PMS - PKS / PMW - PKW series

M12 & M18 IP67/68 cylindrical
for harsh environments - DC

features

- Innovative housing (double enclosure)
- Cutting oils resistant (for machines tool)
- Immersion proof (sealing IP 67/68)
- High frequency switching
- Complementary output (NO+NC), M12 plug cable exit
- ATEX models, cat. 3, available on request
- LED indicator visible at wide angle
- Complete protection against electrical damages

web contents

- Application notes
- Photos
- Catalogue / Manuals



code description (*)

PMS / 0 N - 1 H

series	PMS	M12 inductive proximity sensors (IP 67/68) brass housing
	PKS	M18 inductive proximity sensors (IP 67/68) brass housing
	PMW	M12 inductive proximity sensors (IP 67/68) stainless steel housing
	PKW	M18 inductive proximity sensors (IP 67/68) stainless steel housing
output state	0	NO+NC complementary output
output logic	N	NPN logic output
	P	PNP logic output
distance	1	Standard shielded (2/5 mm)
	2	Standard unshielded (4/8 mm)
connect.	H	M12 plug cable exit

(*) ATEX models available, contact our Sales Dept. for further information.

available models

diameter	housing	installation	distance (mm)	plug	NPN/NO+NC	PNP/NO+NC
M12	nickel plated brass	shielded	2	M12	PMS/0N-1H	PMS/0P-1H
		unshielded	4		PMS/0N-2H	PMS/0P-2H
	stainless steel	shielded	2		PMW/0N-1H	PMW/0P-1H
		unshielded	4		PMW/0N-2H	PMW/0P-2H

available models

diameter	housing	installation	distance (mm)	plug	NO+NC	NO+NC
M18	nickel plated brass	shielded	5	M12	PKS/0N-1H	PKS/0P-1H
		unshielded	8		PKS/0N-2H	PKS/0P-2H
	stainless steel	shielded	5		PKW/0N-1H	PKW/0P-1H
		unshielded	8		PKW/0N-2H	PKW/0P-2H

technical specification

	PM*/0*-1H	PM*/0*-2H
		
nominal sensing distance	2 mm	4 mm
operating distance	0...1.62 mm	0...3.24 mm
hysteresis	1...20%	
repeatibility	5%	
operating voltage	10...30 Vdc	
max ripple content	≤ 10%	
no-load supply current	15 mA	
load current	≤ 100 mA	
leakage current	10 µA	
voltage drop	≤ 2 V@100 mA	
output type	NPN or PNP - NO + NC	
switching frequency	2 kHz	
power on delay	50 ms	
power supply protections	polarity reversal, transient	
output protection	short circuit (autoreset)	
temperature range	-25°...+70°C	
temperature drift	10% Sr	
EMC	in conformity with the EMC Directive according to IEC 60947-5-2	
shocks and vibrations	IEC 60947-5-2	
protection degree	IEC IP 67/68 (1)	
LEDs	yellow LED (NO output energized)	
housing material	nickel-plated brass (PMS) stainless steel AISI303 (PMW)	
active head material	PPS	
tightening torque	8 Nm	
weight (approximate)	35 g	

(1) Only in fully locked position with its splug.

Notes: good chemicals and oils resistance, but test should be made in advance when using in harsh environment.

technical specification

	PK*/0*-1H	PK*/0*-2H
		
nominal sensing distance	5 mm	8 mm
operating distance	0...4.05 mm	0...6.48 mm
hysteresis	1...20%	
repeatibility	5%	
operating voltage	10...30 Vdc	
max ripple content	≤ 10%	
no-load supply current	15 mA	
load current	≤ 400 mA	
leakage current	10 µA	
voltage drop	2 V@200 mA	
output type	NPN or PNP - NO + NC	
switching frequency	1.5 kHz	
power on delay	50 ms	
power supply protections	polarity reversal, transient	
output protection	short circuit (autoreset)	
temperature range	-25°...+70°C	
temperature drift	10% Sr	
EMC	in conformity with the EMC Directive according to IEC 60947-5-2	
shocks and vibrations	IEC 60947-5-2	
protection degree (DIN 40 050)	IEC IP 67/68 (1)	
LEDs	yellow (NO output energized)	
housing materials	nickel-plated brass (PKS) stainless steel AISI303 (PKW)	
active head materials	PPS	
tightening torque	50 Nm	
weight (approximate)	50 g PKS - 55 g PKW	

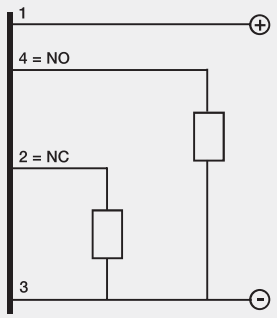
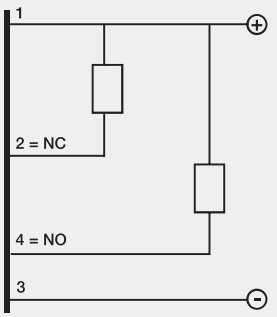
(1) Only in fully locked position withit splugs.

Notes: good chemicals and oils resistance, but test should be made in advance when using in harsh environment

correction factors

code	steelFE 360	copper	alluminium	brass	stainless steel
PMS/**-1*	1	0.22	0.31	0.41	0.77
PMS/**-2*		0.41	0.47	0.56	1.15
PMW/**-1*		0.02	0,08	0.2	0.68
PMW/**-2*		0.34	0,41	0.51	0.88
PKS/**-1*		0.3	0.35	0.65	0.76
PKS/**-2*		0.38	0.48	0.5	0.7
PKW/**-1*		0.12	0.2	0.26	0.62
PKW/**-2*		0.3	0.37	0.46	0.78

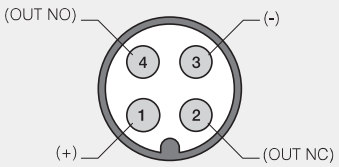
electrical diagrams of connections

PNP	NPN
	

BN	brown
BU	blue
BK	black
WH	white

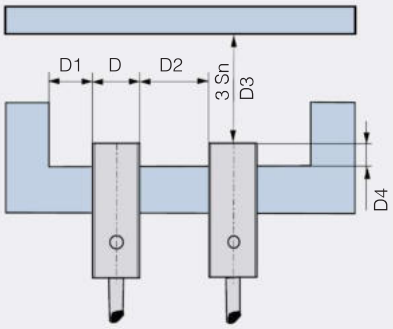
The max. admissible capacity C = 1µF for max. output voltage and current.

plug

M12 NO/NC


Connectors CD series

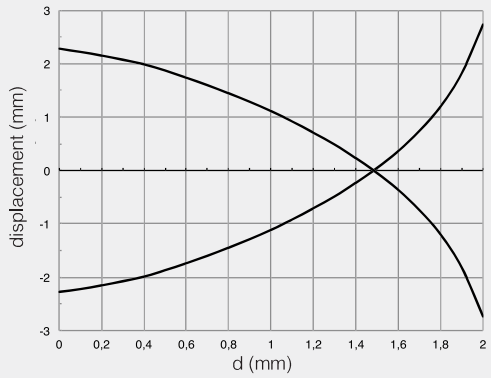
installation



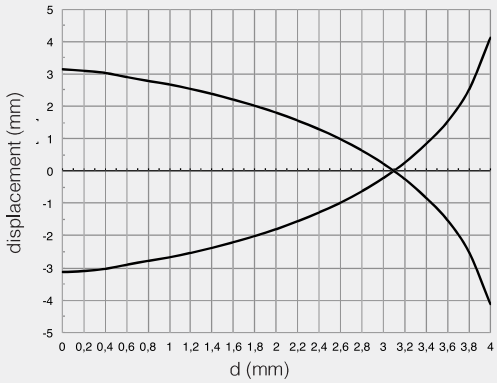
code	D4	D1	D2	D3
PMS/**-1*	≥ 0 mm	≥ 6 mm	≥ 12 mm	≥ 6 mm
PMS/**-2*	≥ 6 mm	≥ 12 mm	≥ 24 mm	≥ 12 mm
PMW/**-1*	≥ 0 mm	≥ 6 mm	≥ 12 mm	≥ 6 mm
PMW/**-2*	≥ 6 mm	≥ 12 mm	≥ 24 mm	≥ 12 mm
PKS/**-1*	≥ 0 mm	≥ 9 mm	≥ 18 mm	≥ 15 mm
PKS/**-2*	≥ 8 mm	≥ 18 mm	≥ 36 mm	≥ 24 mm
PKW/**-1*	≥ 0 mm	≥ 9 mm	≥ 18 mm	≥ 15 mm
PKW/**-2*	≥ 8 mm	≥ 18 mm	≥ 36 mm	≥ 24 mm

response diagram

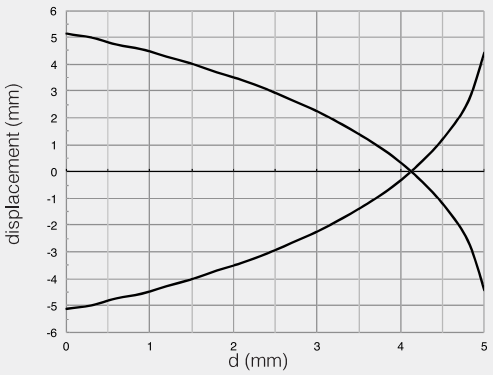
PMS*/**-1* parallel displacement



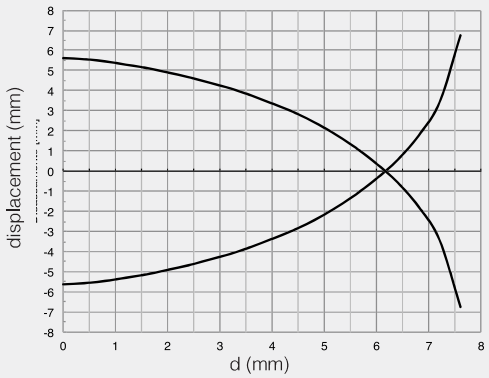
PMS*/**-2* parallel displacement



PK*/**-1* parallel displacement

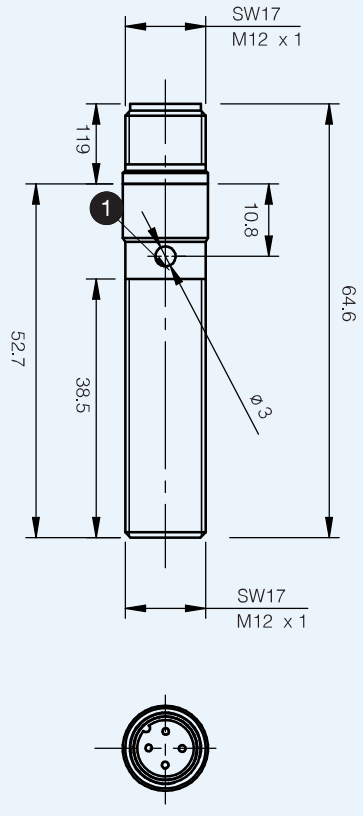


PK*/**-2* parallel displacement

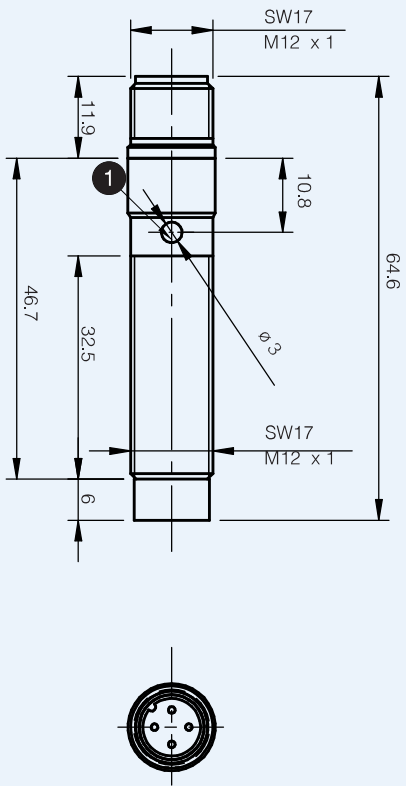


dimensions (mm)

PM*/**-1H



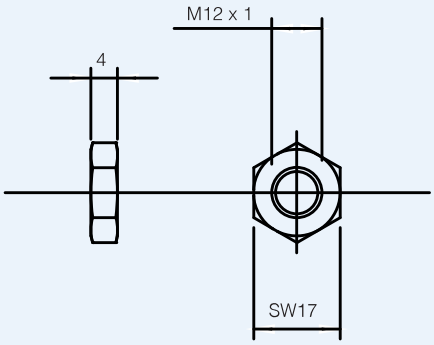
PM*/**-2H



1 LED

dimensions (mm)

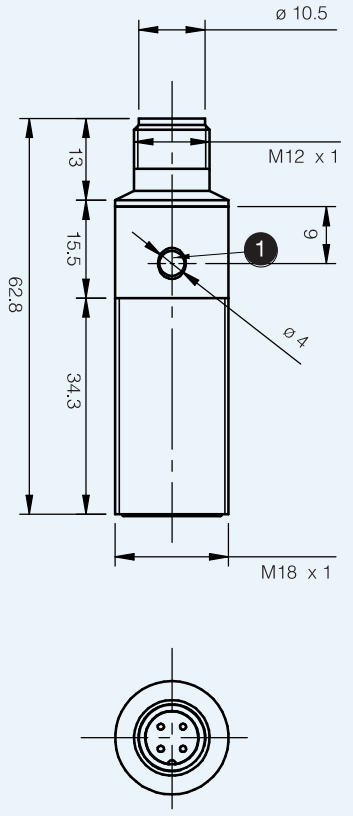
accessories included

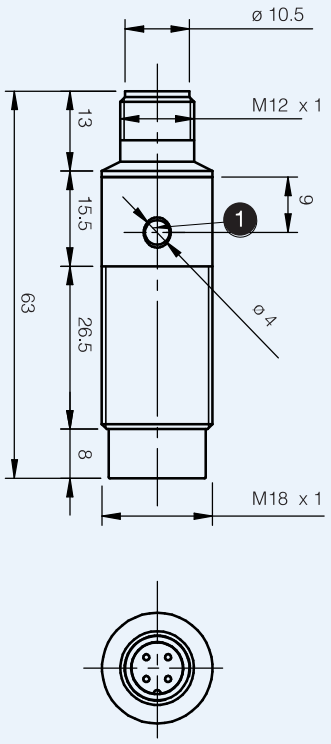


metallic
nut (2 x)

dimensions (mm)

PK*/**-1H	PK*/**-2H

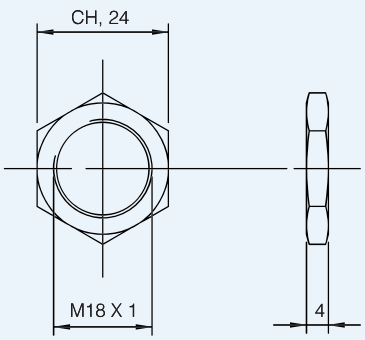




1 LED

dimensions (mm)

accessories included in all M18 models



metallic
nut (2 x)