



PFK series

M18 cylindrical inductive sensors
for food and beverage applications



M18 cylindrical for food and
beverage applications



features

- AISI 316L (DIN 1.4404) stainless steel housing
- LED status indicator
- IP67 – IP68 – IP69K protection degree
- ATEX models, cat. 3, available on request
- Complete protection against electrical damages
- Standard and long distance models

web contents



- Application notes
- Photos
- Catalogue / Manuals



code description (*)

	PFK	1	/	A	P	-	1	H	V5
series	PFK	M18 inductive sensor for food+beverage applications							
housing	1	Standard housing							
output state	A	NO output							
	B	NO+NC complementary output							
output logic	P	PNP output							
	N	NPN output							
distance	1	5 mm standard shielded							
	2	8 mm standard unshielded							
	3	8 mm long distance shielded							
	4	12 mm long distance unshielded							
connect.	H	M12 plug exit							
special models	V5	Smooth housing							
	26	Extended temperature range models							

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



M18 cylindrical for food and beverage applications

available models

standard models

model	installation	sensing	plug	distance (mm)	NPN/NO	PNP/NO
M18	shielded	standard	M12	5	PFK1/AN-1H	PFK1/AP-1H
	unshielded			8	PFK1/AN-2H	PFK1/AP-2H
	shielded	long distance			PFK1/AN-3H	PFK1/AP-3H
	unshielded			12	PFK1/AN-4H	PFK1/AP-4H

available models

models with complementary output

model	installation	sensing	plug	distance (mm)	NPN/NO+NC	PNP/NO+NC
M8	shielded	standard	M12	5	PFK1/BN-1H	PFK1/BP-1H
	unshielded			8	PFK1/BN-2H	PFK1/BP-2H
	shielded	long distance			PFK1/BN-3H	PFK1/BP-3H
	unshielded			12	PFK1/BN-4H	PFK1/BP-4H

available models

models with extended temperature range

model	installation	sensing	plug	distance (mm)	NPN/NO+NC	PNP/NO+NC
M18	shielded	standard	M18	5	PFK1/BN-1H26	PFK1/BP-1H26
	unshielded			8	PFK1/BN-2H26	PFK1/BP-2H26

correction factors

code	steel FE 360	copper	alluminium	brass	stainless steel
PFK1/**-1*	1	0.25	0.35	0.4	0.7
PFK1/**-2*		0.27		0.42	
PFK1/**-3*		0.2	0.3	0.4	0.65
PFK1/**-4*		0.3	0.38	0.42	

Tolerance ±10%



M18 cylindrical for food and beverage applications

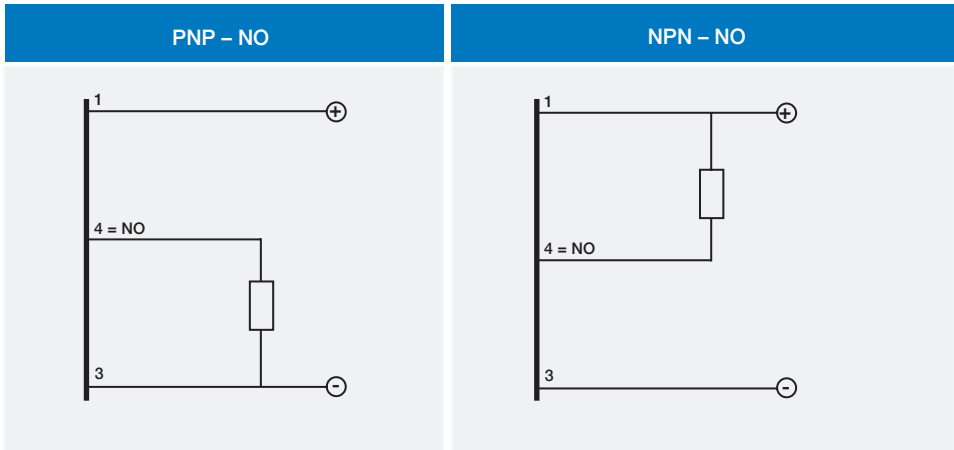
technical specification

according to IEC EN 60947-5-2 / DIN 44030

	PFK1/**-1H	PFK1/**-2H	PFK1/**-3H	PFK1/**-4H
				
nominal sensing distance	5 mm	8 mm	12 mm	12 mm
working distance	0...4 mm	0...6.5 mm	0...9.72 mm	0...9.72 mm
hysteresis	1...20%			
standard target	18x18 mm FE360	24X24 mm FE360	36x36 mm FE360	36x36 mm FE360
repeatability	5%			
operating voltage	10...30 Vcc			
max ripple content	≤ 10%			
output type	NPN or PNP - NO + NC or NO			
output current	≤ 200 mA			
output voltage drop	≤ 2 V			
no-load supply current	≤15 mA			
leakage current	≤10 µA			
switching frequency	15 kHz			
power on delay	50 ms			
ambient temperature range	-40...+80 °C short exposure (15') to 100°C (during cleaning processes) / -25°C...+110°C (PFK-26 models)			
temperature drift of Sr	10%			
short-circuit protection	●			
voltage reversal protection	●			
induction protection	●			
shocks and vibration	IEC 60947-5-2 / 7.4			
weight	55 g (40 g smooth housing)			
LEDs	NO output state / (no led PFK-26 models)			
protection degree	IP67, IP68 (1m, 7 days); IP69K (according to DIN 40050 part 9)			
EMC	in conformity with the EMC Directive according to IEC 60947-5-2			
housing material	Stainless Steel AISI316L (DIN 1.4404)			
active head material	PPS (FDA certified)			
connection	M12 plug with gold-plated pins			
tightening torque	50 Nm			

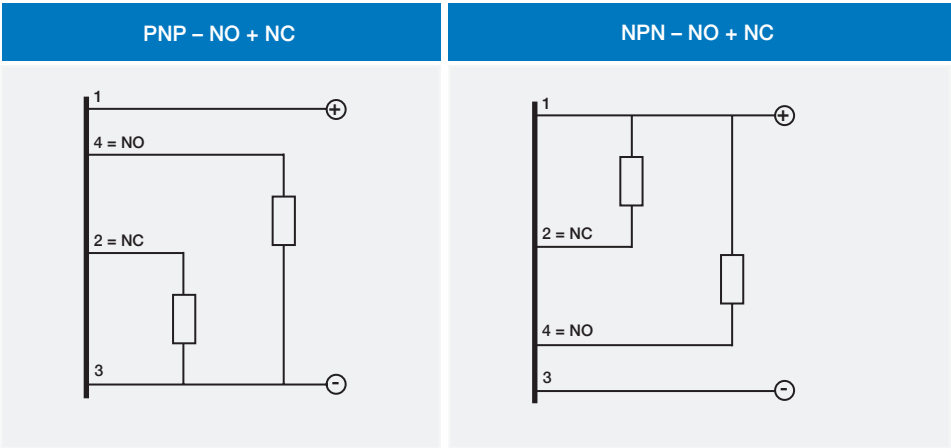
electrical diagrams of connections

3 wires versions

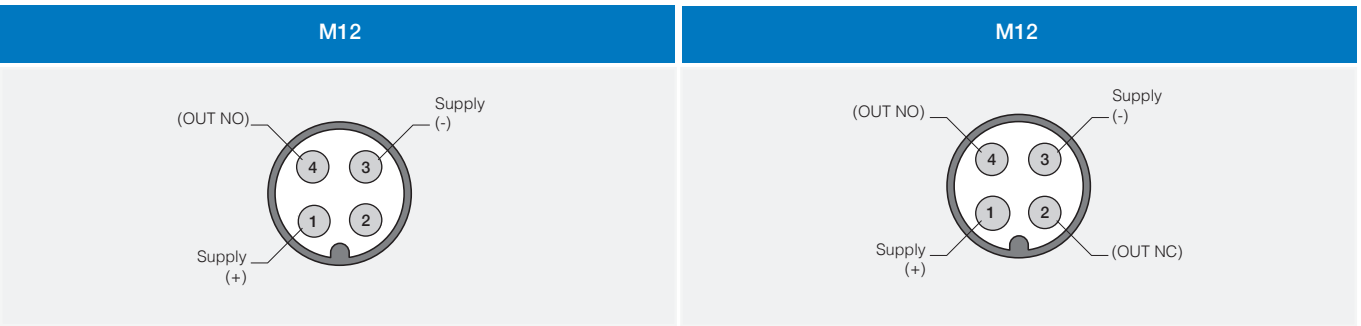


- BN brown
- BU blue
- BK black
- WH white

electrical diagrams of connections



plug

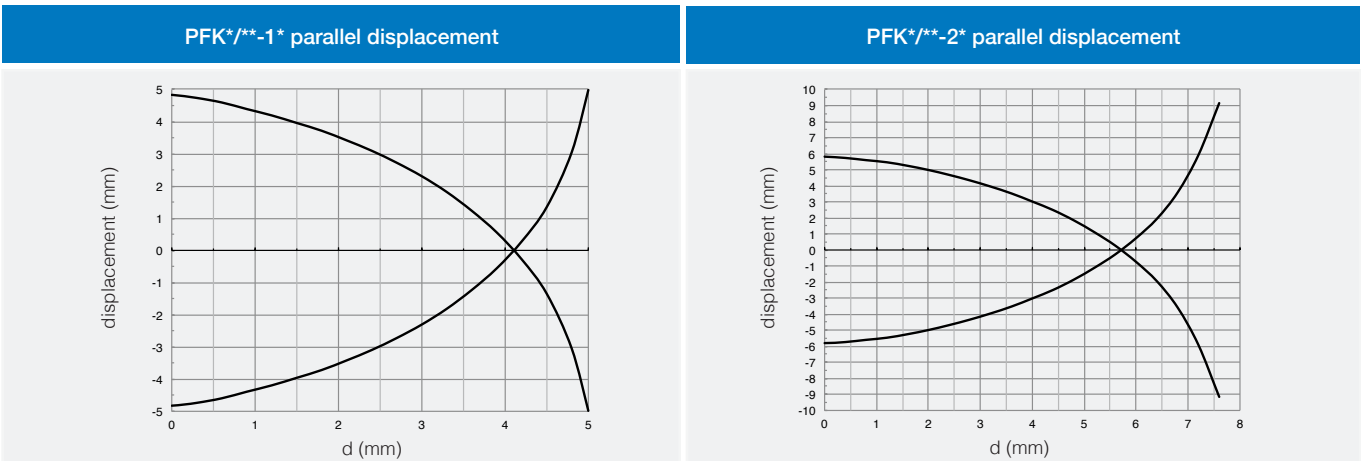


installation

code	D4	D1	D2	D3
PFK1/**-1*	≥ 0.4 mm	≥ 9 mm	≥ 18 mm	≥ 15 mm
PFK1/**-2*	≥ 12 mm	≥ 18 mm	≥ 36 mm	≥ 24 mm
PFK1/**-3*	≥ 1.8 mm ⁽¹⁾	≥ 9 mm	> 19 mm	≥ 24 mm
PFK1/**-4*	≥ 16 mm	≥ 18 mm	> 37 mm	≥ 36 mm

⁽¹⁾ ≥ 3.6 mm for non magnetic material

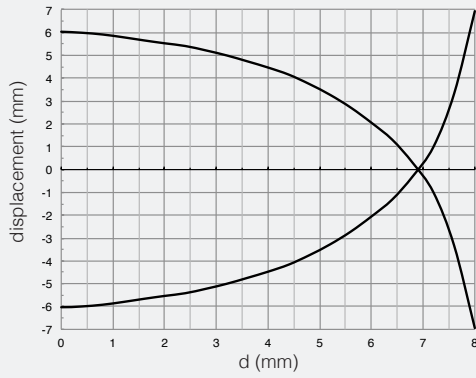
response diagram



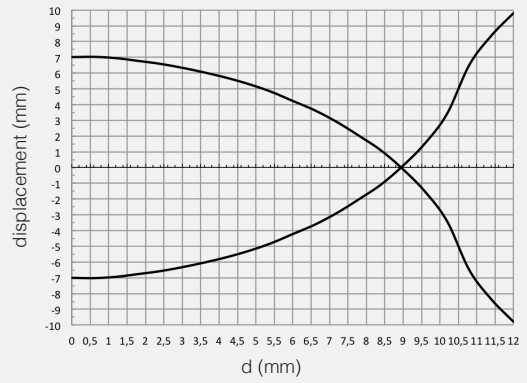


M18 cylindrical for food and
beverage applications

PFK*/**-3* parallel displacement

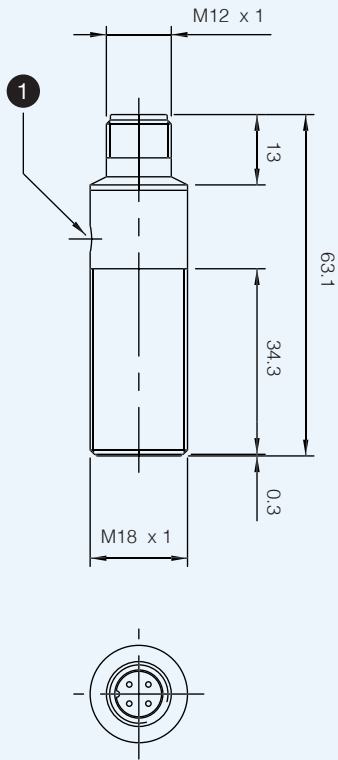


PFK*/**-4* parallel displacement

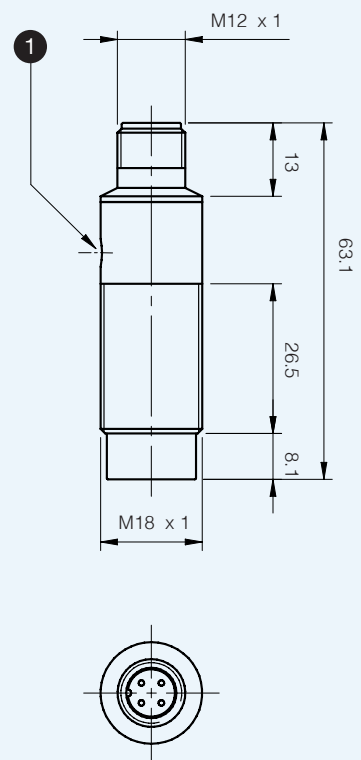


dimensions (mm)

PFK1/**-1H
PFK1/**-3H

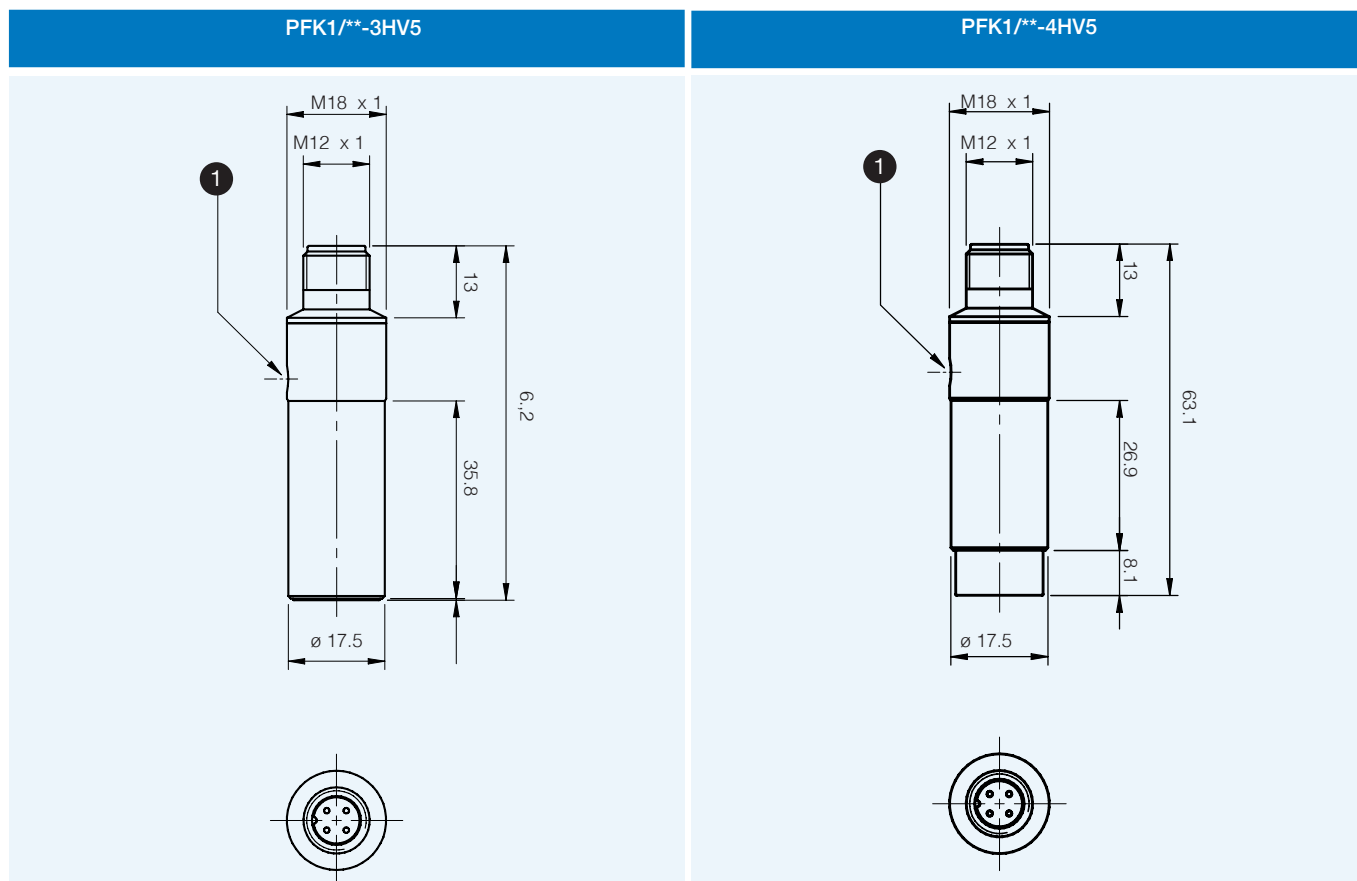


PFK1/**-2H
PFK1/**-4H



1 LED (no LED in PFK-26 models)

dimensions (mm)



1 LED (no LED in PFK-26 models)

dimensions (mm)

accessories included in all M18 models

