

# Capacitive Level Detector For Plastic & Rubber Thermoplastic Polyester Housing Types CA, M18, M30, DC, Teach-in

**TRIPLESHIELD™**

**CARLO GAVAZZI**



- Primary designed for plastic and rubber applications
- For liquid and dry bulk material detection
- Featuring **TRIPLESHIELD™** Sensor Protection
- Teach-in of sensing distance via push-button or COM-input
- Automatic detection of NPN or PNP load
- Selectable make or break switching by means of Teach-in function
- Protection: Short-circuit, transients and reverse polarity
- Humidity compensation
- Alarm output for unsafe operation or heavy dirt build-up on sensing surface
- 5 years of warranty

## Product Description

Capacitive level detector with specialized and optimized features for level detection in plastic and rubber applications. The adjustment is easy to change by means of the single-step teach-in function. The sensing face (flush

mounted) can withstand temperatures up to 120°C. 3-wire DC output with selectable make (NO) or break (NC) switching and NPN Alarm. Grey polyester housing with 2 m PVC cable or M12 plug.

## Ordering Key

**CA18CLL12BPM1**

Capacitive proximity switch  
Housing diameter (mm)  
Housing material  
Housing length  
Detection principle  
Rated operating dist. (mm)  
Output type  
Output configuration  
Connection type

## Type Selection

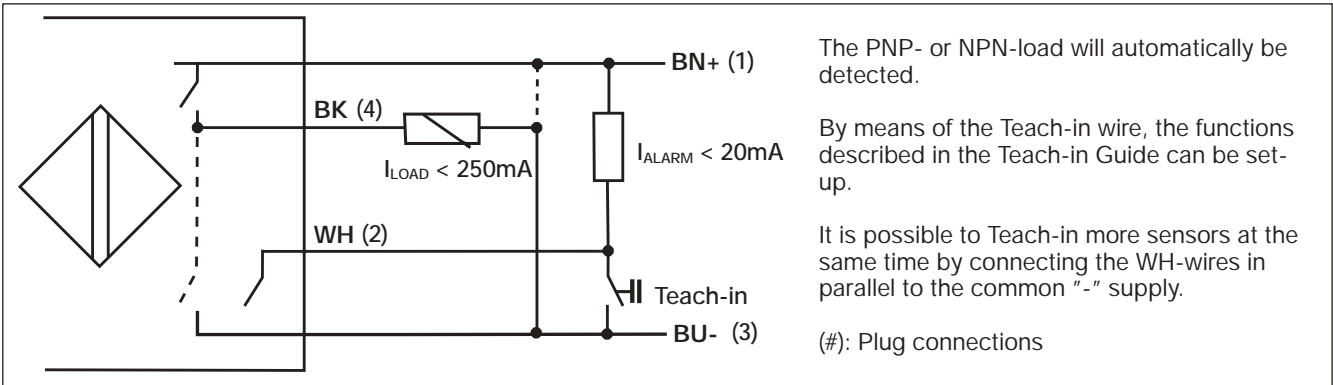
Housing diameter	Ordering no. Cable	Ordering no. Plug
M18	CA18CLL12BP	CA18CLL12BPM1
M30	CA30CLL30BP	CA30CLL30BPM1

## Specifications

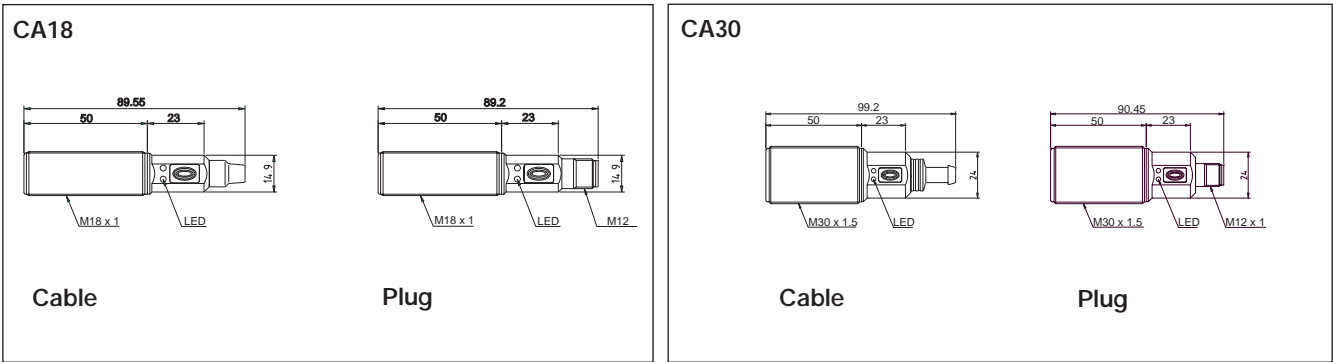
<b>Sensitivity</b>	Adjustable (Teach-in)	<b>Environment</b>	
<b>Repeat accuracy (R)</b>	≤ 5%	Degree of protection	IP 68
<b>Hysteresis (H)</b>	5 - 10%	Operating temperature	-20° to +85°C (-4° to +185°F)
<b>Rated operational volt. (U<sub>B</sub>)</b>	10 to 40 VDC (ripple incl.)	Max. temperature on sensing face	120°C (248°F)
<b>Ripple</b>	≤ 10%	Storage temperature	-40° to +85°C (-40° to +185°F)
<b>Rated operational current (I<sub>o</sub>)</b>	≤ 250 mA (continuous)	<b>Housing material</b>	
<b>No-load supply current (I<sub>o</sub>)</b>	≤ 12 mA	Body	Grey, thermoplastic polyester
<b>Voltage drop (U<sub>d</sub>)</b>	≤ 2.5 VDC @ max. load	Cable end	Polyester, softened
<b>Protection</b>	Short-circuit, reverse polarity, transients	Nuts	Black, PA12 Grilamid
<b>TRIPLESHIELD™ protection-EMC</b>		<b>Connection</b>	
IEC 1000-4-2/EN 61000-4-2	30 kV	Cable	Grey, 2 m, 4 x 0.25 mm <sup>2</sup>
IEC 1000-4-3/EN 61000-4-3	> 15 V/m	Plug (M1)	Oil proof, PVC
IEC 1000-4-4/EN 61000-4-4	3 kV	Cable for plug (M1)	M12 x 1
IEC 1000-4-6/EN 61000-4-6	> 10 V <sub>rms</sub>		CON.1A-series
<b>Frequency of operating cycles (f)</b>	5 Hz	<b>Weight</b>	
<b>Indication</b>		Cable version - M18 / M30	110 g/160 g
For output ON	LED, yellow	Plug version - M18 / M30	30 g/70 g
For safe/unsafe	LED, green	<b>Approvals</b>	UL, CSA
		<b>CE-marking</b>	Yes



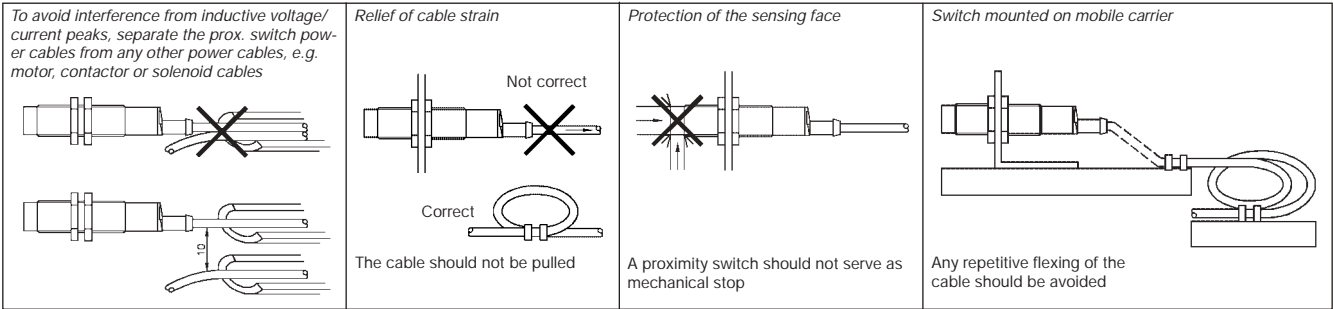
Wiring Diagram



Dimensions



Installation Hints



Delivery Contents

- Capacitive switch: CA..CLL..BP.
- **Packaging:** Cardboard box
- Installation & Adjustment Guide (MAN CAP ENG/GER)

Accessories

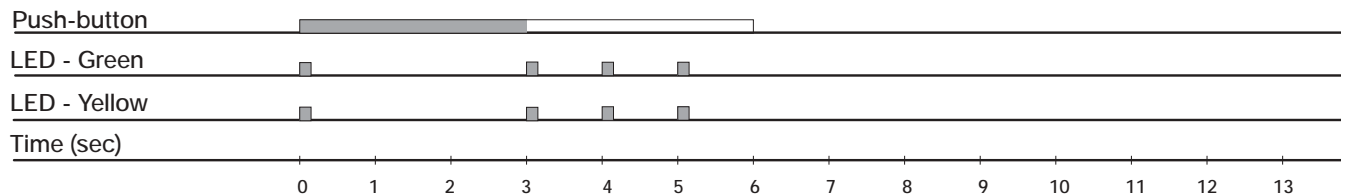
- Plugs CON.1A.. series.
- For further information please refer to "Accessories."

## Teach-in Guide

### Adjustment - wall

#### No target present - tank empty

Press push-button >3 seconds until LED's are flashing one time per second. The surroundings will be calibrated when the push-button is released during the following 3 seconds



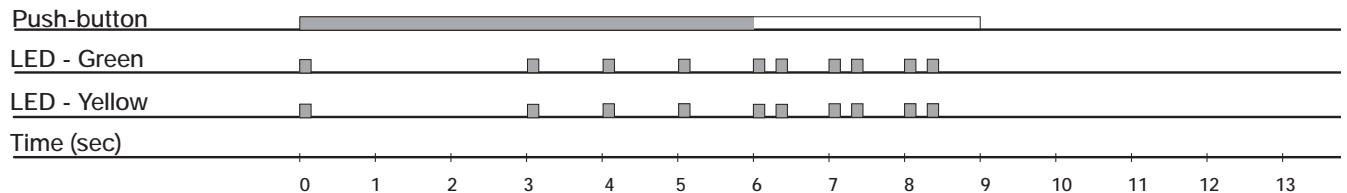
The sensor will calculate a switch-point by itself. No further calibration is needed.

### Adjustment - object

#### Target present - tank full

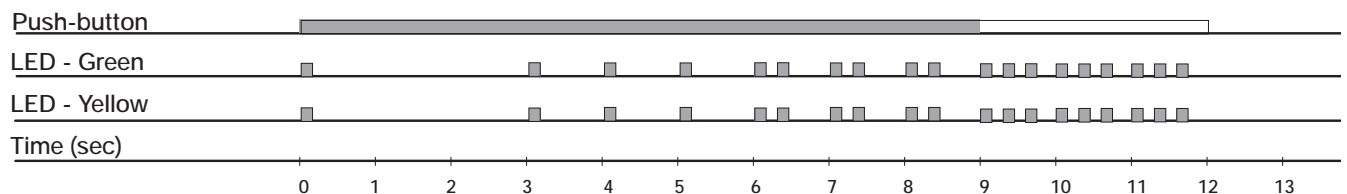
The self-calculated switch-point can be changed by means of the Teach-in function for "Target present".

Press push-button >6 seconds until LED's are flashing two times per second. The object will be calibrated when the push-button is released during the following 3 seconds



### Adjustment - NO - NC

Press push-button >9 sec. until LED's are flashing three times per second. The status of NO-NC will toggle when the push-button is released during the following 3 seconds



Releasing the push-button after 12 sec. returns the sensor to factory settings.

# Mouser Electronics

Authorized Distributor

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