

FIA Series

► FIA-C-08

- Integrated electronics
- Two types are available: with infrared light beam (IR) or with visible red light beam (VIS)
- Switching state indicator (yellow LED)
- 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)-(type)-(length)

FIA-C-08-(aperture)-(fork size)-(type)-TP-(length) (with TP-M12, as below)

FIA-C-08-(aperture)-(fork size)-(type)-TPO-(length) (with TPO-01, as below)

Available apertures:

for type IR: for type VIS:

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

Available fork sizes: (cf. dimensions page 3)

Type IR and VIS:

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)

Type IR:

40/30	(fork width A=40 mm, fork depth B=30 mm)
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Types:

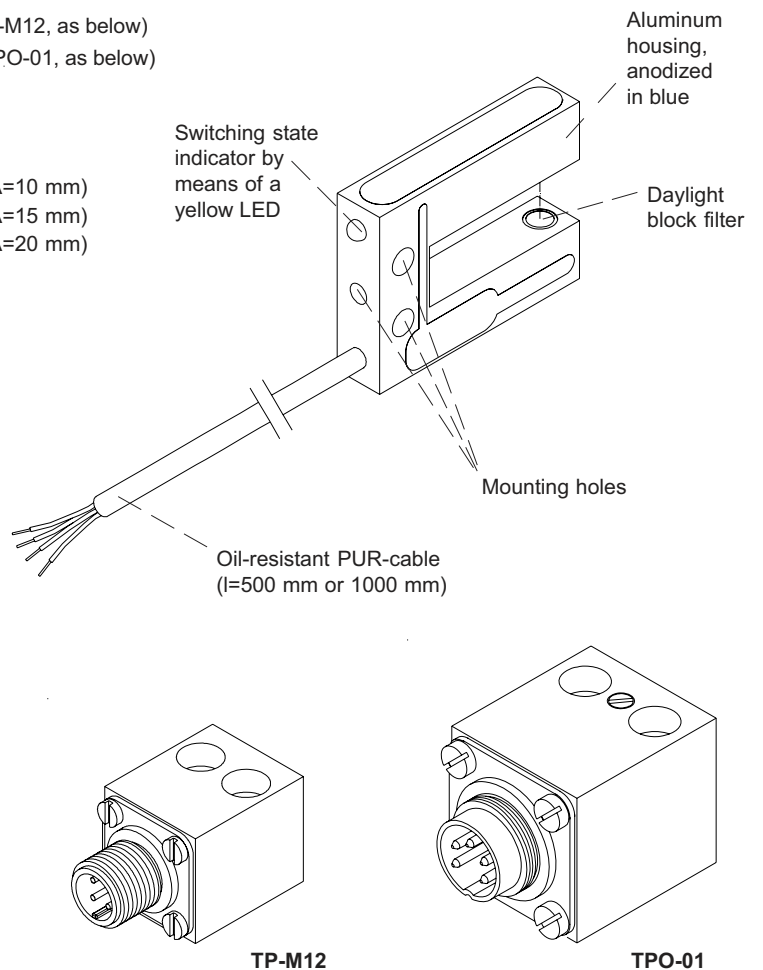
IR	(infrared light beam)
VIS	(visible red light beam)

Length:


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

Also available with tool plug:

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



Technical Data

Model	FIA-C-08-...
Transmitter	IR-type: LED: 905 nm VIS-type: LED: 660 nm
Reproducibility	typ. 0.3 mm (depends on the measured object)
Optical filter	Daylight block filter respectively IR block filter
Voltage supply	+12VDC ... +30VDC
Ambient light	up to 5000 Lux
Current consumption	typ. 30 mA
Aperture size	with IR types: Circular apertures d0.4, d0.6, d08, d1.0, or d1.2 (mm) with VIS types: Circular apertures d0.6, d0.8, d1.0, or d1.2 (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-conductors, PUR-sheath, length 500 mm or 1000 mm
EMC test acc. to	IEC - 801... 
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-conductor cable, PUR-sheath, shielded):

Color:	Assignment:
brown	+Ub (+12VDC ... +30VDC)
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-pin M12 connector):

Pin:	Assignment:
1	+Ub (+12VDC ... +30VDC)
2	Output Qinv
3	GND (0V)
4	Output Q

Connector assignment FIA-C-08 with TPO-01

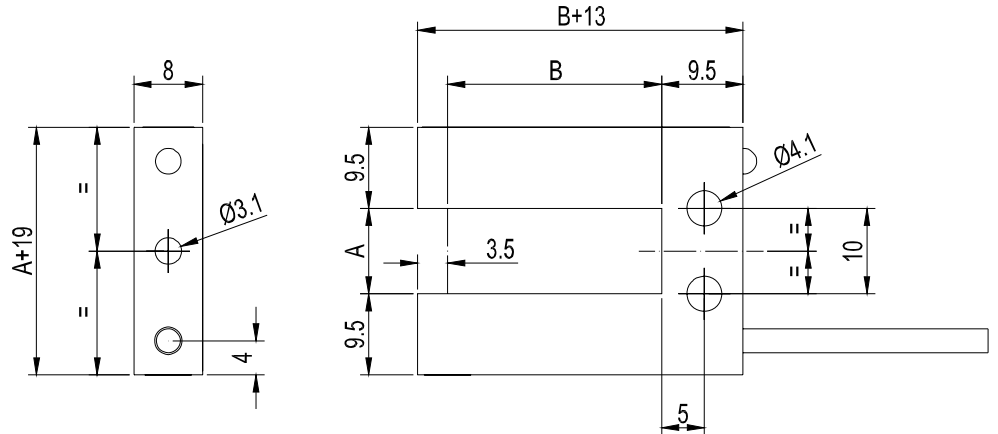
(5-pin connector Binder 680):

Pin:	Assignment:
1	GND (0V)
2	+Ub (+12 ... +30VDC)
3	Output 
4	n.c.
5	Connection control

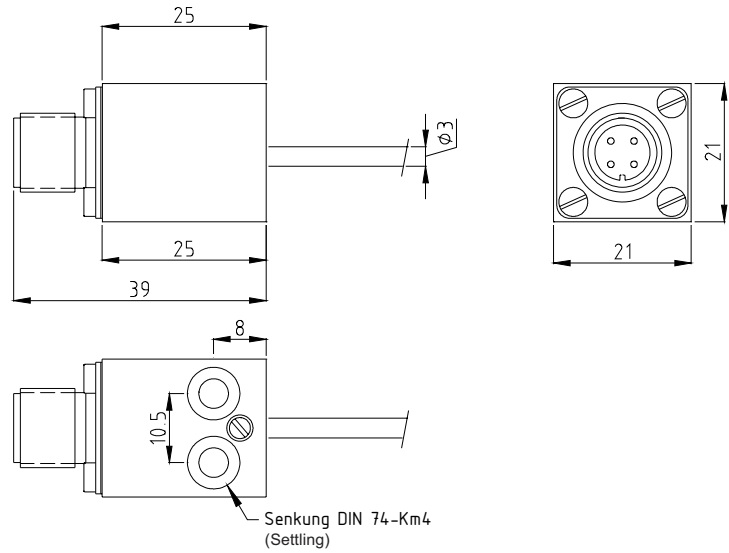
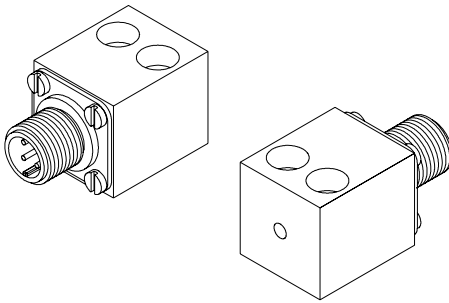
Dimensions

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

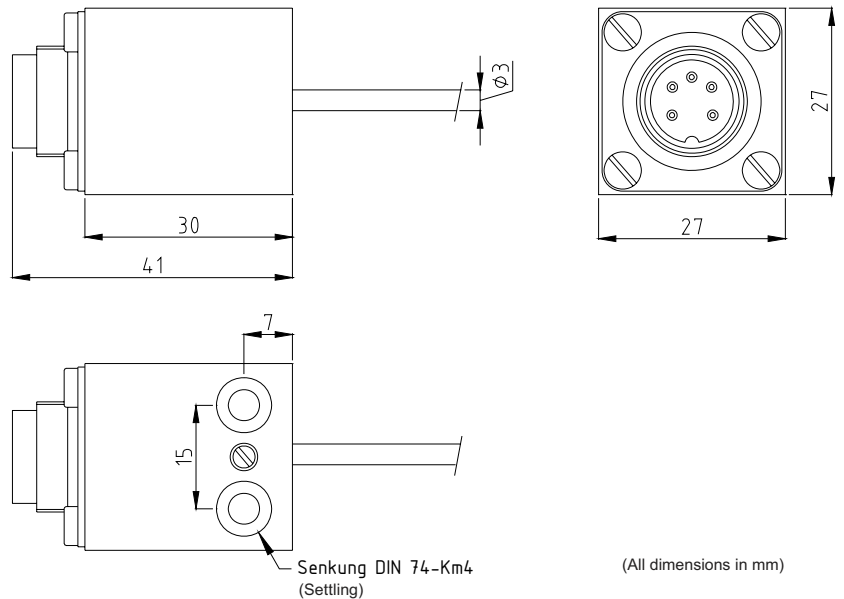
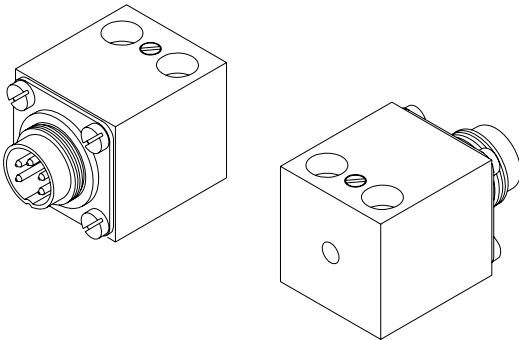
Fork size	dim. A	dim. B
10/15	10 mm	15 mm
10/25	10 mm	25 mm
10/30	10 mm	30 mm
20/15	20 mm	15 mm
20/30	20 mm	30 mm
25/50	25 mm	50 mm
25/80	25 mm	80 mm
30/15	30 mm	15 mm
30/30	30 mm	30 mm
40/30	40 mm	30 mm



Tool plug TP-M12:



Tool plug TPO-01:



(All dimensions in mm)



Notes