



# AE - AM - AK series

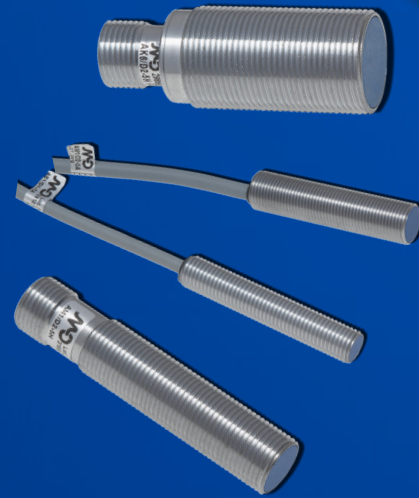
Cylindrical inductive sensors with analogue output



Cylindrical with analogue output

## features

- Wide choice of sizes M8, M12 and M18
- Wide usable sensing ranges: 4 mm for M8, 6 mm for M12 and 10 mm for M18
- Excellent resolution (no digitalization)
- Excellent temperature stability at low distances
- Voltage and current output in the same device (M12 and M18 only)



## web contents



- Application notes
- Photos
- Catalogue / Manuals



## code description

			AM	1	/	D	2	-	5	A
housing	AE	M8 housing								
	AM	M12 housing								
	AK	M18 housing								
housing	1	Standard length housing								
	6	Short housing								
output state	D	Analog output								
output logic	1	0-10 Vdc voltage output								
	2	0-10 Vdc voltage and 4-20 mA current outputs								
distance	5	Quasi-embeddable 3x: 6 mm for M12 and 10 mm for M18								
	7	Quasi-embeddable 4x: 4 mm for M8								
connect.	A	Cable connection								
	F	M8 plug connection								
	H	M12 plug connection								




## available models

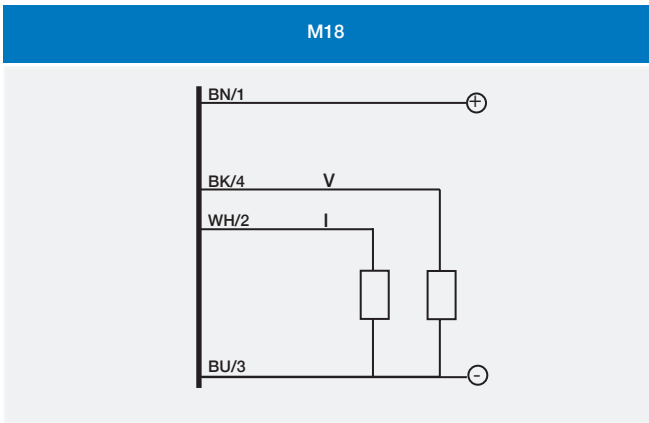
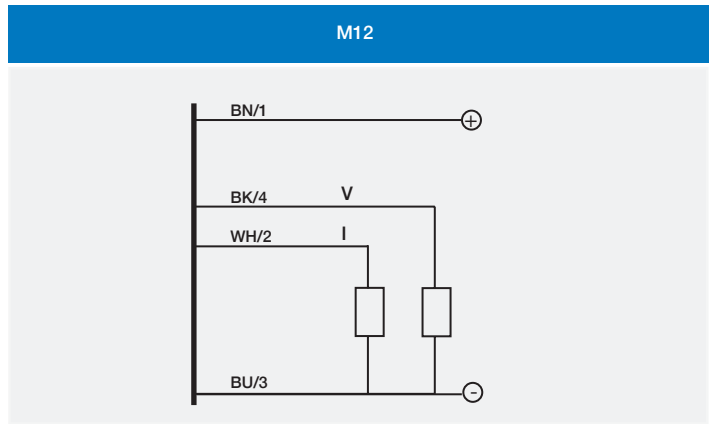
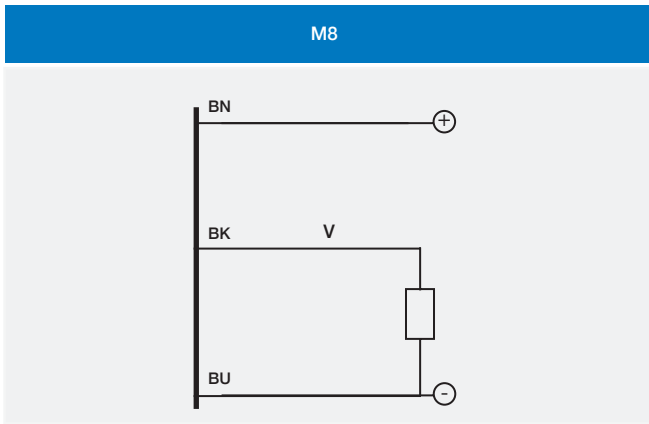
diameter	installation	distance	output	distance (mm)	0...10 V	0...10 V 4...20 mA
M8	quasi-embeddable	extended	cable	4	AE1/D1-7A	-
M12				6	-	AM1/D2-5A
			M12	6	-	AM1/D2-5H
M18			cable	10	-	AK6/D2-5A
				M12	10	-

# technical specification

according to IEC EN 60947-5-2

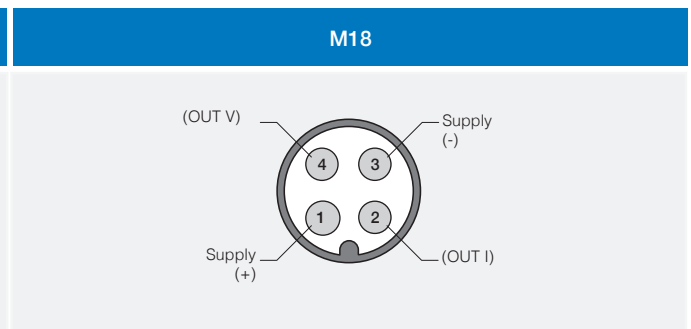
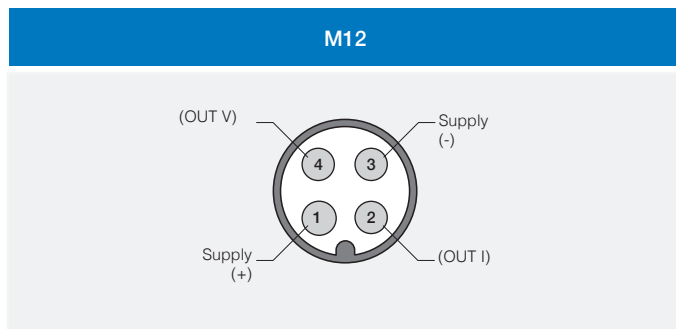
Cylindrical with analogue output

	AE1/D1-7A	AM1/D2-5A	AM1/D2-5H	AK6/D2-5A	AK6/D2-5H
					
sensing range Sd	0...4 mm	0...6 mm		0...10 mm	
standard target	12 x 12 x 1 mm	18 x 18 x 1 mm		30 x 30 x 1 mm	
repeatability	0.3 mm (UB = 20...30 Vdc TA= 23°C ± 5°C)				
repeatability (TA=const.)	± 0.01 mm			± 0.02 mm	
resolution	≤ 1 µm			≤ 2 µm	
operating voltage UB	15...30 Vdc				
max. ripple content	≤ 20 % UB				
output voltage A1					
S = 0 MM	0 V - 0 + 0.4 V (23°C)				
S = 1/2 Sd	+ 5,2 V ± 0.4 V (23°C)				
S = Sd	+ 10 V ± 0.4 V (23°C)				
load current at: A1	≤ 10 mA				
output current A2					
S = 0 mm	-	4 mA ± 0.8 mA (23°C)			
S = Sd	-	20 mA ± 0.8 mA (23°C)			
max load at: A2	-	500 Ω (UB = 15 V) / 1K Ω (UB = 30 V)			
no-load supply current	≤ 10 mA	≤ 12 mA			
cut-off frequency (-3dB 1/2 Sd)	1600 Hz	1000 Hz		500 Hz	
time delay before availability	≤ 50 ms				
ambient temperature range	- 25...+ 70°C				
temperature drift % Sr	± 5 % (0...+70°C) ± 10 % (-25...0°C)			≤ 10 %	
mounting	quasi-embeddable				
short-circuit protection	●				
voltage reversal protection	●				
shocks and vibration	IEC 60947-5-2				
EMC	in conformity with the EMC Directive according to IEC 60947-5-2				
protection degree	IP 67				
weight	50 g	95 g	33 g	116 g	55 g
housing materials	nichel plated brass				
active head material	PBT				
connection cable	PUR (3 pins)	PUR (4 pins)	-	PUR (4 pins)	-
connector type	-	-	M12 4P	-	M12 4P
tightening torque	3 Nm (AE series), 10 Nm (AM series), 25 Nm (AK series)				



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

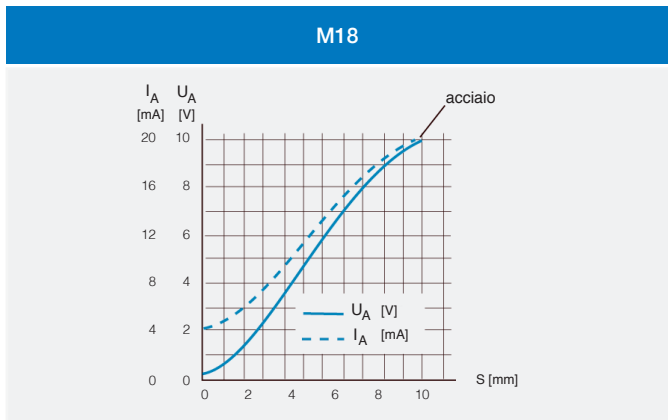
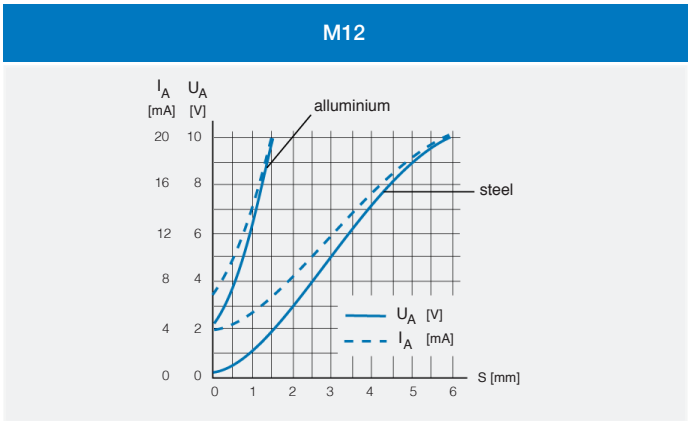
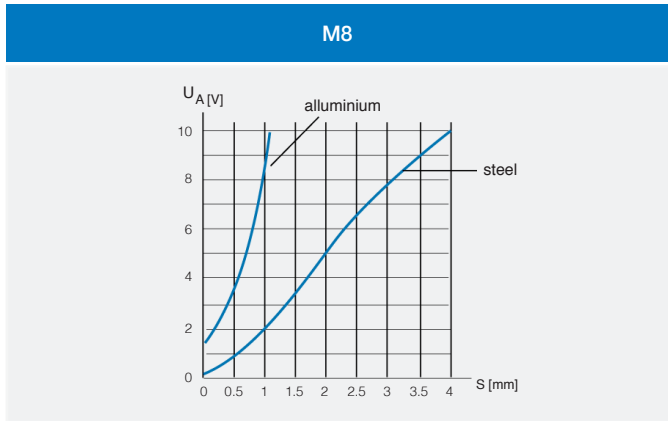
plug



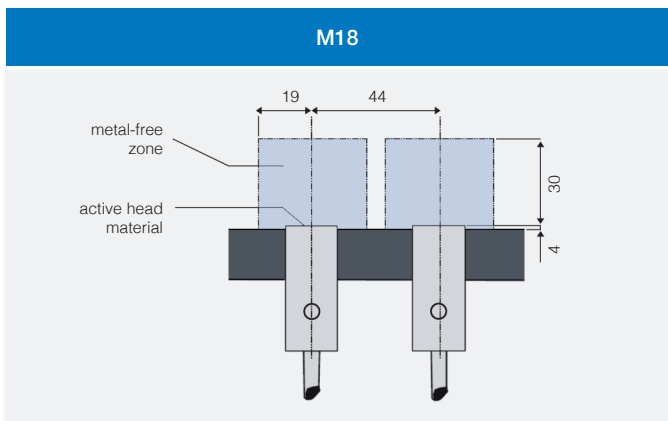
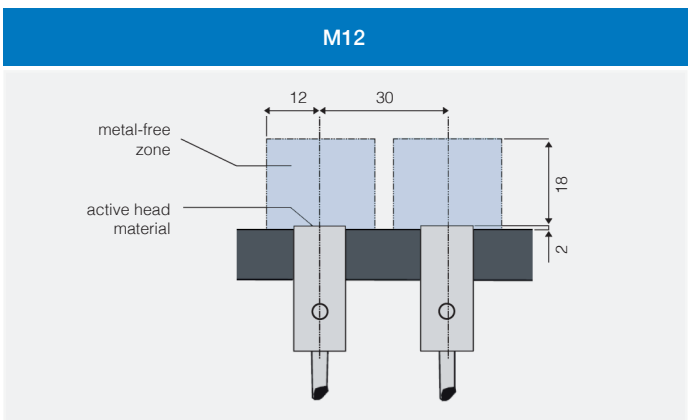
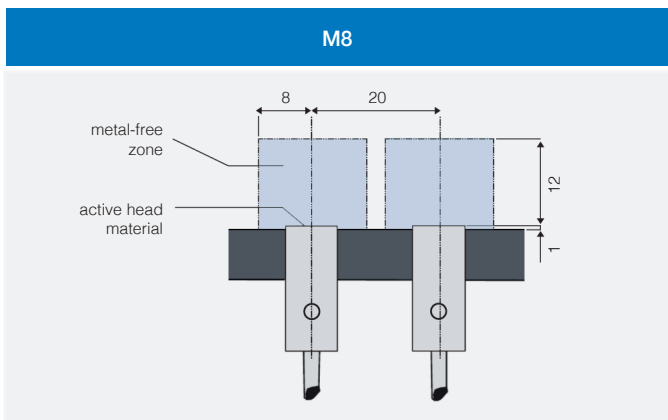


# response diagram

Cylindrical with analogue output

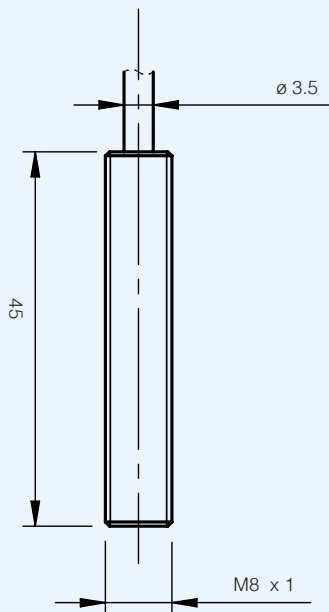


# installation



## dimensions (mm)

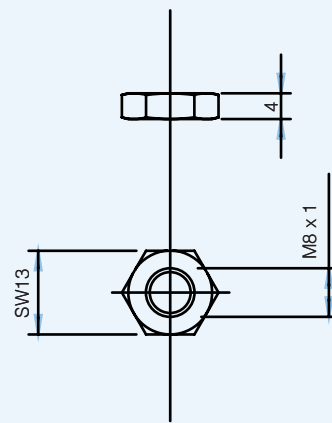
AE1/D1-5A



## dimensions (mm)

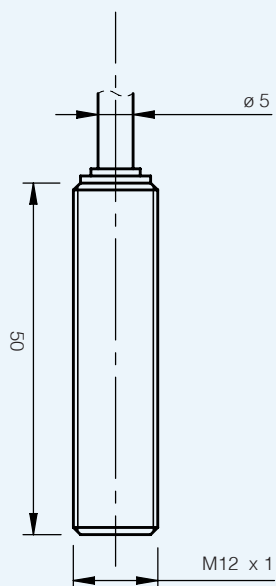
accessories included in all M8 models

metallic  
nut (2 x)

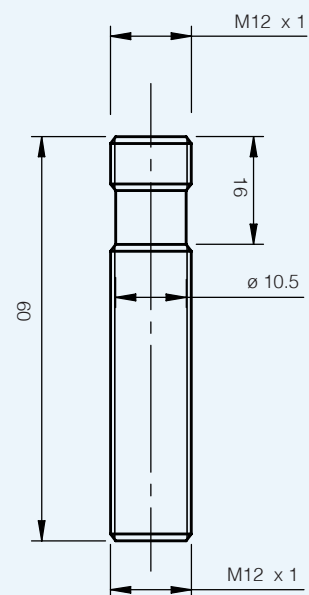


## dimensions (mm)

AM1/D2-5A



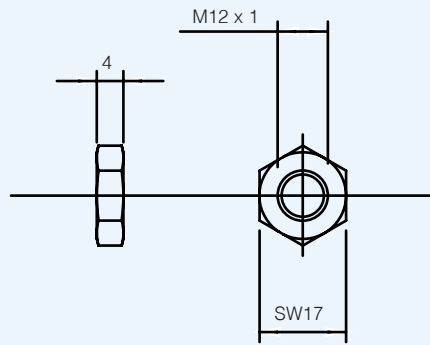
AM1/D2-5H



Cylindrical with  
analogue output

## dimensions (mm)

accessories included in all M12 models

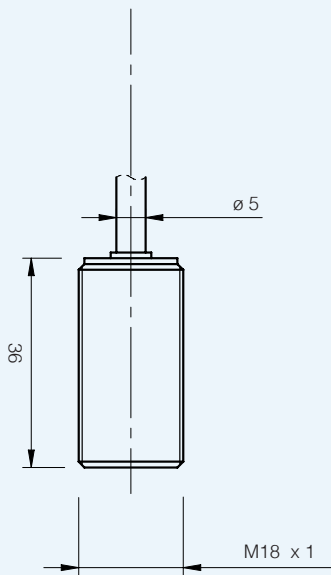


metallic  
nut (2 x)

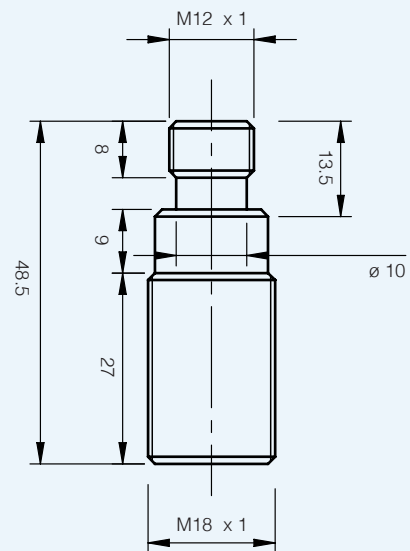
Cylindrical with  
analogue output

## dimensions

AK6/D2-5A

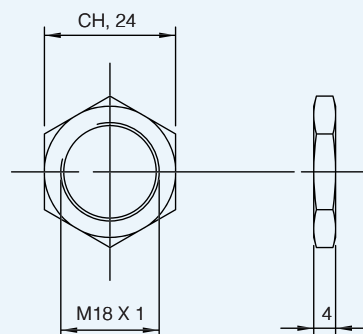


AK6/D2-5H



## dimensions (mm)

accessories included in all M18 models



metallic  
nut (2 x)