



# Micro Detectors

Italian Sensors Technology



## M18 cylindrical capacitive Sensor C18



Proximity Sensor  
Catalogue

Cod. CAT3EC11261653

Datasheet - C18 - English - Ed.01/2012





Products

capacitive  
cylindrical

# Series C18

capacitive  
cylindrical

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

## market sectors and applications

plastic industry  
chemical & petrochemical industry  
wood industry  
photovoltaic installations  
glass & ceramic industry  
packaging industry  
logistic & automatic storage systems  
automatic breeding systems  
automatic car washing systems  
pools & whirlpool baths  
vending machines





## features

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DC or AC supply voltage

High noise immunity

Shielded and unshielded models

Adjustable sensitivity

Plastic housing

## approvals

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## protection degree

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IP67





Products

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## M18 cylindrical capacitive Sensor C18

C18 capacitive Proximity Sensors are made in a M18 polyester threaded housing. Their high technology can grant a high noise immunity. Output indication is activated through yellow LED. SCR output is normally closed or normally open. 2 mt. long cable or M12 plug models are available. All sensors have an **IP67 protection degree**.

## pack content

Instruction manual (English + Italian): CAT8BCT1259401

## further commercial and technical documents available

Datasheet (Italian: CAT3ICQ1261643 and Spanish: CAT3SCQ1261645)

High resolution pictures

Application notes:

- position detection of buckets, dumpers, loaders in diggers (English: CAT3E001261620, Italian: CAT3I001261619 & Spanish: CAT3S001261621)
- detection of food in automatic mangers (English: CAT3E001261623, Italian: CAT3I001261622, & Spanish: CAT3S001261624)
- water level detection in whirlpool baths (English: CAT3E001261626, Italian: CAT3I001261625 & Spanish: CAT3S001261627)
- soaps and waxes level in automatic washing systems (English: CAT3E001261629, Italian: CAT3I001261628, & Spanish: CAT3S001261630)
- water level detection in automatic washing systems (English: CAT3E001261632, Italian: CAT3I001261631 & Spanish: CAT3S001261633)
- goods detection inside boxes (English: CAT3E001261635, Italian: CAT3I001261634 & Spanish: CAT3S001261636)
- freeze-dried products detection in vending machines (English: CAT3E001261638, Italian: CAT3I001261637 & Spanish: CAT3S001261639)
- photovoltaic panels presence and position detection (English: CAT3E001261641, Italian: CAT3I001261640 & Spanish: CAT3S001261642)

## custom models already tested

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## minimum quantity that can be ordered

1 piece

C 18 P / B P - 1 E

**C** Capacitive sensor**18** M18 housing**P** Plastic housing**B** NO + NC complementary output**A** NO output**C** NC output**P** PNP logic**N** NPN logic**0** SCR output**1** 3...8 mm shielded models**2** 3...12 mm unshielded models**E** M12 plug exit**A** 2 m cable exit

## available models

supply	installation	distance	connections	NPN NO+NC	PNP NO+NC	NO	NC
10...40 Vdc	shielded	3...8 mm	2 m cable	C18P/BN-1A	C18P/BP-1A	-	-
			M12 plug	C18P/BN-1E	C18P/BP-1E	-	-
	unshielded	3...12 mm	2 m cable	C18P/BN-2A	C18P/BP-2A	-	-
			M12 plug	C18P/BN-2E	C18P/BP-2E	-	-
20...250 Vca	shielded	3...8 mm	2 m cable	-	-	C18P/A0-1A	C18P/C0-1A
			M12 plug	-	-	C18P/A0-1E	C18P/C0-1E
	unshielded	3...12 mm	2 m cable	-	-	C18P/A0-2A	C18P/C0-2A
			M12 plug	-	-	C18P/A0-2E	C18P/C0-2E




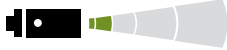


Products

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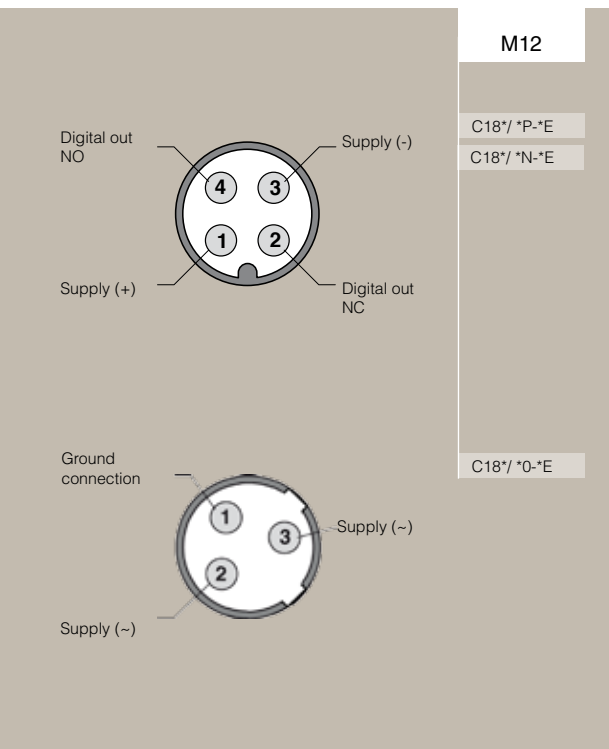
## technical specifications

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

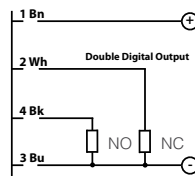
		
models	<b>C18P/**-1*</b>	<b>C18P/**-2*</b>
		
nominal sensing distance $S_n$	8 mm	12 mm
differential travel $H$	$\leq 20\%$	
repeat accuracy	5%	
rated operational voltage $U_e$	10 ... 40 Vdc or 20 ... 250 Vac	
max ripple content	$\leq 10\%$	
no-load supply current	$\leq 10\text{ mA}$	
load current	$\leq 200\text{ mA}$ (dc models), $\leq 500\text{ mA}$ ; max. 2,5 A max. 20 ms (ca models)	
leakage current	$\leq 10\text{ }\mu\text{A}$	
output voltage drop $U_d$	2,5 $V_{\text{MAX}}$ @ $I_L = 200\text{ mA}$ (dc models), $\leq 10\text{ VAC}$ @ $I_L \geq 20\text{ mA}$ (ca models)	
output type	NPN or PNP - NO or NC; SCR - NO or NC	
switching frequency $f$	30 Hz (dc models); 10 Hz (ca models)	
time delay before availability	$\leq 100\text{ ms}$	
supply electrical protections	polarity reversal, impulsive overvoltage	
output electrical protections	autoreset short circuit, overvoltage (dc models)	
sensitivity adjustment	yes	
storage temperature	$-40 \dots +85^\circ\text{C}$	
operating temperature	$-25 \dots +80^\circ\text{C}$ (without freeze)	
thermal drift	$\leq 20\%$	
EMC compatibility	following the provisions of directives CE 2004/108/CE according to EN 60947-5-2	
protection degree	IP67 (EN 60529) NEMA 1,3,4,6,13	
LED indicators	yellow (output status Lon/Don)	
housing material	thermoplastic polyester	
active head material	polyester	
weight	30 g (M12) / 110 g (cable)	

BN	brown
BU	blue
BK	black
WH	white

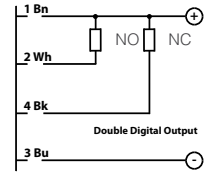
## electrical diagrams of connections



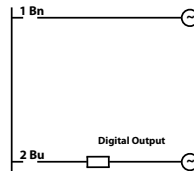
### PNP models



### NPN models

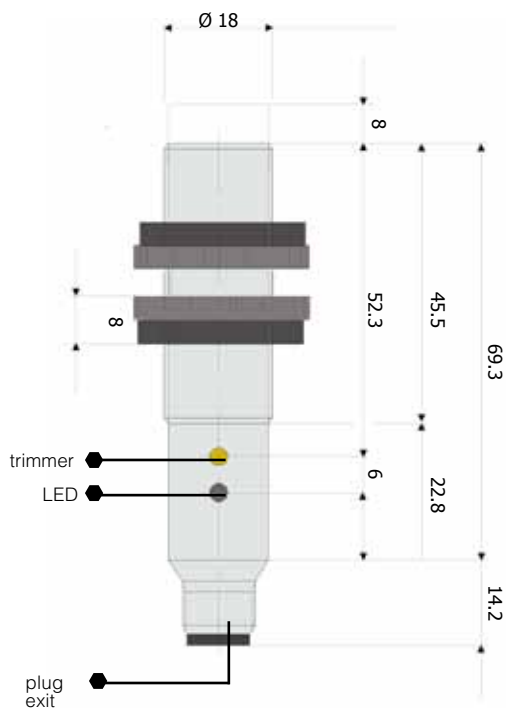


### AC - NO/NC selectable models

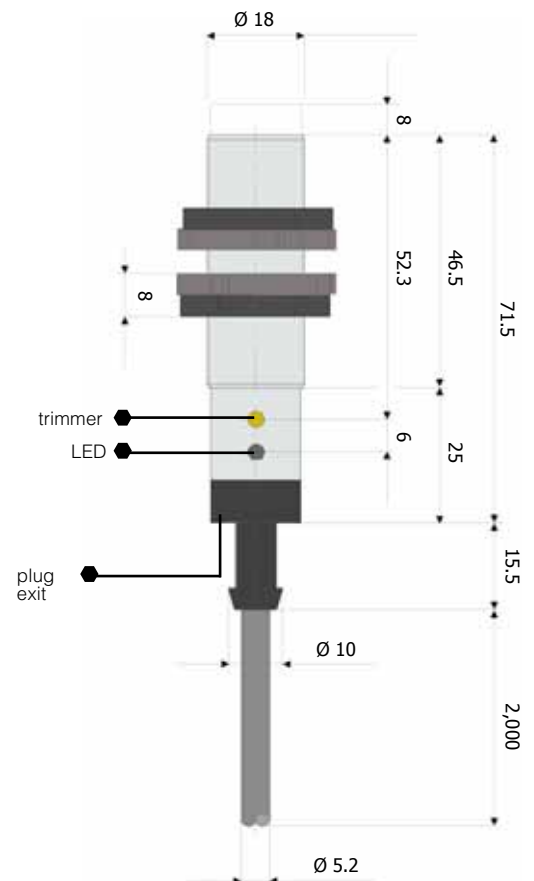


## dimensions

### C30\*/\*\*-\*E (plug exit)



### C30\*/\*\*-\*A (cable exit)





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CAT3EC11261653 DATASHEET C18 ENGLISH ED.01/2012

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