

# Proximity Sensors Capacitive Nickel-plated Brass Housing Type EC, M 30, DC

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- Adjustable sensing distance 4-25 mm
- Rated operational voltage: 10-40 VDC
- Output: DC 200 mA, NPN or PNP
- Make and break switching function
- LED indication
- Nickel plated brass housing
- High noise immunity
- For flush or non-flush mounting



## 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. Grey M 30 polyester housing with 2 m PUR cable or plug. Ideal for use in level and plastic machinery applications.

## Ordering Key **EC 3025 PPA M L-1**

Type: Capacitive proximity switch	EC
Housing diameter (mm)	30
Rated operating dist. (mm)	25
Output type	P
Housing material	P
Housing type	M
Connection type	L-1

## Type Selection

Housing diameter	Rated operating dist. (S <sub>n</sub> ) <sup>1)</sup>	Mounting	Ordering no. Transistor NPN/cable Make & break switching	Ordering no. Transistor NPN/plug Make & break switching	Ordering no. Transistor PNP/cable Make & break switching	Ordering no. Transistor PNP/plug Make & break switching
M30	16 mm	Flush (build-in)	EC 3016 NPAML	EC 3016 NPAML-1	EC 3016 PPAML	EC 3016 PPAML-1
M30	25 mm	Non-flush	EC 3025 NPAML	EC 3025 NPAML-1	EC 3025 PPAML	EC 3025 PPAML-1

<sup>1)</sup> Object: Grounded steel plate

## Specifications

<b>Rated operational volt. (U<sub>B</sub>)</b>	10 to 40 VDC (ripple included)	<b>Drift of sensing distance due to temperature variation</b>	±10%
<b>Ripple</b>	≤ 10%	<b>EMC ratings</b>	Acc. to EN 50 082-2
<b>Rated operational current (I<sub>e</sub>)</b> Continuous	≤ 200 mA	<b>ENV 50 140</b> RF Electromagnetic field AM, 80-1000 MHz, Level 3	10 V/m
<b>No-load supply current (I<sub>o</sub>)</b>	≤ 10 mA (no load)	<b>ENV 50 204</b> RF Electromagnetic field PM, 80-900 MHz, Level 3	10 V/m
<b>Voltage drop (U<sub>d</sub>)</b>	≤ 2.5 VDC at max. load	<b>EN 61000-4-2</b> ESD	
<b>Protection</b>	Reverse polarity, short-circuit	Contact discharge, Level 4	8 kV
<b>Frequency of operating cycles (f)</b>	100 Hz	Air discharge, Level 4	17 kV
<b>Indication for output ON</b>	LED, yellow	<b>EN 61000-4-4</b> Fast transient	
<b>Rated operating dist. (S<sub>n</sub>)</b> (adjustable)	<b>3016:</b> 2 to 16 mm factory set at 16 mm <b>3025:</b> 4 to 25 mm factory set at 25 mm	Rep. freq. 5 kHz, Level 3	2 kV
<b>Repeat accuracy (R)</b>	≤ 5%	<b>IEC 947-5-2</b> Surges common mode, Gen. Imp. 500E, Level 3	2.5 kV
<b>Hysteresis (H)</b>	3 to 20% of sensing distance	<b>Environment</b>	
		Degree of protection	IP 67 (Nema 1, 3, 4, 6, 13)
		Operating temperature	-25 to +80°C (-13 to +176°F)
		Storage temperature	-40 to +85°C (-40 to +185°F)
		<b>Housing material</b>	
		Front:	Grey thermoplastic polyester
		Body:	Nickel plated brass



## Specifications (cont.)

<b>Cable</b>	2 m, 4 x 0.34 mm <sup>2</sup> grey PUR, oil proof
<b>Plug (-1)</b> Cable for plug (-1)	M12 x 1 CONH1A-series
<b>Weight (incl. nuts)</b>	<b>3016:</b> 140 g <b>3025:</b> 150 g

## Dimensions

**EC 3016:** M 30 x 79 mm  
**EC 3025:** M 30 x 91 mm

## Delivery Contents

- Capacitive switch: EC 30.. PAPL(-1)
- Screw driver
- **Packaging:** Cardboard box

## Wiring Diagrams

