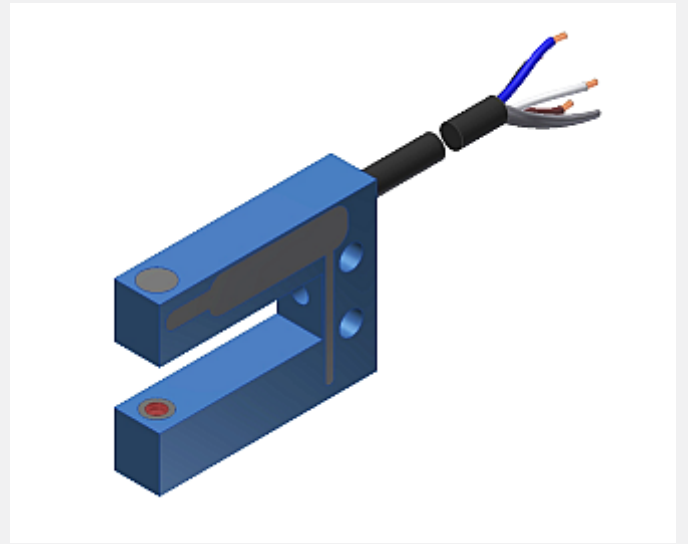


# FIA Series

## ► FIA-C-08-...

- Integrated electronics
- Infrared light beam (IR LED 905 nm)
- Switching state indicator (yellow LED)
- Switching frequency typ. 10 kHz (in case object size > aperture size)
- Scratch-resistant optics
- Oil-resistant cable with PUR sheath
- Sturdy aluminum housing
- Compact design
- Also available with tool plug



### Design

#### Product name:

**FIA-C-08-(aperture)-(fork size)-IR-(length)**

**FIA-C-08-(aperture)-(fork size)-IR-TP-(length)** (with tool plug TP-M12, s. below)

**FIA-C-08-(aperture)-(fork size)-IR-TPO-(length)** (with tool plug TPO-01, s. below)

#### Available apertures:

- d0.4** (circular aperture Ø 0.4 mm, up to A=10 mm)
- d0.6** (circular aperture Ø 0.6 mm, up to A=15 mm)
- d0.8** (circular aperture Ø 0.8 mm, up to A=20 mm)
- d1.0** (circular aperture Ø 1.0 mm)
- d1.2** (circular aperture Ø 1.2 mm)

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

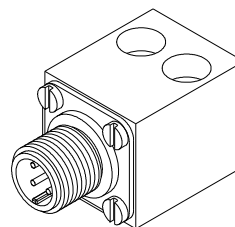
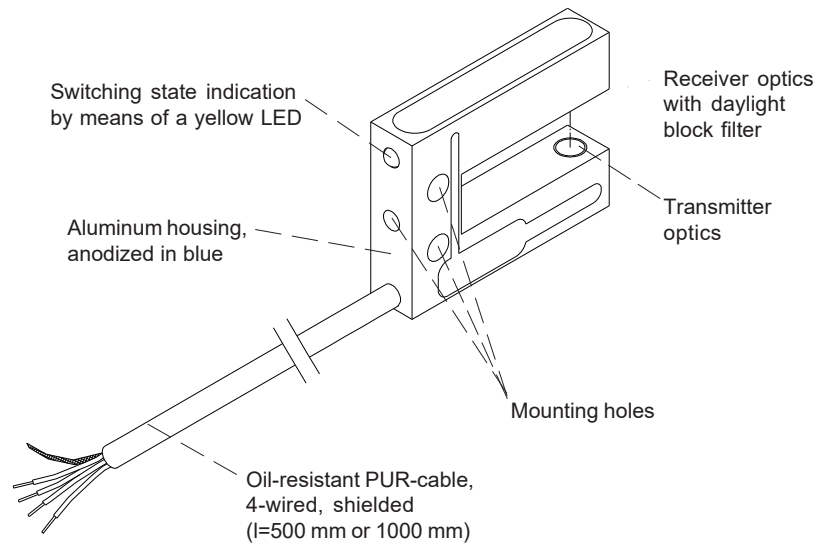
- 10/15** (fork width A=10 mm, fork depth B=15 mm)
- 10/25** (fork width A=10 mm, fork depth B=25 mm)
- 10/30** (fork width A=10 mm, fork depth B=30 mm)
- 20/15** (fork width A=20 mm, fork depth B=15 mm)
- 20/30** (fork width A=20 mm, fork depth B=30 mm)
- 25/50** (fork width A=25 mm, fork depth B=50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

#### Length:

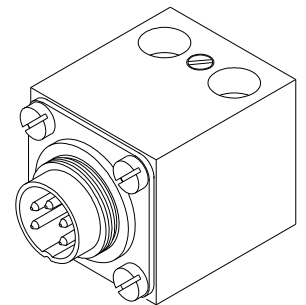
- 500** (cable length = 500 mm)
- 1000** (cable length = 1000 mm)

#### Also available with tool plug:

- TP** (tool plug TP-M12 with 4-pole M12 connector, fixed to the sensor cable)
- TPO** (tool plug TPO-01 with 5-pole connector 680, fixed to the sensor cable)




"TP"  
(tool plug TP-M12)



"TPO"  
(tool plug TPO-01)



**Technical Data**

<b>Type</b>	<b>FIA-C-08-...</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 ( $\pm 10\%$ ), reverse polarity protected
Ambient light	up to 5000 Lux
Current consumption	typ. 30 mA
Aperture size	Circular apertures $\varnothing 0.4$ mm / $\varnothing 0.6$ mm / $\varnothing 0.8$ mm / $\varnothing 1.0$ mm / $\varnothing 1.2$ mm
Switching output	Q = pnp bright-switching (pnp n.c.) / npn dark-switching (nnp n.o.) Qinv = pnp dark-switching (pnp n.o.) / npn bright-switching (nnp n.c.) 100mA, short-circuit protection
Enclosure rating	IP67
Operating temperature range	-20°C ... +50°C
Storage temperature range	-20°C ... +85°C
Housing	Aluminum, anodized in blue
Dimensions	see page 3
Cable type	Cable integrated in the sensor housing: 4-wire, PUR-sheath, length 500 mm or 1000 mm
EMC test acc. to	DIN EN 60947-5-2 
Switching frequency	typ. 10 kHz (in case that object size > aperture size)
Switching state indicator	by means of a yellow LED integrated in the sensor housing: LED on = sensor free LED off = sensor covered



**Connector Assignment**
**Cable assignment FIA-C-08**


(4-wire cable, PUR-sheath, shielded):

Color:	Assignment:
brown	+Ub (+24VDC $\pm 10\%$ )
white	Qinv (pnp dark-switching, npn bright-switching)
blue	GND (0V)
black	Q (pnp bright-switching, npn dark-switching)
Shield	Housing

**Connector assignment****FIA-C-08 with TP-M12**  
(4-pole M12 connector):

Pin:	Assignment:
1	+Ub (+24VDC $\pm 10\%$ )
2	Output Qinv
3	GND (0V)
4	Output Q

**Connector assignment****FIA-C-08 with TPO-01**  
(5-pole connector Binder 680):

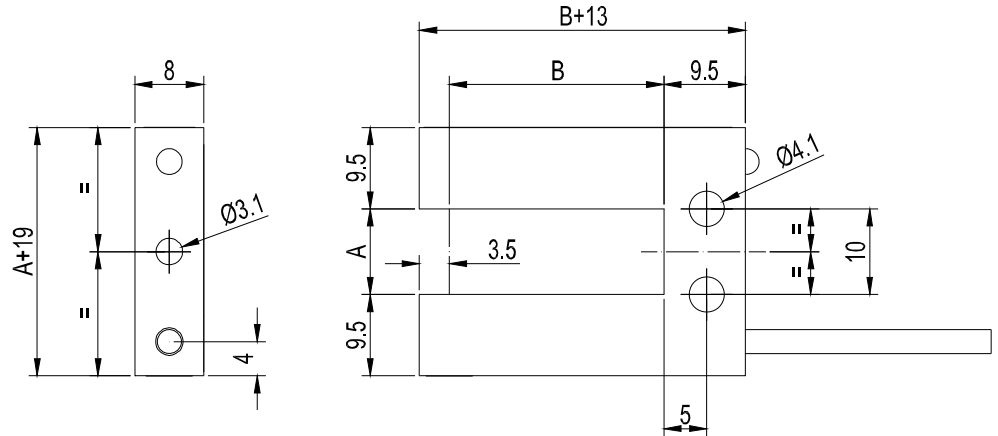
Pin:	Assignment:
1	GND (0V)
2	+Ub (+24VDC $\pm 10\%$ )
3	Output 
4	n.c.
5	Connection control



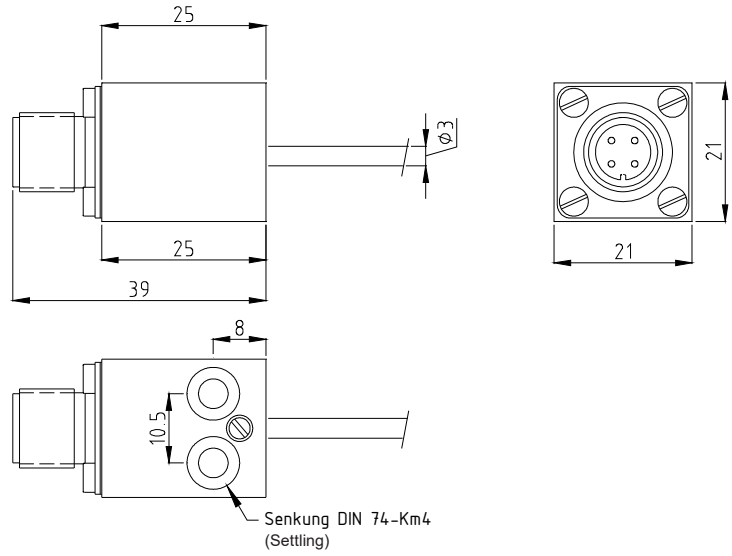
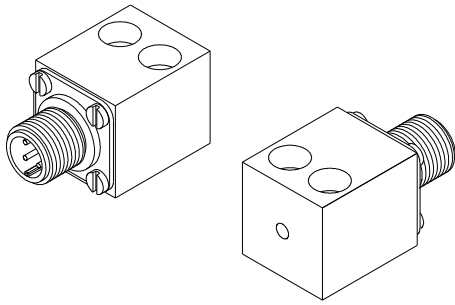
Dimensions

FIA-C-08-...-(fork size)-...:

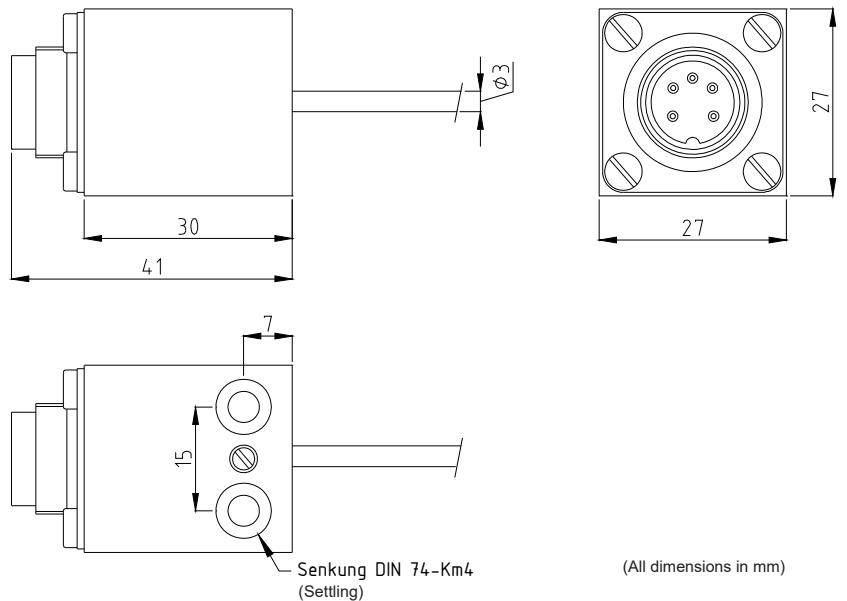
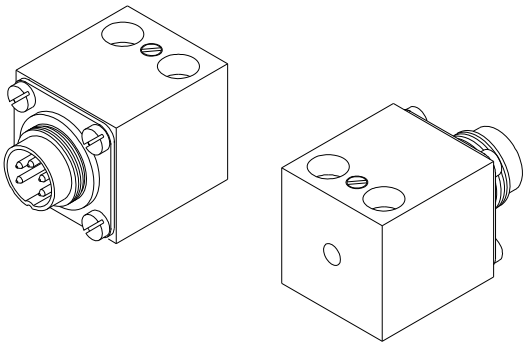
Fork size	dim. A	dim. B
10/15	10 mm	15 mm
10/25	10 mm	25 mm
10/30	10 mm	30 mm
20/15	20 mm	15 mm
20/30	20 mm	30 mm
25/50	25 mm	50 mm
25/80	25 mm	80 mm
30/15	30 mm	15 mm
30/30	30 mm	30 mm
40/30	40 mm	30 mm



Tool plug TP-M12:



Tool plug TPO-01:



(All dimensions in mm)