

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

TRIPLESIELD™

CARLO GAVAZZI



- Primary designed for plastic and rubber applications
- For liquid and dry bulk material detection
- Featuring **TRIPLESIELD™** 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

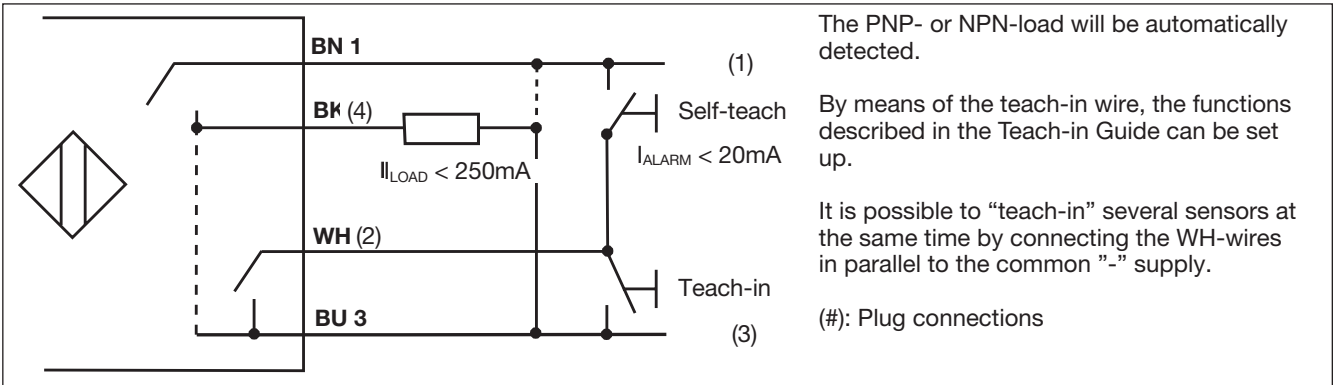
Housing diameter	Ordering no. Cable	Ordering no. Plug
M18	CA18CLL12BP	CA18CLL12BPM1
M30	CA30CLL30BP	CA30CLL30BPM1

Specifications

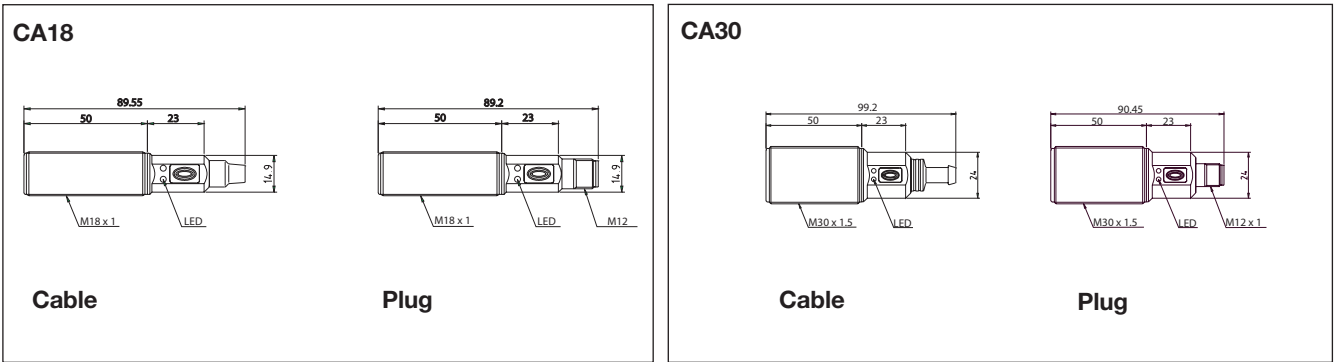
Sensitivity	Adjustable (Teach-in)	Environment	
Repeat accuracy (R)	≤ 5%	Degree of protection	IP 68
Hysteresis (H)	5 - 10%	Operating temperature	-20° to +85°C (-4° to +185°F)
Rated operational volt. (U_B)	10 to 40 VDC (ripple incl.)	Max. temperature on sensing face	120°C (248°F)
Ripple	≤ 10%	Storage temperature	-40° to +85°C (-40° to +185°F)
Rated operational current (I_B)	≤ 250 mA (continuous)	Housing material	
No-load supply current (I₀)	≤ 12 mA	Body	Grey, thermoplastic polyester
Voltage drop (U_d)	≤ 2.5 VDC @ max. load	Cable end	Polyester, softened
Protection	Short-circuit, reverse polarity, transients	Nuts	Black, PA12 Grilamid
TRIPLESIELD™ protection-EMC		Connection	
IEC 1000-4-2/EN 61000-4-2	30 kV	Cable	Grey, 2 m, 4 x 0.25 mm ²
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 _{rms}		CON.1A-series
Frequency of operating cycles (f)	5 Hz	Weight	
Indication		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	Approvals	UL, CSA
		CE-marking	Yes



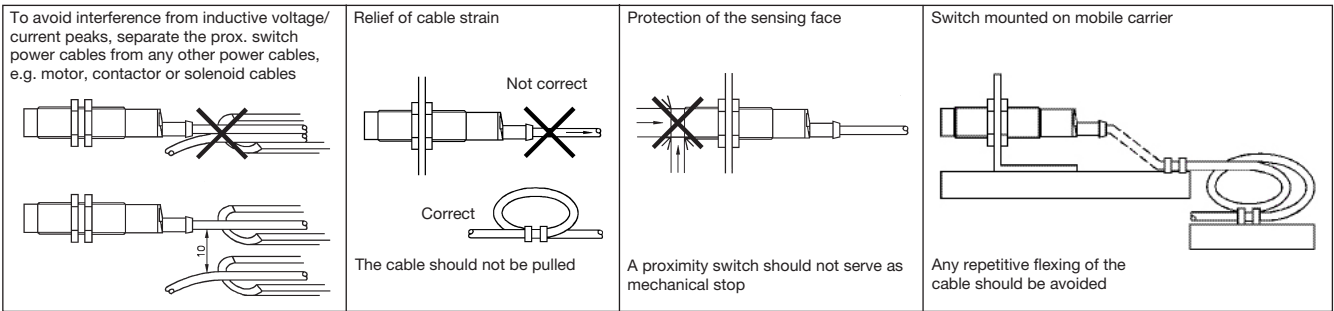
Wiring Diagram



Dimensions



Installation Hints



Delivery Contents

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

Accessories

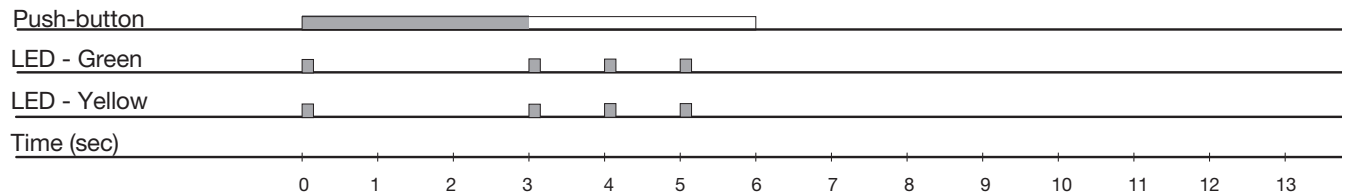
- Plugs CON.1A.. series.
- For further information, please refer to “Accessories.”

Teach-in Guide

Adjustment - wall

No target present - tank empty

Press push-button >3 seconds until LEDs are flashing once per second. The surroundings will be calibrated when the push-button is released during the following 3 seconds



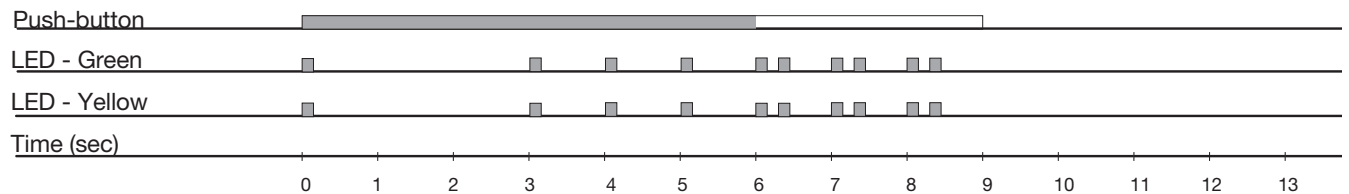
The sensor will calculate a switch-point by itself. No further calibration is needed.

Adjustment - object

Target present - tank full

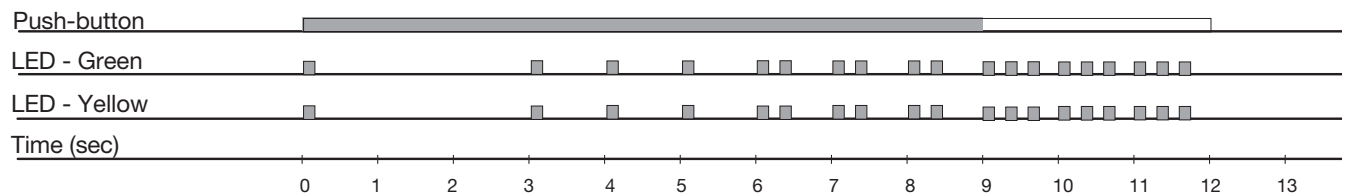
The self-calculated switch-point can be changed by means of the Teach-in function for "Target present".

Press push-button >6 seconds until LEDs are flashing twice 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 LEDs 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. will reset the sensor to factory settings.