

# FIA Series

## ► FIA-LBL-... Label Detection

- Infrared light beam (IR LED 905 nm)
- High switching frequency (typ. 5 kHz)
- Potentiometer and LED at front side
- Two switching outputs (Q and Qinv)
- Two fork types available (with different fork width)
- Sturdy aluminum housing
- Available with either cable output or M12-connector



Picture: FIA-LBL-C-...



## Design

### Product name:

**FIA-LBL-C-1.2-2/40** (type with fork width 2 mm, fork depth 40 mm)

**FIA-LBL-C-1.2-5/40** (type with fork width 5 mm, fork depth 40 mm)

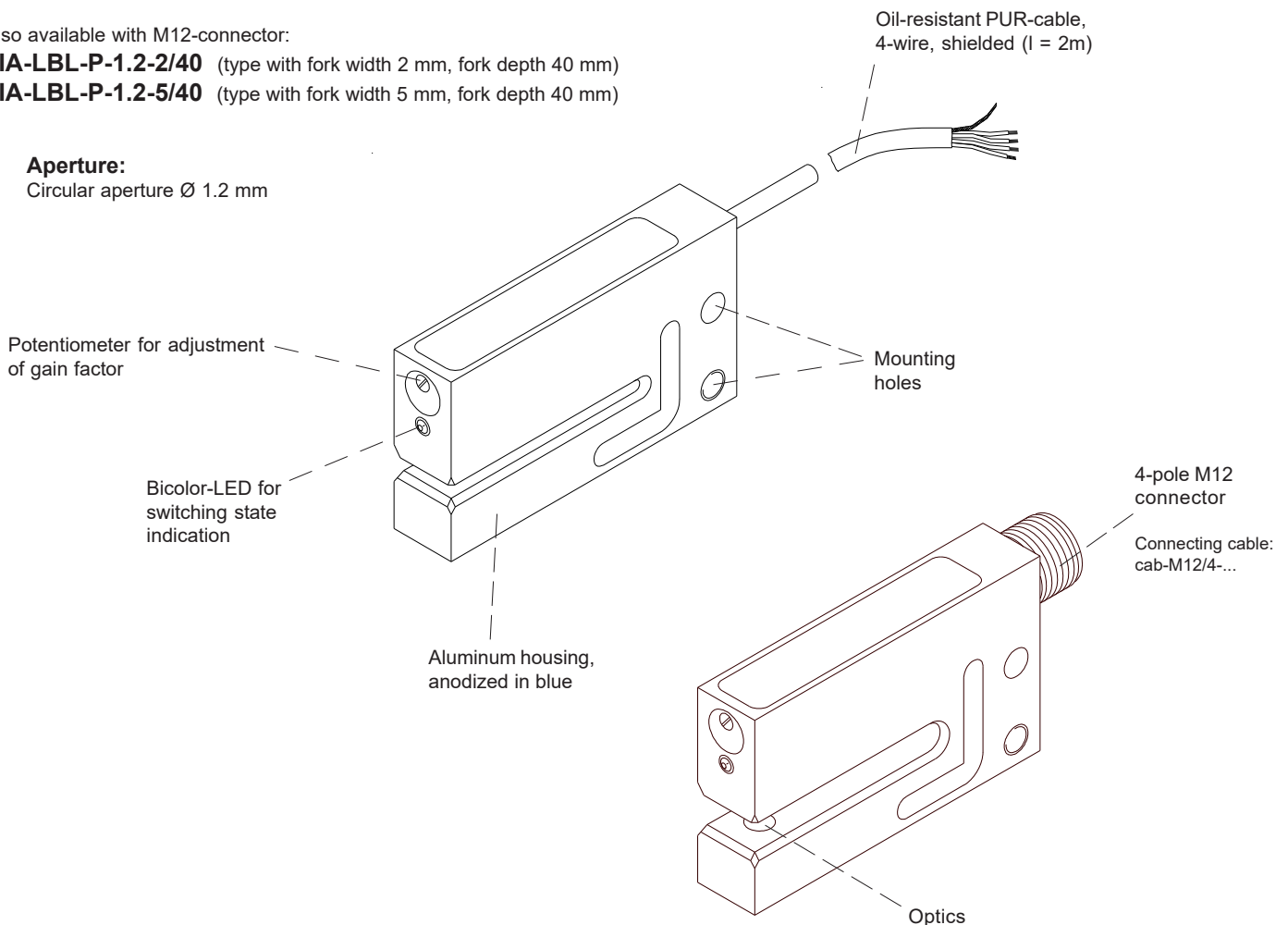
Also available with M12-connector:

**FIA-LBL-P-1.2-2/40** (type with fork width 2 mm, fork depth 40 mm)

**FIA-LBL-P-1.2-5/40** (type with fork width 5 mm, fork depth 40 mm)

### Aperture:

Circular aperture  $\varnothing$  1.2 mm




 Technical Data

Type	FIA-LBL-...
Transmitter	IR LED: 905 nm
Min. detectable object	typ. 0.3 mm
Reproducibility	typ. 0.01 mm
Optical Filter	Daylight block filter
Voltage supply	+24VDC (± 10%), reverse polarity protected
Ambient light	up to 5000 Lux
Sensitivity setting (switching threshold)	by means of an integrated potentiometer
Current consumption	typ. 80 mA
Aperture size	circular aperture Ø 1.2 mm
Switching outputs (2x)	Q (pnp bright-switching, pnp n.c. / npn dark-switching, npn n.o.) and Qinv (pnp dark-switching, pnp n.o. / npn bright-switching npn n.c.), 100 mA, short-circuit proof
Enclosure rating	IP67
Operating temperature range	-20°C ... +50°C
Storage temperature range	-20°C ... +85°C
Housing	Aluminum, anodized in blue
Housing dimensions	see page 3
Connector type	FIA-LBL-C: Cable integrated in the sensor housing: 4-wire, PUR sheath, shielded FIA-LBL-P: 4-pole M12-connector
EMC test acc. to	DIN EN 60947-5-2 
Switching frequency	typ. 5 kHz


 Connector Assignment
**Cable assignment FIA-LBL-C-...:**

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

Color:	Assignment:
brown	+Ub (+24VDC ± 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-LBL-P-...:**

(4-pin M12-connector):

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

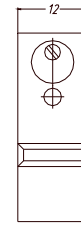
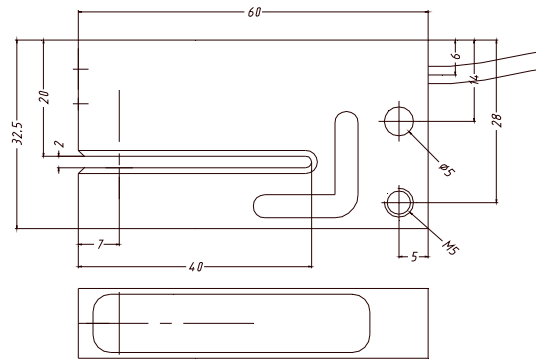
Connecting cable: e.g. cab-M12/4-g-2-shd (l=2m)



Dimensions

**FIA-LBL-C-1.2-2/40**

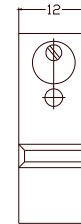
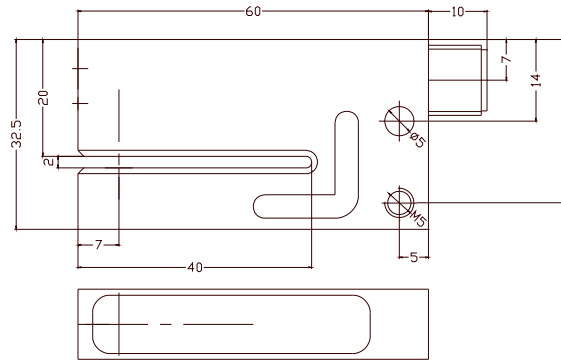
(fork width 2 mm, fork depth 40 mm)



im Schlitzbereich 1x45°  
(in slit region 1x45°)

**FIA-LBL-P-1.2-2/40**

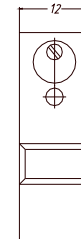
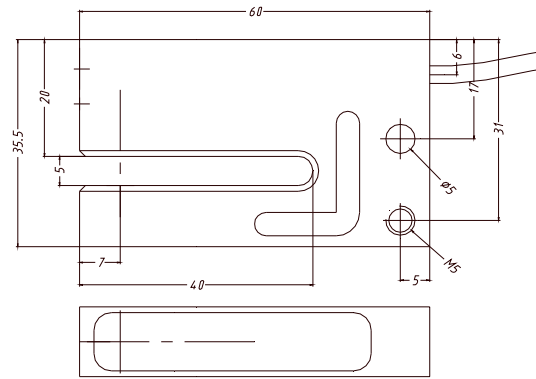
(fork width 2 mm, fork depth 40 mm)



im Schlitzbereich 1x45°  
(in slit region 1x45°)

**FIA-LBL-C-1.2-5/40**

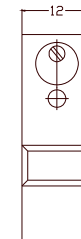
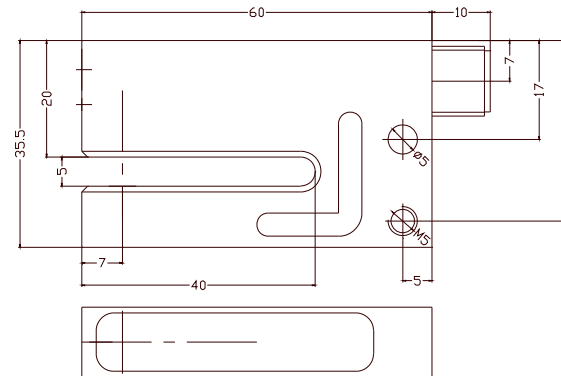
(fork width 5 mm, fork depth 40 mm)



im Schlitzbereich 1x45°  
(in slit region 1x45°)

**FIA-LBL-P-1.2-5/40**

(fork width 5 mm, fork depth 40 mm)

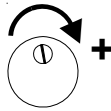
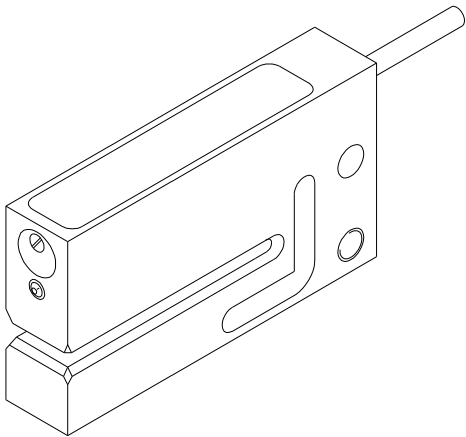


im Schlitzbereich 1x45°  
(in slit region 1x45°)

(All dimensions in mm)



**Setting**



**Potentiometer for adjustment of gain**  
Increase of gain factor: Rotation clockwise  
(3-revolution potentiometer)



**LED yellow/green (switching state indicator)**  
LED yellow = sensor covered  
LED green = sensor free