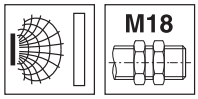
ISS 218

Inductive switches

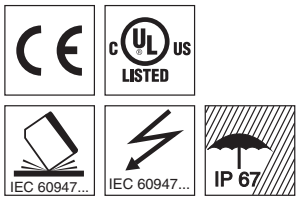
en 02-2015/05 50110216



8 mm
20 mm

non-embedded

- Slim and very short cylindrical metal housing M8
- Chromium-plated brass housing
- Built-in short circuit protection, inductive protection and polarity reversal protection
- LED for switching state visible from 360°

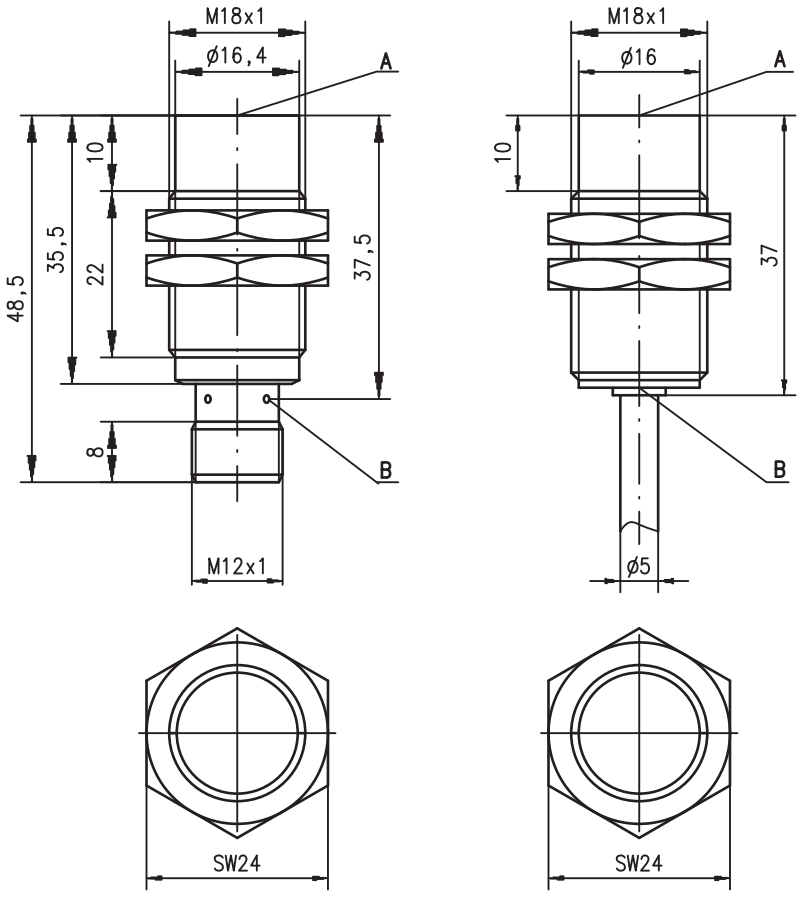


Accessories:

(available separately)

- M12 connectors (KD …)
- Ready-made cables (K-D …)
- Mounting clamp (MC 018…)

Dimensioned drawing

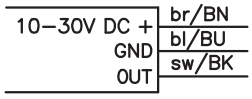


Tightening torque of the fastening nuts
IS 218…8N0… < 20Nm !
IS 218…20N… < 25Nm !

A Active surface
B Yellow indicator diode

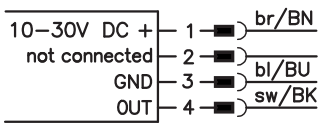
Electrical connection

Cable

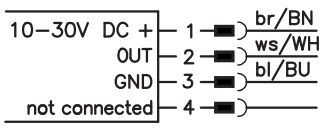


M12 connector

…NO… (normally open)



…NC… (normally closed)



…NO…-S12 (normally open): 3-pin **or** 4-pin M12 connection cables can be used.
…NC…-S12 (normally closed): **only** 4-pin M12 connection cables can be used.

Specifications

General specifications		ISS 218…-8N0…	ISS 218…-20N…
Type of installation		non-embedded installation	
Typ. operating range limit S_n		8.0mm	20.0mm
Operating range S_a		0 … 6.5mm	0 … 16.2mm
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		≤ 10%	
Temperature drift of S_r		≤ 10% 2)	
Repeatability		≤ 5% 3)	
Timing			
Switching frequency f		2kHz	200Hz
Delay before start-up		≤ 40ms	≤ 100ms
Indicators			
Yellow LED (visible from 360°)		switching state	
Mechanical data			
Housing		chromium-plated brass	
Standard surface plate		24 x 24mm², Fe360	60 x 60mm², Fe360
Active surface		PBTP	
Weight (M12 plug)		approx. 50g/approx. 120g	
Connection type		M12 connector 4-pin or cable: 2m, PVC, 3 x 0.34mm², Ø 5.0mm	
Environmental data			
Ambient temperature		-25°C … +70°C	
Protection class		IP 67	
Protective circuit 4)		1, 2, 3	
Standards applied		IEC/EN 60947-5-2	
Electromagnetic compatibility		IEC 60255-5	1kV
		IEC 61000-4-2	Level 3 air 8kV (ESD)
		IEC 61000-4-3	Level 3 10V/m (RFI)
		IEC 61000-4-4	Level 3 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

Remarks

Operate in accordance with intended use!

- This product is not a safety sensor and is not intended as personnel protection.
- The product may only be put into operation by competent persons.
- Only use the product in accordance with the intended use.

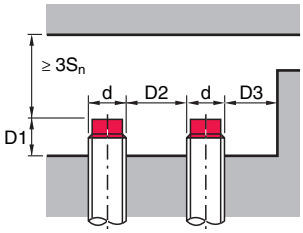
Tables

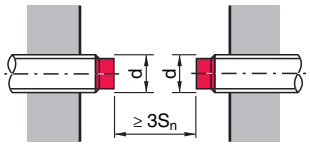
Reduction factors:

for S_n = 8.0mm		for S_n = 20.0mm	
Steel Fe360	1	Steel Fe360	1
Copper	0.40	Copper	0.35
Aluminum	0.50	Aluminum	0.40
Brass	0.50	Brass	0.45
Stainless steel	0.80	Stainless steel	0.66

Mounting

Non-embedded installation:

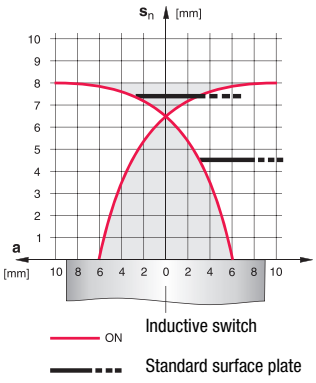




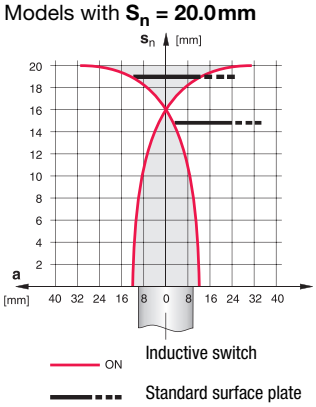
Ferromagnetic and non-ferromagnetic materials			
S_n [mm]	D1 [mm]	D2 [mm]	D3 [mm]
8.0	10.0	32.0	11.0
20.0	20.0	50.0	21.0

Diagrams

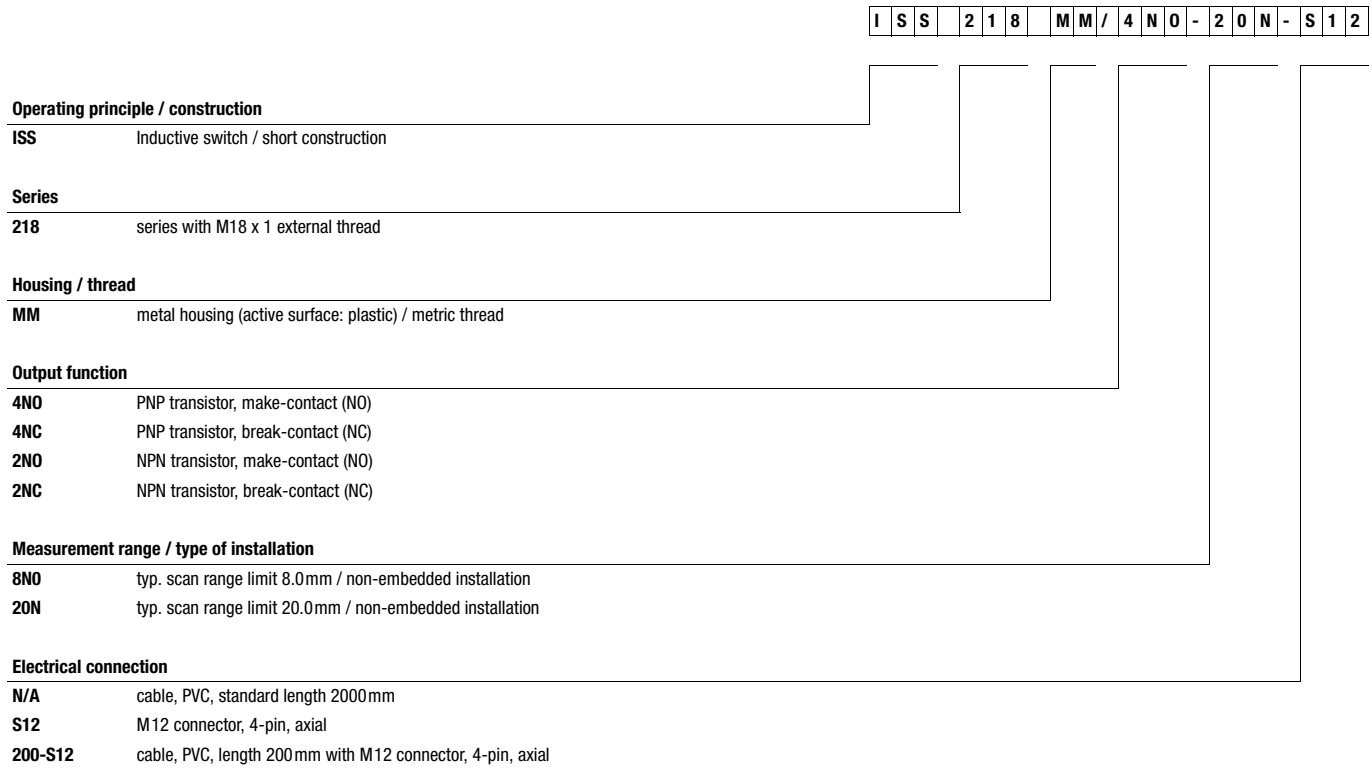
Models with S_n = 8.0mm



Models with S_n = 20.0mm



Type key



Order guide

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

	Designation	Part No.
S_n = 20 mm	ISS 218 MM/4NO-20N-S12	50109710
	ISS 218 MM/4NC-20N-S12	50109711