

Proximity Sensors Inductive

Thermoplastic Polyester Housing

Type EIA 4025, 40 x 40 x 120 mm

CARLO GAVAZZI



- 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 _n) | Ordering no. Transistor NPN Make & break switching | Ordering no. Transistor PNP Make & break switching | Ordering no. Power MOSFET Make & break switching |
|---|--|--|--|
| 25 mm ¹⁾ | EIA 4025 NPAP | EIA 4025 PPAP | EIA 4025 UPAP ²⁾ |

¹⁾ For non-flush mounting

²⁾ Delivered: NO (make switching)

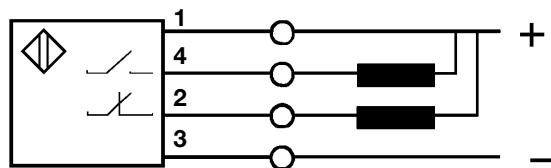
Specifications

| | Transistor NPN/PNP | Power MOSFET output AC types |
|--|---|---|
| Rated operational voltage (U_e) (U_B) | 11.3 to 50 VDC 10 to 55 VDC (rippled included) | 24 to 230 VAC/VDC (VAC: 45 to 65 Hz) 20 to 250 VAC/VDC (VAC: 45 to 65 Hz) |
| Ripple | ≤ 15% | - |
| Rated operational current (I_e) | | |
| Continuous | ≤ 200 mA | 5 - 250 mA @ 25°C 5 - 180 mA @ 70°C ≤ 2 A, t ≤ 20 ms (Max. 1 pulse per s) |
| Short-time | - | |
| No-load supply current (I₀) | ≤ 25 mA | - |
| Minimum load current | - | 5 mA |
| OFF-state current (I_r) (leakage) | 50 μA | ≤ 1.7 mA @ 120 VAC ≤ 2.5 mA @ 220 VAC |
| Voltage drop (U_d) | 0.8 to 3.5 V | Static: ≤ 10.5 V Dynamic: ≤ 7.5 V |
| Protection | Reverse polarity, short-circuit | Transient voltages, short-circuit |
| Power ON delay | ≤ 100 ms | ≥ 200 ms |
| Frequency of operating cycles (f) | ≤ 100 Hz | ≤ 100 Hz |
| Indication for supply ON (LED 2) | LED, green | - |
| Indication for output ON (LED 1) | LED, yellow | LED, yellow |
| Rated operating dist. (S_n) | 25 mm | 25 mm |
| Repeat accuracy (R) | ≤ 5% | ≤ 5% |

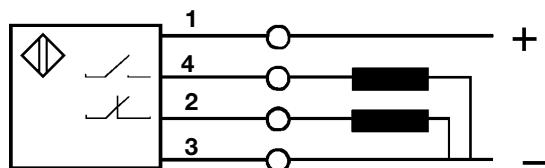
Specifications (cont.)

| | Transistor NPN/PNP | Power MOSFET output AC types |
|--|---|---|
| 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 | PBTP | PBTP |
| Terminal block | 4 terminals for 2 x 2.5 mm ² wires, self-lifting | 2 terminals for 2 x 2.5 mm ² wires, self-lifting |
| Cable gland | M20 x 1.5 | M20 x 1.5 |
| Weight | 200 g | 200 g |
| CE-marking | Yes | Yes |

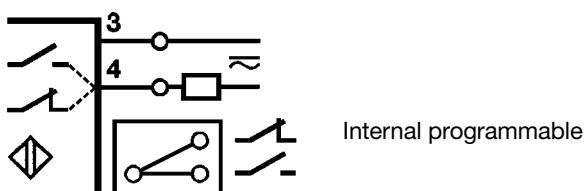
Wiring Diagrams



EIA 4025 NPAP

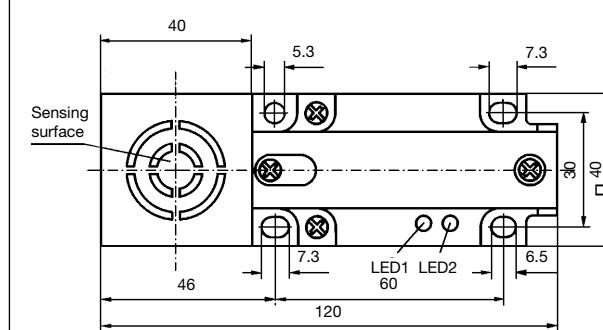


EIA 4025 PPAP



EIA 4025 UPAP

Dimensions



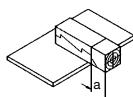
Installation Hints

Table 1**Installation examples**

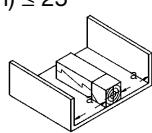
Sensing surface on head ("top"); other orientations of the sensing surface mean deviations from nominal sensing distance.

Figure 1

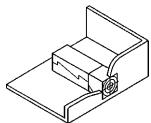
a (mm) ≥ 40
 S_n (mm) ≤ 20

**Figure 2**

a (mm) ≥ 40
 S_n (mm) ≤ 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 (mm) ≥ 120

