



# Micro Detectors

Italian Sensors Technology



## Cylindrical inductive sensor miniaturized M5 AD1



### Proximity Sensors Catalogue

Cod. CAT3EAD1373701

Datasheet - AD1 - english - Ed.01/2014





Products

inductive  
miniaturized

# Series AD1

inductive  
miniaturized



AD1 download area

[www.microdetectors.com](http://www.microdetectors.com)

<http://www.microdetectors.com/ita/prodotti/dettaglioofamiglia.aspx?idfamiglia=37>

## market sectors and applications

plastic industry  
robot industry  
wood industry  
textile industry  
automatic machines  
packaging industry  
electronic components production  
printing industry  
sorting mail machine





## features

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Extremely reduced models: M5 x 30 mm (cable) / 38 mm (plug) length

Operating voltage: 10 ÷ 30 Vcc

Output current: 100 mA

LED output indicator

Totally protected against electrical damages

Cable and M8 plug output

Stainless steel housing

## approvals

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## protection degree

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IP67





Products

inductive  
miniaturized

## cylindrical inductive sensors M5 AD1

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Inductive proximity sensors AD1 have a stainless steel housing, M5 diameter. Yellow output LED 360° visible. Available 2 m PVC cable models or M8 connector models. The sensors have a **IP 67 protection degree**.

## pack content

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## further commercial and technical documents available

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High resolution photos

## customization already tested

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## minimum quantity that can be ordered

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1 piece

AD 1 / A P - 1 F

**AD** Inductive sensor M5**1** Miniaturized housing**A** NO output**C** NC output**P** PNP output**N** NPN output**1** Standard distance shielded**3** Long distance shielded**A** Cable exit**F** M8 connector exit

## available models

diameter	installation	distance	connection	distance	PNP - NO	NPN - NO	PNP - NC	NPN - NC
M5	shield	standard distance	cable	0,8 mm	AD1/AP-1A	AD1/AN-1A	AD1/CP-1A	AD1/CN-1A
			M8 connector		AD1/AP-1F	AD1/AN-1F	AD1/CP-1F	AD1/CN-1F
		long distance	cable	1,5 mm	AD1/AP-3A	AD1/AN-3A	AD1/CP-3A	AD1/CN-3A
			M8 connector		AD1/AP-3F	AD1/AN-3F	AD1/CP-3F	AD1/CN-3F





Products

inductive  
miniaturized

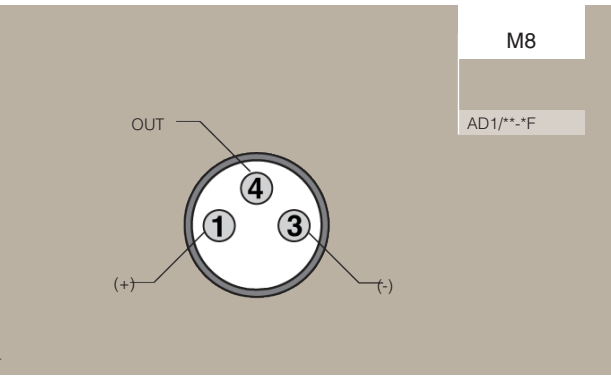
## technical specifications

according to IEC EN 60947-5-2 and IEC EN 60947-5-7

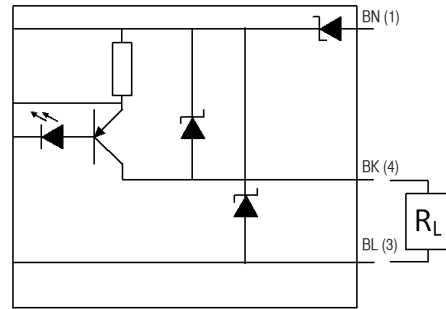
		
models	AD1/**-1*	AD1/**-3*
		
nominal sensing distance $S_n$	0,8 mm	1,5 mm
hysteresys	1 ÷ 20%	
standard target	5 x 5 mm	
repeat accuracy	5% @ $U_b = 20 \div 30$ V; $T_a = 23^\circ\text{C} \pm 5^\circ\text{C}$	
operating voltage	10 ÷ 30 V <sub>cc</sub>	
ripple	≤ 10 %	
output current	≤ 100 mA	
output voltage drop	≤ 1,5 V @ 100mA	
no-load current	≤ 10 mA	
leakage current	≤ 10 μA	
switching frequency	7 kHz	
time delay before availability	≤ 50 ms	
temperature range	-25°C ÷ +70°C	
thermal drift	≤ 10%	
supply electrical protection	polarity reversal	
output electrical protection	short circuiti (auto reset), overvoltage pulses	
EMC compatibility	conforming to EC Directive 2004/108/EC requirements according to EN60947-5-2	
protection degree	IP67	
housing material	stainless steel AISI 303	
active head material	PBT	
reduction factor	see table	
LED indicators	on (yellow LED)	
weight	30 g (cable version); 4g (M8 connector version)	

BN brown  
 BL blue  
 BK black

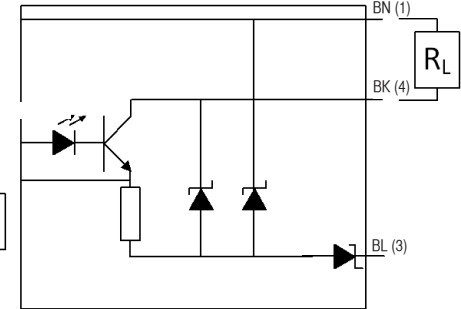
## electrical diagrams of connections



### PNP models

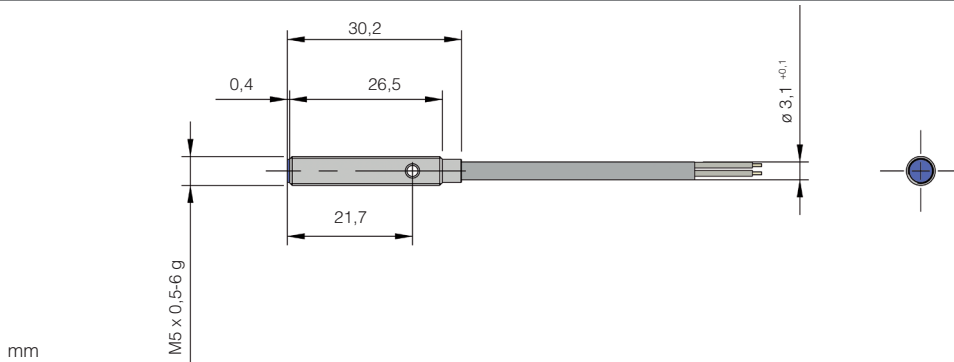


### NPN models

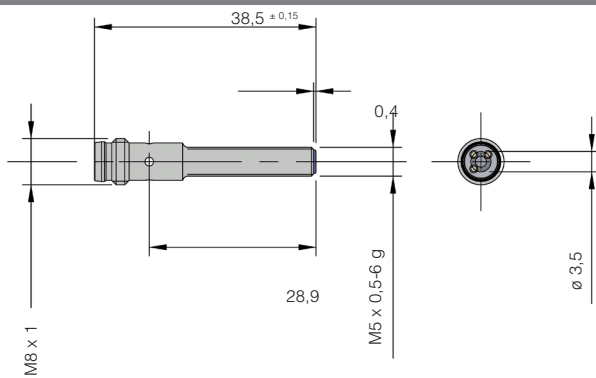


## dimensions

### AD1/\*\*-A



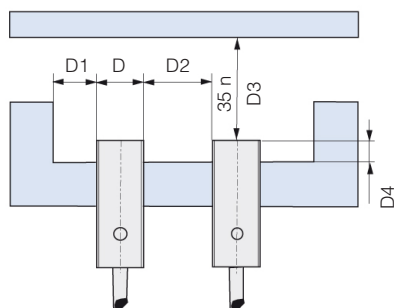
### AD1/\*\*-F



## correction factors

model	FE360	copper	aluminium	brass	stainless steel
<b>AD1/xx-1x</b>	1	0,32 ± 10%	0,26 ± 10%	0,35 ± 10%	0,66 ± 10%
<b>AD1/xx-3x</b>	1	0,33 ± 10%	0,27 ± 10%	0,34 ± 10%	0,66 ± 10%

## installation



model	D4	D1	D2	D3
<b>AD1/xx-1x</b>	≥ 0 mm <sup>(1)</sup>	≥ 5 mm	≥ 5 mm	≥ 2,4 mm
<b>AD1/xx-3x</b>	≥ 1 mm <sup>(2)</sup>	≥ 5 mm	≥ 10 mm	≥ 4,5 mm

<sup>(1)</sup> ≥ 1 mm without ferro-magnetic material  
<sup>(2)</sup> ≥ 2 mm without ferro-magnetic material



Proximity Sensors  
Catalogue



CAT3EAD1373701 DATASHEET AD1 ENGLISH ED.01/2014

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