

FIA Series

► FIA-A-V-...

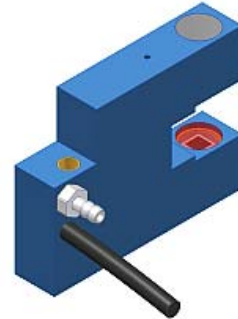
- High reproducibility
- Integrated electronics
- Infrared light beam (IR LED 905 nm)
- High switching frequency (typ. 100 kHz)
- Temperature-compensated
- Analog output (0 ... +5V)
- Blast-air connector
- Scratch-resistant optics
- Enclosure rating IP67
- Compact, sturdy aluminum housing, oil-resistant cable
- Also available with circular connector or tool plug

In Proud Partnership with Sensor Instruments

PAQUIN SENSORS

For technical support, sales, & distribution
within the USA & Canada

www.paquin.com | (800) 831-8217 | paquinsensors@paquin.com



Design

Product name:

FIA-A-V-(aperture)-(fork size)-(length)

FIA-A-V-(aperture)-(fork size)-P-(length) (incl. 8-pole circular connector, s. below)

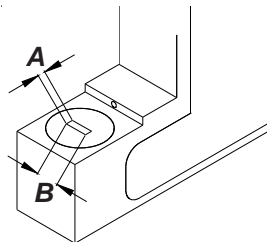
FIA-A-V-(aperture)-(fork size)-TPN-(length) (incl. tool plug TPN, s. below)

Round apertures *d*... (∅ mm):

| | |
|------|------|
| d0.4 | d1.0 |
| d0.6 | d1.5 |
| d0.8 | d2.0 |

Rectangular apertures *A*x*B* (mm):

| | |
|-----------|----------|
| 0.2 x 0.5 | 0.5 x 1 |
| 0.2 x 1 | 0.75 x 2 |
| 0.3 x 0.8 | 0.75 x 3 |
| 0.3 x 1 | 1 x 1 |
| 0.3 x 1.5 | 1 x 1.2 |
| 0.3 x 3 | 1 x 2 |



Fork sizes: (cf. dimensions page 3)

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

Length:

- 500** (cable length = 500 mm)
- 1000** (cable length = 1000 mm)

Also available with 8-pin circular connector or tool plug:

- P** (8-pin circular connector, type Binder 712)
- TPN** (tool plug TPN-01 with 8-pole connector Binder 702)

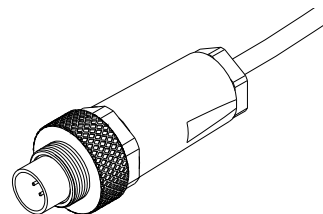
Aluminum housing,
anodized in blue

Mounting hole

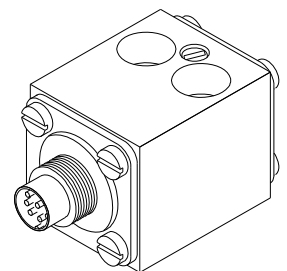
Receiver optics
with day light
block filter

Blast-air
connector

Oil-resistant PUR cable, 4-wire
(l=500 mm or 1000 mm)



"P"
(circular connector, 8-pole)



"TPN"
(tool plug TPN-01)



Technical Data

| Type | FIA-A-V-... |
|-----------------------------|---|
| Transmitter | IR LED: 905 nm |
| Min. detectable object | typ. 0.05 mm |
| Reproducibility | typ. 0.2% of measuring range |
| Optical filter | Day light block filter |
| Voltage supply | +5VDC |
| Analog output | 0V ... +5V |
| Band width analog signal | 100 kHz (-3dB) |
| Current consumption | typ. 30 mA |
| Available apertures | circular apertures (max. Ø 2 mm) or rectangular apertures (max. 2 mm x 1 mm) |
| Enclosure rating | IP67 |
| Operating temperature range | -20°C ... +50°C |
| Storage temperature range | -20°C ... +85°C |
| Housing material | Aluminum, anodized in blue |
| Housing dimensions | cf. page 3 |
| Cable type | cable intergrated at sensor housing: 4-wire, outer jacket PUR, shielded, length = 500 mm or 1000 mm |
| EMC test acc. to | DIN EN 60947-5-2 |
| Switching frequency | typ. 100 kHz |



Connector Assignment

Cable assignment FIA-A-V-...

(4-wire cable, outer jacket PUR, shielded):

| Color: | Assignment: |
|--------|--------------------|
| brown | +5V |
| green | ANALOG (0 ... +5V) |
| white | GND (0V) |
| yellow | I-CONTROL |

Connector assignment FIA-A-V-...-P

(8-pole circular connector Binder 712):

| Pin: | Assignment: |
|------|--------------------|
| 1 | GND (0V) |
| 2 | +Ub |
| 3 | ANALOG (0 ... +5V) |
| 4 | I-CONTROL |
| 5 | n.c. |
| 6 | n.c. |
| 7 | n.c. |
| 8 | n.c. |

Connector assignment FIA-A-V-...-TPN

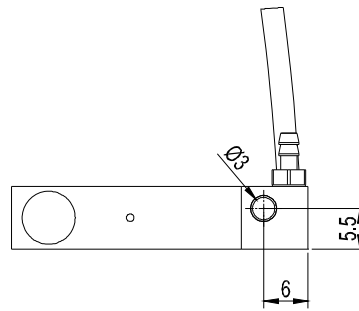
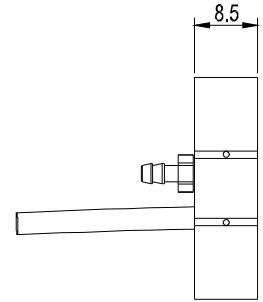
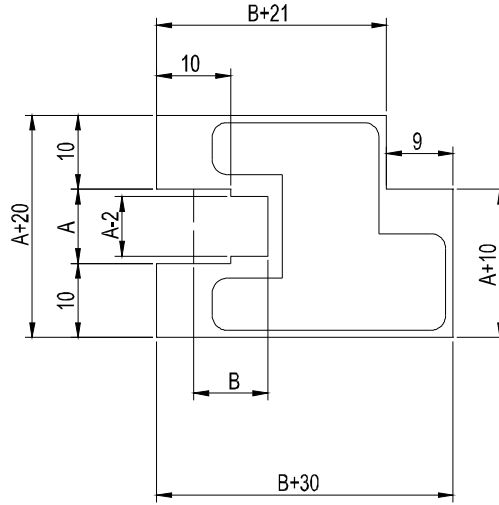
(8-pole circular connector Binder 702):

| Pin: | Assignment: |
|------|--------------------|
| 1 | GND (0V) |
| 2 | +Ub |
| 3 | ANALOG (0 ... +5V) |
| 4 | I-CONTROL |
| 5 | n.c. |
| 6 | n.c. |
| 7 | n.c. |
| 8 | n.c. |

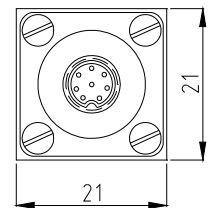
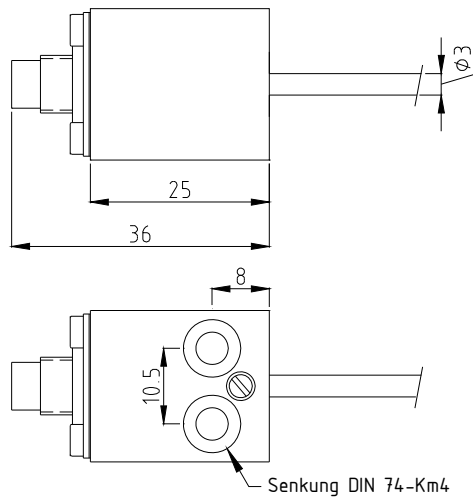
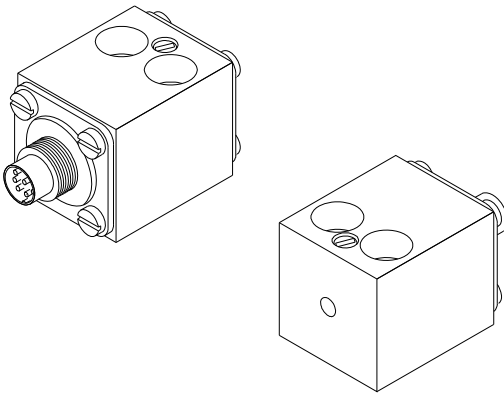
Dimensions

FIA-A-V-...:

| Fork size | Dim. A | Dim. B |
|-----------|--------|--------|
| 10/10 | 10 mm | 10 mm |
| 10/15 | 10 mm | 15 mm |
| 10/20 | 10 mm | 20 mm |
| 10/30 | 10 mm | 30 mm |
| 15/10 | 15 mm | 10 mm |
| 20/10 | 20 mm | 10 mm |
| 20/30 | 20 mm | 30 mm |



Tool plug TPN -01:



(All dimensions in mm)