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

- **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_n)	Ordering no. Transistor NPN Normally open & normally closed	Ordering no. Transistor PNP Normally open & normally closed
30 mm [1]	**IC40CNN30NAT1**	**IC40CNN30PAT1**

[1] For non-flush mounting

Type Selection - AC and AC/DC

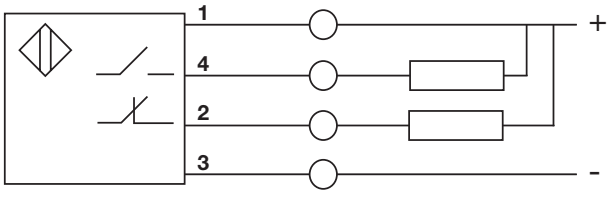
Rated operating dist. (S_n)	Ordering no. Power MOSFET Normally open, AC/DC	Ordering no. Power MOSFET Normally closed, AC/DC	Ordering no. Power MOSFET Normally open & closed, AC
30 mm [1]	**IC40CNN30COT1**	**IC40CNN30CCT1**	**IC40CNN30TAT1**[2]

[1] For non-flush mounting
[2] Delivered: NO

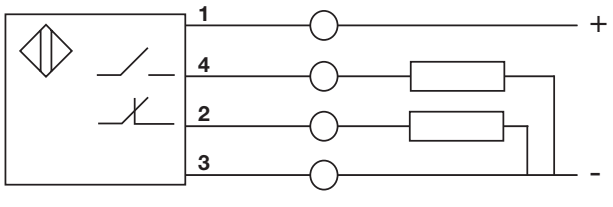
Specifications

	Transistor NPN/PNP	Power MOSFET output AC types
Rated operational voltage (U_B)	10 to 30 VDC (rippled included)	20 to 250 VAC/VDC (VAC: 45 to 65 Hz)
Ripple	≤ 15%	-
Rated operational current (I_e) Continuous Short-time	 ≤ 200 mA -	 5 - 200 mA @ 25°C 5 - 160 mA @ 70°C ≤ 2 A, t ≤ 20 ms (Max. 1 pulse per s)
No-load supply current (I_o)	≤ 25 mA	-
Minimum load current	-	5 mA
OFF-state current (I_r) (leakage)	50 µA	≤ 2.5 mA
Voltage drop (U_d)	< 1.5 VDC	≤ 10.0 VAC; ≤ 8.0 VDC
Protection	Reverse polarity, short-circuit	Short-circuit (except for IC40CNN30TAT1)
Power ON delay	≤ 100 ms	≥ 100 ms
Frequency of operating cycles (f)	≤ 100 Hz	≤ 25 Hz AC; 40 Hz DC
Indication for supply ON (LED 2)	LED, green	LED, green
Indication for output ON (LED 1)	LED, red	LED, red
Rated operating dist. (S_n)	30 mm	30 mm
Repeat accuracy (R)	≤ 1%	≤ 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 Storage	 -25° to +70°C (-13° to +158°F) -30° to +80°C (-22° to +176°F)	 -25° to +70°C (-13° to +158°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 mm² wires, self-lifting	2 terminals for 2 x 2.5 mm² wires, self-lifting
Cable gland	M20 x 1.5	M20 x 1.5
Weight	200 g	200 g
CE-marking	Yes	Yes

Wiring Diagrams

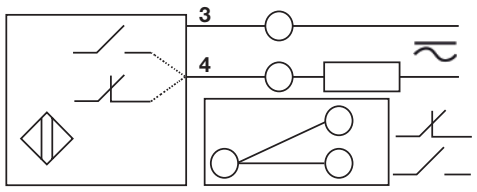


IC40CNN30NAT1



IC40CNN30PAT1

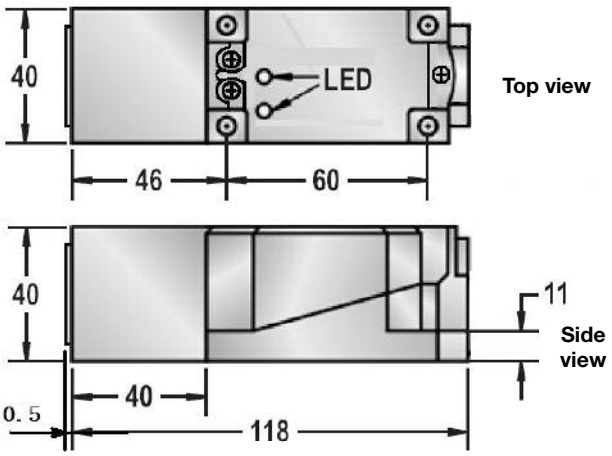
Wiring Diagrams (cont.)



Internal programmable

IC40CNN30TAT1
IC40CNN30COT1
IC40CNN30CCT1

Dimensions



Top view

Side view

Installation Hints

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

Figure 1
a (mm) ≥ 40
S_n (mm) ≤ 20

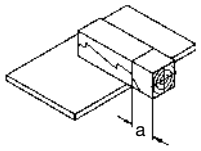


Figure 2
a (mm) ≥ 40
S_n (mm) ≤ 25

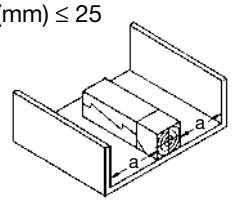
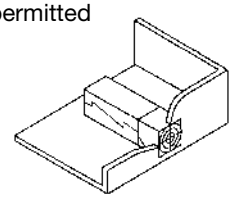


Figure 3
Flush mounting not permitted



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

Figure 4
a (mm) ≥ 120