

# AE

## M8 PROXIMITY INDUCTIVE SENSORS

Installation manual - 826001350 Rev. A - ENG - Created: 16/01/2023

### SUPPLIED MATERIAL

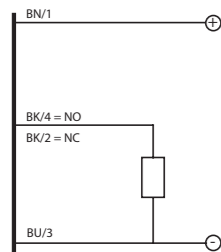
- Installation manual
- Safety instructions for dangerous areas
- Declaration of Conformity CE
- Label ATEX marked

### GENERAL DESCRIPTION

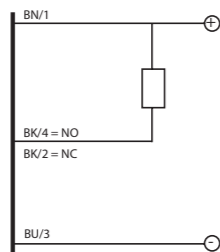
- Extremely reduced measure
- Metal housing
- LED status indicator 360° visible
- IP 67 housing protection
- Complete protection against electrical damages
- Standard and long distance models
- Standard and short body housing
- CE Mark
- ATEX certified

### ELECTRICAL DIAGRAMS OF THE CONNECTIONS

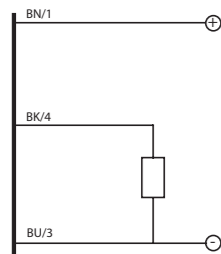
#### M12 PNP



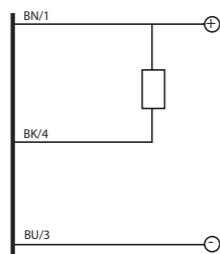
#### M12 NPN



#### M8 PNP



#### M8 NPN



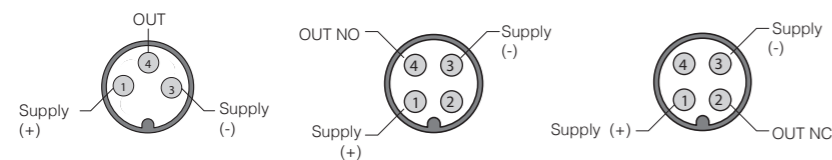
KEY:  
BN = brown;  
BK = black;  
BU = blue;  
WH = white.

### CONNECTORS

#### M8

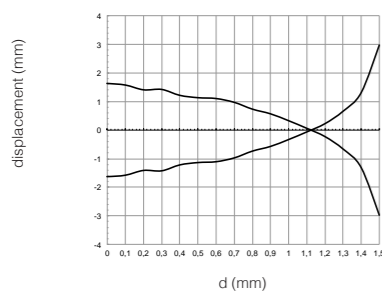
#### M12 - NO

#### M12 - NC

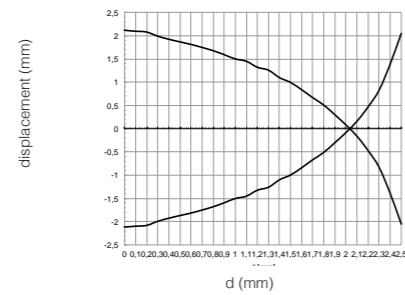


### RESPONSE DIAGRAMS

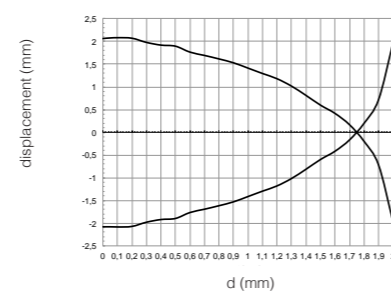
AE\*/\*\*-\* parallel displacement



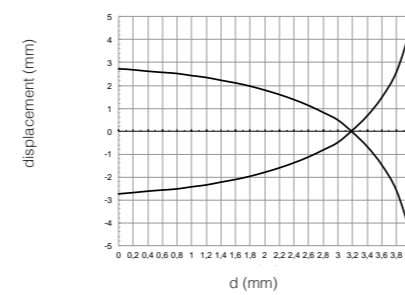
AE\*/\*\*-\* parallel displacement



AE\*/\*\*-\* parallel displacement



AE\*/\*\*-\* parallel displacement



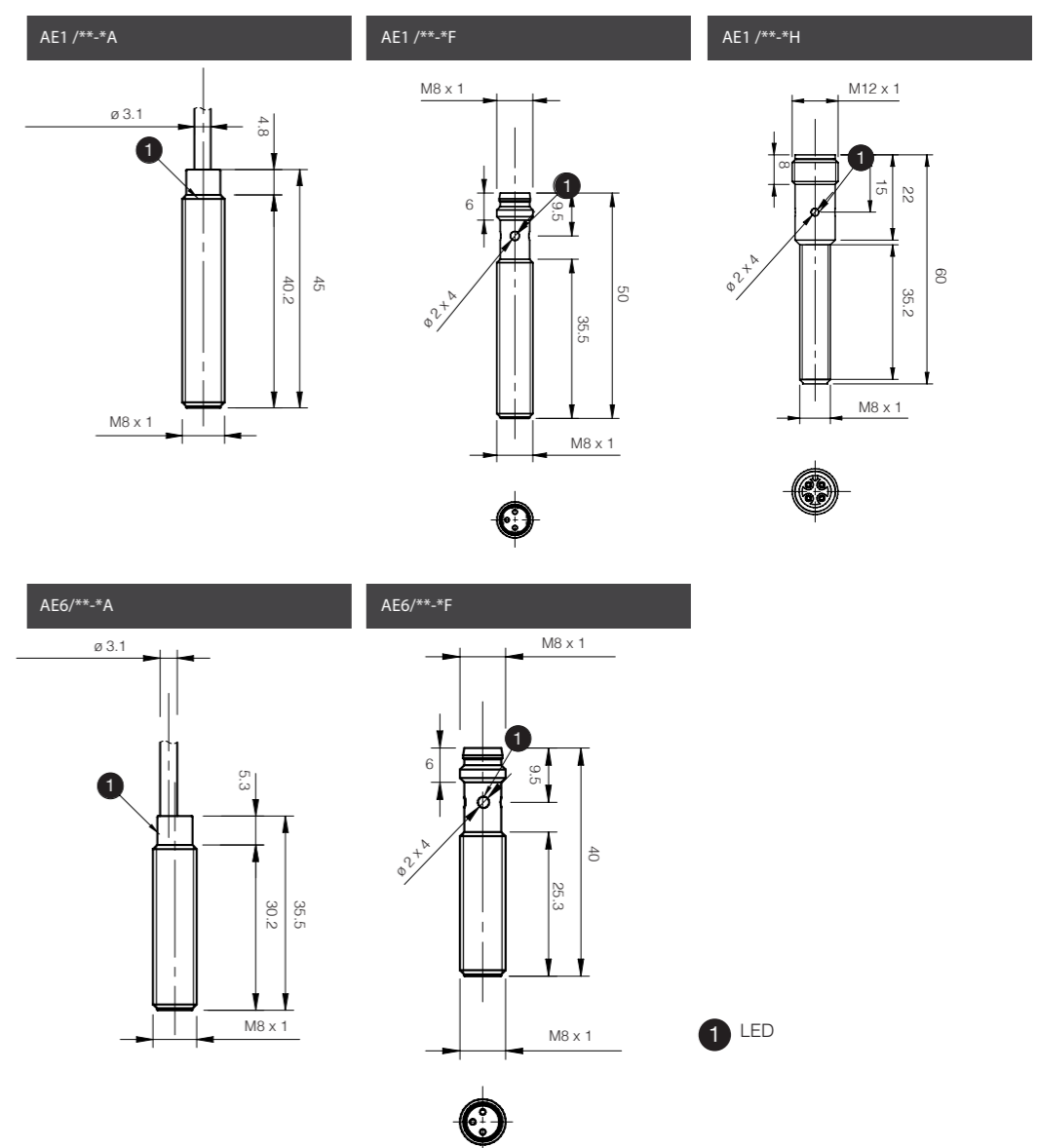
### SPECIFICATIONS

Models	AE*/**-*1*	AE*/**-*2*	AE*/**-*3*	AE*/**-*4*
nominal sensing	1.5 mm	2.5 mm	2 mm	4 mm
operating distance	0...1.21 mm	0...2.02 mm	0...1.62 mm	0...3.24 mm
hysteresis	1...20% Sr			
standard target	8 x 8 mm FE360		12 x 12 mm FE360	
repeat accuracy	5 %			
supply voltage range	10...30 Vcc			
max ripple content	≤ 10 %			
output current	≤ 200 mA			
output voltage drop	≤ 1.8 V @ 200 mA			
no load supply current	10 mA			
leakage current	≤ 10 μA			
switching frequency	5 kHz			
time delay before availability	50 ms			
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			
weight	16 g plug M8 version 20 g plug M12 version 43 g cable version			
LED indicators	yellow LED output state			
degree of protection	IP 67 ( EN60529 )			
EMC	conforming to EMC Directive requirements according to IEC 60947-5-2			
housing material	nickel-plated brass			
sensing face	PBT			
connection	cable 2 m PVC / plug M8 or M12			
tightening torque	3 Nm			

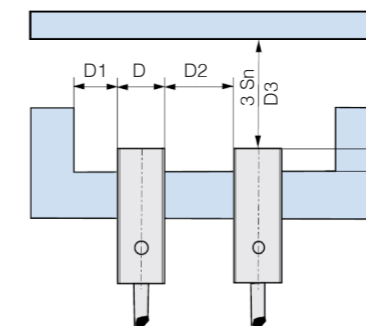
### CODE DESCRIPTION

series	AE	M8 inductive proximity switch
housing	1	Standard body
	6	Short body
output state	A	NO output state
	C	NC output state
output logic	N	NPN logic output
	P	PNP logic output
distance	1	Shielded standard 1.5 mm
	2	Unshielded standard 2.5 mm
	3	Long distance shielded 2 mm
	4	Unshielded long distance 4 mm
connect.	A	Axial cable exit
	F	M8 plug cable exit
	H	M12 plug cable exit
	AN	With ATEX Certificate

### DIMENSIONS (mm)



### INSTALLATION



code	D4	D1	D2	D3
AE*/**-*1*	≥ 0 mm	≥ 3,25 mm	≥ 6,5 mm	≥ 4,5 mm
AE*/**-*2*	≥ 4 mm <sup>(1)</sup>	≥ 6,5 mm	> 17 mm	≥ 7,5 mm
AE*/**-*3*	≥ 0 mm	≥ 3,25 mm	≥ 6,5 mm	≥ 6 mm
AE*/**-*4*	≥ 4 mm	≥ 6,5 mm	> 17 mm	≥ 12 mm

(1) ≥ 0 mm for non magnetic materials



**Micro Detectors**  
Italian Sensors Technology

CE  
Ex  
Model AE  
II 3G Ex nA IIC T5 Gc  
II 3D Ex tc IIIB T90°C Dc  
Certificate N° : 0802004X

WARNING These products are NOT safety sensors and are NOT suitable for use in personal safety application.  
For ATEX models read carefully safety instruction before installation.

Declaration of conformity  
Datsensing S.r.l. declares under its sole responsibility that these products are in conformity with the EMC directive.

Datsensing S.r.l.  
Strada S. Caterina 235 - 41122 Modena - Italy  
Tel. +39 059 420411 - Fax +39 059 253973 -  
[www.datsensing.com](http://www.datsensing.com)

# AE SENSORI DI PROSSIMITÀ INDUTTIVI CILINDRICI M8

Manuale d'installazione - 826001350 Rev. A - ITA - Creato il: 16/01/2023

## CONTENUTO DELLA CONFEZIONE

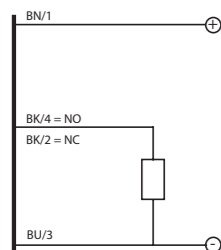
- Manuale di installazione
- Manuale di sicurezza per aree pericolose
- Dichiarazione di conformità CE
- Etichetta con Marcatura ATEX

## DESCRIZIONE GENERALE

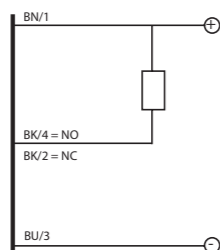
- Dimensioni estremamente ridotte
- Corpo metallico
- Indicatore LED visibile 360°
- Contenitore con protezione IP 67
- Totalmente protetti contro danneggiamenti di tipo elettrico
- Modelli distanza standard e lunga distanza
- Modelli con corpo standard e corpo corto
- Marchio CE
- Certificazione ATEX

## SCHEMI ELETTRICI CONNESSIONI

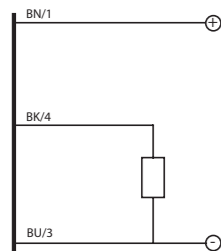
### M12 PNP



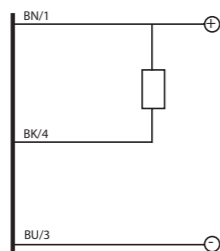
### M12 NPN



### M8 PNP



### M8 NPN



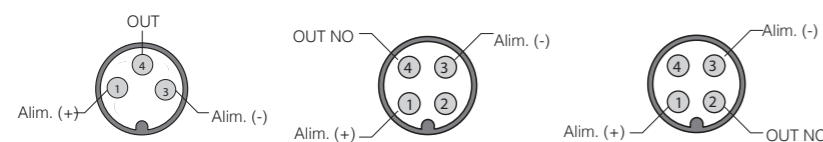
**LEGENDA:**  
BN = marrone;  
BK = nero;  
BU = blu;  
WH = bianco.

## CONNETTORI

### M8

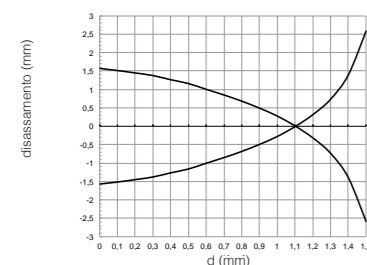
### M12 - NO

### M12 - NC

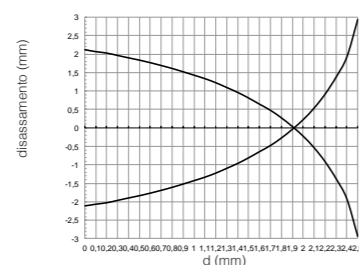


## CURVE DI RISPOSTA

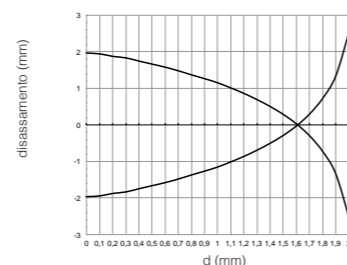
AE\*/\*\*-\*1\* disassamento parallelo



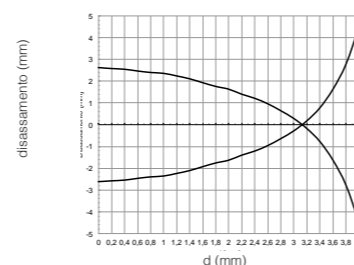
AE\*/\*\*-\*2\* disassamento parallelo



AE\*/\*\*-\*3\* disassamento parallelo



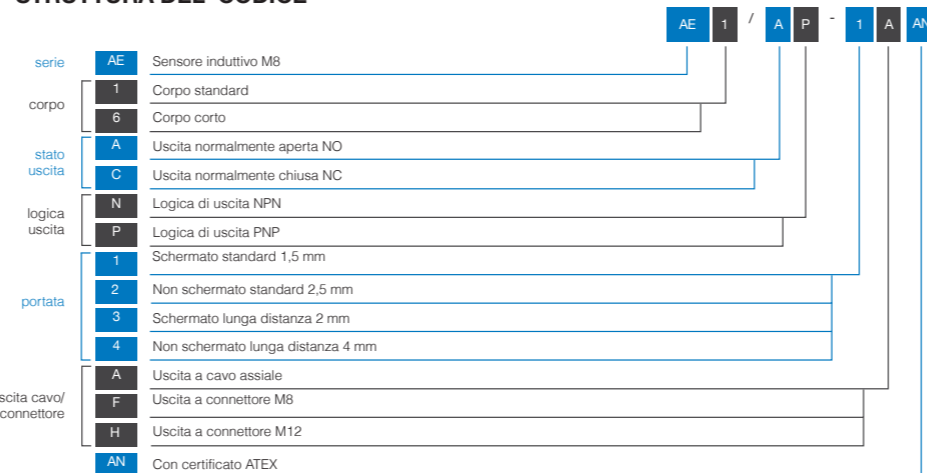
AE\*/\*\*-\*4\* disassamento parallelo



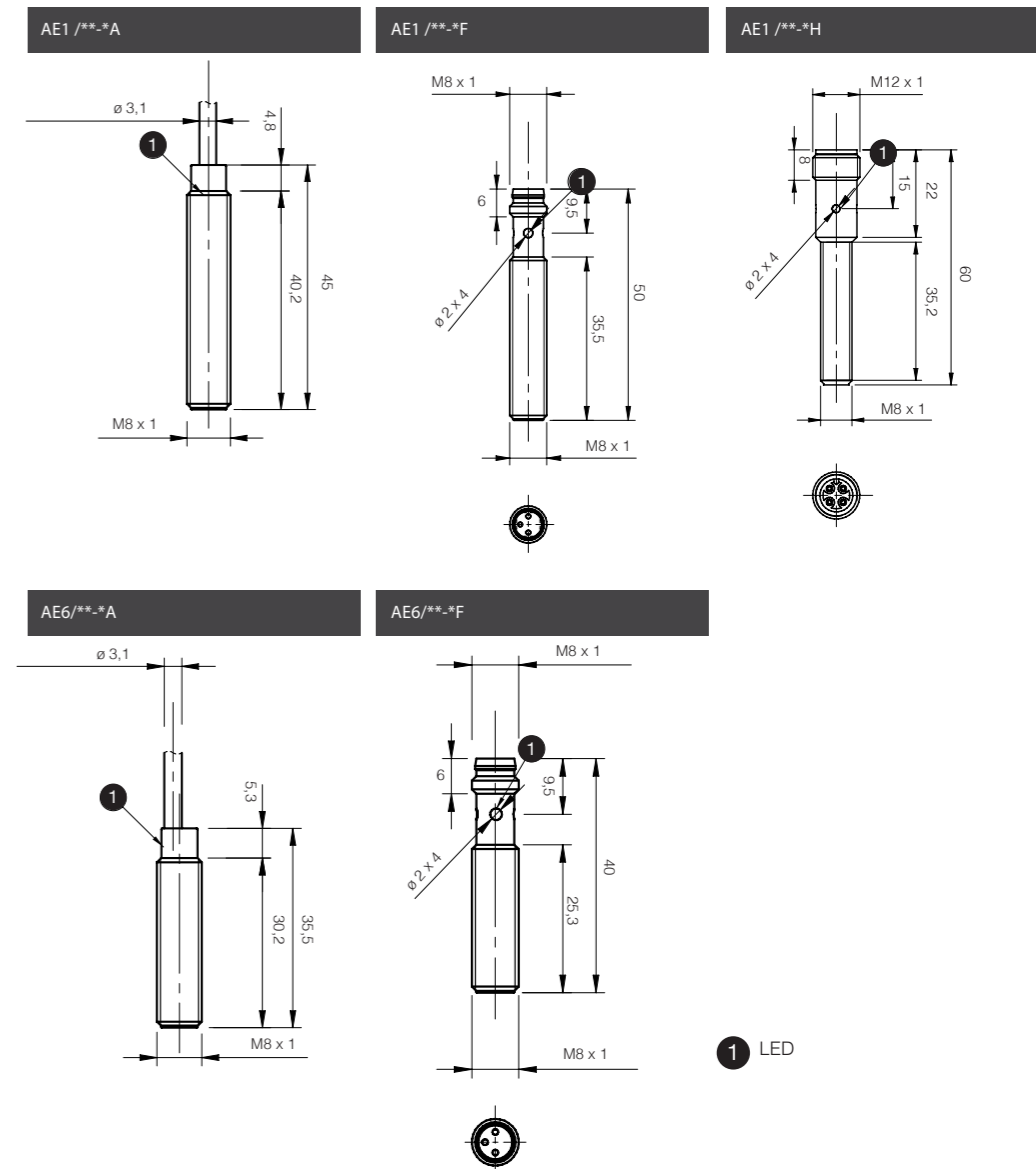
## SPECIFICHE TECNICHE

Modelli	AE*/**-*1*	AE*/**-*2*	AE*/**-*3*	AE*/**-*4*
distanza nominale S <sub>n</sub>	1,5 mm	2,5 mm	2 mm	4 mm
distanza di lavoro nominale	0...1,21 mm	0...2,02 mm	0...1,62 mm	0...3,24 mm
corsa differenziale	1...20% S <sub>r</sub>			
dimensione azionatore normalizzato	8 x 8 mm FE360			12 x 12 mm FE360
ripetibilità	5 %			
campo di tensione di alimentazione	10...30 Vcc			
massima ondulazione residua	≤ 10 %			
corrente di uscita	≤ 200 mA			
tensione di saturazione di uscita	≤ 1,8 V @ 200 mA			
corrente di alimentazione senza carico	10 mA			
corrente di perdita	≤ 10 μA			
frequenza di commutazione	5 kHz			
ritardo all'accensione	50 ms			
campo di temperature ambiente	-25...+70 °C			
deriva termica di S <sub>r</sub>	10%			
protezione al corto circuito	•			
protezione all'inversione di polarità di alimentazione	•			
protezione ai carichi induttivi	•			
colpi e vibrazioni	IEC 60947-5-2			
peso	16 g versione a connettore M8 20 g versione a connettore M12 43 g versione a cavo			
indicatori LED	LED giallo stato dell'uscita			
grado di protezione	IP 67 ( EN60529 )			
compatibilità elettromagnetica	conforme ai requisiti della Direttiva EMC in accordo a IEC 60947-5-2			
materiale corpo	ottone nichelato			
superficie sensibile	PBT			
connessione	cavo 2 m PVC - connettore M8 o M12			
coppia di seraggio	3 Nm			

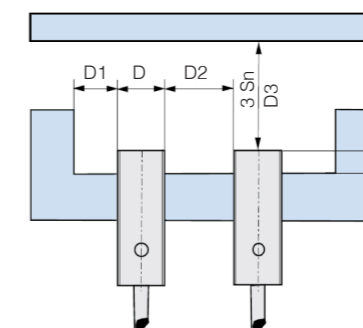
## STRUTTURA DEL CODICE



## DIMENSIONI (mm)



## MONTAGGIO



codice	D4	D1	D2	D3
AE*/**-*1*	≥ 0 mm	≥ 3,25 mm	≥ 6,5 mm	≥ 4,5 mm
AE*/**-*2*	≥ 4 mm <sup>(1)</sup>	≥ 6,5 mm	> 17 mm	≥ 7,5 mm
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(1) ≥ 0 mm per materiali non magnetici



**Micro Detectors**  
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CE  
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II 3D Ex tc IIB T90°C Dc  
Certificato N°: 0802004X

**ATTENZIONE** Questo prodotto NON è un componente di sicurezza e NON deve essere usato in applicazioni di salvaguardia della sicurezza delle persone.  
**Per i modelli ATEX leggere attentamente le istruzioni di sicurezza prima dell'installazione.**

**Dichiarazione di conformità**  
Datasensing S.r.l. dichiara sotto la propria responsabilità che questi prodotti sono conformi ai contenuti della direttiva EMC.

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