

# Proximity Sensors Inductive Thermoplastic Polyester Housing Type IC 40, 40 x 40 x 118 mm

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- Rotable-head, 5 positions
- Mounting dimensions in accordance with DIN 43694
- Thermoplastic polyester housing
- Sensing distance: 30 mm
- LED-indication for power and output ON
- Fully protected
- DC types 4-wire NO & NC, 10-30 VDC
- AC/DC types 2-wire NO or NC, 20-250 VAC/DC
- AC type 2-wire NO & NC

## Product Description

Inductive proximity switch in standard limit switch housing. Rugged polyester housing. Sensing face adjustable in up to 5 positions. 2-wire AC/DC for maximum efficiency.

## Ordering Key

**IC40CNN30NAT1**

Ind. prox. switch \_\_\_\_\_  
Housing style \_\_\_\_\_  
Housing size \_\_\_\_\_  
Housing material \_\_\_\_\_  
Housing length \_\_\_\_\_  
Detection principle \_\_\_\_\_  
Sensing distance \_\_\_\_\_  
Output type \_\_\_\_\_  
Output configuration \_\_\_\_\_  
Connection \_\_\_\_\_

## Type Selection - DC

Rated operating dist. (S <sub>n</sub> )	Ordering no. Transistor NPN Normally open & normally closed	Ordering no. Transistor PNP Normally open & normally closed
30 mm <sup>1)</sup>	IC40CNN30NAT1	IC40CNN30PAT1

<sup>1)</sup> For non-flush mounting

## Type Selection - AC and AC/DC

Rated operating dist. (S <sub>n</sub> )	Ordering no. Power MOSFET Normally open, AC/DC	Ordering no. Power MOSFET Normally closed, AC/DC	Ordering no. Power MOSFET Normally open & closed, AC
30 mm <sup>1)</sup>	IC40CNN30COT1	IC40CNN30CCT1	IC40CNN30TAT1 <sup>2)</sup>

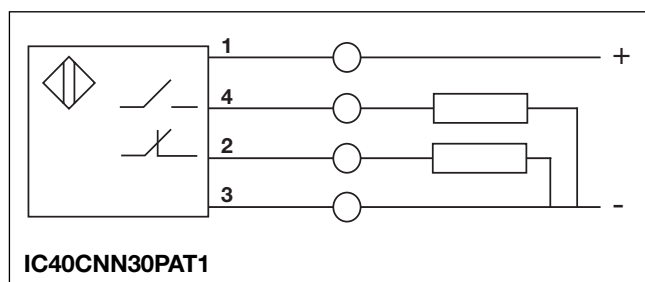
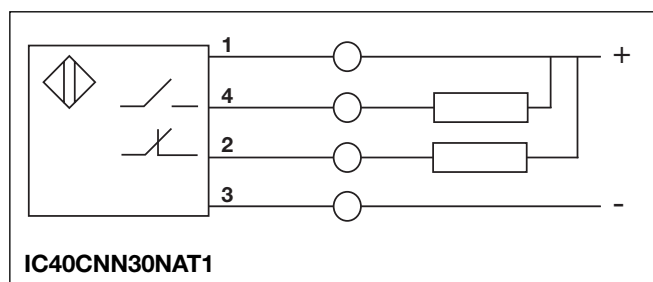
<sup>1)</sup> For non-flush mounting

<sup>2)</sup> Delivered: NO

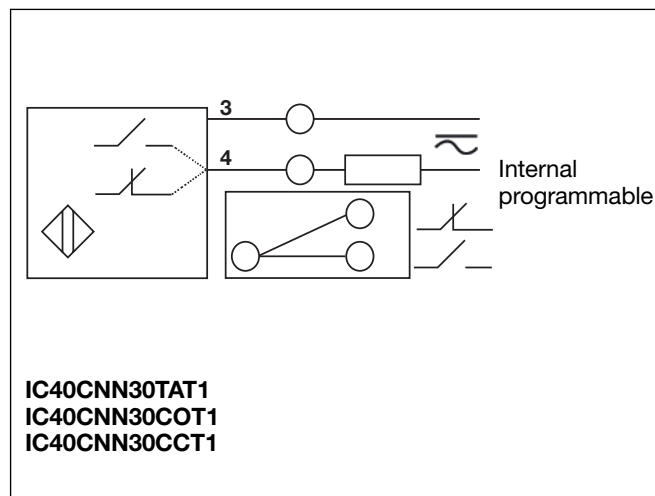
## Specifications

	Transistor NPN/PNP	Power MOSFET output AC types
<b>Rated operational voltage</b> ( $U_B$ )	10 to 30 VDC (rippled included)	20 to 250 VAC/VDC (VAC: 45 to 65 Hz)
<b>Ripple</b>	$\leq 15\%$	-
<b>Rated operational current</b> ( $I_o$ )		
Continuous	$\leq 200$ mA	5 - 200 mA @ 25°C 5 - 160 mA @ 70°C
Short-time	-	$\leq 2$ A, $t \leq 20$ ms (Max. 1 pulse per s)
<b>No-load supply current</b> ( $I_o$ )	$\leq 25$ mA	-
<b>Minimum load current</b>	-	5 mA
<b>OFF-state current</b> ( $I_r$ ) (leakage)	50 $\mu$ A	$\leq 2.5$ mA
<b>Voltage drop</b> ( $U_d$ )	$< 1.5$ VDC	$\leq 10.0$ VAC; $\leq 8.0$ VDC
<b>Protection</b>	Reverse polarity, short-circuit	Short-circuit (except for IC40CNN30TAT1)
<b>Power ON delay</b>	$\leq 100$ ms	$\geq 100$ ms
<b>Frequency of operating cycles</b> (f)	$\leq 100$ Hz	$\leq 25$ Hz AC; 40 Hz DC
<b>Indication for supply ON</b> (LED 2)	LED, green	LED, green
<b>Indication for output ON</b> (LED 1)	LED, red	LED, red
<b>Rated operating dist.</b> ( $S_n$ )	30 mm	30 mm
<b>Repeat accuracy</b> (R)	$\leq 1\%$	$\leq 1\%$
<b>Hysteresis</b> (H) (Differential travel)	3 to 20% of sensing distance	3 to 20% of sensing distance
<b>Effective operating dist.</b> ( $S_r$ )	$0.9 \times S_n \leq S_r \leq 1.1 \times S_n$	$0.9 \times S_n \leq S_r \leq 1.1 \times S_n$
<b>Usable operating dist.</b> ( $S_u$ )	$0.9 \times S_r \leq S_u \leq 1.1 \times S_r$	$0.9 \times S_r \leq S_u \leq 1.1 \times S_r$
<b>Ambient temperature</b>		
Operating	-25° to +70°C (-13° to +158°F)	-25° to +70°C (-13° to +158°F)
Storage	-30° to +80°C (-22° to +176°F)	-30° to +80°C (-22° to +176°F)
<b>Degree of protection</b>	IP 67(Nema 1, 3, 4, 6, 13)	IP 67 (Nema 1, 3, 4, 6, 13)
<b>Shock resistance</b>	30 G/ 11 ms	30 G/ 11 ms
<b>Vibration resistance</b>	10 to 50 Hz/1 mm/5 min.	10 to 50 Hz/1 mm/5 min.
<b>Housing material</b>	PBT	PBT
<b>Terminal block</b>	4 terminals for 2 x 2.5 mm <sup>2</sup> wires, self-lifting	2 terminals for 2 x 2.5 mm <sup>2</sup> wires, self-lifting
<b>Cable gland</b>	M20 x 1.5	M20 x 1.5
<b>Weight</b>	200 g	200 g
<b>CE-marking</b>	Yes	Yes

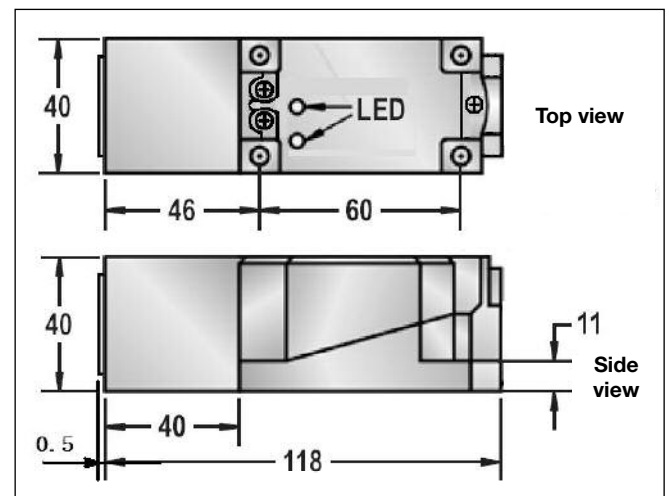
## Wiring Diagrams



## Wiring Diagrams (cont.)



## Dimensions

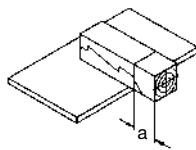


## Installation Hints

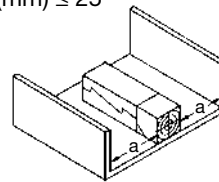
### Installation examples

Sensing surface on head ("top"); other orientations of the sensing surface mean deviations from nominal sensing distance.

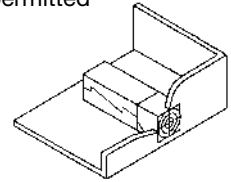
**Figure 1**  
 $a \text{ (mm)} \geq 40$   
 $S_n \text{ (mm)} \leq 20$



**Figure 2**  
 $a \text{ (mm)} \geq 40$   
 $S_n \text{ (mm)} \leq 25$



**Figure 3**  
Flush mounting not permitted



### Adjacent mounting

To avoid cross-interference when mounting the sensors next to each other, the given separations (a) should be maintained.

**Figure 4**  
 $a \text{ (mm)} \geq 120$

