standards applied		IEC/EN 60947-5-2
Electromagnetic compatibility		IEC 61000-4-2 Air 8kV (ESD) IEC 61000-4-3 10V/m (RFI) IEC 61000-4-4 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°C ± 5°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.

	Designation	Part no.
S_n = 4.0mm	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

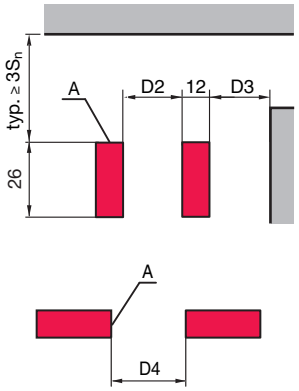
Tables

Reduction factors:
for S_n = 20.0mm

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.