



# Micro Detectors

Italian Sensors Technology



## Cubic capacitive Sensor CQ55



## Proximity Sensors Catalogue

Cod. CAT3ECQ1264401

Datasheet - CQ55 - English - Ed.01/2012





Products

capacitive  
cubic

# Series CQ55

## capacitive cubic


[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 supply voltage
- Adjustable sensitivity
- Flat polycarbonate plastic housing

## approvals

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## protection degree

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IP67





Products

capacitive  
cubic

## cubic capacitive Sensor CQ50

CQ55 capacitive sensors are made in a flat polycarbonate housing with 4-wire DC output with both make (NO) and break (NC) switching. Their triple screening allows a **high noise immunity**. Output indication is activated through yellow LED. Thanks to their short size it is possible to use them in **application requiring minimum working space**. Continuous current versions are available, 2m length PVC cable or M12 plug versions are both available. All sensor have an **IP67 protection degree**.

## packaging content

Instruction manual (English + Italian): CAT8BCT1259401

## further commercial and technical documents available

Datasheet (Italian: CAT3ECQ1264201 and Spanish: CAT3SCQ1264501)

High resolution pictures

Application notes:

- position detection of buckets, dumpers, loaders in diggers (English: CAT3E001262001, Italian: CAT3I001261901 & Spanish: CAT3S001262101)
- detection of food in automatic mangers (English: CAT3E001262301, Italian: CAT3I001262201, & Spanish: CAT3S001262401)
- water level detection in whirlpool baths (English: CAT3E001262601, Italian: CAT3I001262501 & Spanish: CAT3S001262701)
- soaps and waxes level in automatic washing systems (English: CAT3E001262901, Italian: CAT3I001262801, & Spanish: CAT3S001263001)
- water level detection in automatic washing systems (English: CAT3E001263201, Italian: CAT3I001263101 & Spanish: CAT3S001263301)
- goods detection inside boxes (English: CAT3E001263501, Italian: CAT3I001263401 & Spanish: CAT3S001263601)
- freeze-dried products detection in vending machines (English: CAT3E001263801, Italian: CAT3I001263701 & Spanish: CAT3S001263901)
- photovoltaic panels presence and position detection (English: CAT3E001264101, Italian: CAT3I001264001 & Spanish: CAT3S001264201)

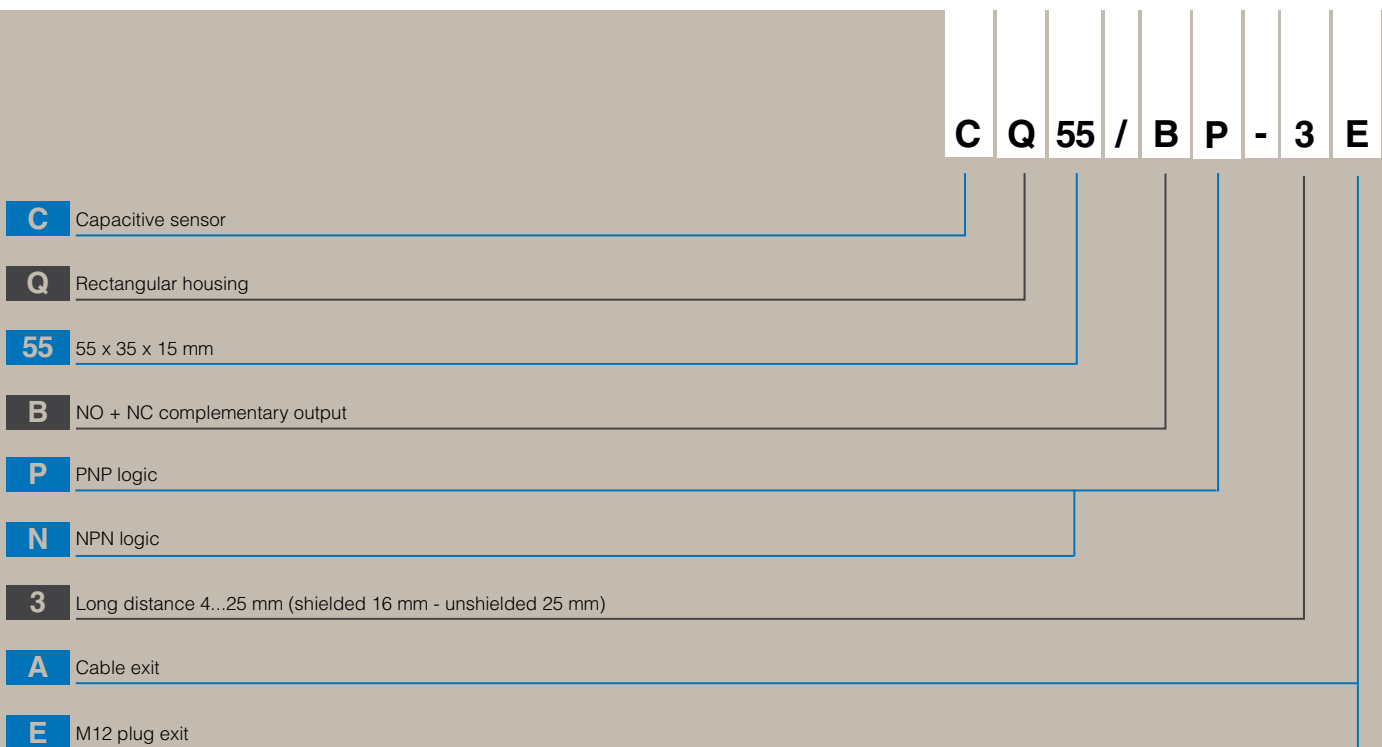
## custom models already tested

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## minimum quantity that can be ordered

1 piece

## code description



## available models

supply	installation	distance	connection	NPN NO+NC	PNP NO+NC
10...40 Vdc	shielded / unshielded	4...25 mm	2 m cable	CQ55/BN-3A	CQ55/BP-3A
			M12 Plug	CQ55/BN-3E	CQ55/BP-3E





Products

capacitive  
cubic

## technical specifications

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

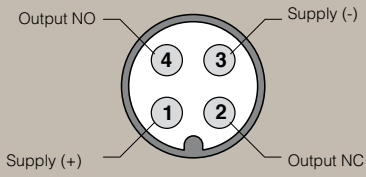
	
<b>CQ55/**-3*</b>	
	
nominal sensing distance $S_n$	25 mm
differential travel H	$\leq 20\%$
repeat accuracy	5%
rated operational voltage $U_e$	10 ... 40 Vdc
max ripple content	$\leq 10\%$
no-Load supply current	$\leq 10\text{ mA}$
load current	$\leq 200\text{ mA}$
leakage current	$\leq 10\text{ }\mu\text{A}$
output voltage drop $U_d$	2,5 V MAX ( $I_L = 200\text{ mA}$ )
output type	NPN o PNP - NO / NC
switching frequency f	50 Hz
time delay before availability	$\leq 100\text{ ms}$
supply electrical protections	polarity reversal, impulsive overvoltage
output electrical protections	autoreset short circuit, impulsive overvoltage
sensitivity adjustment	yes
storage temperature	-40 ... +85° C
operating temperature	-25 ... +80° 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	PC
active head material	PC
weight	40 g (plug) / 125 g (cable)

BN	brown
BU	blue
BK	black
WH	white

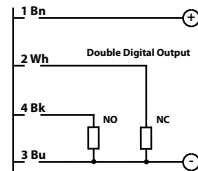
## electrical diagrams of the connections

M12

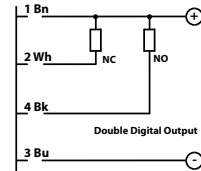
CQ55/\*\*-E



PNP models

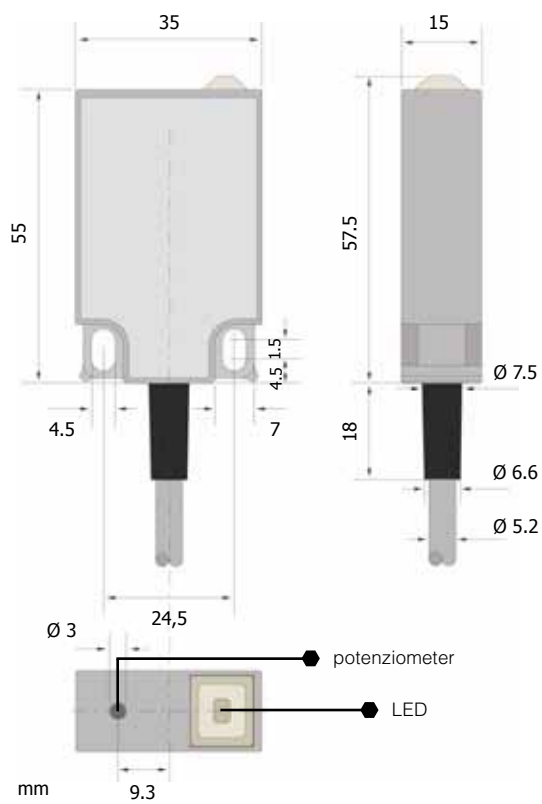


NPN models

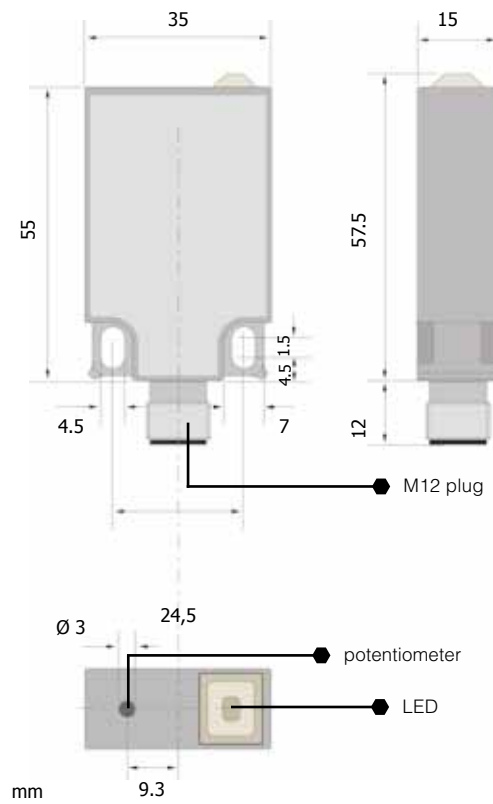


## dimensions

CQ55/\*\*-3A (cable exit)



CQ55/\*\*-3E (plug exit)





Proximity Sensors  
Catalogue



CAT3ECQ1264401 DATASHEET CQ55 ENGLISH ED.01/2012

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