



AT series

M30 cylindrical inductive sensors



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



M30 cylindrical inductives

code description (*)

	AT	1	/	A	P	-	1	A
series	AT	M30 inductive proximity switch						
housing	1	Standard body						
	6	Short body						
output state	A	NO output state						
	C	NC output state						
	B	NO+NC complementary output						
output logic	N	NPN logic output						
	0	2 wires version						
	P	PNP logic output						
distance	1	Shielded standard 10 mm						
	2	Unshielded standard 15 mm						
	3	Long distance shielded 15 mm						
	4	Long distance unshielded 20 mm						
connect.	A	Axial cable exit						
	B	Axial cable exit with tang						
	H	M12 plug cable exit						

(*) 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/BP-1H
	unshielded			15	AT1/BP-2H
	shielded	long distance			15
	unshielded			20	AT1/BP-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	15	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
	unshielded		cable	20	AT1/AN-4A	AT1/CN-4A	AT1/AP-4A	AT1/CP-4A
			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	
			M12		AT1/A0-1H	
	unshielded		cable	15	AT1/A0-2A	
			M12		AT1/A0-2H	
	shielded	long distance	cable		15	AT1/A0-3A
			M12			AT1/A0-3H
	unshielded		cable	20	AT1/A0-4A	
			M12		AT1/A0-4H	

available models

short housing

diameter	plug	distance	installation	distance (mm)	NPN/NO	PNP/NO	NPN/NO+NC	PNP/NO+NC
M30	cable	standard	shielded	10	AT6/AN-1A	AT6/AP-1A	AT6/BN-1A	AT6/BP-1A
			unshielded	15	AT6/AN-2A	AT6/AP-2A	AT6/BN-2A	AT6/BP-2A
		long distance	shielded	15	AT6/AN-3A	AT6/AP-3A	AT6/BN-3A	AT6/BP-3A
			unshielded	20	AT6/AN-4A	AT6/AP-4A	AT6/BN-4A	AT6/BP-4A
	M12	standard	shielded	10	AT6/AN-1H	AT6/AP-1H	AT6/BN-1H	AT6/BP-1H
			unshielded	15	AT6/AN-2H	AT6/AP-2H	AT6/BN-2H	AT6/BP-2H
		long distance	shielded	15	AT6/AN-3H	AT6/AP-3H	AT6/BN-3H	AT6/BP-3H
			unshielded	20	AT6/AN-4H	AT6/AP-4H	AT6/BN-4H	AT6/BP-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 _B 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 ⁽¹⁾ (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 M12			
tightening torque	50 Nm			

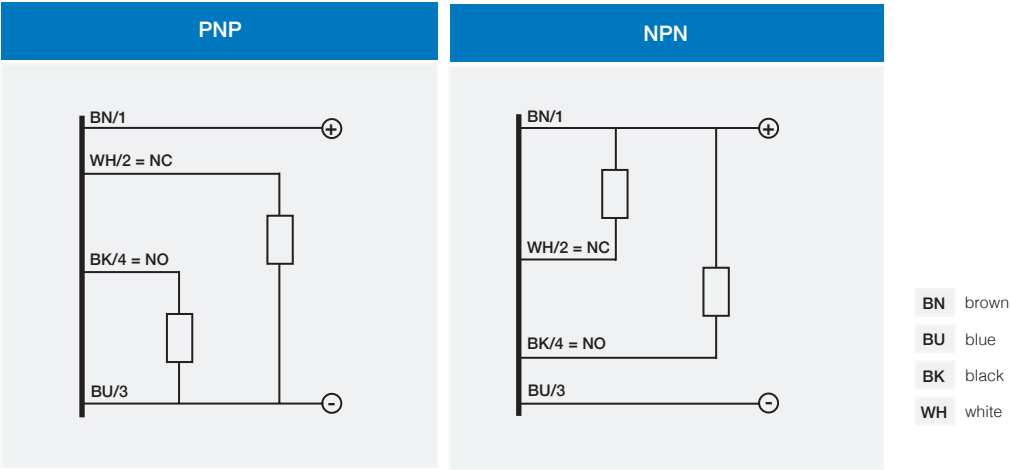
⁽¹⁾ Protection guaranteed only with plug cable well mounted.

correction factors

code	steel FE 360	copper	alluminium	brass	stainless steel
AT1/**-1*	1	0.35	0.45	0.50	0.75
AT1/**-2*		0.45	0.50	0.55	0.80
AT1/**-3*		0.35	0.45	0.50	0.70
AT1/**-4*		0.45	0.50	0.55	0.75
AT6/**-1*		0.41	0.47	0.52	0.84
AT6/**-2*		0.44	0.49	0.53	0.80
AT6/**-3*		0.41	0.47	0.52	0.80
AT6/**-4*		0.46	0.50	0.54	0.78

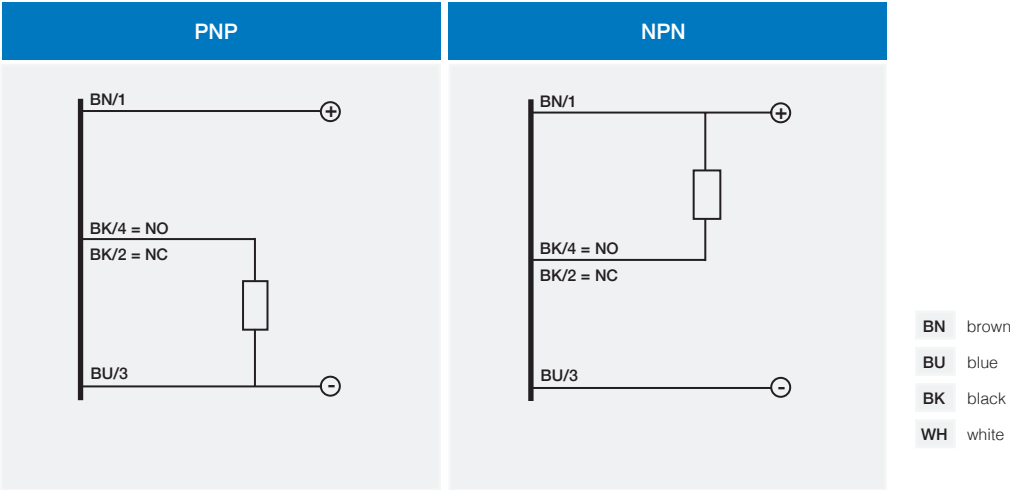
electrical diagrams of connections

4 wires versions



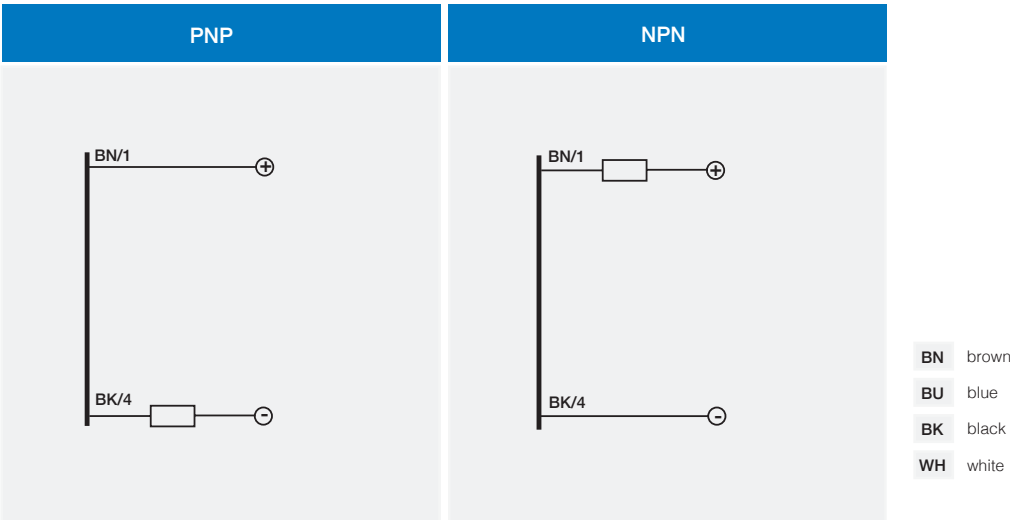
electrical diagrams of connections

3 wires versions



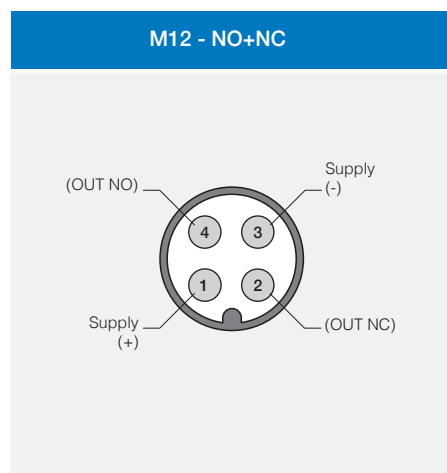
electrical diagrams of connections

2 wires versions



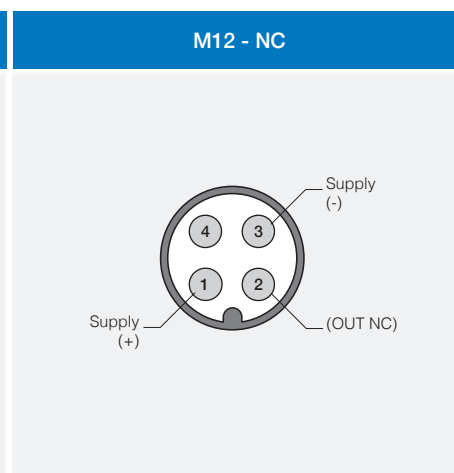
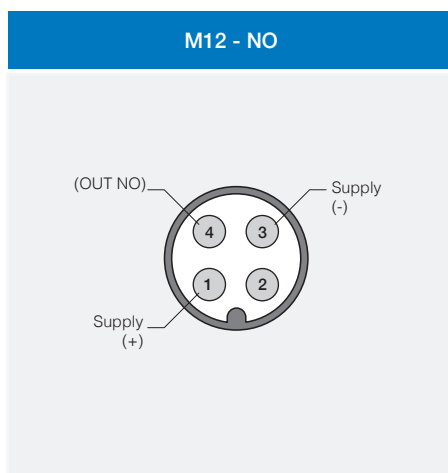
plug

4 wires versions



plug

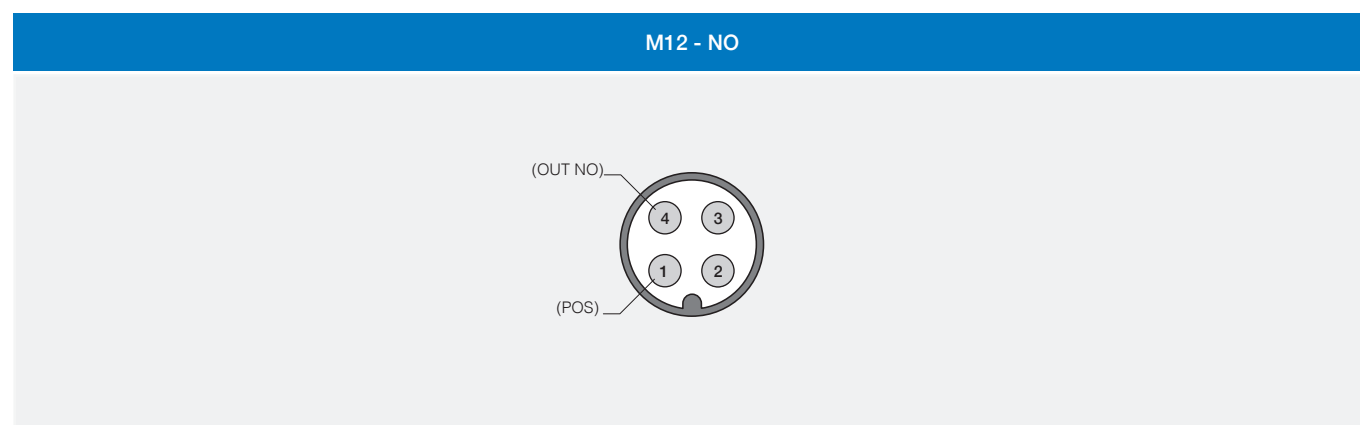
3 wires versions



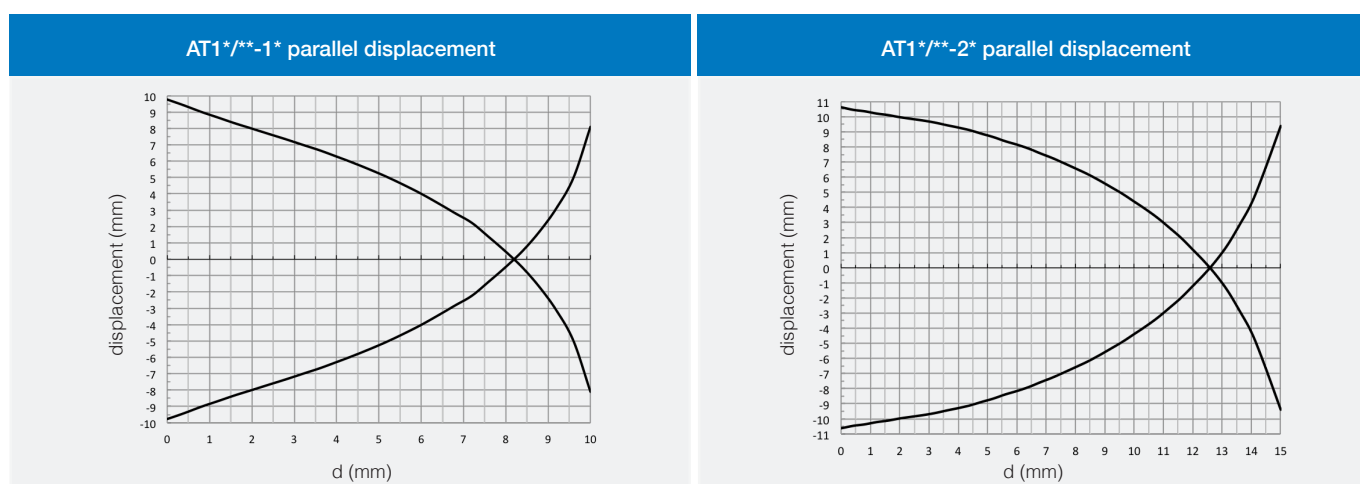
M30 cylindrical inductives

plug

2 wires versions



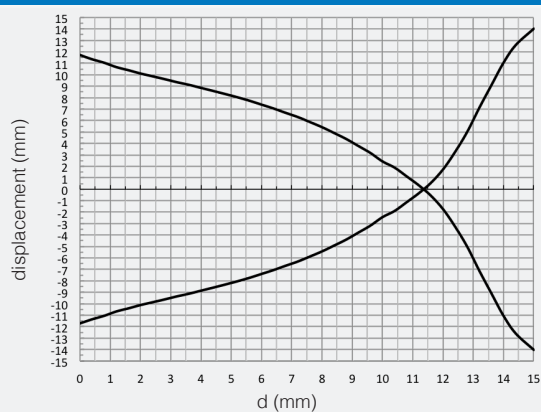
response diagram



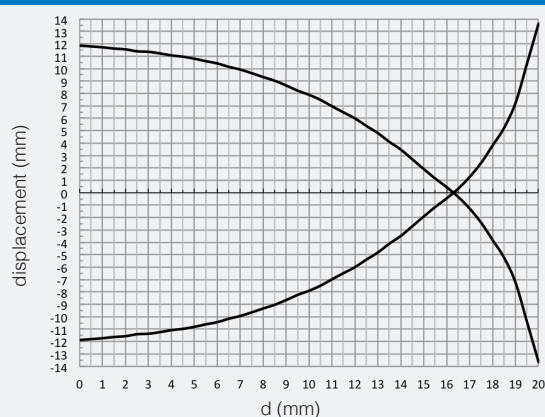
AT

response diagram

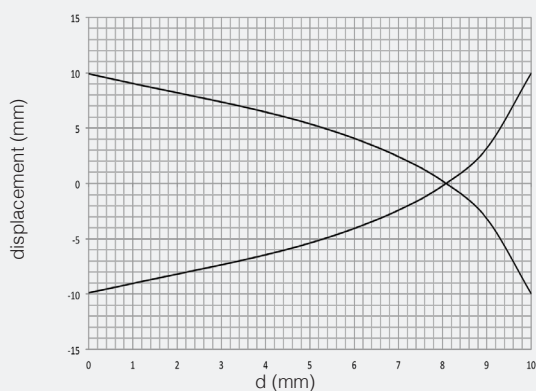
AT1/**-3* parallel displacement



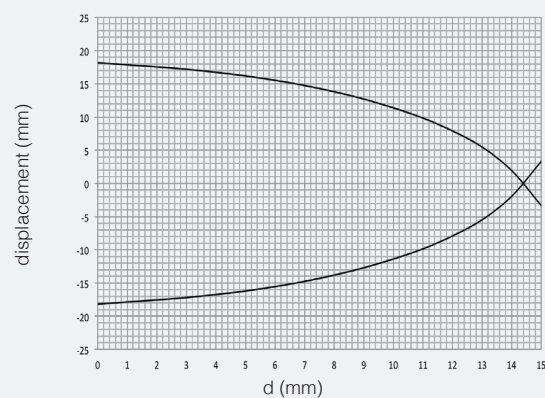
AT1/**-4* parallel displacement



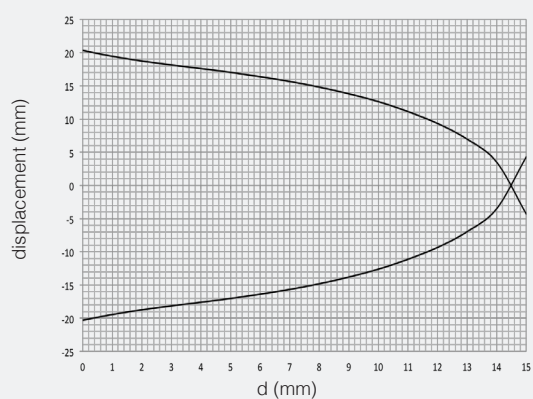
AT6/**-1* parallel displacement



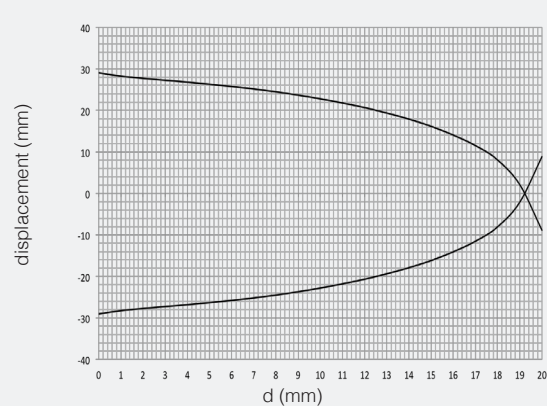
AT6/**-2* parallel displacement



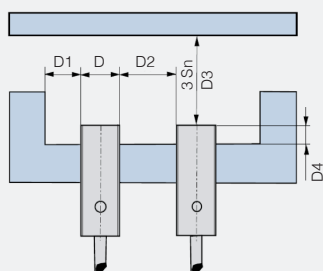
AT6/**-3* parallel displacement



AT6/**-4* parallel displacement



installation

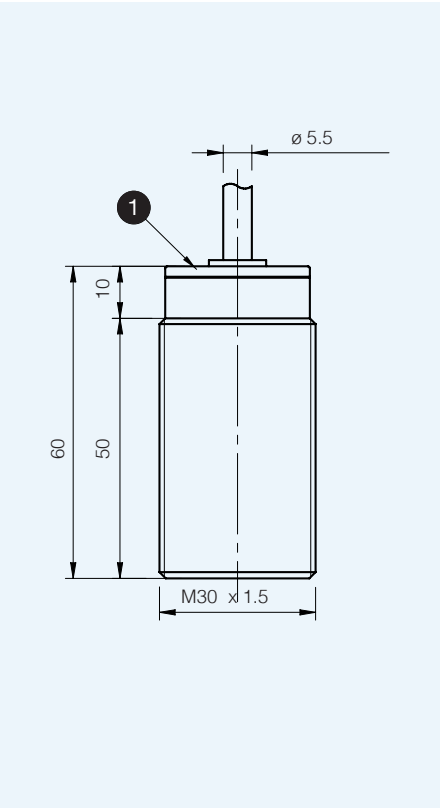


- (1) ≥ 9 mm for non magnetic materials
 (2) ≥ 12 mm for non magnetic materials
 (3) ≥ 0 mm for non magnetic materials

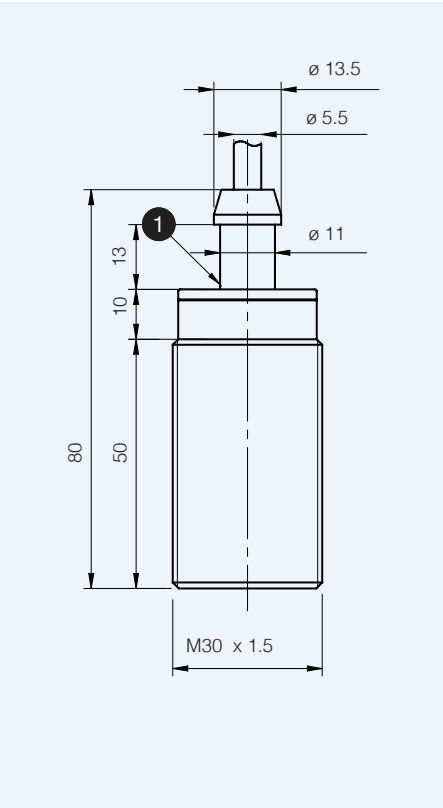
code	D4	D1	D2	D3
AT1/**-1*	≥ 0 mm	≥ 10 mm	≥ 30 mm	≥ 30 mm
AT1/**-2*	≥ 18 mm ⁽¹⁾	≥ 15 mm	≥ 45 mm	≥ 45 mm
AT1/**-3	≥ 3 mm	≥ 15 mm	≥ 40 mm	≥ 45 mm
AT1/**-4*	≥ 20 mm ⁽¹⁾	≥ 20 mm	≥ 60 mm	≥ 60 mm
AT6/**-1*	≥ 0 mm	≥ 0 mm	≥ 5 mm	≥ 30 mm
AT6/**-2*	≥ 14 mm ⁽²⁾	≥ 15 mm	≥ 10 mm	≥ 45 mm
AT6/**-3*	≥ 3 mm ⁽³⁾	≥ 3 mm	≥ 15 mm	≥ 45 mm
AT6/**-4*	≥ 17 mm ⁽²⁾	≥ 15 mm	≥ 15 mm	≥ 60 mm



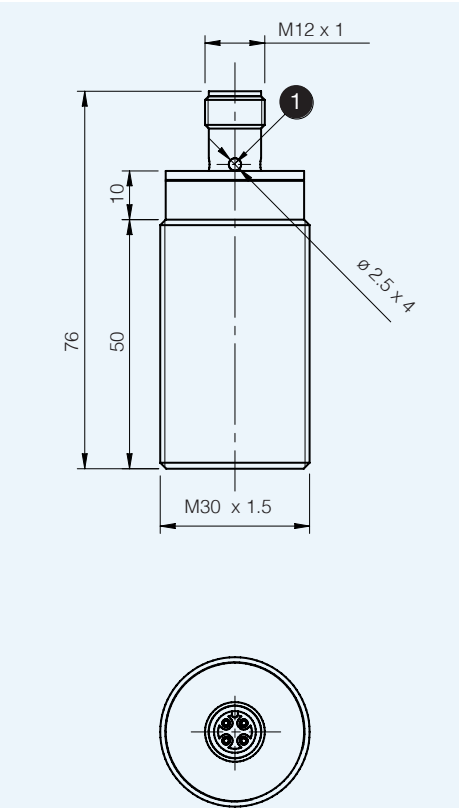
AT1/**-1A
AT1/**-3A



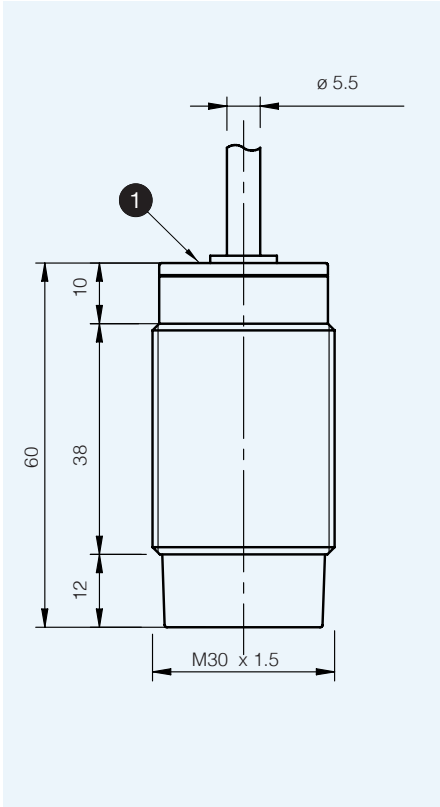
AT1/**-1B
AT1/**-3B



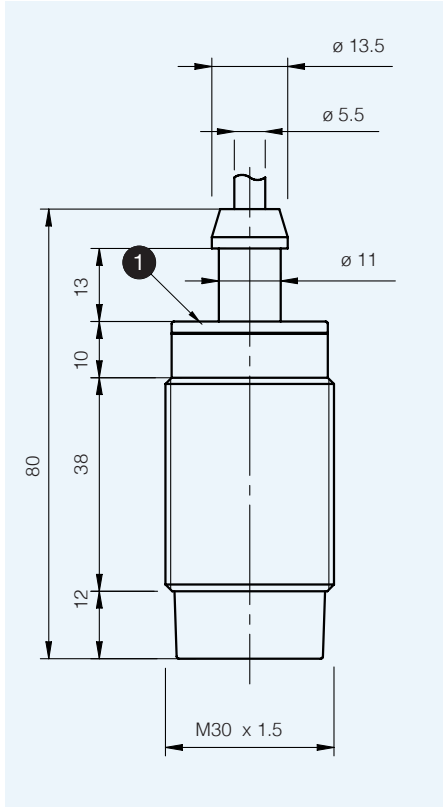
AT1/**-1H
AT1/**-3H



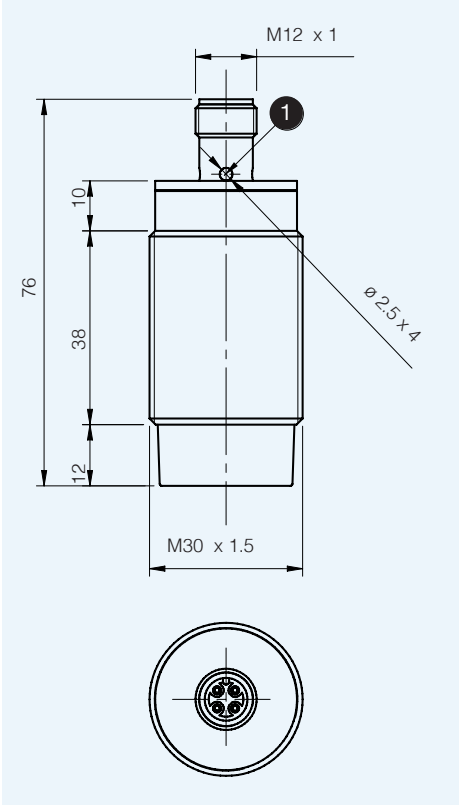
AT1/**-2A
AT1/**-4A



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



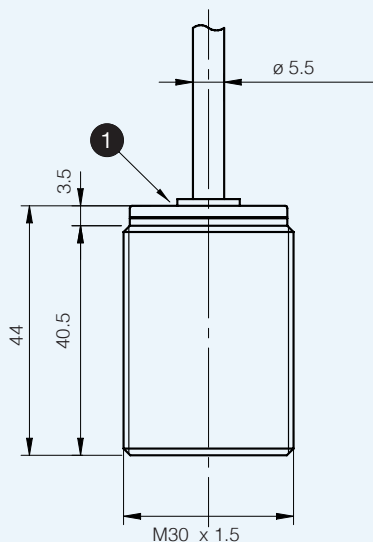
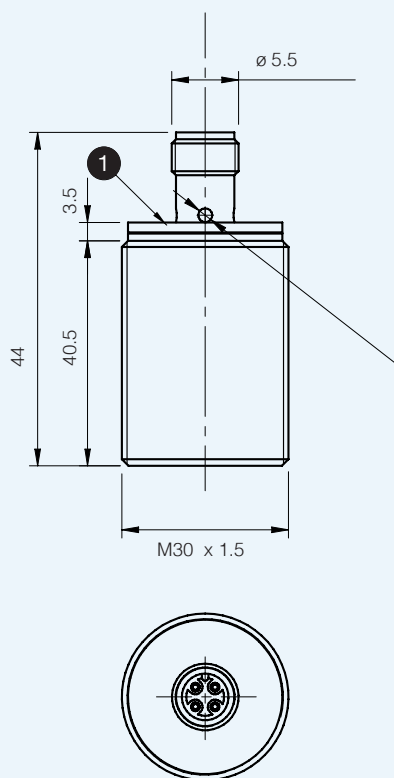
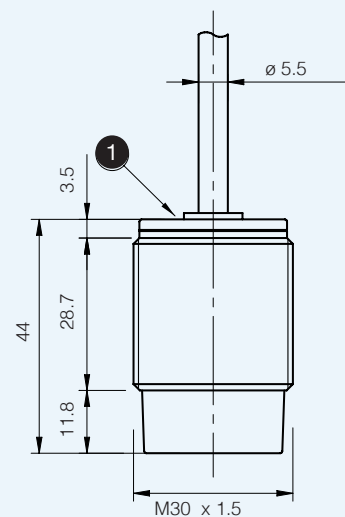
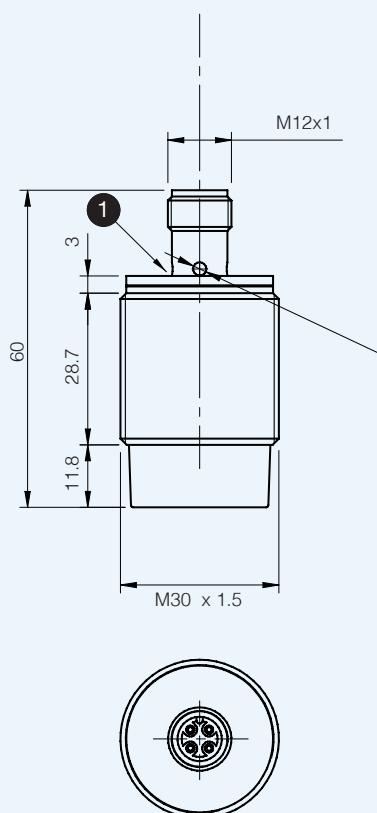
AT1/**-2H
AT1/**-4H



1 LED

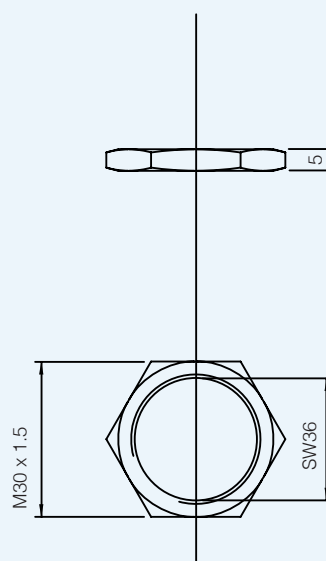


dimensions (mm)

AT6/**-1A
AT6/**-3AAT6/**-1H
AT6/**-3HAT6/**-2A
AT6/**-4AAT6/**-2H
AT6/**-4H

dimensions (mm)

accessories included in all models

metallic
nut (2 x)

1 LED

EU Declaration of Conformity

UE DICHIARAZIONE DI CONFORMITA', UE DECLARACIÓN DE CONFORMIDAD, UE DÉCLARATION DE CONFORMITÉ, EU KONFORMITÄTSEKTLÄRUNG, EU CONFORMITEITSVERKLARING, EU FÖRSÄKRAN OM ÖVERENSSTÄMMELSE

Manufacturer / Produttore / Fabricante / Fabricant / Hersteller / Fabrikant / Tillverkaren

Datasensing S.r.l.

Strada S. Caterina 235, 41122 Modena - Italy

Apparatus / Apparato / Aparato / Appareil / Gerätetyp / Apparaatmodel / Apparatmodell

AT_AN

Proximity Sensor

This declaration of conformity is issued under the sole responsibility of the manufacturer / La presente dichiarazione di conformità è rilasciata sotto la responsabilità esclusiva del fabbricante / La presente declaración de conformidad se expide bajo la exclusiva responsabilidad del fabricante / La présente déclaration de conformité est établie sous la seule responsabilité du fabricant / Die alleinige Verantwortung für die Ausstellung dieser onformitätserklärung trägt der Hersteller / Deze conformiteitsverklaring wordt verstrekt onder volledige verantwoordelijkheid van de fabrikant / Denna försäkran om överensstämmelse utfärdas på tillverkarens eget ansvar.

The object of the declaration described above is in conformity with the relevant Union harmonization legislation: / L'oggetto della dichiarazione di cui sopra è conforme alla pertinente normativa di armonizzazione dell'Unione: / El objeto de la declaración descrita anteriormente es conforme con la legislación de armonización pertinente de la Unión: / L'objet de la déclaration décrit ci-dessus est conforme à la législation d'harmonisation de l'Union applicable: / Der oben beschriebene Gegenstand der Erklärung erfüllt die einschlägigen Harmonisierungsrechtsvorschriften der Union: / Het hierboven beschreven voorwerp is in overeenstemming de desbetreffende harmonisatiewetgeving van de Unie: / Föremålet för försäkran ovan överensstämmer med den relevanta harmoniserade unionslagstiftningen:

2014/30/EU (EMC)

2011/65/EU (RoHS 3)

2014/34/EU (ATEX)

References to the relevant harmonised standards: / Riferimento alle pertinenti norme armonizzate: / Referencias a las normas armonizadas: / Références des normes harmonisées: / Angabe der einschlägigen harmonisierten Normen: / Vermelding van de toegepaste relevante geharmoniseerde normen: / Hänvisningar till de relevanta harmoniserade standarder:

EN60079-0:2018, EN IEC 60079-7:2015/A1:2018, EN60079-31:2014, EN IEC 60947-5-2:2020, EN60947-5-7:2003, EN IEC 63000:2018

to the protection mode/al
modo di protezione



**II 3G Ex ec nC IIC T6 Gc
II 3D Ex tc IIIB T85°C Dc (connector)
II 3G Ex nC IIC T6 Gc
II 3D Ex tc IIIB T85°C Dc (cable)**

Certificate nr.
Nr. Certificato

0802013X

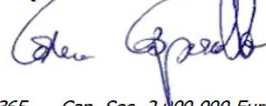
The sign "X" placed after the certificate number indicates that the device or protective system is subject to special conditions for safe use specified in the technical documentation.

Il segno "X" posto dopo il numero di certificato indica che il dispositivo è soggetto a condizioni speciali per l'uso in sicurezza specificate nella documentazione tecnica.

EU 39

**Modena
8/01/2024**

**Cosimo Capuzzello
(Chief Executive Officer)**



Datasensing S.r.l.

Strada S. Caterina, 235
41122 Modena – Italy
info@datasensing.com

C.F. e P.I. 01555630365
Tel. +39 059 420411
Fax +39 059 253973

Cap. Soc. 2.000.000 Euro i.v.
C.C.I.A.A. 225715 - N. Mecc. 003994
www.datasensing.com

856000460

Società soggetta ad attività di direzione e coordinamento da parte di Datalogic S.r.l. ai sensi dell'art. 2497 – bis Codice Civile