

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

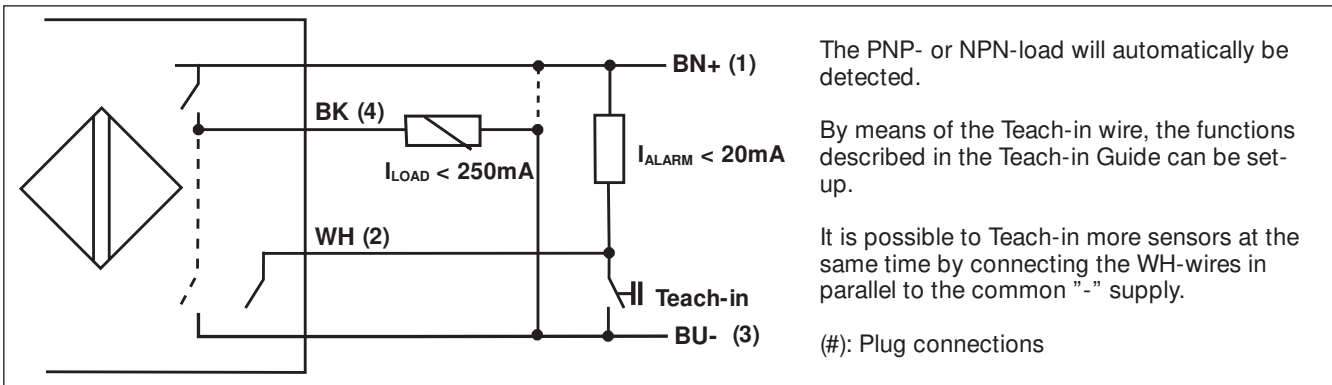
Type Selection

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

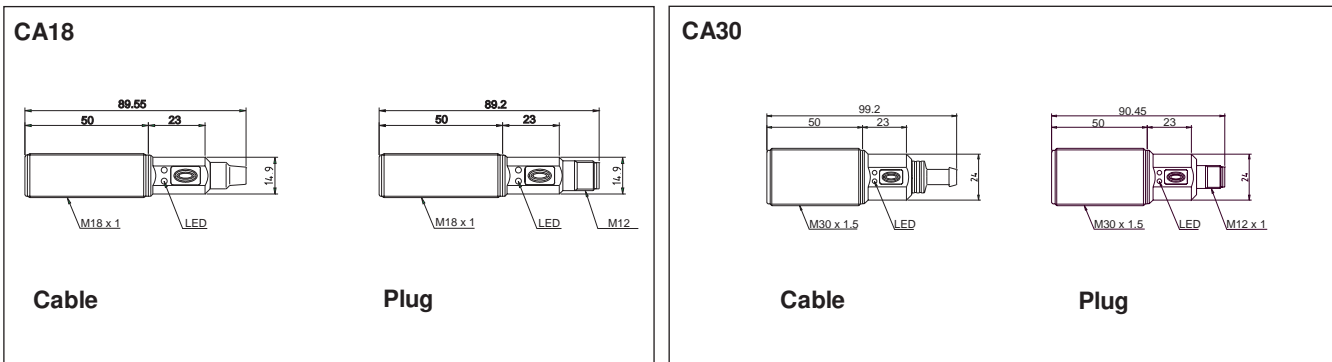
Specifications

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

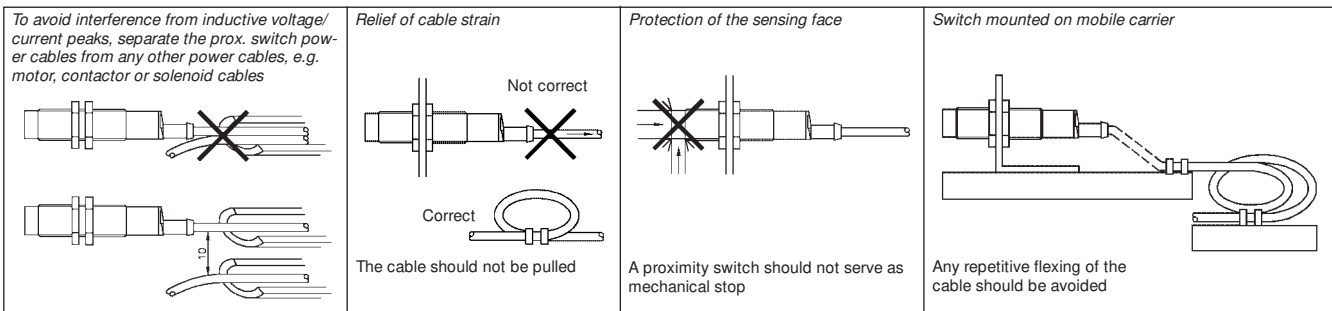
Wiring Diagram



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."

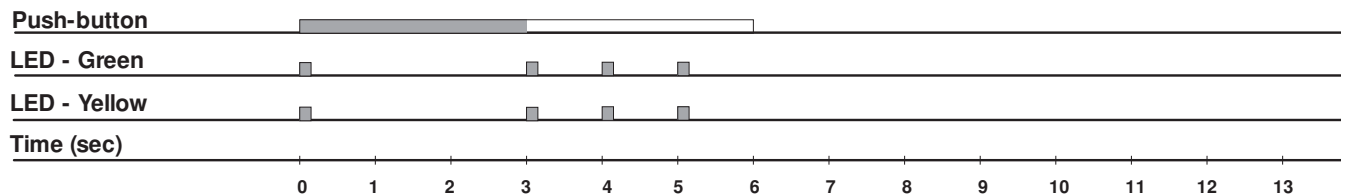


Teach-in Guide

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



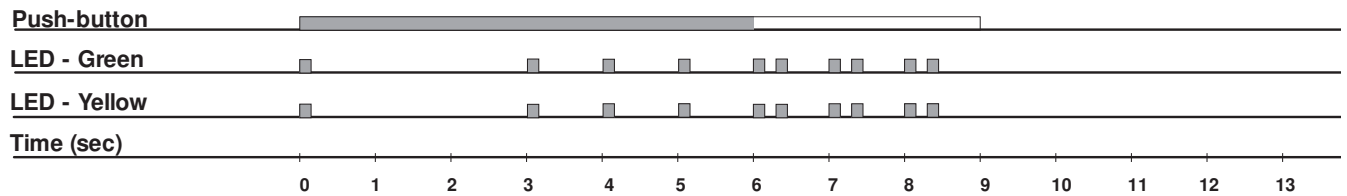
The sensor will calculate a switch-point by itself. No further calibration is needed.

Adjustment - object

Target present - tank full

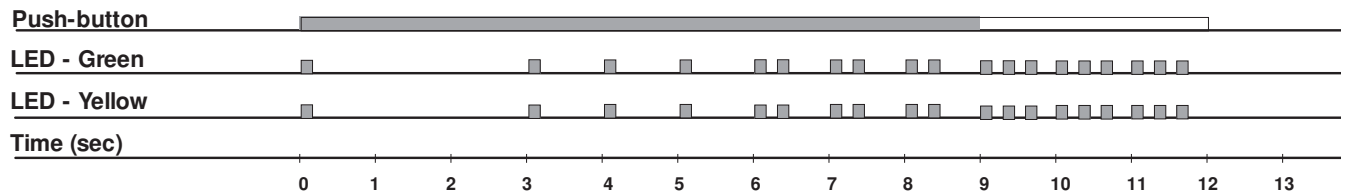
The self-calculated switch-point can be changed by means of the Teach-in function for "Target present".

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.