

# Proximity Sensors Inductive Thermoplastic Polyester Housing Type EIA 4025, 40 x 40 x 120 mm



- Rotable-head, 5 positions
- Mounting dimensions in accordance with DIN 43694
- Glass-reinforced thermoplastic polyester housing
- Sensing distance: 25 mm
- LED-indication for power and output ON
- Fully protected
- DC types 4-wire NO & NC, 10-55 VDC
- AC/DC types 2-wire NO & NC, 20-250 VAC/DC

## Product Description

Inductive proximity switch in standard limit switch housing. Rugged glass-reinforced polyester housing. Sensing face

adjustable in up to 5 positions. 2-wire AC/DC for maximum efficiency.

## Ordering Key

**EIA 4025 PPA P**

Type \_\_\_\_\_  
Housing type \_\_\_\_\_  
Rated operating dist.(mm) \_\_\_\_\_  
Output type \_\_\_\_\_  
Housing material \_\_\_\_\_

## Type Selection

| Rated operating dist. (S <sub>n</sub> ) | Ordering no.<br>Transistor NPN<br>Make & break switching | Ordering no.<br>Transistor PNP<br>Make & break switching | Ordering no.<br>Power MOSFET<br>Make & break switching |
|-----------------------------------------|----------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------|
| 25 mm <sup>1)</sup>                     | EIA 4025 NPAP                                            | EIA 4025 PPAP                                            | EIA 4025 UPAP <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                                                 |
|-------------------------------------------------------------------------|---------------------------------------------------|------------------------------------------------------------------------------|
| <b>Rated operational voltage</b> (U <sub>e</sub> )<br>(U <sub>B</sub> ) | 11.3 to 50 VDC<br>10 to 55 VDC (rippled included) | 24 to 230 VAC/VDC (VAC: 45 to 65 Hz)<br>20 to 250 VAC/VDC (VAC: 45 to 65 Hz) |
| <b>Ripple</b>                                                           | ≤ 15%                                             | -                                                                            |
| <b>Rated operational current</b> (I <sub>e</sub> )<br>Continuous        | ≤ 200 mA                                          | 5 - 250 mA @ 25°C<br>5 - 180 mA @ 70°C                                       |
| Short-time                                                              | -                                                 | ≤ 2 A, t ≤ 20 ms (Max. 1 pulse per s)                                        |
| <b>No-load supply current</b> (I <sub>o</sub> )                         | ≤ 25 mA                                           | -                                                                            |
| <b>Minimum load current</b>                                             | -                                                 | 5 mA                                                                         |
| <b>OFF-state current</b> (I <sub>r</sub> ) (leakage)                    | 50 µA                                             | ≤ 1.7 mA @ 120 VAC<br>≤ 2.5 mA @ 220 VAC                                     |
| <b>Voltage drop</b> (U <sub>d</sub> )                                   | 0.8 to 3.5 V                                      | Static: ≤ 10.5 V<br>Dynamic: ≤ 7.5 V                                         |
| <b>Protection</b>                                                       | Reverse polarity, short-circuit                   | Transient voltages, short-circuit                                            |
| <b>Power ON delay</b>                                                   | ≤ 100 ms                                          | ≥ 200 ms                                                                     |
| <b>Frequency of operating cycles</b> (f)                                | ≤ 100 Hz                                          | ≤ 100 Hz                                                                     |
| <b>Indication for supply ON</b> (LED 2)                                 | LED, green                                        | -                                                                            |
| <b>Indication for output ON</b> (LED 1)                                 | LED, yellow                                       | LED, yellow                                                                  |
| <b>Rated operating dist.</b> (S <sub>n</sub> )                          | 25 mm                                             | 25 mm                                                                        |
| <b>Repeat accuracy</b> (R)                                              | ≤ 5%                                              | ≤ 5%                                                                         |

Specifications (cont.)

|                                             | Transistor NPN/PNP                                               | Power MOSFET output AC types                                     |
|---------------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------|
| Hysteresis (H)<br>(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<br>Operating<br>Storage | -25° to +70°C (-13° to +158°F)<br>-30° to +80°C (-22° to +176°F) | -25° to +70°C (-13° to +158°F)<br>-30° to +80°C (-22° to +176°F) |
| Degree of protection                        | IP 67<br>(Nema 1, 3, 4, 6, 13)                                   | IP 67<br>(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                            | PBTP                                                             | PBTP                                                             |
| Terminal block                              | 4 terminals for 2 x 2.5 mm <sup>2</sup> wires,<br>self-lifting   | 2 terminals for 2 x 2.5 mm <sup>2</sup> wires,<br>self-lifting   |
| Cable gland                                 | M20 x 1.5                                                        | M20 x 1.5                                                        |
| Weight                                      | 200 g                                                            | 200 g                                                            |
| CE-marking                                  | Yes                                                              | Yes                                                              |

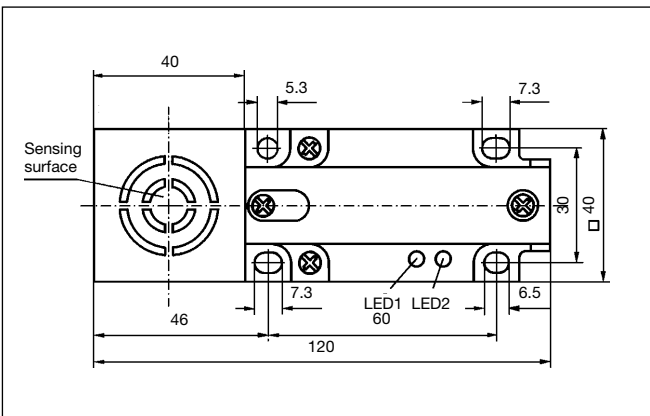
Wiring Diagrams

EIA 4025 NPAP

EIA 4025 PPAP

EIA 4025 UPAP

Dimensions



## Installation Hints

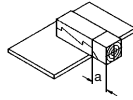
**Table 1**

**Installation examples**

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

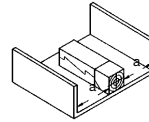
**Figure 1**

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



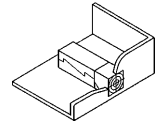
**Figure 2**

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



**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**

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

