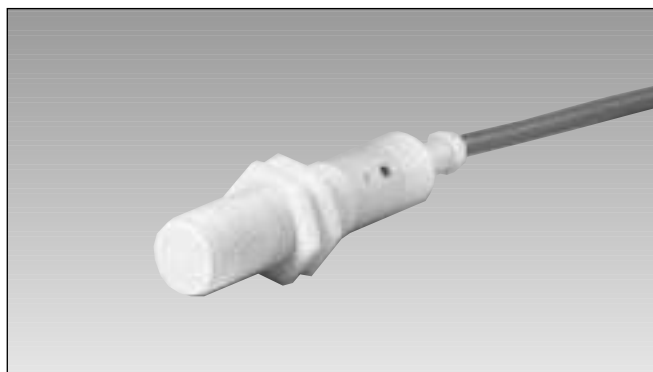


Proximity Sensors Capacitive Teflon Housing Type CA, M18, DC

TRIPLESIELD™

CARLO GAVAZZI



- Featuring **TRIPLESIELD™** sensor protection
- Adjustable sensing distance 3-8 mm
- Rated operational voltage: 10-40 VDC
- Output: DC 200 mA, NPN or PNP
- Make and break switching function
- LED indication
- High noise immunity
- Flush types
- Cable versions

Product Description

Capacitive proximity switches with sensing distance of 8 mm flush mounted in metal. 4-wire DC output with both make (NO) and break (NC) switching.

White M18 Teflon housing with 2 m cable. Ideal for use in level applications in the chemical, semi-conductor and food & beverage industries.

Ordering Key

CA 18 FLF 08 NA

Type _____
Housing style _____
Housing size _____
Housing material _____
Housing length _____
Detection principle _____
Sensing distance _____
Output type _____
Output configuration _____

Type Selection

Housing diameter	Rated operating dist. (S _n) ¹⁾	Mounting	Ordering no. Transistor NPN Make & break switching	Ordering no. Transistor PNP Make & break switching
M18	8 mm	Flush (built-in)	CA18FLF08NA	CA18FLF08PA

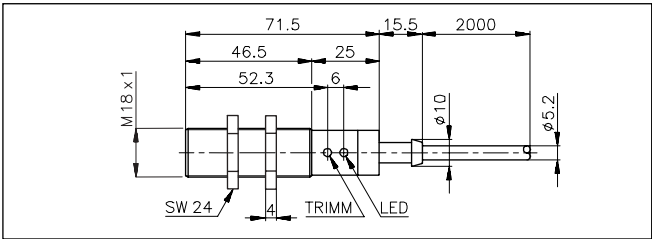
¹⁾ Object: Grounded steel plate

Specifications

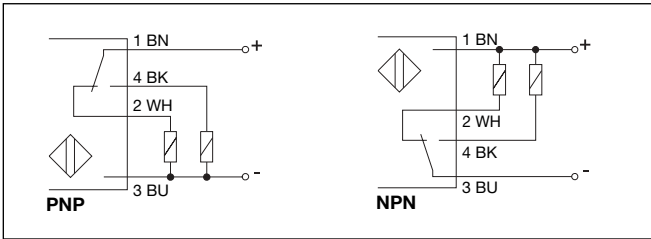
Rated operating dist. (S_n)	3 to 8 mm factory set at 8 mm	Indication for output ON	LED, yellow
Sensitivity	Adj. 270° turn pot. meter	Environment	
Effective operation dist. (S_r)	$0.9 \times S_n \leq S_r \leq 1.1 \times S_n$	Degree of protection	IP 67 (Nema 1, 3, 4, 6, 13)
Usable operation dist. (S_u)	$0.8 \times S_r \leq S_u \leq 1.2 \times S_r$	Temperature	
Repeat accuracy (R)	≤ 5%	Operating temperature	-25° to +80°C (-13° to +140°F)
Hysteresis (H)	4 to 20% of sensing distance	Storage temperature	-40° to +85°C (-40° to +149°F)
Rated operational volt. (U_B)	10 to 40 VDC (ripple included)	Housing material	
Ripple	≤ 10%	Body, front, nuts	Teflon
Rated operational current (I_e)		Connection	
Continuous	≤ 200 mA	Cable	Grey, 2 m, 4 x 0.34 mm ² Oil proof PVC
No-load supply current (I_o)	≤ 10 mA	Weight	110 g
Voltage drop (U_d)	≤ 2.5 VDC at max. load	CE-marking	Yes
Protection	Reverse polarity, short-circuit, transients		
Frequency of operating cycles (f)	30 Hz		



Dimensions



Wiring Diagrams

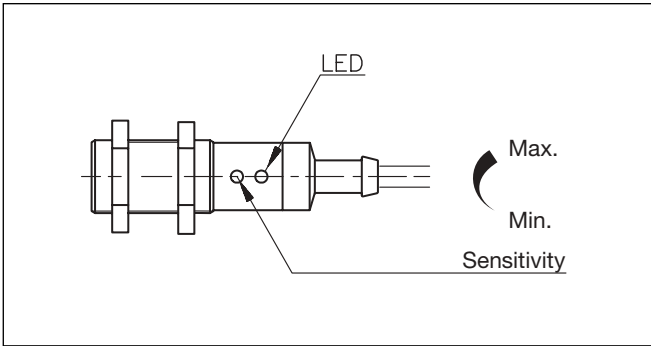


Adjustment Guide

The environments in which capacitive sensors are installed can often be unstable regarding temperature, humidity, object distance and industrial (noise) interference. Because of this, Carlo Gavazzi offers as standard features in all *TRIP-LESHIELD™* capacitive sensors a user-friendly sensitivity adjustment instead of having a fixed sensing range, extended sensing range to accom-

modate mechanically demanding areas, temperature stability to ensure minimum need for adjusting sensitivity if temperature varies and high immunity to electromagnetic interference (EMI).

Note:
Sensors are factory set (default) to maximum rated sensing range.



Installation Hints

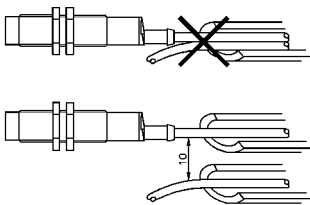
Capacitive sensors have the unique ability to detect almost all materials, either in liquid or solid form. Capacitive sensors can detect metallic as well as non-metallic objects, however, their traditional use is for non-metallic materials such as:

- **Plastic Industry**
Resins, regrinds or moulded products.
- **Chemical Industry**
Cleansers, fertilisers, liquid soaps, corrosives and petrochemicals.
- **Wood Industry**
Saw dust, paper products, door and window frames.
- **Ceramic & Glass Industry**
Raw material, clay or finished products, bottles.

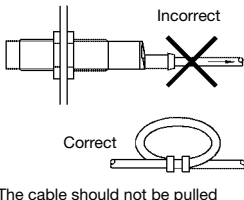
- **Semi-conductor Industry**
- **Food & Beverage Industry**
- **Packaging Industry**
Package inspection for level or contents, dry goods, fruits and vegetables, dairy products.

Materials are detected due to their dielectric constant. The bigger the size of an object, the higher the density of material, the better or easier it is to detect the object. Nominal sensing distance for a capacitive sensor is referenced to a grounded metal plate (ST37). For additional information regarding dielectric ratings of materials please refer to Technical Information.

To avoid interference from inductive voltage/current peaks, separate the prox. switch power cables from any other power cables, e.g. motor, contactor or solenoid cables

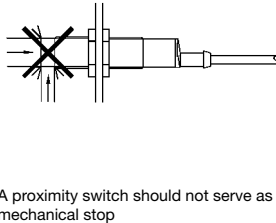


Relief of cable strain



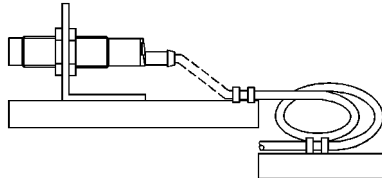
The cable should not be pulled

Protection of the sensing face



A proximity switch should not serve as mechanical stop

Switch mounted on mobile carrier



Any repetitive flexing of the cable should be avoided

Delivery Contents

- Capacitive switch: CA18FL...
- Screw driver
- 2 nuts
- **Packaging:** Cardboard box
- Installation & Adjustment Guide