

# TLB Series

## ▶ **FKB-06-TPN** Fork light barriers

- Insensitive to outside light due to optical filtering
- Various fork sizes available
- Various aperture sizes available
- Oil resistant connecting cable
- High resolution
- Sturdy metal housing
- Alternatively version with visible red light beam or IR version



### Design

#### Product name:

- FKB-06-(fork size)-(aperture)-(type)-TPN-500** (fork light barrier, tool plug with 8-pin connector, cable l=500 mm)  
**FKB-06-(fork size)-(aperture)-(type)-TPN-1000** (fork light barrier, tool plug with 8-pin connector, cable l=1000 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)

#### **Available types:**

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

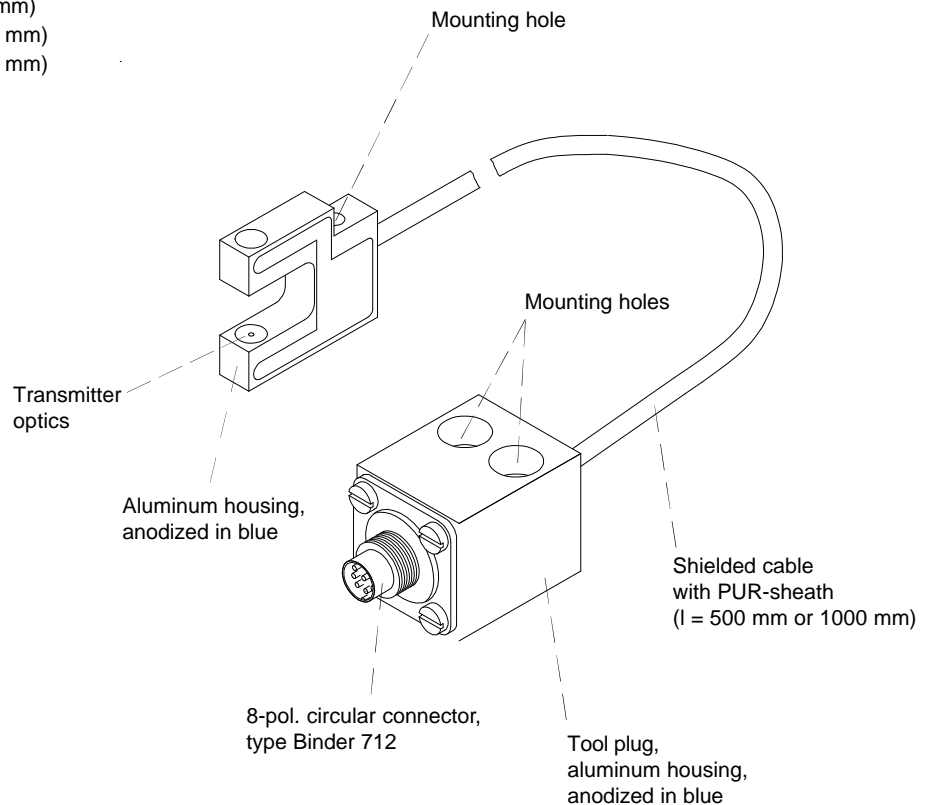
#### **Available apertures:**

for type IR:

- d0.4** (circular aperture Ø 0.4 mm)  
**d0.6** (circular aperture Ø 0.6 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)


for type VIS:

- d0.6** (circular aperture Ø 0.6 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)





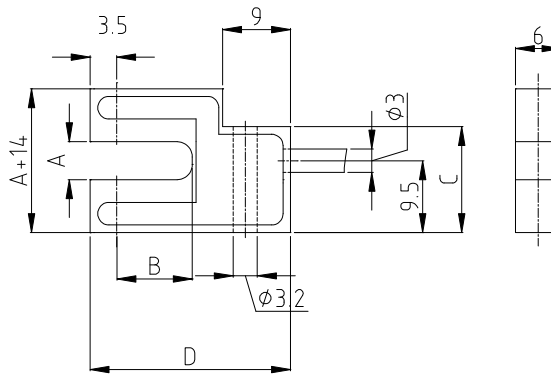
**Technical Data**

<b>Model</b>	<b>FKB-06-TPN</b>
Transmitter	IR type: IR-LED, 905 nm, DC operation: max. opt. power < 0,4 mW, AC operation: medium opt. power < 0,4 mW VIS type: red LED 660 nm, opt. power 0,4 mW
Minimum detectable object	typ. 10 µm (DC operation, depending on the aperture), typ. 200 µm (AC operation)
Light spot dimension (at transmitter output)	IR type: Ø 0.6 mm, 0.8 mm, 1.0 mm, or 1.2 mm VIS type: Ø 0.8 mm
Repeatability	typ. 10 µm
Optical filter	IR type: Daylight rejection filter RG715 VIS type: IR rejection filter KG2
Receiver aperture	IR type: Ø 0.4 mm, 0.6 mm, 0.8 mm, 1.0 mm, or 1.2 mm VIS type: Ø 0.6 mm, 0.8 mm, 1.0 mm, or 1.2 mm
EMC test acc. to	IEC - 801... 
Ambient light	up to 5000 Lux (AC operation)
Cable type	PUR sheath, black, 4-conductor, shielded
Cable length	500 mm or 1000 mm
Mechanical protection	IP67
Connector type	Tool plug with 8-pin circular connector, type Binder 712
Operating temperature range	-20°C ... +80°C
Storage temperature range	-20°C ... +80°C
Housing	Aluminum, anodized in blue
Housing dimensions	see page 3

Dimensions

FKB-06-(fork size):

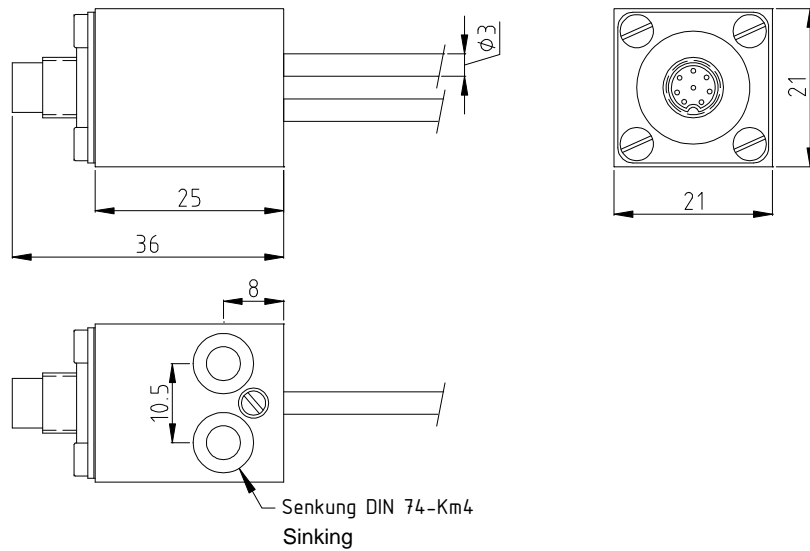
Fork size	dim. A	dim. B	dim. C	dim. D
5/10	5 mm	10 mm	14 mm	26.5 mm
10/10	10 mm	10 mm	19 mm	26.5 mm
10/15	10 mm	15 mm	19 mm	31.5 mm



Fork size 5/10  
without inner radius  
  
Fork sizes 10/10 and 10/15  
with inner radius R=2

(All dimensions in mm)

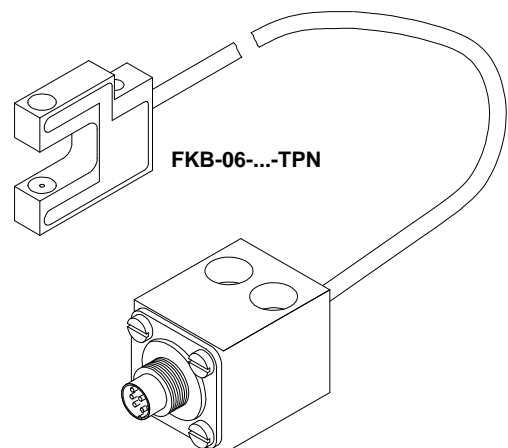
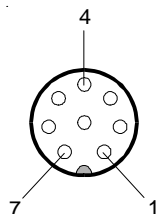
TPN (tool plug):



Connector Assignment

Assignment 8-pin connector, type Binder 712:

Pin:	Assignment:
1	n.c.
2	n.c.
3	Transmitter anode
4	Receiver collector
5	Transmitter cathode
6	Receiver emitter
7	n.c.
8	n.c.
Shield	



**Product Line**

**Fork light barriers:**

FKB-06-...  
FKB-06-...-P  
**FKB-06-...-TPN**  
FKB-06-...-TPO

FKB-06-...-BL  
FKB-06-...-BL-P  
FKB-06-...-BL-TPN  
FKB-06-...-BL-TPO

FKB-08-...  
FKB-08-...-P  
FKB-08-...-TPN  
FKB-08-...-TPO

FKB-08-...-BL  
FKB-08-...-BL-P  
FKB-08-...-BL-TPN  
FKB-08-...-BL-TPO

**Split light barriers:**

SLB-01  
SLB-01-P  
SLB-01-TP

SLB-02  
SLB-02-P  
SLB-02-TP

SLB-03  
SLB-03-P  
SLB-03-TP

SLB-04  
SLB-04-P  
SLB-04-TPN  
SLB-04-TPO

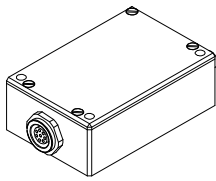
SLB-05  
SLB-05-P  
SLB-05-TPN  
SLB-05-TPO

SLB-06  
SLB-06-P  
SLB-06-TP

SLB-08  
SLB-08-P  
SLB-08-TP

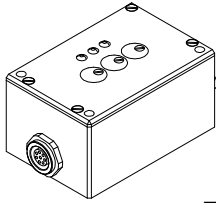
Connecting cable:  
cab-tlb8/702 (2m)

**Pulsating light amplifiers:**



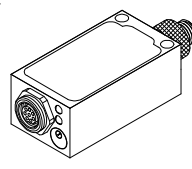
**TLB-CON5**

Connecting cable:  
cab-M8/4-g-2 (2m)  
cab-las5/PC (5m)



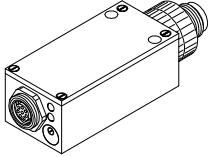
**TLB-CON6**

Connecting cable:  
cab-las8/702-fem (2m)



**TLB-CON8**

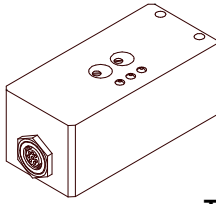
Connecting cable:  
cab-M8/3-g-2 (2m)



**TLB-CON12**

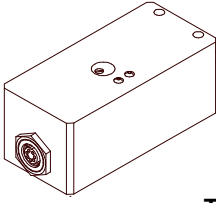
Connecting cable:  
cab-M12/5-g-2-shd (2m)

**Constant light amplifiers:**



**TLB-CON2**

Connecting cable:  
cab-las8/702-fem (2m)



**TLB-CON11**

Connecting cable:  
cab-las8/702-fem (2m)