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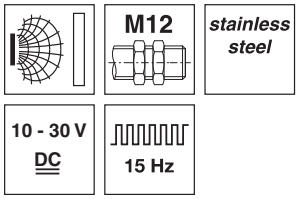
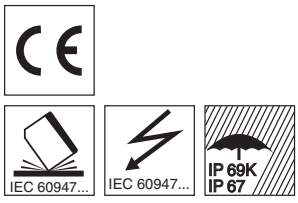


- Slim and short cylindrical metal housing M12x1
- Stainless steel housing V2A
- For welding applications (resistant to electromagnetic fields and weld spatters)
- Built-in short circuit protection, inductive protection and polarity reversal protection
- LED for switching state visible from 360°

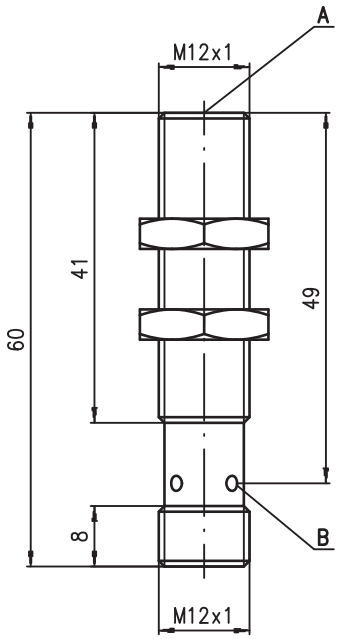


Accessories:

(available separately)

- M12 connectors (KD …)
- Ready-made cables (K-D …)
- Mounting clamp (MC 012…)

Dimensioned drawing



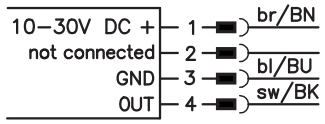
Tightening torque of the fastening nuts < 20Nm !

A Active surface
B Yellow indicator diode

Electrical connection

M12 connector

…NO… (normally open)



Specifications

General specifications		**IS 212… .5W-6E0…**
Type of installation		embedded installation
Typ. operating range limit S_n		6.0mm
Operating range S_a		0 … 4.8mm
Electrical data		
Operating voltage U_B [1]		10 … 30VDC
Residual ripple σ		≤ 20% of U_B
Output current I_L		≤ 200mA
Open-circuit current I_0		≤ 10mA
Residual current I_r		≤ 100µA
Switching output/function	…/4NO…	PNP transistor, make-contact (NO)
	…/4NC…	PNP transistor, break-contact (NC)
	…/2NO…	NPN transistor, make-contact (NO)
	…/2NC…	NPN transistor, break-contact (NC)
Voltage drop U_d		≤ 2V
Hysteresis H of S_r		≤ 15%
Temperature drift of S_r		≤ 10% [2]
Repeatability		≤ 5% [3]
Timing		
Switching frequency f		15Hz
Delay before start-up		≤ 80ms
Indicators		
Yellow LED (visible from 360°)		switching state
Mechanical data		
Housing		stainless steel AISI 303L (DIN 1.4305)
Standard surface plate		18 x 18mm², Fe360
Active surface		stainless steel AISI 303L (DIN 1.4305)
Weight (M12 plug)		approx. 24g
Connection type		M12 connector, 4-pin
Environmental data		
Ambient temperature		-25°C … +70°C
Protection class		IP 67, IP 69K
Protective circuit [4]		1, 2, 3
Standards applied		IEC/EN 60947-5-2
Electromagnetic compatibility		IEC/EN 60947-5-2 (7.2.3.1) 1kV
		IEC 61000-4-2 air 15kV (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) Over the entire operating temperature range
3) For U_B = 20 … 30VDC, ambient temperature T_a = 23°C ± 5°C
4) 1=polarity reversal protection, 2=short circuit protection, 3=inductive protection for all outputs

Order guide

The sensors listed here are preferred types; current information at www.leuze.com.

	Designation	Part No.
S_n = 6mm	IS 212 FM/4NO.5W-6E0-S12	50117127

Remarks

- **Approved purpose**:
  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.

Tables

Reduction factors for surface plates made of: for S_n = 6.0mm

Steel Fe360	1
Copper	0.85
Aluminum	1.00
Brass	1.30
Stainless steel	0.9[1]

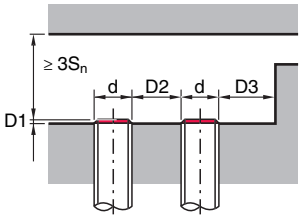
Reduction factors for installation in: for S_n = 6.0mm

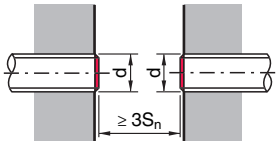
Steel Fe360	0.7
Aluminum	1.15
Brass	1.05
Stainless steel	0.80

1) Surface plate min. 2mm thick

Mounting

Embedded installation:





Ferromagnetic and non-ferromagnetic materials			
S_n [mm]	**D1 [mm]**	**D2 [mm]**	**D3 [mm]**
6.0	0	38.0	6.0

Diagrams

Models with **S_n = 6.0mm**