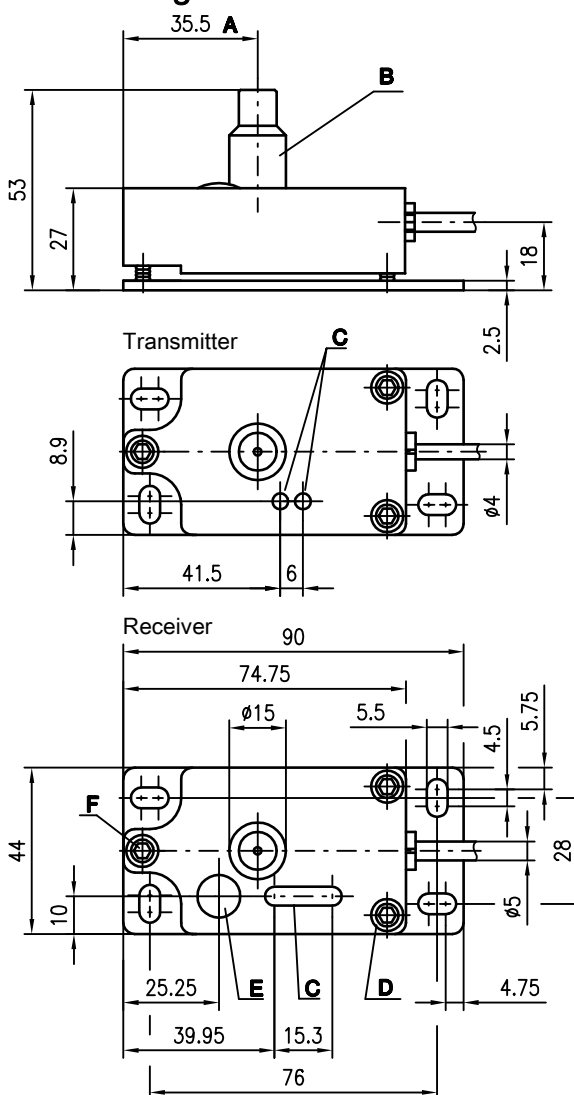


en_2020/05/06 501 07798



- Laser throughbeam photoelectric sensor for tool monitoring
- Time-saving, precise alignment of transmitter and receiver by means of visible light spot and level indicator (bar graph)
- Optimum adaptation to tool and surroundings by means of sensitivity adjustment
- Static and dynamic control in the range from 0 ... 8m (1 mm Ø)
- Warning output for contamination display
- Pneumatic connection for keeping the optics clean
- Compact, metal construction with integrated fastening and adjustment system

Dimensioned drawing



- A Optical axis
- B Pneumatic connection
- C Indicator diodes
- D Adjustment of the X-axis
- E Sensitivity adjustment
- F Adjustment of the Y-axis

Accessories:

(available separately)

- Diaphragms Ø 1.1mm and Ø 2mm (see order guide)

Electrical connection

Transmitter

10-30V DC +	br/BN
GND	bl/BU
activ	rt/RD
⊕	gnge/GNYE

Receiver

10-30V DC +	br/BN
warn	vi/VT
GND	bl/BU
⊕	sw/BK
⊕	ws/WH
●	rt/RD
DYN	gnge/GNYE
⊕	

We reserve the right to make changes • DS_BKL706_en_50107798.fm

Specifications

Optical data

Operating range ¹⁾	0 ... 8m (diaphragm dependent)
Operating range limit ²⁾	0 ... 10m
Light beam propagation	divergent
Light source	laser (modulated light)
Wavelength	655nm (visible red light)
Laser class	2 (acc. to EN 60825-1)
Focal point	at 1.4m (other focus settings optional)
Light spot	at 1.4m with diaphragm 2mm Ø: 0.8mm
recommended diaphragms for drill 1mm Ø (0 ... 8m)	receiver: 1.1mm Ø (1) transmitter: 2mm Ø (2)
Minimum receiver/transmitter distance	50mm (diaphragm 1/2)

Timing

Switching frequency	200Hz
Response time	2.5ms
Delay before start-up	100ms

Electrical data

Operating voltage U_B	10 ... 30VDC (incl. residual ripple)
Residual ripple	≤ 15% of U_B
Transmitter/receiver open-circuit current	≤ 30mA
Switching outputs	PNP
Function characteristics	light switching/dark switching
Signal voltage high/low	≥ ($U_B - 2V$) / ≤ 2V
Output current	max. 200mA
Sensitivity	adjustable with multiturn potentiometer

Indicators

Transmitter

Green LED	ready
Yellow LED	transmitter active

Receiver

Bar graph -LED 1 green	ready
-LED 2 red	switching output Q, \bar{Q} , Dyn
-LEDs 3-5 yellow	performance reserve

Mechanical data

Housing	red aluminium, anodised
Optics	glass
Weight	400g (transmitter and receiver)
Connection type	cable (transmitter 4 x 0.25mm ² , receiver 7 x 0.25mm ²) PVC or PUR version; see order guide for length

Environmental data

Ambient temp. (operation/storage)	-20°C ... +40°C / -30°C ... +70°C
Ambient light limit	≥ 30kLux (VDE 0660 T 208)
Protective circuit ³⁾	1, 2, 3
VDE safety class	III
Protection class	IP 67
Impact resistance	semi-sine, 30g, 11 ms (VDE 0660 T 208)
Vibration resistance	10 ... 55Hz, max. 7.5gn (VDE 0660 T 208)
Electromagnetic compatibility	severity level 3 (IEC 801.2...4)

Options

Activation input active

Transmitter active/not active	≥ 8V / ≤ 2V or not connected
Activation/disable delay	≤ 0.5ms

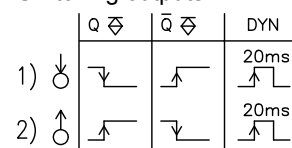
- 1) Operating range: recommended range with performance reserve
- 2) Operating range limit: max. attainable range without performance reserve
- 3) 1=transient protection, 2=polarity reversal protection, 3=short-circuit protection for all outputs

Order guide

		Cable length	Designation	Part No.
with standard diaphragms (transmitter: Ø 2mm, receiver: Ø 1.1mm)				
With PUR cable	Transmitter	10m	BKL 706 SE, 10000P	500 34293
	Receiver	15m	BKL 706/44 E, 15000P	500 34294
with special diaphragms (transmitter: Ø 1.1mm, receiver: Ø 1.1mm)				
With PUR cable	Transmitter	10m	BKL 706 SE.1, 10000P	501 07098
	Transmitter	20m	BKL 706 SE.1, 20000P	501 07099
Diaphragms				
Ø 1.1mm	natural colour	-	BKL 706 M	500 60796
Ø 2mm	black	-	BL 66.2	500 20010

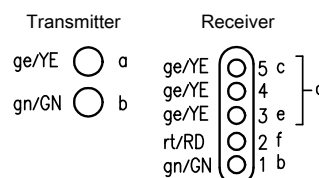
Remarks

● Switching outputs



- 1) Light axis interrupted (tool present in light beam)
- 2) Light axis no longer interrupted (tool has e.g. passed through light beam)

● LEDs



- a Activation
- b Ready for operation
- c Max.
- d Sensitivity
- e Min.
- f Switching output

- Optimum sensitivity adjustment: 5th LED begins to illuminate.

- The red LED indicates the state of the switching output.

- Laser warning notice

