

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



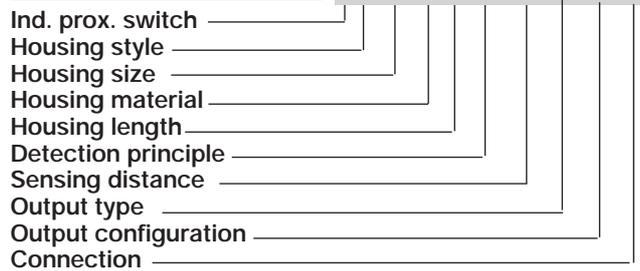
- Rotable-head, 5 positions
- Mounting dimensions in accordance with DIN 43694
- Thermoplastic polyester housing
- Sensing distance: 30 mm
- LED-indication for power and output ON
- Fully protected
- DC types 4-wire NO & NC, 10-30 VDC
- AC/DC types 2-wire NO or NC, 20-250 VAC/DC
- AC type 2-wire NO &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



## Type Selection - DC

Rated operating dist. (S <sub>n</sub> )	Ordering no. Transistor NPN Make & break switching	Ordering no. Transistor PNP Make & break switching
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 Make switching, AC/DC	Ordering no. Power MOSFET Break switching, AC/DC	Ordering no. Power MOSFET Make & Break switching, AC
30 mm <sup>1)</sup>	IC40CNN30COT1	IC40CNN30CCT1	IC40CNN30TAT1 <sup>2)</sup>

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

<sup>2)</sup> Delivered: NO (make switching)

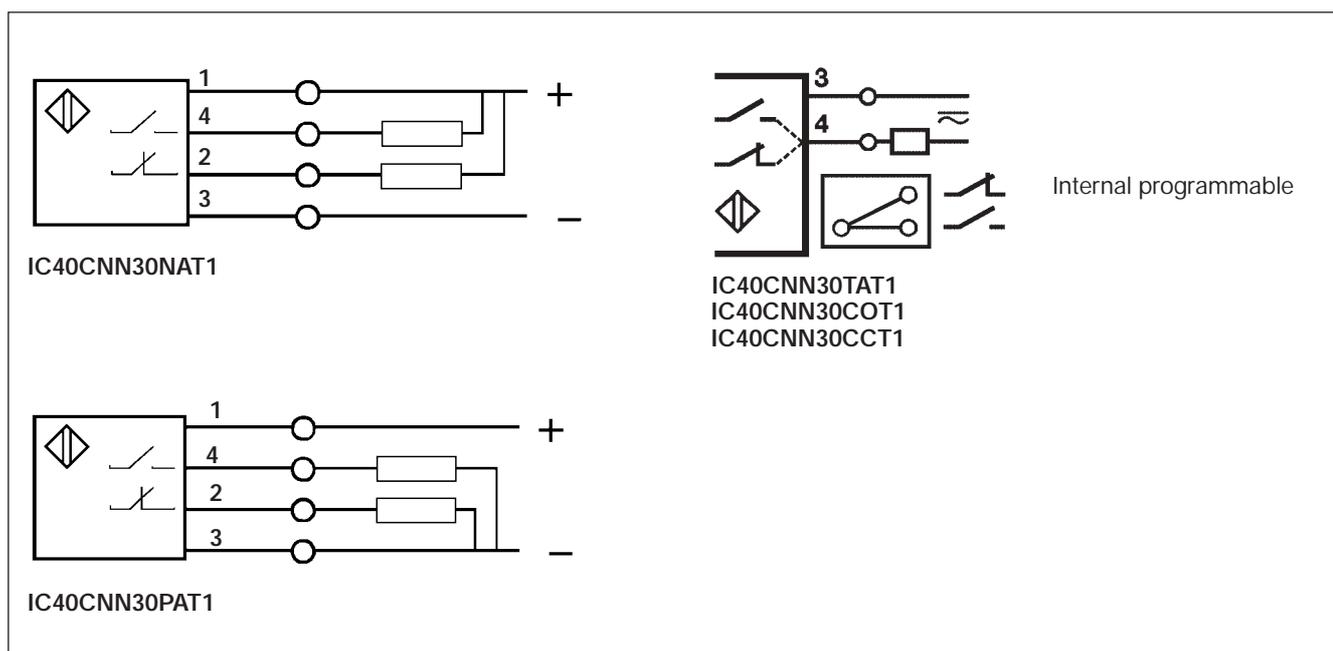
## Specifications

	Transistor NPN/PNP	Power MOSFET output AC types
Rated operational voltage (U <sub>B</sub> )	10 to 30 VDC (rippled included)	20 to 250 VAC/VDC (VAC: 45 to 65 Hz)
Ripple	≤ 15%	-
Rated operational current (I <sub>e</sub> ) Continuous	≤ 200 mA	5 - 200 mA @ 25°C 5 - 160 mA @ 70°C
Short-time	-	≤ 2 A, t ≤ 20 ms (Max. 1 pulse per s)
No-load supply current (I <sub>o</sub> )	≤ 25 mA	-
Minimum load current	-	5 mA

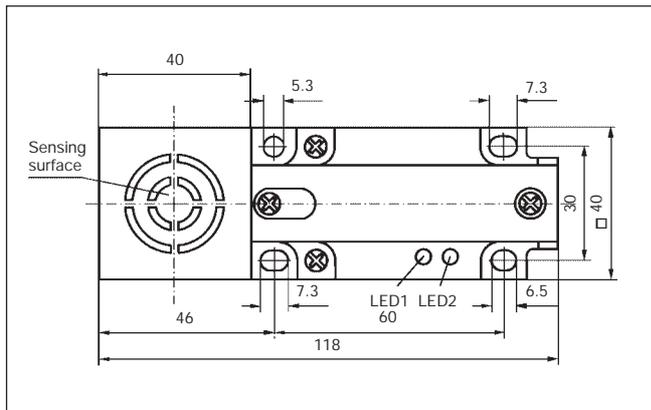
## Specifications (cont.)

	Transistor NPN/PNP	Power MOSFET output AC types
OFF-state current ( $I_r$ ) (leakage)	50 $\mu$ A	$\leq 1.7$ mA @ 120 VAC $\leq 2.5$ mA @ 220 VAC
Voltage drop ( $U_d$ )	0.8 to 3.5 V	Static: $\leq 10.0$ V Dynamic: $\leq 8.0$ V
Protection	Reverse polarity, short-circuit	Transient voltages, short-circuit
Power ON delay	$\leq 100$ ms	$\geq 10$ ms
Frequency of operating cycles (f)	$\leq 100$ Hz	$\leq 25$ Hz AC; 40 Hz DC
Indication for supply ON (LED 2)	LED, green	-
Indication for output ON (LED 1)	LED, yellow	LED, green
Rated operating dist. ( $S_n$ )	30 mm	30 mm
Repeat accuracy (R)	$\leq 1\%$	$\leq 1\%$
Hysteresis (H) (Differential travel)	3 to 20% of sensing distance	3 to 20% of sensing distance
Effective operating dist. ( $S_r$ )	$0.9 \times S_n \leq S_r \leq 1.1 \times S_n$	$0.9 \times S_n \leq S_r \leq 1.1 \times S_n$
Usable operating dist. ( $S_u$ )	$0.9 \times S_r \leq S_u \leq 1.1 \times S_r$	$0.9 \times S_r \leq S_u \leq 1.1 \times S_r$
Ambient temperature		
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)
Degree of protection	IP 67 (Nema 1, 3, 4, 6, 13)	IP 67 (Nema 1, 3, 4, 6, 13)
Shock resistance	30 G/ 11 ms	30 G/ 11 ms
Vibration resistance	10 to 50 Hz/1 mm/5 min.	10 to 50 Hz/1 mm/5 min.
Housing material	PBT	PBT
Terminal block	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
Cable gland	M20 x 1.5	M20 x 1.5
Weight	200 g	200 g
CE-marking	Yes	Yes

## Wiring Diagrams



## Dimensions



## Installation Hints

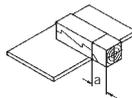
**Table 1**

**Installation examples**

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

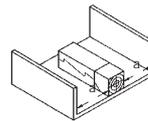
**Figure 1**

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



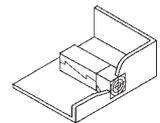
**Figure 2**

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



**Figure 3**

Flush mounting not permitted



**Table 2**

**Adjacent mounting**

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

**Figure 4**

$a \text{ (mm)} \geq 120$

