

Sensori di prossimità induttivi M30 serie AT

M30 inductive proximity sensors AT series



Caratteristiche principali Main features

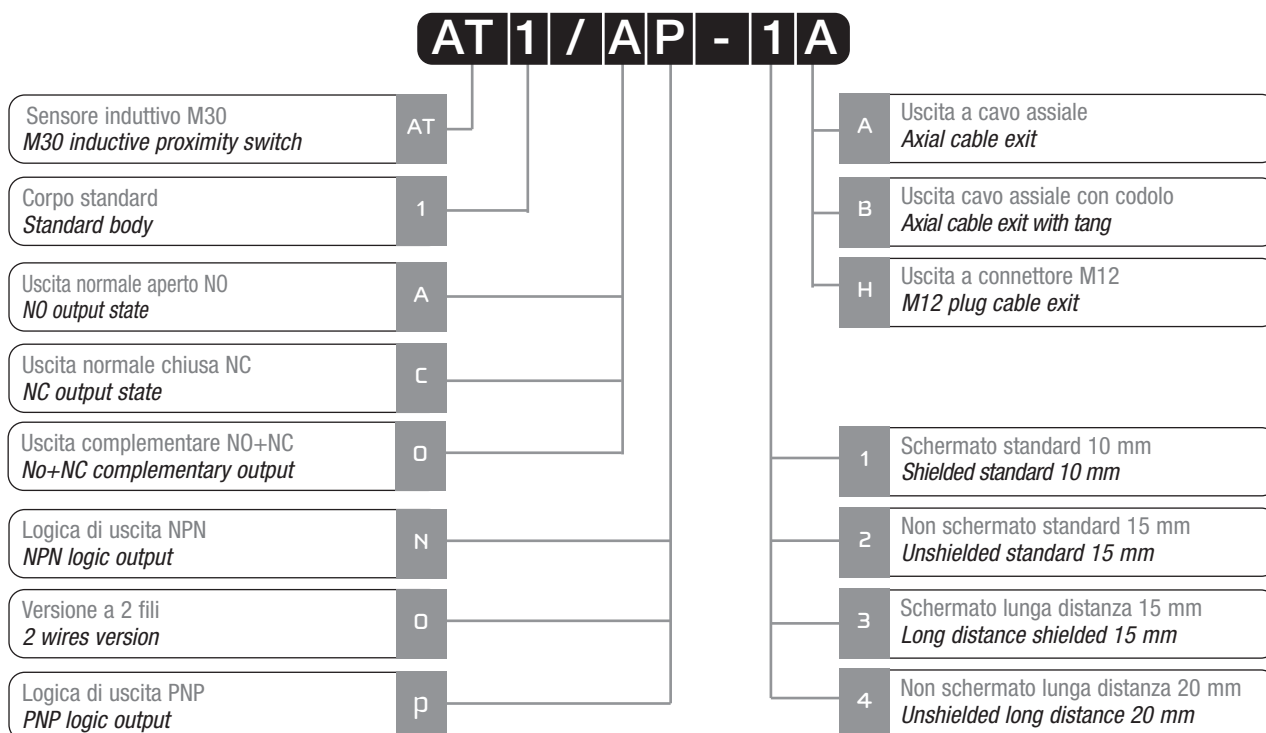
- > Vasta gamma di modelli: standard, lunga distanza
> *Wide range of models: standard, long distance*
- > Uscite: cavo, connettore M12
> *Output: cable, M12 and plug cable exit*
- > Modelli a 2, 3 e 4 fili
> *Models with 2, 3, and 4 wires*

Disponibili, su richiesta, modelli ATEX, cat. 3
ATEX models, cat. 3, available on request

- > Modelli con uscita antivalente (NO+NC)
> *Models with complementary output (NO + NC)*
- > Totalmente protetti contro danneggiamenti di tipo elettrico
> *Complete protection against electrical damages*
- > Marchio CE
> *CE Mark*

Descrizione del codice - Code structure

> M30 serie AT - M30 AT series



Modelli disponibili - Available models

Corpo standard a 4 fili / 4 wires standard housing

Diametro <i>Diameter</i>	Montaggio <i>Installation</i>	Portata <i>Distance</i>	Conn. <i>Plug</i>	Distanza <i>Distance</i>	NPN - NO+NC	PNP - NO+NC
M30	Schermato <i>Shielded</i>	Standard	M12	10 mm	AT1/ON-1H	AT1/OP-1H
	Non schermato <i>Unshielded</i>	Standard		15 mm	AT1/ON-2H	AT1/OP-2H
	Schermato <i>Shielded</i>	Lunga distanza <i>Long distance</i>		15 mm	AT1/ON-3H	AT1/OP-3H
	Non schermato <i>Unshielded</i>	Lunga distanza <i>Long distance</i>		20 mm	AT1/ON-4H	AT1/OP-4H

Corpo Standard 3 fili / 3 wires standard housing

Diametro <i>Diameter</i>	Montaggio <i>Installation</i>	Portata <i>Distance</i>	Conn. <i>Plug</i>	Distanza <i>Distance</i>	NPN - NO	NPN - NC	PNP - NO	PNP - NC
M30	Schermato <i>Shielded</i>	Standard	Cavo / Wire	10 mm	AT1/AN-1A	AT1/CN-1A	AT1/AP-1A	AT1/CP-1A
			Cavo con codolo / Cable with tang	10 mm	AT1/AN-1B	AT1/CN-1B	AT1/AP-1B	AT1/CP-1B
			M12	10 mm	AT1/AN-1H	AT1/CN-1H	AT1/AP-1H	AT1/CP-1H
	Non schermato <i>Unshielded</i>	Standard	Cavo / Wire	15 mm	AT1/AN-2A	AT1/CN-2A	AT1/AP-2A	AT1/CP-2A
			Cavo / Wire 90°	15 mm	AT1/AN-2B	AT1/CN-2B	AT1/AP-2B	AT1/CP-2B
			M12	15 mm	AT1/AN-2H	AT1/CN-2H	AT1/AP-2H	AT1/CP-2H
	Schermato <i>Shielded</i>	Lunga dist. <i>Long dist.</i>	Cavo / Wire	15 mm	AT1/AN-3A	AT1/CN-3A	AT1/AP-3A	AT1/CP-3A
			M12	15 mm	AT1/AN-3H	AT1/CN-3H	AT1/AP-3H	AT1/CP-3H
	Non schermato <i>Unshielded</i>	Lunga dist. <i>Long dist.</i>	Cavo / Wire	20 mm	AT1/AN-4A	AT1/CN-4A	AT1/AP-4A	AT1/CP-4A
			M12	20 mm	AT1/AN-4H	AT1/CN-4H	AT1/AP-4H	AT1/CP-4H

Modelli 2 fili DC / DC 2 wires models

Diametro <i>Diameter</i>	Montaggio <i>Installation</i>	Portata <i>Distance</i>	Conn. <i>Plug</i>	Distanza <i>Distance</i>	NO	NC
M30	Schermato <i>Shielded</i>	Standard	Cavo / Wire	10 mm	AT1/A0-1A	AT1/C0-1A
			M12	10 mm	AT1/A0-1H	AT1/C0-1H
	Non schermato <i>Unshielded</i>	Standard	Cavo / Wire	15 mm	AT1/A0-2A	AT1/C0-2A
			M12	15 mm	AT1/A0-2H	AT1/C0-2H
	Schermato <i>Shielded</i>	Lunga distanza <i>Long distance</i>	Cavo / Wire	15 mm	AT1/A0-3A	AT1/C0-3A
			M12	15 mm	AT1/A0-3H	AT1/C0-3H
	Non schermato <i>Unshielded</i>	Lunga distanza <i>Long distance</i>	Cavo / Wire	20 mm	AT1/A0-4A	AT1/C0-4A
			M12	20 mm	AT1/A0-4H	AT1/C0-4H

AT SERIES - INDUCTIVE SENSORS

Specifiche (In accordo con IEC EN 60947-5-2 / DIN 44030) - Specifications (According to IEC EN 60947-5-2 / DIN 44030)

Modelli / Models	AT*/**-1*	AT*/**-2*	AT*/**-3*	AT*/**-4*
Distanza nominale S_n / Nominal sending distance S_n	10 mm	15 mm	15 mm	20 mm
Distanza di lavoro / Operating distance	0 ÷ 8,1 mm	0 ÷ 12,1 mm	0 ÷ 12,1 mm	0 ÷ 16,2 mm
Corsa differenziale / Hysteresis	1 ÷ 20%			
Dimensione azionatore normalizzato / Standard target	30x30 mm FE 360	45x45 mm FE 360	45x45 mm FE 360	60x60 mm FE 360
Ripetitività / Repeat accuracy	5% U_0 20-30 V $T_a = 23^\circ\text{C} \pm 5^\circ\text{C}$			
Campo di tensione di alimentazione / Supply voltage range	10 ÷ 30 Vcc / Vdc			
Massima ondulazione residua / Max ripple content	≤ 10 %			
Corrente di uscita / Output current	≤ 400 mA (3 ÷ 100 mA per versioni a 2 fili / for 2 wires versions)			
Tensione di saturazione di uscita / Output voltage drop	≤ 1V @ 400 mA (2,8 V @ 100 mA per versioni a 2 fili / for 2 wires versions)			
Corrente di alimentazione senza carico / No load supply current	20 mA			
Corrente di perdita / Leakage current	10 μA / 0,8 mA per versioni a 2 fili / for 2 wires versions			
Frequenza di commutazione / Switching frequency	200 Hz / 100 Hz per 2 fili / for 2 wires		150 Hz (75 Hz per 2 fili / for 2 wires)	
Ritardo all'accensione / Time delay before availability	100 ms (50 ms per versioni a 2 fili / for 2 wires versions)			
Campo di temperatura ambiente / Ambient temperature range	-25 ÷ +70 °C			
Deriva termica di S_r / Temperature drift of S_r	10%			
Protezione al corto circuito / Short-circuit protection	Sì auto ripristinante / Yes auto reset			
Protezione all'inversione di polarità / Voltage reversal protection	Sì / Yes			
Protezione ai carichi induttivi / Induction protection	Sì / Yes			
Colpi e vibrazioni / Shocks and vibrations	IEC/EN60947-5-2 / 7.4			
Peso / Weight	30 g versione a connettore / plug version 70 g versione a cavo / cable version			
Indicatori LED / LED indicators	LED giallo stato dell'uscita / Yellow LED output state			
Grado di protezione / Degree of protection	IP 67 ⁽¹⁾ (EN60529)			
Protezione EMC / EMC protection:	Secondo / According to IEC/EN60947-5-2			
IEC 60255-5	1 kV			
IEC 61000-4-2	Livello 3 / Level 3			
IEC 61000-4-3	Livello 3 / Level 3			
IEC 61000-4-4	Livello 3 / Level 3			
Materiale del corpo / Housing material	Ottone nichelato / Nickel-plated brass			
Superficie sensibile / Sensing face	PBT			
Connessione / Connection	Cavo / Cable 2 m PVC Connettore / Plug M8 o / or M12			

(1) Protezione garantita solo con il cavo a connettore correttamente montato / Protection guaranteed only with plug cable well mounted.

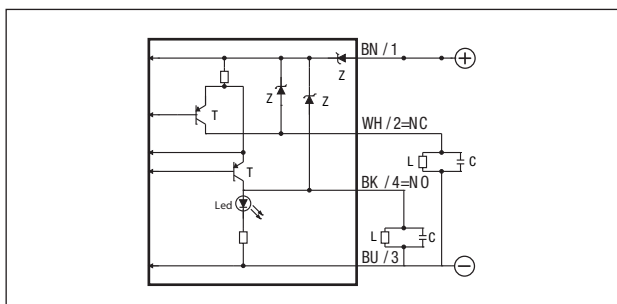
Coefficienti di riduzione - Correction factors

Codice / Code	Acciaio / Steel FE 360	Rame Copper	Alluminio Aluminium	Ottone Brass	Acciaio INOX Stainless steel
AT*/**-1*	1	0.35	0.45	0.50	0.75
AT*/**-2*	1	0.45	0.50	0.55	0.80
AT*/**-3*	1	0.35	0.45	0.50	0.70
AT*/**-4*	1	0.45	0.50	0.55	0.75

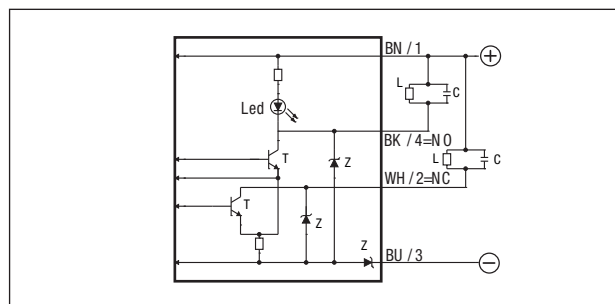
Schemi elettrici delle connessioni - Electrical diagrams of the connections

> Versioni a 4 fili - 4 wires versions

Schema di collegamento PNP
Wiring diagram PNP

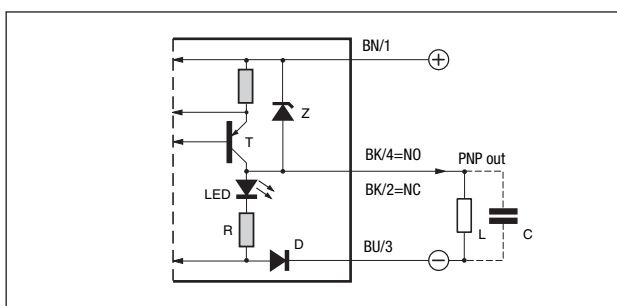


Schema di collegamento NPN
Wiring diagram NPN

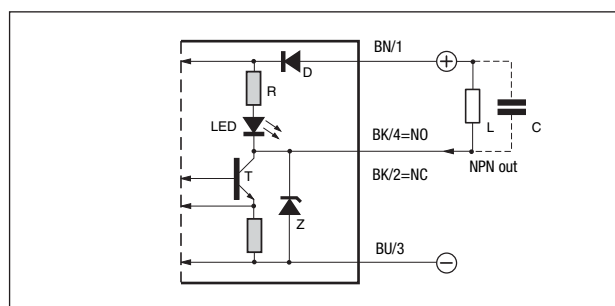


> Versioni a 3 fili - 3 wires versions

Schema di collegamento PNP
Wiring diagram PNP

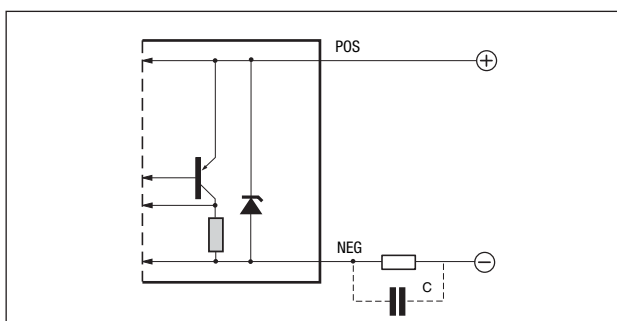


Schema di collegamento NPN
Wiring diagram NPN

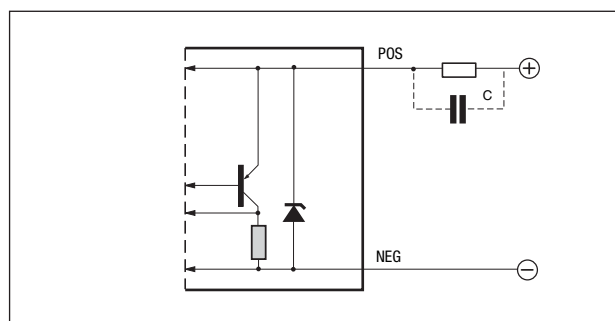


> Versioni a 2 fili - 2 wires versions

Schema di collegamento PNP
Wiring diagram PNP



Schema di collegamento NPN
Wiring diagram NPN



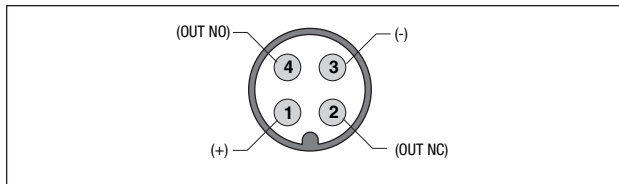
Legenda Key

BN → marrone/brown	BU → blu/blue
BK → nero/black	WH → bianco/white
PK → rosa/pink	GY → grigio/gray

Connetture - Plug

> Versioni a 4 fili - 4 wires versions

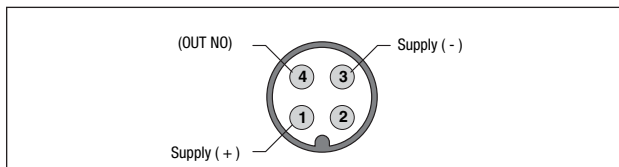
M12 - NO+NC



Connettori serie CD / Connectors CD series

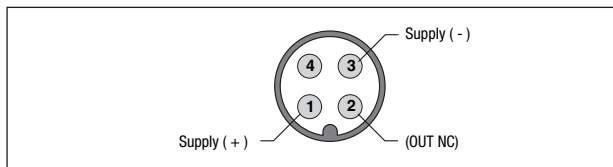
> Versioni a 3 fili - 3 wires versions

M12 - NO



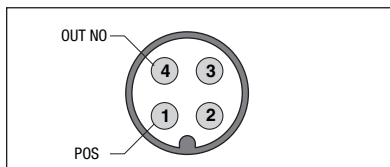
Connettori serie CD / Connectors CD series

M12 - NC

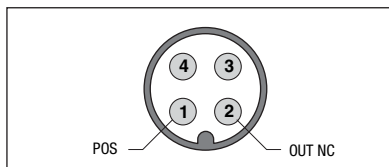


> Versioni a 2 fili - 2 wires versions

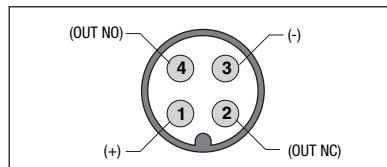
M12 - NO



M12 - NC



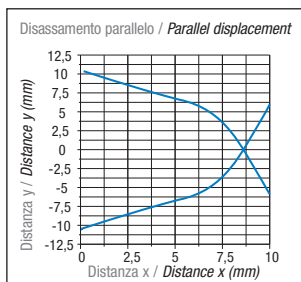
M12 - NO+NC



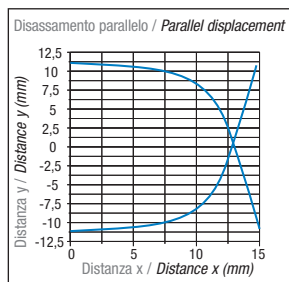
Connettori serie CD / Connectors CD series

Curva di risposta - Response diagram

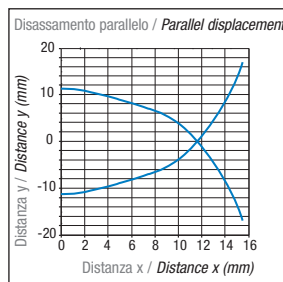
AT*/** -1*



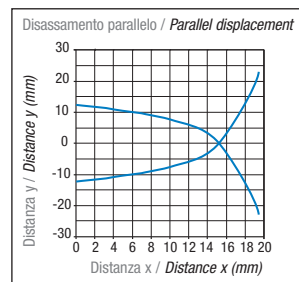
AT*/** -2*



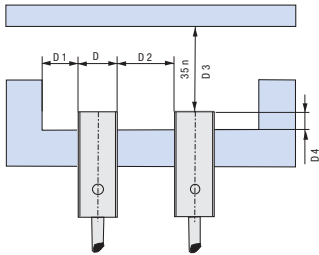
AT*/** -3*



AT*/** -4*



Montaggio - Installation

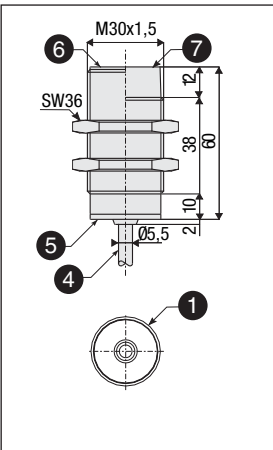


	D4	D1	D2	D3
AT1/**-1*	≥ 0 mm	≥ 10 mm	≥ 30 mm	≥ 30 mm
AT1/**-2*	≥ 18 mm ⁽¹⁾	≥ 15 mm	≥ 45 mm	≥ 45 mm
AT1/**-3*	≥ 3 mm	≥ 15 mm	≥ 40 mm	≥ 45 mm
AT1/**-4*	≥ 20 mm ⁽¹⁾	≥ 20 mm	≥ 60 mm	≥ 60 mm

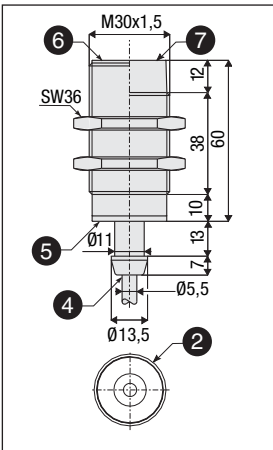
(1) ≥ 9 mm per materiali non magnetici / for non magnetic materials.

Dimensioni - Dimensions

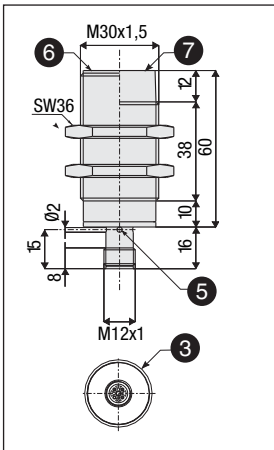
AT1/**-A



AT1/**-B



AT1/**-H



Legenda / Key

- | | |
|--|--|
| ① Uscita cavo assiale / Axial cable exit | ⑤ Indicatore LED di stato / Led status indicator |
| ② Uscita cavo assiale con codolo / Axial cable exit with tang | ⑥ Versione schermata / Shielded version |
| ③ Uscita connettore M12 / M12 plug cable exit | ⑦ Versione non schermata / Unshielded version |
| ④ Cavo 2 o 3 poli x 0,22 mm ² , Ø 5,5 mm / Cable 2 o 3 poli x 0,22 mm ² , Ø 5,5 mm | |