

FIA Series

▶ FIA-S-...

- Insensitive to outside light due to optical filter
- Infrared light beam (IR LED 905 nm)
- High resolution
- Switching frequency typ. 5 kHz
- Various aperture sizes available
- Various fork sizes available
- 3-pole M8 connector
- Oil-resistant cable with PUR sheath
- Sturdy aluminum housing
- Compact design



Design

Part number:

FIA-S-(aperture)-(fork size)-(switching output)-IR

available apertures:

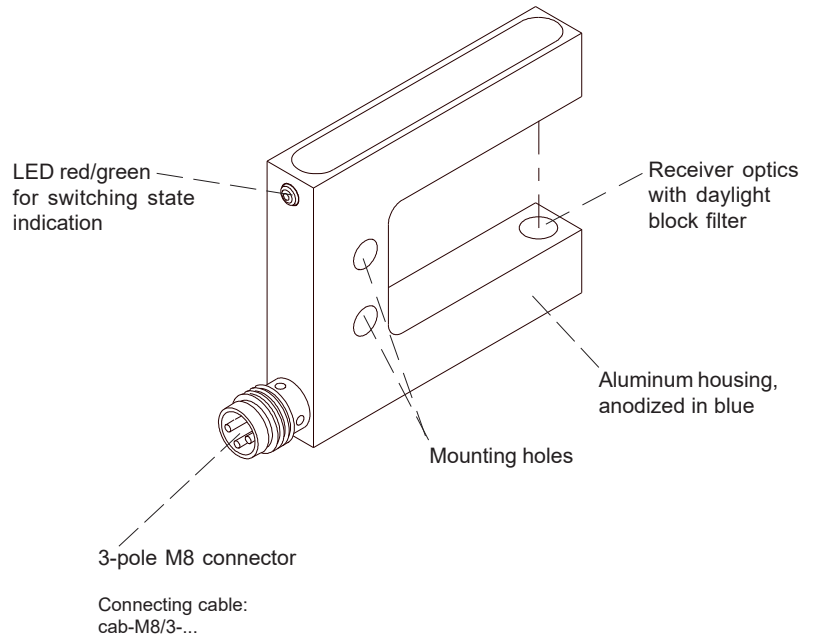
- 0.6** (circular aperture Ø 0.6 mm)
- 0.8** (circular aperture Ø 0.8 mm)
- 1.0** (circular aperture Ø 1.0 mm)
- 1.2** (circular aperture Ø 1.2 mm)
- 1.5** (circular aperture Ø 1.5 mm)

Available fork sizes: (cf. dimensions page 3)

- 10/15** (fork width A=10 mm, fork depth B=15 mm)
- 10/30** (fork width A=10 mm, fork depth B=30 mm)
- 15/20** (fork width A=15 mm, fork depth B=20 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)
- 20/40** (fork width A=20 mm, fork depth B=40 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)
- 30/30** (fork width A=30 mm, fork depth B=30 mm)
- 30/40** (fork width A=30 mm, fork depth B=40 mm)

Switching output:

- Q** pnp bright-switching / npn dark-switching
- Qinv** pnp dark-switching / npn bright-switching



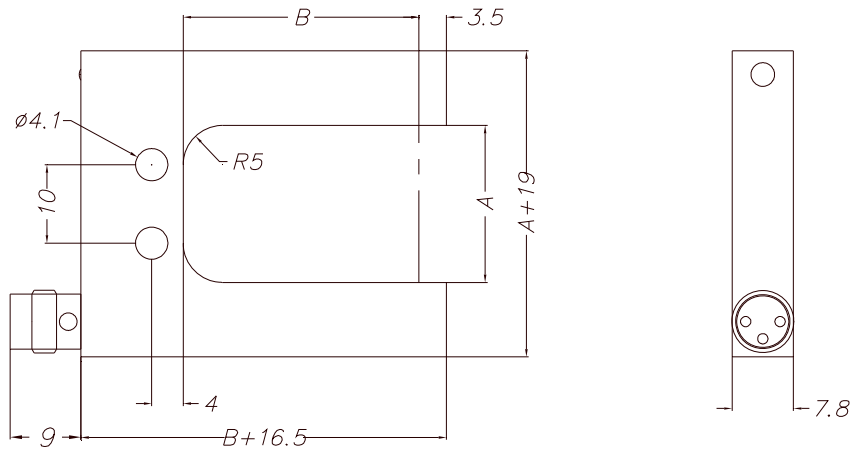

Technical Data

Type	FIA-S-...
Transmitter	IR LED: 905 nm
Transmitter/receiver distance	= fork width A
Min. detectable object	depends on fork width A: typ. 0.4 mm with A=10 typ. 0.4 mm with A=15 typ. 0.5 mm with A=20 typ. 0.6 mm with A=25 typ. 0.7 mm with A=30
Reproducibility	typ. 0.01 mm
Voltage supply	+24VDC ($\pm 10\%$), reverse polarity protected
Operation	Constant light operation
Ambient light	up to 5000 Lux
Type of protection	IP67
Optical filter	Daylight block filter
Maximum current consumption	typ. 80 mA
Switching state indication	red/green LED (detection of an object = LED switches from green to red, the LED is coupled to the digital output OUTPUT INV)
Switching frequency	typ. 5 kHz
Operating temperature range	-20 °C ... +70 °C
Storage temperature range	-20 °C ... +85 °C
Housing material	Aluminum, anodized in blue
Housing dimensions	see page 3
Type of connector	3-pole M8-connector
Max. switching current	100 mA, overcurrent protected
EMC test acc. to	DIN EN 60947-5-2

Dimensions

Available fork sizes:

10/15:	A = 10 mm	B = 15 mm
10/30:	A = 10 mm	B = 30 mm
15/20:	A = 15 mm	B = 20 mm
20/15:	A = 20 mm	B = 15 mm
20/30:	A = 20 mm	B = 30 mm
20/40:	A = 20 mm	B = 40 mm
25/50:	A = 25 mm	B = 50 mm
25/80:	A = 25 mm	B = 80 mm
30/30:	A = 30 mm	B = 30 mm
30/40:	A = 30 mm	B = 40 mm

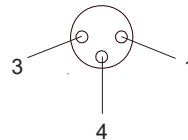


(All dimensions in mm)

Connector Assignment

Connector assignment of 3-pole M8 connector:

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



Available connecting cables:

- cab-M8/3-g-2** (l=2m)
- cab-M8/3-g-5** (l=5m)
- cab-M8/3-w-2** (angle type, l=2m)
- cab-M8/3-w-5** (angle type, l=5m)

