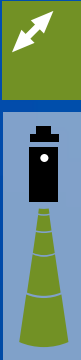




# AT series

M30 cylindrical inductive sensors



M30 cylindrical

## features

- Wide range of models: standard, long distance
- Output: cable, M12 and plug cable exit
- Models with 2, 3, and 4 wires
- ATEX models, cat. 3, available on request
- Models with complementary output (NO + NC)
- Complete protection against electrical damages



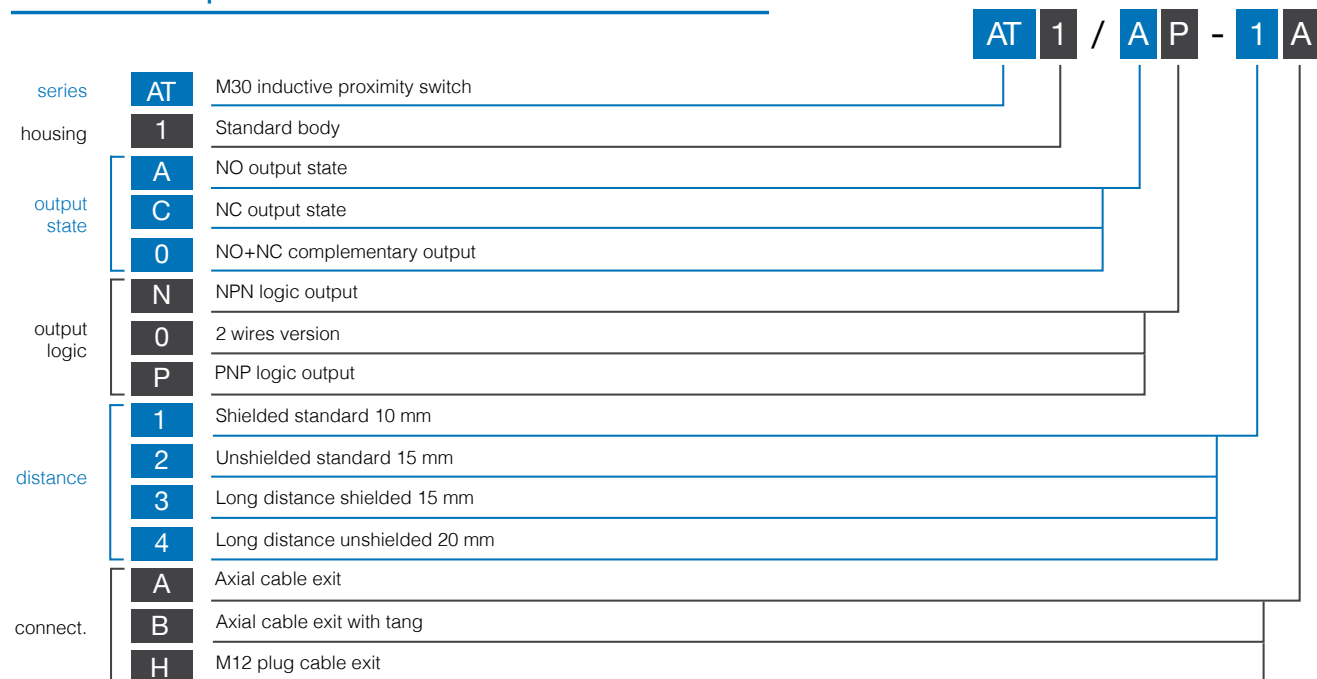
## web contents



- Application notes
- Photos
- Catalogue / Manuals



## code description (\*)



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

## available models

### 4 wires standard housing

diameter	installation	distance	plug	distance (mm)	PNP/NO+NC
M30	shielded	standard	M12	10	AT1/OP-1H
	unshielded			15	AT1/OP-2H
	shielded	long distance		20	AT1/OP-3H
	unshielded			AT1/OP-4H	

## available models

### 3 wires standard housing

diameter	installation	distance	plug	distance (mm)	NPN/NO	NPN/NC	PNP/NO	PNP/NC
M30	shielded	standard	cable	10	AT1/AN-1A	AT1/CN-1A	AT1/AP-1A	AT1/CP-1A
			cable with tang		AT1/AN-1B	AT1/CN-1B	AT1/AP-1B	AT1/CP-1B
			M12		AT1/AN-1H	AT1/CN-1H	AT1/AP-1H	AT1/CP-1H
	unshielded		cable	15	AT1/AN-2A	AT1/CN-2A	AT1/AP-2A	AT1/CP-2A
			cable with tang		AT1/AN-2B	AT1/CN-2B	AT1/AP-2B	AT1/CP-2B
			M12		AT1/AN-2H	AT1/CN-2H	AT1/AP-2H	AT1/CP-2H
	shielded	long distance	cable	20	AT1/AN-3A	AT1/CN-3A	AT1/AP-3A	AT1/CP-3A
			M12		AT1/AN-3H	AT1/CN-3H	AT1/AP-3H	AT1/CP-3H
			cable		AT1/AN-4A	AT1/CN-4A	AT1/AP-4A	AT1/CP-4A
	unshielded		M12	AT1/AN-4H	AT1/CN-4H	AT1/AP-4H	AT1/CP-4H	

## available models

### DC 2 wires models

diameter	installation	distance	plug	distance (mm)	NO
M30	shielded	standard	cable	10	AT1/A0-1A
					AT1/A0-1H
	unshielded		M12	15	AT1/A0-2A
					AT1/A0-2H
	shielded	long distance	cable	20	AT1/A0-3A
					AT1/A0-3H
	unshielded		M12	AT1/A0-4A	AT1/A0-4H



	AT*/**-1*	AT*/**-2*	AT*/**-3*	AT*/**-4*
nominal sending distance	10 mm	15 mm	15 mm	20 mm
operating distance	0...8.1 mm	0...12.1 mm	0...12.1 mm	0...16.2 mm
hysteresis	1...20%			
standard target	30 x 30 mm FE 360	45 x 45 mm FE 360	45 x 45 mm FE 360	60 x 60 mm FE 360
repeatability	5% U <sub>b</sub> 20-30 V Ta = 23°C ± 5°C			
operating voltage	10...30 Vdc			
output type	NPN or PNP - NO or NC (3 wires models), PNP - NO + NC (4 wires models), NPN/PNP - NO (2 wires models)			
max ripple content	≤ 10%			
output current	≤ 400 mA ( 3...100 mA for 2 wires versions)			
output voltage drop	≤ 1V @ 400 mA (2.8 V @ 100 mA for 2 wires versions)			
no-load supply current	20 mA			
leakage current	10 µA / 0,8 mA for 2 wires versions			
switching frequency	200 Hz / 100 Hz for 2 wires versions		200 Hz / 100 Hz for 2 wires versions	
power on delay	100 ms (50 ms for 2 wires versions)			
ambient temperature range	-25...+70 °C			
temperature drift of Sr	10%			
short-circuit protection	●			
voltage reversal protection	●			
induction protection	●			
shocks and vibrations	IEC 60947-5-2 / 7.4			
weight	150 g connector, 230 g cable			
LEDs	yellow LED output state			
protection degree	IP 67 <sup>(1)</sup> ( EN60529 )			
EMC	in conformity with the EMC Directive according to IEC 60947-5-2			
shocks and vibrations	IEC 60947-5-2			
housing material	nickel-plated brass			
active head material	PBT			
connection	cable 2 m PVC - plug M8 or M12			
tightening torque	50 Nm			

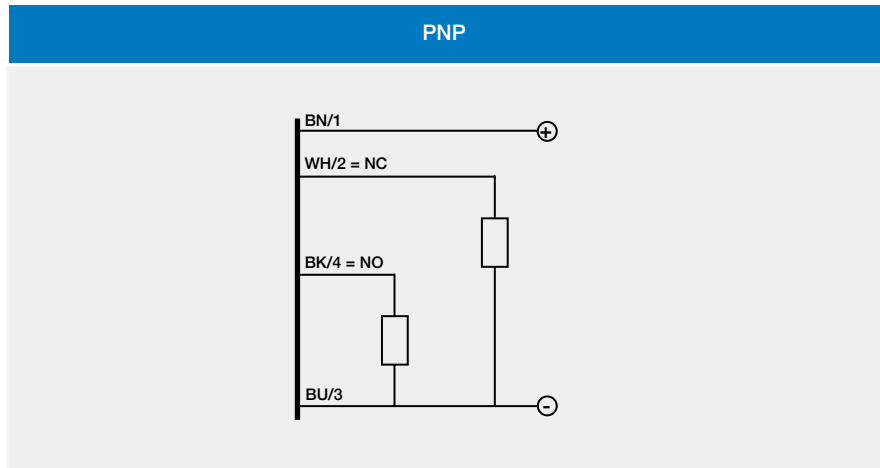
<sup>(1)</sup> Protection guaranteed only with plug cable well mounted.

## correction factors

code	steel FE 360	copper	alluminium	brass	stainless steel
AT*/**-1*	1	0.35	0.45	0.50	0.75
AT*/**-2*		0.45	0.50	0.55	0.80
AT*/**-3*		0.35	0.45	0.50	0.70
AT*/**-4*		0.45	0.50	0.55	0.75

## electrical diagrams of connections

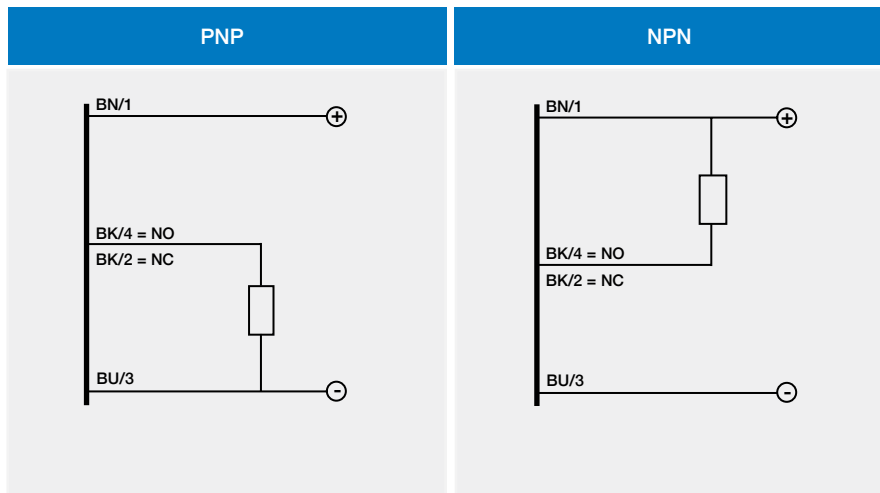
4 wires versions



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

## electrical diagrams of connections

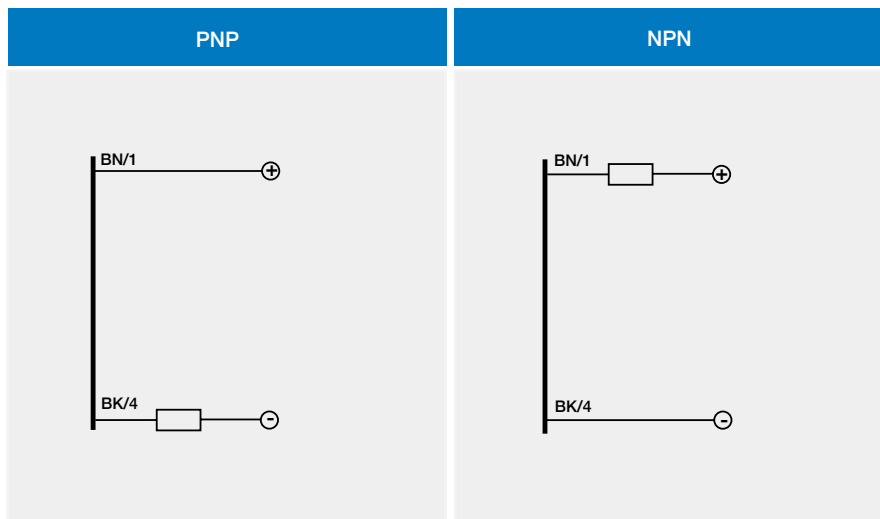
3 wires versions



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

## electrical diagrams of connections

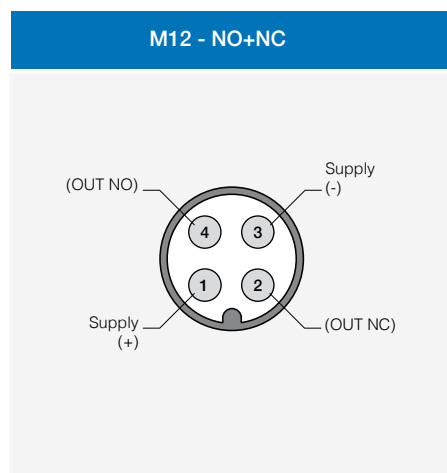
2 wires versions



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

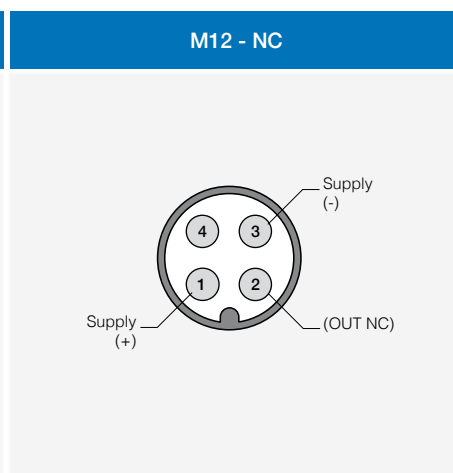
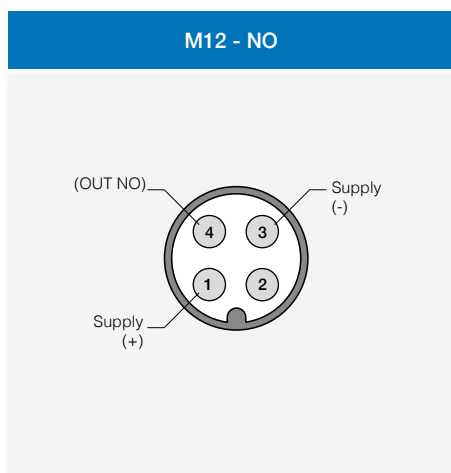
## plug

4 wires versions



## plug

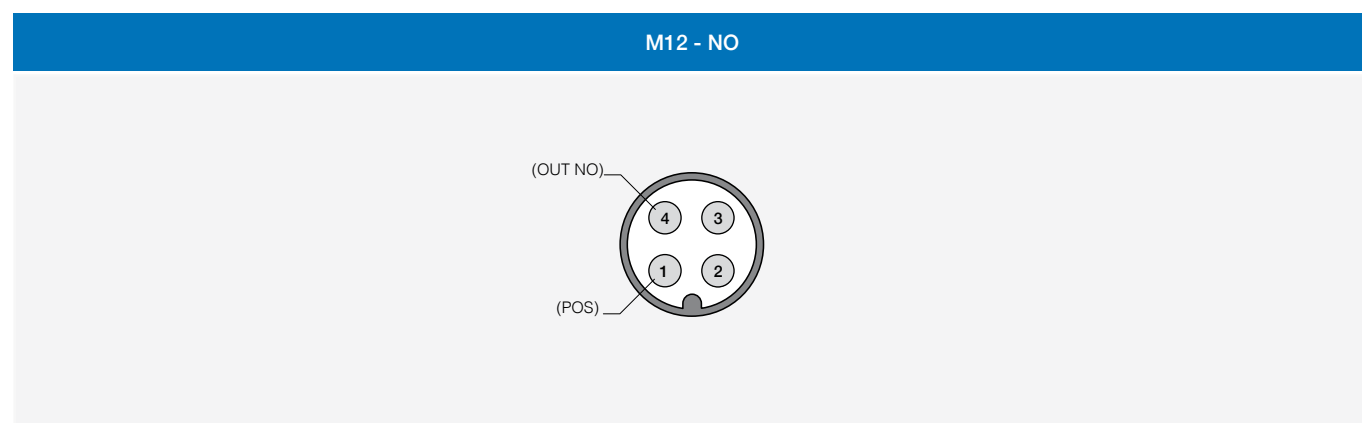
3 wires versions



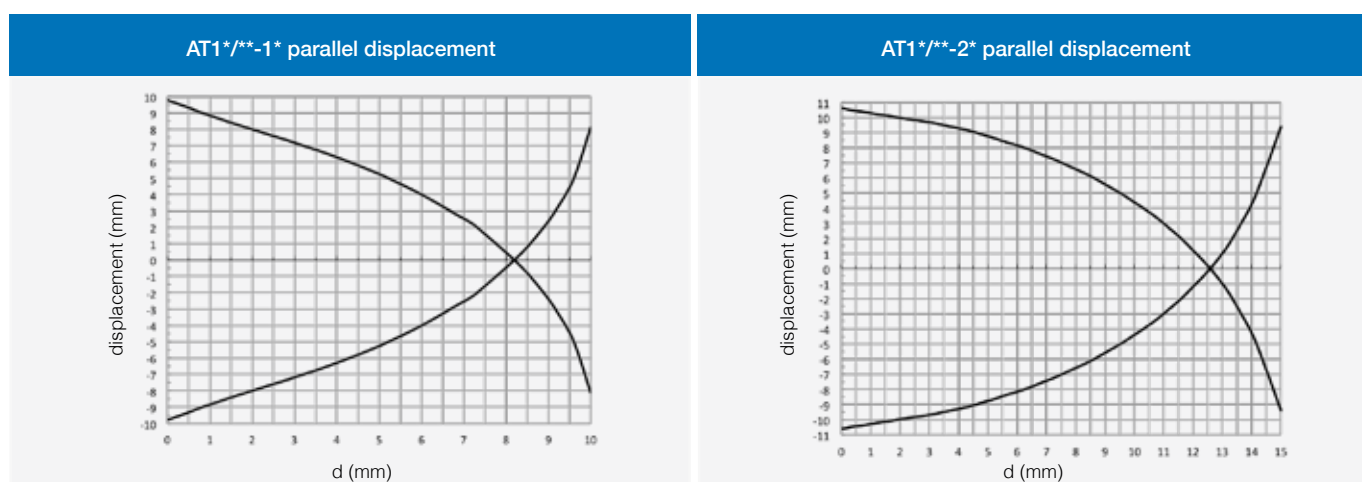
M30 cylindrical

## plug

2 wires versions

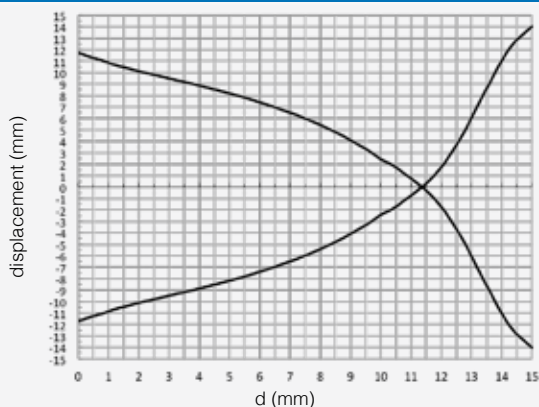


## response diagram

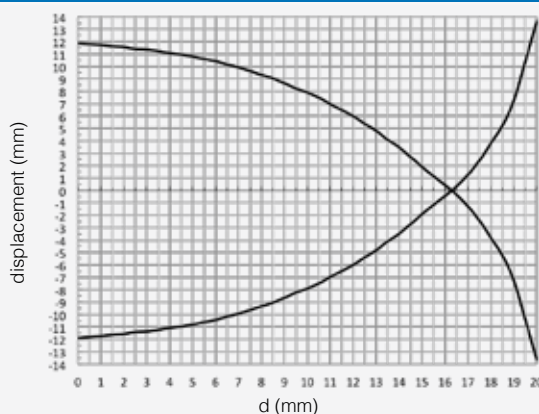


## response diagram

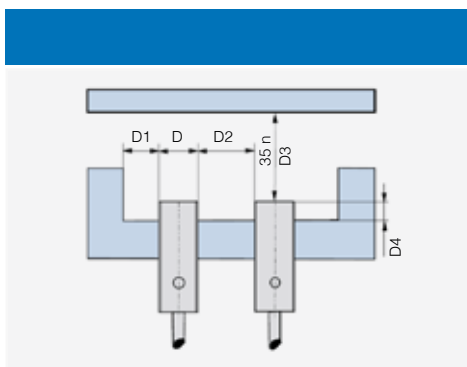
AT1/\*\*-3\* parallel displacement



AT1/\*\*-4\* parallel displacement



## installation

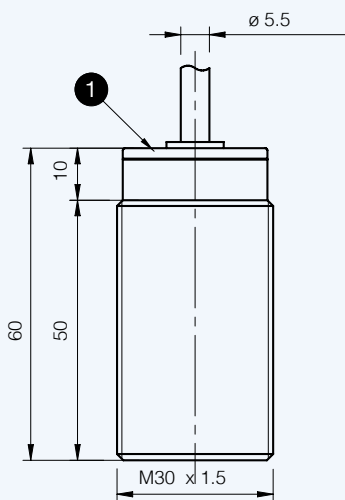


code	D4	D1	D2	D3
AT1/**-1*	≥ 0 mm	≥ 10 mm	≥ 30 mm	≥ 30 mm
AT1/**-2*	≥ 18 mm <sup>(1)</sup>	≥ 15 mm	≥ 45 mm	≥ 45 mm
AT1/**-3	≥ 3 mm	≥ 15 mm	≥ 40 mm	≥ 45 mm
AT1/**-4*	≥ 20 mm <sup>(1)</sup>	≥ 20 mm	≥ 60 mm	≥ 60 mm

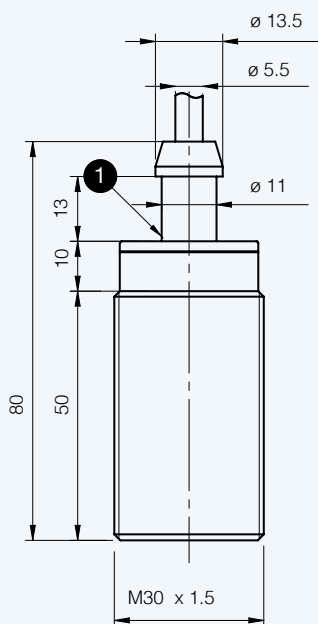
<sup>(1)</sup> ≥ for non magnetic materials

## dimensions (mm)

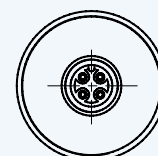
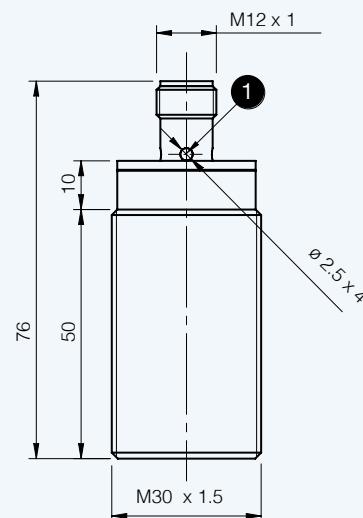
AT1/\*\*-1A  
AT1/\*\*-3A



AT1/\*\*-1B  
AT1/\*\*-3B

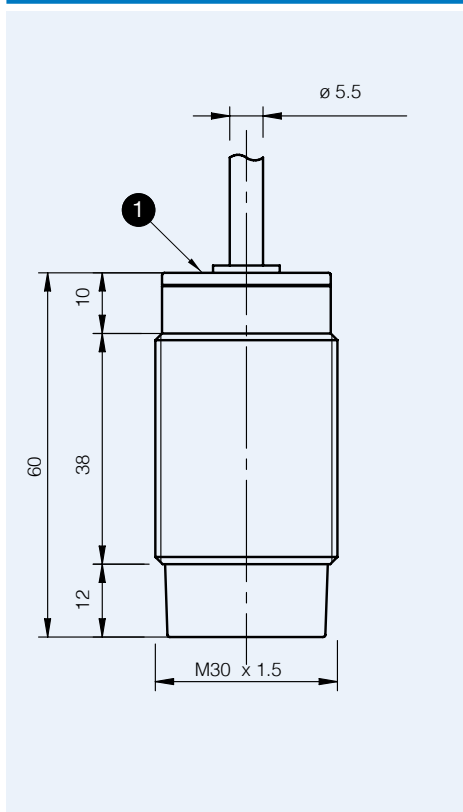


AT1/\*\*-1H  
AT1/\*\*-3H

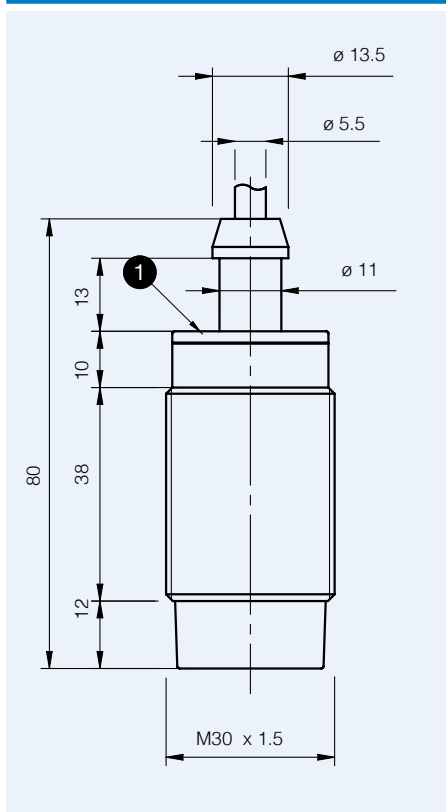




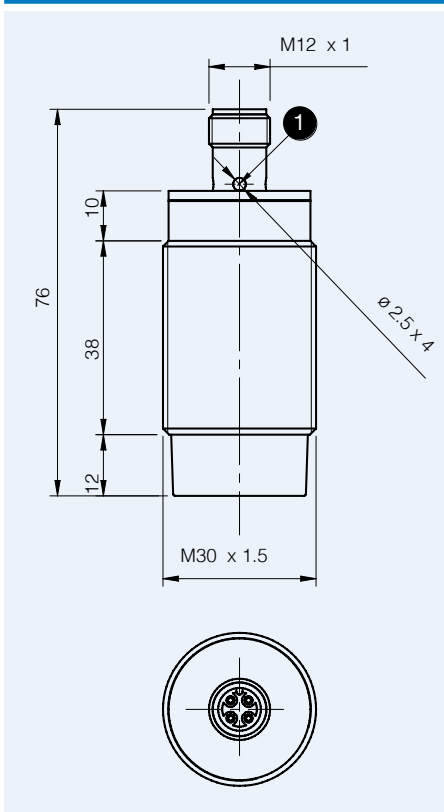
AT1/\*\*-2A  
AT1/\*\*-4A



AT1/\*\*-2B  
AT1/\*\*-4B



AT1/\*\*-2H  
AT1/\*\*-4H



1 LED

### dimensions (mm)

accessories included in all models

