

FIA Series

► FIA-L-06-...-P-IR

- Infrared laser light beam
- Class 1 laser product (850 nm, P<0.39 mW)
- Integrated electronics
- Switching state indicator (yellow LED)
- Scratch-resistant optics
- 4-pole M8-connector
- Sturdy aluminum housing, compact design
- Insensitive to dirt accumulation, insensitive to outside light
- High switching frequency (typ. 25 kHz)



Design

Product name:

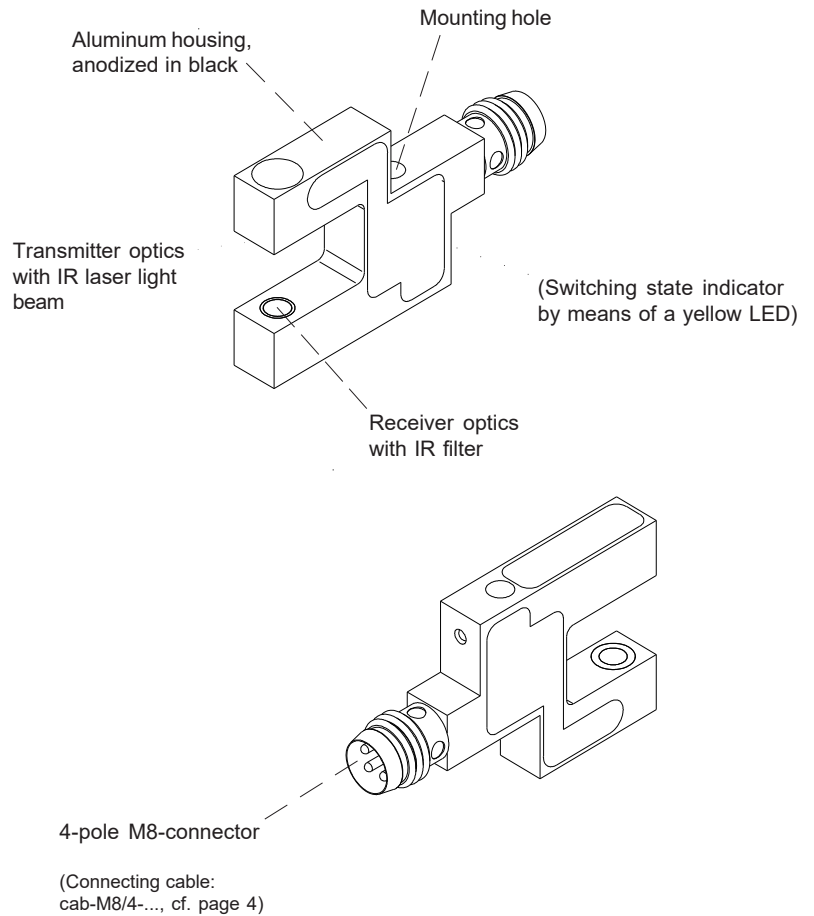
FIA-L-06-(aperture)-(fork size)-P-IR

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)
- d1.0** (circular aperture Ø 1.0 mm)
- d1.2** (circular aperture Ø 1.2 mm)

Available fork sizes: (cf. dimensions page 3)

- 5/10** (fork width A=5 mm, fork depth B=10 mm)
- 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)



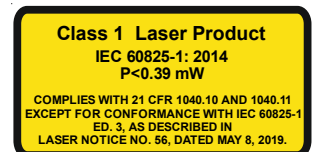
Technical Data

Type	FIA-L-06-...-P-IR
Laser	Solid state laser 850 nm, DC operation, 0.39 mW max. opt. power, laser class 1 acc. to DIN EN 60825. The use of these laser transmitters therefore requires no additional protective measures.
Min. detectable object	typ. 0.3 mm
Reproducibility	typ. 0.01 mm
Optical filter	IR filter
Voltage supply	+24VDC (± 10%), reverse polarity protected
Ambient light	up to 5000 Lux
Current consumption	typ. 20 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 outputs (2x)	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 black
Dimensions	see page 3
Connector type	4-pole M8-connector
EMC test acc. to	DIN EN 60947-5-2 
Switching frequency	typ. 25 kHz
Switching state indicator	by means of a yellow LED integrated in the sensor housing: LED on = sensor free LED off = sensor covered

Laser Information

The laser transmitter of FIA-L Series comply with laser class 1 according to EN 60825-1. Under reasonably foreseeable conditions a class 1 laser is safe. The reasonably foreseeable conditions are kept during specified normal operation. The use of these laser transmitters therefore requires no additional protective measures.

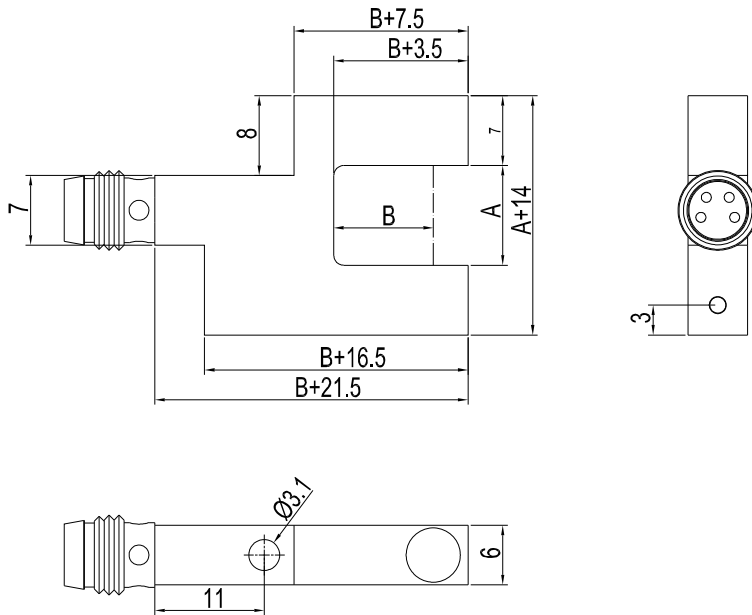
The laser transmitter of FIA-L Series are supplied with an information label „CLASS 1 LASER PRODUCT“.



Dimensions

FIA-L-06-(fork size)-...-P-IR:

Fork size	Dim. A	Dim. B
5/10	5 mm	10 mm
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



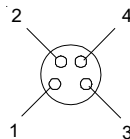
(All dimensions in mm)

Connector Assignment

Connector assignment FIA-L-06-...-P-IR:

(4-pole M8-connector)

Pin:	Assignment:
1	+Ub (+24VDC ± 10%)
2	Qinv (pnp dark-switching, npn bright-switching)
3	0V (GND)
4	Q (pnp bright-switching, npn dark-switching)



Available connecting cables:

- cab-M8/4-g-2** (l=2m)
- cab-M8/4-g-5** (l=5m)
- cab-M8/4-w-2** (angle type, l=2m)
- cab-M8/4-w-5** (angle type, l=5m)

