

FLB Series

▶ FLB-CON3-5 Amplifier

- Suitable for FLB-F-...-C, FLB-H-...-C, FLB-V-...-C sensors
- Sensitivity and gain factor adjustable by means of potentiometer (inside housing)
- Switching state indication by means of a yellow/green LED
- Dynamic and static output
- Threshold correction can be activated
- High switching frequency (typ. 10 kHz)
- Dirt accumulation indication by means of a red LED
- Bright- and dark-switching
- Push-pull output (npn and pnp suitable)



Design

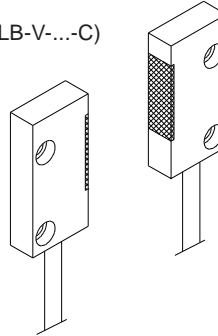
Product name:

FLB-CON3-5

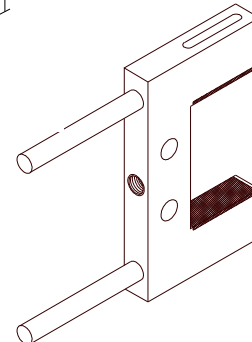
Suitable for connection to frame light barriers of type (cf. page 4):

- FLB-F-...-C (1m)
- FLB-H-...-C (1m)
- FLB-V-...-C (1m)

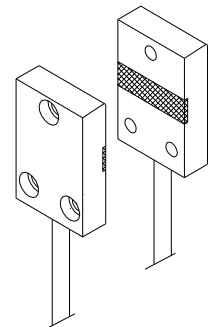
(FLB-V-...-C)



(FLB-F-...-C)

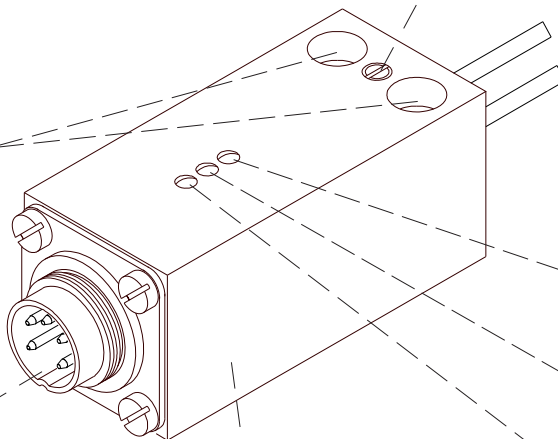


(FLB-H-...-C)



Pull relief for sensor cable

Mounting holes



LED red "DIRT ACCUMULATION"
LED off: No dirtying
LED red: Sensor dirty

LED red/green "DYNAMIC"
LED red: Object is being moved through sensor
LED green: No object is being moved through sensor

LED yellow/green "STATIC"
LED yellow: Sensor covered
LED green: Sensor free

5-pin circular connector type Binder 680 (270°)

Connecting cable: cab-agl5

Aluminum housing, anodized in blue

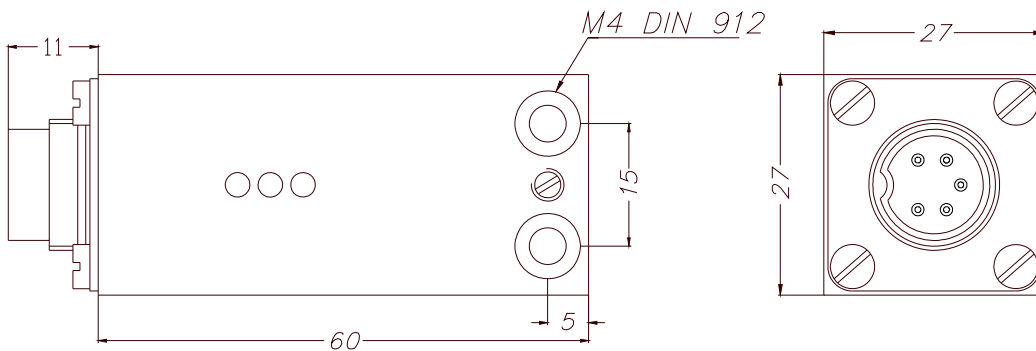


Technical Data

Model	FLB-CON3-5
Voltage supply	+12VDC ... +32VDC Ripple 10% max.
Suitable sensor frontends	FLB-F-...-C, FLB-H-...-C, FLB-V-...-C (cable versions, directly assembled to FLB-CON3-5)
Current consumption	with sensor: typ. 80 mA
Operating temperature range	-20°C ... +60°C
Storage temperature range	-20°C ... +85°C
Housing material	Aluminum, anodized in blue
Housing dimensions	LxWxH approx. 60 mm x 27 mm x 27 mm
Enclosure rating	IP 64
Threshold correction	adjustable by means of an integrated jumper
Output DIGITAL STATIC	1x static: Q: NPN dark-switching (NPN n.o.) / PNP bright-switching (PNP n.c.)
Output DIGITAL DYNAMIC	1x dynamic (pulse length 15 ms) Q: NPN dark-switching (NPN n.o.) / PNP bright-switching (PNP n.c.)
Potentiometer for gain factor	10-revolutions potentiometer integrated in the housing
Potentiometer for trigger threshold	10-revolutions potentiometer integrated in the housing
Dirt accumulation indication	red LED
Switching state indication STATIC	yellow/green LED (yellow = sensor covered, green = sensor free)
Switching state indication DYNAMIC	red/green LED (red = object is being moved through sensor, green = no object is being moved through sensor)
Type of connector	Connection to PLC: 5-pole female connector Binder Series 680 (270°) Connection to sensor: via integrated cable
Connecting cable to PLC	cab-agl5 (l = 2m)
Switching frequency	typ. 10 kHz
Max. switching current	200 mA, short-circuit proof
EMC test acc. to	DIN EN 60947-5-2

Dimensions

(All dimensions in mm)

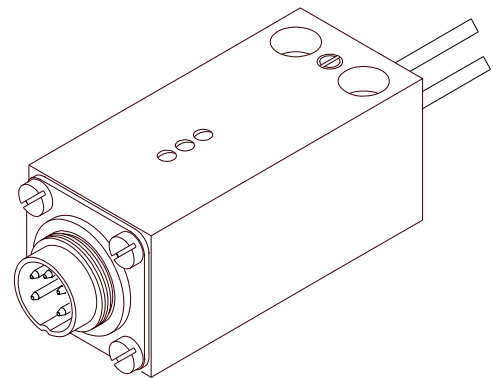
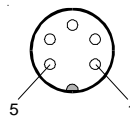


Connector Assignment

5-pin connector type Binder Series 680

Pin No.:	Color:	Assignment:
1	blue	0V
2	brown	+Ub (+12 ... +32VDC)
3	white	Output Q
4	black	Output DYNAMIC (15 ms)
5	red	Connection control

Connecting cable: cab-agl5 (l=2m)



FLB-CON3-5

Setting

Procedure for the adjustment of potentiometers and jumper:

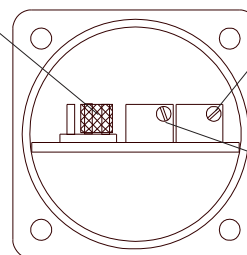
- Unscrew the 4 slotted head screws
- Unscrew the 2 plastic screws (tensile relief of the two cables!)
- Carefully pull the electronic unit out of the aluminum housing
- Carry out setting of potentiometers and of jumper

Jumper for selection of threshold: static or dynamic

Jumper on the right: static (= standard adjustment)
Jumper in the left: dynamic (corrected threshold)

Threshold correction:

The adjusted threshold automatically adapts to the current maximum value, this is to prevent - for instance in case of dirt accumulation - a shift of the trigger point. Furthermore this allows reliable detection of smallest objects.



Potentiometer for adjustment of gain factor

Increase of analog signal:
 Rotation anticlockwise
 (10-step-potentiometer)

Potentiometer for adjustment of threshold

Increase of sensitivity:
 Rotation anticlockwise
 (10-step-potentiometer)



Suitable Frontends

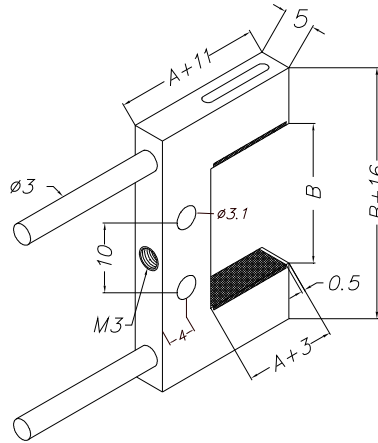
Sensor frontend suitable for connection to FLB-CON3-5:

(please select sensor frontend and order it together with the FLB-CON3-5, as for delivery will both have to be assembled)

FLB-F-...-C (1m):

(fork shape)

FLB-F-05/20	(A = 5 mm, B = 20 mm)
FLB-F-10/20	(A = 10 mm, B = 20 mm)
FLB-F-15/20	(A = 15 mm, B = 20 mm)
FLB-F-20/20	(A = 20 mm, B = 20 mm)
FLB-F-20/40	(A = 20 mm, B = 40 mm)
FLB-F-20/50	(A = 20 mm, B = 50 mm)
FLB-F-25/20	(A = 25 mm, B = 20 mm)
FLB-F-30/10	(A = 30 mm, B = 10 mm)
FLB-F-30/20	(A = 30 mm, B = 20 mm)
FLB-F-40/20	(A = 40 mm, B = 20 mm)
FLB-F-40/25	(A = 40 mm, B = 25 mm)
FLB-F-40/40	(A = 40 mm, B = 40 mm)



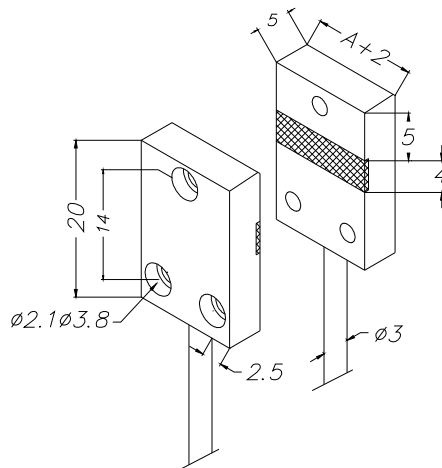
Dim. A =
Length of active measuring range

Dim. B =
Fork width = distance transmitter/receiver

FLB-H-...-C (1m):

(horizontal light curtain)

FLB-H-05	(A = 5 mm)
FLB-H-10	(A = 10 mm)
FLB-H-15	(A = 15 mm)
FLB-H-20	(A = 20 mm)
FLB-H-25	(A = 25 mm)
FLB-H-30	(A = 30 mm)
FLB-H-40	(A = 40 mm)



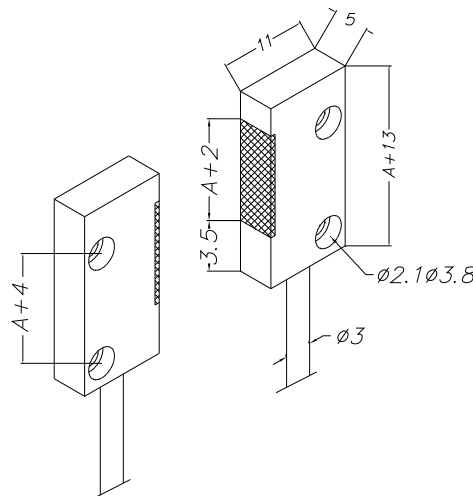
Dim. A =
Length of active measuring range:

- 5 mm
- 10 mm
- 15 mm
- 20 mm
- 25 mm
- 30 mm
- 40 mm
- 50 mm

FLB-V-...-C (1m):

(vertical light curtain)

FLB-V-05	(A = 5 mm)
FLB-V-10	(A = 10 mm)
FLB-V-15	(A = 15 mm)
FLB-V-20	(A = 20 mm)
FLB-V-25	(A = 25 mm)
FLB-V-30	(A = 30 mm)
FLB-V-40	(A = 40 mm)



Dim. A =
Length of active measuring range

- 5 mm
- 10 mm
- 15 mm
- 20 mm
- 25 mm
- 30 mm
- 40 mm
- 50 mm
- 60 mm

All dimensions in mm