

# FIA Series

## ▶ FIA-P-08-...-3pol

- Integrated electronics
- Infrared light beam (IR LED 905 nm)
- Switching state indicator (yellow LED)
- Switching frequency typ. 1 kHz
- Scratch-resistant optics
- 3-pole M8-connector
- Sturdy aluminum housing
- Compact design



### Design

#### Product name:

FIA-P-08-(aperture)-(fork size)-(output)-IR-3pol

#### Available apertures:

- d0.4** (circular aperture Ø 0.4 mm)
- d0.6** (circular aperture Ø 0.6 mm)
- d0.8** (circular aperture Ø 0.8 mm)
- d1.0** (circular aperture Ø 1.0 mm)
- d1.2** (circular aperture Ø 1.2 mm)

#### Available fork sizes: (cf. dimensions page 3)

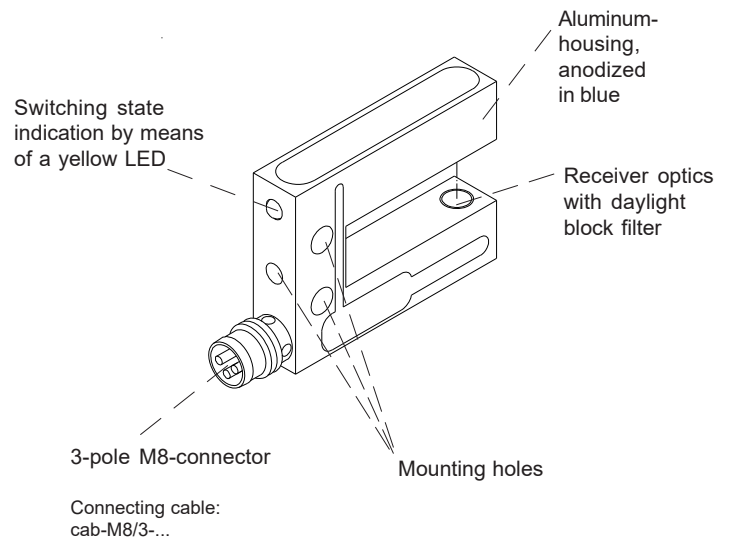
- 10/15** (fork width A=10 mm, fork depth B=15 mm)
- 10/25** (fork width A=10 mm, fork depth B=25 mm)
- 10/30** (fork width A=10 mm, fork depth B=30 mm)
- 20/15** (fork width A=20 mm, fork depth B=15 mm)
- 20/30** (fork width A=20 mm, fork depth B=30 mm)
- 25/50** (fork width A=25 mm, fork depth B=50 mm)
- 25/80** (fork width A=25 mm, fork depth B=80 mm)
- 30/15** (fork width A=30 mm, fork depth B=15 mm)
- 30/30** (fork width A=30 mm, fork depth B=30 mm)
- 40/30** (fork width A=40 mm, fork depth B=30 mm)

#### Special fork sizes (available as per request):

- 40/40** (fork width A=40 mm, fork depth B=40 mm)
- 40/60** (fork width A=40 mm, fork depth B=60 mm)
- 60/60** (fork width A=60 mm, fork depth B=60 mm)


#### Switching output:

- N** = npn dark-switching (npn n.o.)
- NI** = npn bright-switching (npn n.c.)
- P** = pnp bright-switching (pnp n.c.)
- PI** = pnp dark-switching (pnp n.o.)





**Technical Data**

|                             |  |
|-----------------------------|--|
| <b>Type</b>                 | <b>FIA-P-08-...-3pol</b>   |
| Transmitter                 | IR LED: 905 nm   |
| Min. detectable object      | typ. 0.3 mm  |
| Reproducibility             | typ. 0.05 mm   |
| Optical filter              | Daylight block filter  |
| Voltage supply              | +24VDC (± 10%), reverse polarity protected   |
| Ambient light               | up to 5000 Lux   |
| Current consumption         | typ. 30 mA   |
| Aperture size               | Ø 0.4 mm / Ø 0.6 mm / Ø 0.8 mm / Ø 1.0 mm / Ø 1.2 mm   |
| Switching output (1x)       | N = npn dark-switching (npn n.o.)<br>NI = npn bright-switching (npn n.c.)<br>P = pnp bright-switching (pnp n.c.)<br>PI = pnp dark-switching (pnp n.o.)<br>100mA, short-circuit protected |
| Enclosure rating            | IP67   |
| Operating temperature range | -20°C ... +50°C  |
| Storage temperature range   | -20°C ... +85°C  |
| Housing                     | Aluminium, anodized in blue  |
| Dimensions                  | see page 3   |
| Connector type              | 3-pole M8-connector  |
| EMC test acc. to            | DIN EN 60947-5-2    |
| Switching frequency         | typ. 1 kHz   |
| Switching state indicator   | by means of a yellow LED integrated in the sensor housing:<br>LED on = sensor free<br>LED off = sensor covered   |



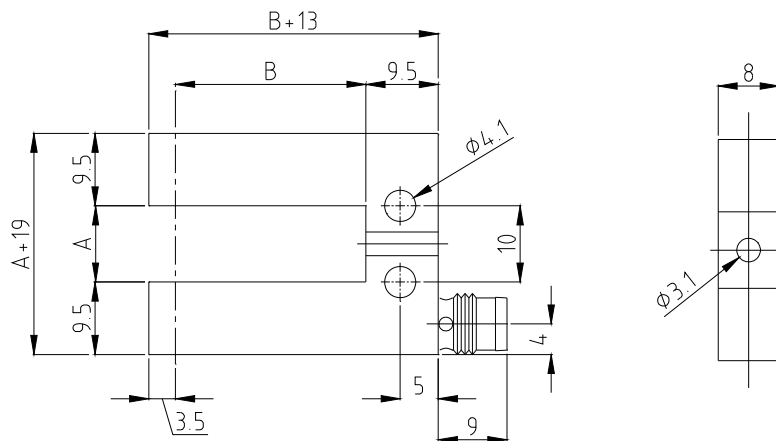
Dimensions

FIA-P-08-...(fork size)-...-3pol:

| Fork-size | dim. A | dim. B |  |
|-----------|--------|--------|--|
| 10/15     | 10 mm  | 15 mm  | (housings partly with inner radius R1) |
| 10/25     | 10 mm  | 25 mm  | (housings partly with inner radius R1) |
| 10/30     | 10 mm  | 30 mm  | (housings partly with inner radius R1) |
| 20/15     | 20 mm  | 15 mm  | (housings partly with inner radius R1) |
| 20/30     | 20 mm  | 30 mm  |  |
| 25/50     | 25 mm  | 50 mm  |  |
| 25/80     | 25 mm  | 80 mm  |  |
| 30/15     | 30 mm  | 15 mm  |  |
| 30/30     | 30 mm  | 30 mm  |  |
| 40/30     | 40 mm  | 30 mm  |  |

Special fork sizes (as per request):

|       |       |       |
|-------|-------|-------|
| 40/40 | 40 mm | 40 mm |
| 40/60 | 40 mm | 60 mm |
| 60/60 | 60 mm | 60 mm |



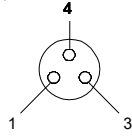
(All dimensions in mm)



**Connector Assignment**

**Pin assignment FIA-P-08-...-3pol:**  
(3-pole M8-connector)

|      |                          |
|------|--------------------------|
| Pin: | Assignment:              |
| 1    | +Ub (+24VDC ± 10%)       |
| 3    | GND (0V)                 |
| 4    | Output (N, NI, P, or PI) |



Output (to be chosen):  
 N = npn dark-switching (npn n.o.)  
 NI = npn bright-switching (npn n.c.)  
 P = pnp bright-switching (pnp n.c.)  
 PI = pnp dark-switching (pnp n.o.)

Connecting cables:  
 cab-M8/3-g-(length)  
 cab-M8/3-w-(length) (angle type, 90°)  
 (standard lengths: 2m, 5m)



**Connecting Cables**

**Available connecting cables:**

|                     |            |                   |                 |
|---------------------|------------|-------------------|-----------------|
| <b>cab-M8/3-g-2</b> | Length: 2m | Outer jacket: PUR |                 |
| <b>cab-M8/3-g-5</b> | Length: 5m | Outer jacket: PUR |                 |
| <b>cab-M8/3-w-2</b> | Length: 2m | Outer jacket: PUR | angle type, 90° |
| <b>cab-M8/3-w-5</b> | Length: 5m | Outer jacket: PUR | angle type, 90° |

