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FIA Series

▶ FIA-C-08-...-3pol

- Integrated electronics
- Infrared light beam (IR LED 905 nm)
- Switching state indicator (yellow LED)
- Switching frequency typ. 1 kHz
- 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)-(output)-IR-3pol-(length)

FIA-C-08-(aperture)-(fork size)-(output)-IR-3pol-TP-(length) (with tool plug TP-M12, s. below)

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

Switching output:

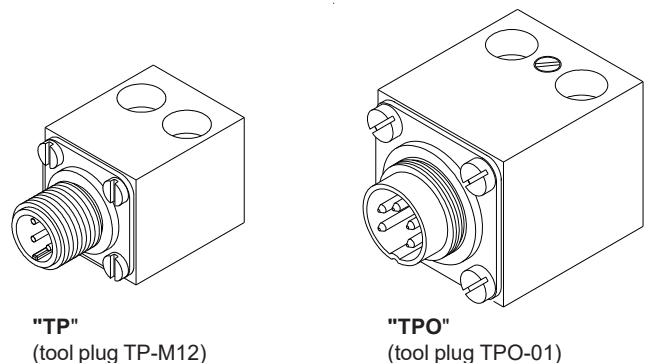
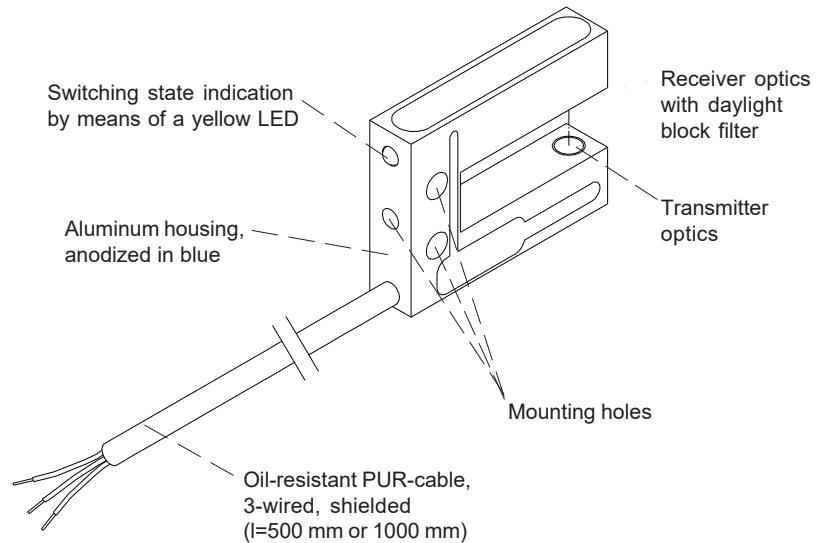
- N** (npn dark-switching = npn n.o.)
- NI** (npn bright-switching = npn n.c.)
- P** (pnp bright-switching = pnp n.c.)
- PI** (pnp dark-switching = pnp n.o.)

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)





Technical Data

Type	FIA-C-08-...-3pol
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	Circular apertures Ø 0.4 mm / Ø 0.6 mm / Ø 0.8 mm / Ø 1.0 mm / Ø 1.2 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.) 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: 3-wire, PUR-sheath, length 500 mm or 1000 mm
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: LED on = sensor free LED off = sensor covered



Connector Assignment

Cable assignment FIA-C-08 -...-3pol:
(3-wire cable, PUR-sheath):

Color:	Assignment:
brown	+Ub (+24VDC ± 10%)
blue	GND (0V)
black	Output (N, NI, P, or PI)

Connector assignment FIA-C-08-...-3pol with TP-M12
(4-pole M12 connector):

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

Connector assignment FIA-C-08-...-3pol with TPO-01
(5-pole connector Binder 680):

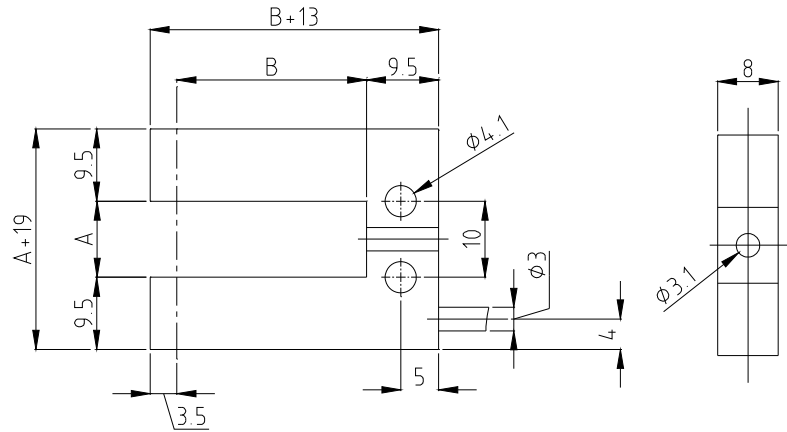
Pin:	Assignment:
1	GND (0V)
2	+Ub (+24VDC ± 10%)
3	Output (N, NI, P, or PI)
4	n.c.
5	Connection control



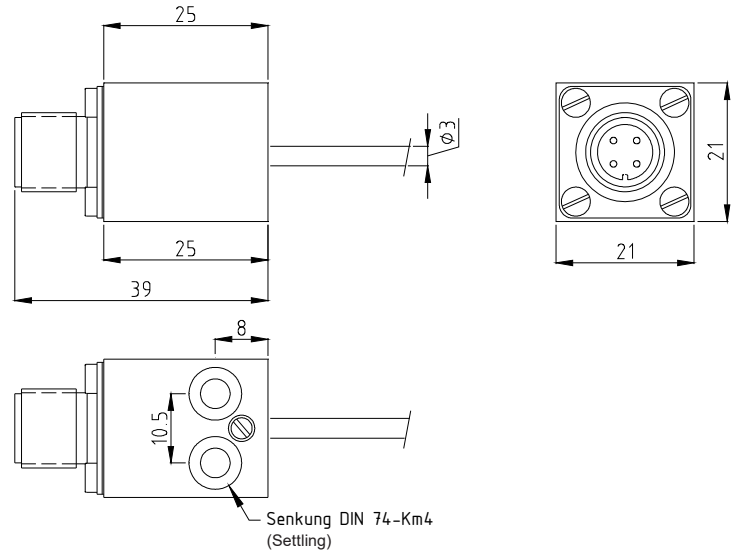
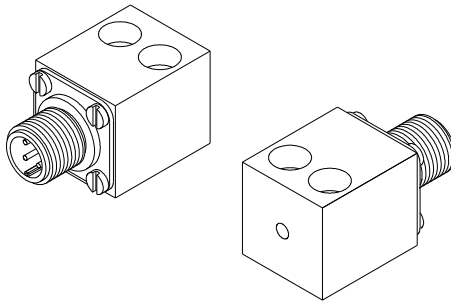
Dimensions

FIA-C-08-....:

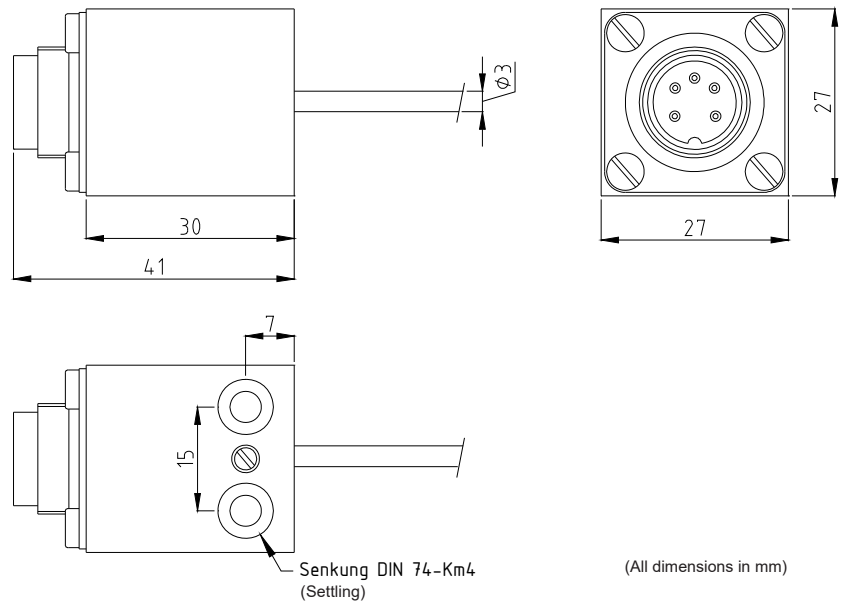
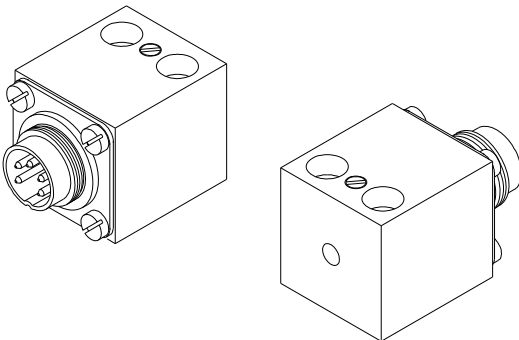
Fork size	dim. A	dim. B
10/15	10 mm	15 mm
10/25	10 mm	25 mm
10/30	10 mm	30 mm
20/15	20 mm	15 mm
20/30	20 mm	30 mm
25/50	25 mm	50 mm
25/80	25 mm	80 mm
30/15	30 mm	15 mm
30/30	30 mm	30 mm



Tool plug TP-M12:



Tool plug TPO-01:



(All dimensions in mm)