Proximity Sensors Capacitive Stainless Steel Housing Type EC, M30, DC







- Featuring TRIPLESHIELD™ sensor protection
- Rated operational voltage: 10-40 VDC
- Adjustable sensing distance 2-16 mm or 4-25 mm
- Output: DC 200 mA, NPN or PNP
- Make and break switching function
- LED indication

Connection type

- · High noise immunity
- Flush and non-flush types
- Plug and cable versions available
- AC versions in the same housing

Product Description

Capacitive proximity switches with either sensing distance 16 mm flush mounted or sensing distance 25 mm non-flush mounted. 4-wire DC output with both make (NO)

and break (NC) switching. M30 stainless steel housing with 2 m PVC cable or plug. Ideal for use in level and plastic machinery applications.

Capacitive proximity switch Housing diameter (mm) Rated operating dist. (mm) Output type Housing material Housing type

Type Selection

Housing diameter	Rated operating dist. (S _n) 1)	Mounting	Transistor NPN/cable Make & break	Ordering no. Transistor NPN/plug Make & break switching	•	Ordering no. Transistor PNP/plug Make & break switching	
M30	16 mm	Flush (built-in)	EC 3016 NPASL		EC 3016 PPASL	EC 3016 PPASL-1	
M30	25 mm	Non-flush	EC 3025 NPASL		EC 3025 PPASL	EC 3025 PPASL-1	

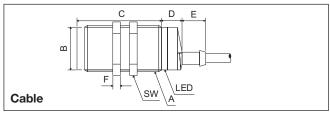
¹⁾ Object: Grounded steel plate

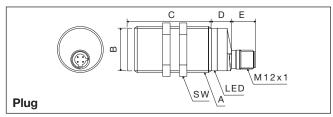
Specifications

Rated operating dist. (S _n) 3016:	2 to 16 mm	Frequency of operating cycles (f)	50 Hz		
2005-	factory set at 16 mm	Indication for output ON	LED, yellow		
3025:	4 to 25 mm factory set at 25 mm	Environment Degree of protection	IP 67 (Nema 1, 3, 4, 6, 13)		
Sensitivity	Adj. multiturn pot.meter	Temperature	07 (1101110 1, 0, 1, 0, 10		
Effective operating dist. (S _r)	$0.9 \times S_n \le S_r \le 1.1 \times S$	Operating temperature	-25° to +80°C (-13° to +176		
Usable operating dist. (S _u)	$0.8 \times S_r \le S_n > 1.2 \times S_r$	Storage temperature	-40° to +85°C (-40° to +185		
Repeat accuracy (R)	≤ 5%	Housing material			
Hysteresis (H)	3 to 20% of sensing distance	Body	Stainless steel (St 304)		
Rated operational volt. (U _B)	10 to 40 VDC (ripple included)	Front Cable end Nuts	Grey, polyester Polyester Nickel plated brass		
Ripple	≤ 10%	Connection	Tricker plated brace		
Rated operational current (I _e) Continuous	≤ 200 mA	Cable	Grey, 2 m, 4 x 0.34 mm ² Oil proof, PVC		
No-load supply current (I _o)	≤ 10 mA (no load)	Plug (-1)	M12 x 1		
Voltage drop (U _d)	≤ 2.5 VDC at max. load	Cable for plug (-1)	CON.1A-series		
Protection	Reverse polarity, short-circuit, transients	Weight (incl. nuts)	3016: 140 g 3025: 150 g		
	cher chear, transferto	Approvals	UL		
		CE-marking	Yes		



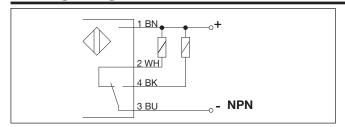
Dimensions

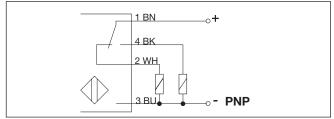




Туре	Α	B Ø mm	D mm	ı	
EC 3016xPASL(-1) EC 3025xPASL(-1)	M30 x 1.5 x 50 M30 x 1.5 x 50	28 28	13.6 13.6		

Wiring Diagrams





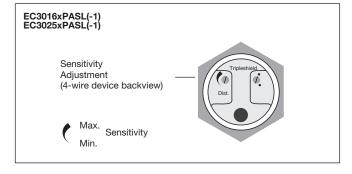
Adjustment Guide

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 TRIPLESHIELDTM capacitive sensors a user-friendly sensitivity adjustment instead of having a fixed sensing range,

extended sensing range to accommodate 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

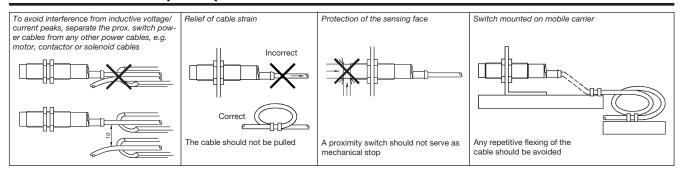
Raw material, clay or finished products, bottles.

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.



Installation Hints (cont.)



Delivery Contents

- Capacitive switch: EC 30.. PASL(-1)
- Screw driver
- 2 nuts
- Packaging: Cardboard boxInstallation & Adjustment Guide

Accessories

• Plugs CON.1A.. serie