### fiber optic sensors



### fiber optic amplifiers 1300

dimensions 15 x 30 x 30mm

plastic fiber optics through-beam sensor up to 1000mm

dif. reflection sensor up to 120mm



- ✓ glass fiber reinforced plastic housing
- ✓ switching state display by LED: yellow
- ✓ LED indicator for functional reserve: green
- **✓** integrated amplifier
- √ high switching frequency and switching distances
- ✓ exclusive OR output or alarm output
- ✓ connection with M8-connector or cable

miniature design visible red light









**Alarm** 

#### description

The devices in the **OL15** series are designed for the highest levels of performance with small dimensions (miniature housing). Despite the compact design, the user benefits from robust, industrial strength devices with all protective functions.

Fiber optics are fitted in front of the transmitter and receiver. They are the extended eye of the photosensor. As the fiber optics only have small dimensions and are flexible, scanning tasks in places which are difficult to access can be completed easily. In addition, no electrical voltage is transferred.

As such, fiber optics can also be used without particular precautions in areas at risk of explosion and in the presence of highly charged electrical and magnetic fields (high voltage

systems, electric welding equipment).

By selecting appropriately thin fibers, the smallest of objects can be detected. Using fiber optics, both the functions of the through-beam sensor as well as that of the diffuse reflection sensor can be realized.

The built-in functional reserve helps the user when aligning and setting the device. As such, soiling can additionally be spotted at an early stage and removed.

#### application examples

- detection of markings
- quality control of printing
- presence checks of metal pins
- foil width recognition







# fiber optic sensors

## 1300 fiber optic amplifiers



-		
article-no.	OL150105	OL150175
connection	cable	M8-connector
output	pnp, light-on mode	pnp, light-on mode
	7 30 15	7 30 15
TECHNICAL DATA	Ø 4.3	Ø 4.3
operating range (through-beam sensor)	depending on used fiber optics up to 0.5m	depending on used fiber optics up to 0.5m
sensing range	depending on used	depending on used
(dif. reflection sensor)	fiber optics up to 60mm	fiber optics up to 60mm
output signal	pnp, light-on mode	pnp, light-on mode
operating voltage	10 36V DC	10 36V DC
current consumption (w/o load)	≤ 15mA	≤ 15mA
output current (max. load)	200mA	200mA
voltage drop (max. load)	2.0V DC	2.0V DC
transmitting element (pulsed)	LED, red light	LED, red light
wavelength	660nm	660nm
hysteresis	< 10%	< 10%
norm trimming plate	100mm x 100mm, white	100mm x 100mm, white
response/decay time	0.5ms / 0.5ms	0.5ms / 0.5ms
switching frequency	1kHz	1kHz
display (signal/reserve)	yellow LED / green LED	yellow LED / green LED
sensitivity adjustment	12-turn potentiometer	12-turn potentiometer
short-circuit protection	+	+
reverse polarity protection	+	+
dimensions	15x30x30mm	15x30x30mm
housing material	PBTP	PBTP
operating temperature	-25 +55°C	-25 +55°C
degree of protection (EN 60529)	IP65	IP65
connection	2m PVC-cable, 3-wire	M8-connector, 3-pin
connection accessories	-	e.g. <b>VK200075</b>
mounting accessories (bracket)	AO000045	AO000045









## fiber optic amplifiers 1300

article-no.	OL150400	OL150470
connection	cable	M8-connector
output	pnp, light-on/dark-on mode	pnp, light-on/dark-on mode
article-no.	OL150700	OL150770
connection	cable	M8-connector
output	pnp, light-on mode / alarm output	pnp, light-on mode / alarm output
	21 21 0 4.3	7 30 21 15 0 4.3
TECHNICAL DATA  operating range	depending on used	depending on used
(through-beam sensor)	fiber optics up to 1000mm	fiber optics up to 1000mm
sensing range	depending on used	depending on used
(dif. reflection sensor)	fiber optics up to 120mm	fiber optics up to 120mm
output signal	see above	see above
output signal	SCC above	
·	10 36V DC	10 36V DC
operating voltage	10 36V DC	10 36V DC
operating voltage current consumption (w/o load)	10 36V DC ≤ 20mA	10 36V DC ≤ 20mA
operating voltage current consumption (w/o load) output current (max. load)	10 36V DC ≤ 20mA 200mA	10 36V DC ≤ 20mA 200mA
operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load)	10 36V DC ≤ 20mA 200mA 2.0V DC	10 36V DC ≤ 20mA 200mA 2.0V DC
operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) transmitting element (pulsed)	10 36V DC ≤ 20mA 200mA 2.0V DC LED, red light	10 36V DC ≤ 20mA 200mA 2.0V DC LED, red light
operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) transmitting element (pulsed) wavelength	10 36V DC	10 36V DC ≤ 20mA 200mA 2.0V DC LED, red light 660nm
operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) transmitting element (pulsed) wavelength hysteresis	10 36V DC  ≤ 20mA  200mA  2.0V DC  LED, red light  660nm  < 10%	10 36V DC ≤ 20mA 200mA 2.0V DC LED, red light 660nm < 10%
operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) transmitting element (pulsed) wavelength hysteresis norm trimming plate	10 36V DC  ≤ 20mA  200mA  2.0V DC  LED, red light  660nm  < 10%  100mm x 100mm, white	10 36V DC ≤ 20mA 200mA 2.0V DC LED, red light 660nm < 10% 100mm x 100mm, white
operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) transmitting element (pulsed) wavelength hysteresis norm trimming plate response/decay time	10 36V DC  ≤ 20mA  200mA  2.0V DC  LED, red light  660nm  < 10%  100mm x 100mm, white  0.5ms / 0.5ms	10 36V DC  ≤ 20mA  200mA  2.0V DC  LED, red light  660nm  < 10%  100mm x 100mm, white  0.5ms / 0.5ms
operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) transmitting element (pulsed) wavelength hysteresis norm trimming plate response/decay time switching frequency	10 36V DC  ≤ 20mA  200mA  2.0V DC  LED, red light  660nm  < 10%  100mm x 100mm, white  0.5ms / 0.5ms  1kHz	10 36V DC  ≤ 20mA  200mA  2.0V DC  LED, red light  660nm  < 10%  100mm x 100mm, white  0.5ms / 0.5ms  1kHz
operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) transmitting element (pulsed) wavelength hysteresis norm trimming plate response/decay time switching frequency display (signal/reserve)	10 36V DC  ≤ 20mA  200mA  2.0V DC  LED, red light  660nm  < 10%  100mm x 100mm, white  0.5ms / 0.5ms  1kHz  yellow LED / green LED	10 36V DC  ≤ 20mA  200mA  2.0V DC  LED, red light  660nm  < 10%  100mm x 100mm, white  0.5ms / 0.5ms  1kHz  yellow LED / green LED
operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) transmitting element (pulsed) wavelength hysteresis norm trimming plate response/decay time switching frequency display (signal/reserve) sensitivity adjustment	10 36V DC  ≤ 20mA  200mA  2.0V DC  LED, red light  660nm  < 10%  100mm x 100mm, white  0.5ms / 0.5ms  1kHz  yellow LED / green LED  12-turn potentiometer	10 36V DC  ≤ 20mA  200mA  2.0V DC  LED, red light  660nm  < 10%  100mm x 100mm, white  0.5ms / 0.5ms  1kHz  yellow LED / green LED  12-turn potentiometer
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operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) transmitting element (pulsed) wavelength hysteresis norm trimming plate response/decay time switching frequency display (signal/reserve) sensitivity adjustment short-circuit protection reverse polarity protection	10 36V DC  ≤ 20mA  200mA  2.0V DC  LED, red light  660nm  < 10%  100mm x 100mm, white  0.5ms / 0.5ms  1kHz  yellow LED / green LED  12-turn potentiometer  + +	10 36V DC
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operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) transmitting element (pulsed) wavelength hysteresis norm trimming plate response/decay time switching frequency display (signal/reserve) sensitivity adjustment short-circuit protection reverse polarity protection dimensions housing material operating temperature degree of protection (EN 60529)	10 36V DC  ≤ 20mA  200mA  2.0V DC  LED, red light  660nm  < 10%  100mm x 100mm, white  0.5ms / 0.5ms  1kHz  yellow LED / green LED  12-turn potentiometer  + + + 15x30x30mm  PBTP  -25 +55°C	10 36V DC  ≤ 20mA  200mA  2.0V DC  LED, red light  660nm  < 10%  100mm x 100mm, white  0.5ms / 0.5ms  1kHz  yellow LED / green LED  12-turn potentiometer  + + +  15x30x30mm  PBTP  -25 +55°C
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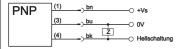
# fiber optic sensors

### 1300 fiber optic amplifiers



#### connection

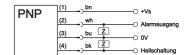
light-on mode



light-on/dark-on mode

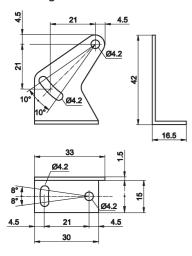


light-on mode, alarm output



wire colors: bn = brown (1), wh = white (2), bu = blue (3), bk = black (4)

#### mounting bracket AO000045



This data sheet contains the standard versions only. Kindly request the availability of other output- and connection versions.

We will be pleased to supply the matching cable socket for your devices with connector. Please refer to the list in catalog chapter "accessories" under "cable sockets ipf -SENSORFLEX®" or search our website for "VK".

Warning: Never use these devices in applications where the safety of a person depends on their functionality.



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