



**PHOTOELECTRIC SENSORS:  
FIBER-OPTIC AMPLIFIERS  
SERIES 3#6#**



- ✓ Complete series of fiber-optic amplifiers for **DIN-rail mounting** (TS35)
- ✓ **Small housings**  $\varnothing$  31 x 60 x 10 mm
- ✓ Sensing range: **0 ... 200 mm**
- ✓ **Operator-guided setting**
- ✓ **IO-Link**
- ✓ For application environments from **-55 °C to +105 °C**
- ✓ **Blue light** for glass detection

**TECHNICAL DATA**

(according to IEC 60947-5-2)	
Housing material	Glass-fiber reinforced PBTP (Crastin)
Hysteresis	10 % typ. / $\leq$ 5 % (3066)
Supply voltage range $U_B$	10 ... 30 VDC
Max. ripple content	$\leq$ 20 %
Output current	$\leq$ 200 mA
Output voltage drop	$\leq$ 2.0 V at 200 mA
Max. switching frequency	1,500 Hz / 5,000 Hz (high frequency)
	4,000 Hz (3066)
Switching time ( $\uparrow$ and $\downarrow$ )	330 $\mu$ sec / 100 $\mu$ sec (high frequency)
	$\geq$ 80 $\mu$ sec (3066)
Max. ambient light:	
halogen	5,000 Lux
sun	10,000 Lux
Ambient temperature range	-25 ... +55 °C / -5 ... +55 °C (3066)
Degree of protection	IP 64
EMC protection:	
IEC 60947-5-2 (7.2.3.1)	5 kV
IEC 61000-4-2	Level 2
IEC 61000-4-3	Level 3
IEC 61000-4-4	Level 2
IEC 61000-4-6	Level 2 (3066)
Short-circuit protection	Built-in
Polarity reversal protection	Built-in
Power-on reset	Built-in

Complete series of fiber-optic amplifiers in small housings  $\varnothing$  31 x 60 x 10 mm for DIN-rail mounting (TS35) with large sensing range of 0 ... 200 mm. For application environments from -55 °C to +105 °C. IO-Link as well as blue-light models for glass detection. For a large selection of optical fibers, please refer to pages 200 - 219 of this catalog.

Fiber-optic solutions are particularly suited for

- ✓ **precision engineering**
- ✓ **robot gripping arms**
- ✓ **handling systems**
- ✓ **automation equipment**
- ✓ **special machinery**
- ✓ **electronics industry**
- ✓ **printed circuit board production**

## HOUSING SIZE

# 31 X 60 X 10 WITH POTENTIOMETER

## SENSING RANGE

FIBER-OPTIC AMPLIFIER \*

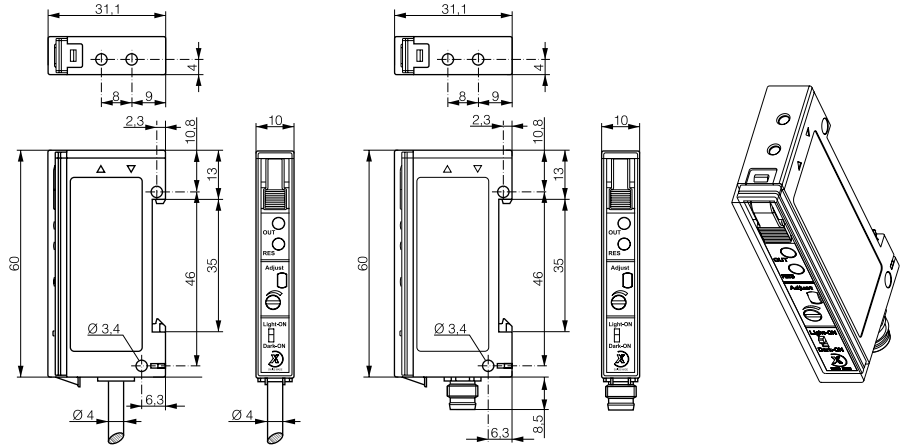
200 mm

FIBER-OPTIC AMPLIFIER \*  
HIGH SWITCHING FREQUENCY

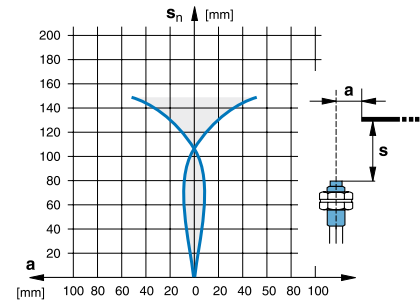
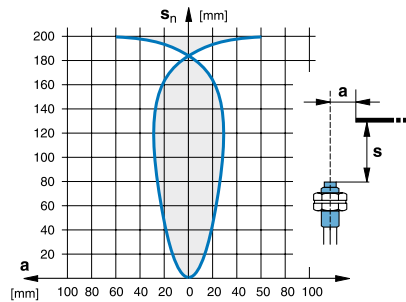
140 mm



Dimensions:



Response curves:



## TECHNICAL DATA

	200 mm (with LFP-1002-020)	140 mm (with LFP-1002-020)
Sensing range	200 mm (with LFP-1002-020)	140 mm (with LFP-1002-020)
Standard target	100 x 100 mm white	100 x 100 mm white
No-load supply current (at $U_B = 24V$ )	15 mA (typ.)	15 mA (typ.)
Emitter	LED red 680 nm	LED red 680 nm
Approvals	CE, UL, RoHS	CE, RoHS
Weight (cable / connector model)	69 / 18 g	69 / 18 g

## PART REFERENCES

(bold: preferred types)		
NPN light-ON / dark-ON switchable	<b>LFK-3060-101</b>	<b>LFK-3260-101</b>
+ excess gain / cable		
NPN light-ON / dark-ON switchable	<b>LFS-3060-101</b>	<b>LFS-3260-101</b>
+ excess gain / connector S8		
PNP light-ON / dark-ON switchable	<b>LFK-3060-103</b>	<b>LFK-3260-103</b>
+ excess gain / cable		
PNP light-ON / dark-ON switchable	<b>LFS-3060-103</b>	<b>LFS-3260-103</b>
+ excess gain / connector S8		
Compatible connectors (page 268)	E, F	E, F
Wiring (pages 198-199)	Diagram 2	Diagram 2

\* Optical fibers (pages 200 - 219)

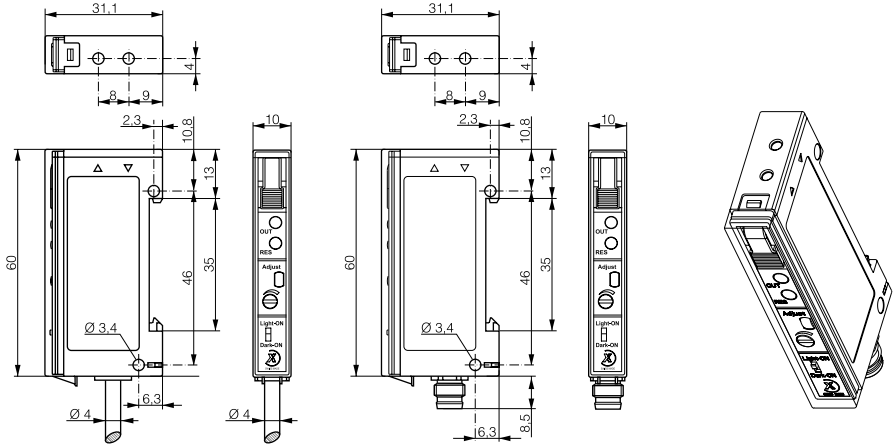
HOUSING SIZE

**31 X 60 X 10 WITH POTENTIOMETER**

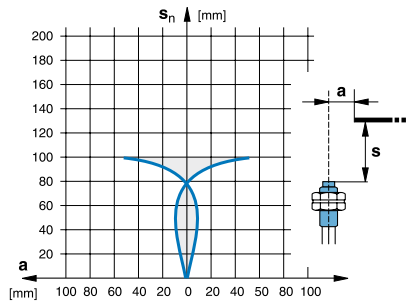
SENSING RANGE

**FIBER-OPTIC AMPLIFIER \*  
BLUE-LIGHT  
100 mm**

Dimensions:



Response curve:



**TECHNICAL DATA**

Sensing range	100 mm (with LFP-1002-020)	
Standard target	100 x 100 mm white	
No-load supply current (at U <sub>B</sub> = 24V)	15 mA (typ.)	
Emitter	LED blue 465 nm	
Approvals	CE, RoHS	
Weight (cable / connector model)	69 / 18 g	

**PART REFERENCES**

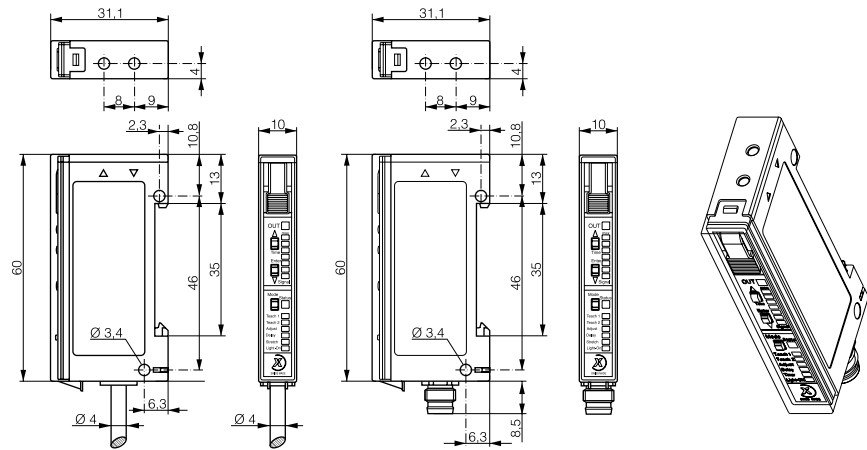
<b>(bold: preferred types)</b>		
NPN light-ON / dark-ON switchable	<b>LFK-3360-101</b>	
+ excess gain / cable		
NPN light-ON / dark-ON switchable	<b>LFS-3360-101</b>	
+ excess gain / connector S8		
PNP light-ON / dark-ON switchable	<b>LFK-3360-103</b>	
+ excess gain / cable		
PNP light-ON / dark-ON switchable	<b>LFS-3360-103</b>	
+ excess gain / connector S8		
Compatible connectors (page 268)	E, F	
Wiring (pages 198-199)	Diagram 2	

\* Optical fibers (pages 200 - 219)

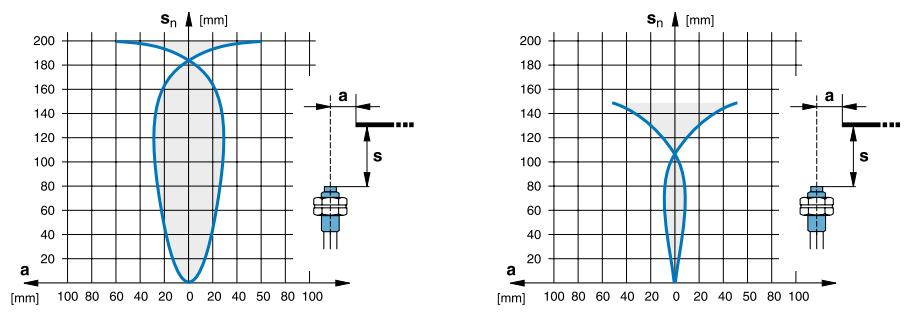
HOUSING SIZE	<b>31 X 60 X 10 WITH TEACH-IN</b>	
SENSING RANGE	FIBER-OPTIC AMPLIFIER * 200 mm	FIBER-OPTIC AMPLIFIER * HIGH SWITCHING FREQUENCY 140 mm



Dimensions:



Response curves:



### TECHNICAL DATA

Sensing range	200 mm (with LFP-1002-020)	140 mm (with LFP-1002-020)
Standard target	100 x 100 mm white	100 x 100 mm white
No-load supply current (at U <sub>B</sub> = 24V)	25 mA (typ.)	25 mA (typ.)
Emitter	LED red 680 nm	LED red 680 nm
Approvals	CE, UL, RoHS	CE, RoHS
Weight (cable / connector model)	68 / 17 g	68 / 17 g

### PART REFERENCES

<b>(bold: preferred types)</b>		
NPN light-ON / dark-ON switchable	<b>LFK-3065-101</b>	<b>LFK-3265-101</b>
+ excess gain / cable		
NPN light-ON / dark-ON switchable	<b>LFS-3065-101</b>	<b>LFS-3265-101</b>
+ excess gain / connector S8		
PNP light-ON / dark-ON switchable	<b>LFK-3065-103</b>	<b>LFK-3265-103</b>
+ excess gain / cable		
PNP light-ON / dark-ON switchable	<b>LFS-3065-103</b>	<b>LFS-3265-103</b>
+ excess gain / connector S8		
Compatible connectors (page 268)	E, F	E, F
Wiring (pages 198-199)	Diagram 6	Diagram 7

\* Optical fibers (pages 200 - 219)

Inductive  
 Photoelectric  
 Optical fibers  
 Ultrasonic  
 Capacitive  
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HOUSING SIZE

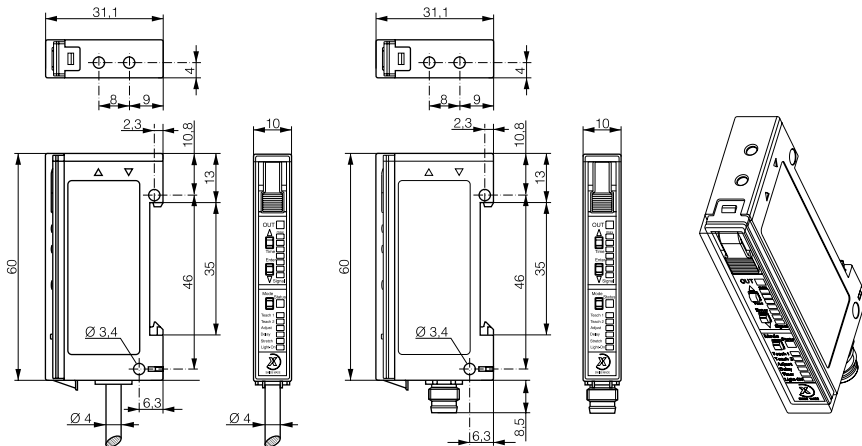
**31 X 60 X 10 WITH TEACH-IN**

SENSING RANGE

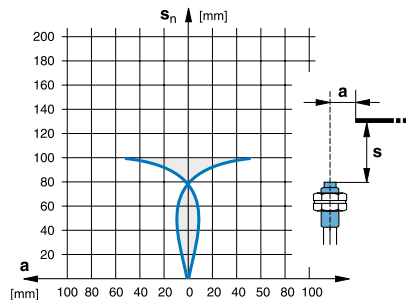
**FIBER-OPTIC AMPLIFIER \*  
BLUE-LIGHT  
100 mm**



Dimensions:



Response curve:



**TECHNICAL DATA**

Sensing range	100 mm (with LFP-1002-020)
Standard target	100 x 100 mm white
No-load supply current (at $U_B = 24V$ )	25 mA (typ.)
Emitter	LED blue 465 nm
Approvals	CE, RoHS
Weight (cable / connector model)	68 / 17 g

**PART REFERENCES**

<b>(bold: preferred types)</b>	
NPN light-ON / dark-ON switchable	<b>LFK-3365-101</b>
+ excess gain / cable	
NPN light-ON / dark-ON switchable	<b>LFS-3365-101</b>
+ excess gain / connector S8	
PNP light-ON / dark-ON switchable	<b>LFK-3365-103</b>
+ excess gain / cable	
PNP light-ON / dark-ON switchable	<b>LFS-3365-103</b>
+ excess gain / connector S8	
Compatible connectors (page 268)	E, F
Wiring (pages 198-199)	Diagram 6

\* Optical fibers (pages 200 - 219)

HOUSING SIZE

**31 X 60 X 10 WITH TEACH-IN & DIGITAL DISPLAY**

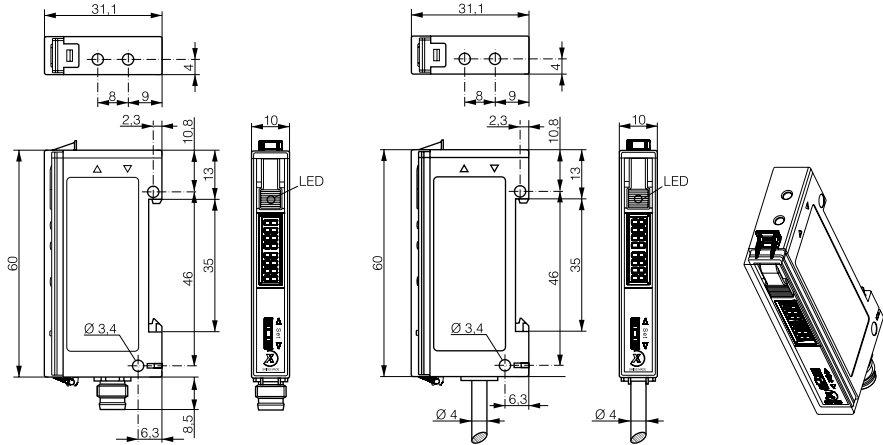
SENSING RANGE

**FIBER-OPTIC AMPLIFIER \*  
200 mm**

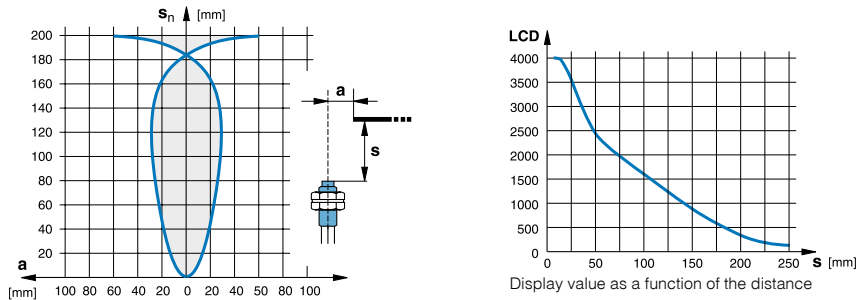


**IO-Link**

Dimensions:



Response curves:



**TECHNICAL DATA**

Sensing range	200 mm (with LFP-1002-020)
Standard target	100 x 100 mm white
No-load supply current (at $U_B = 24V$ )	30 mA (typ.)
Emitter	LED red 680 nm
Approvals	CE, RoHS
Weight (cable / connector model)	68 / 17 g

**PART REFERENCES**

<b>(bold: preferred types)</b>	
NPN light/dark-ON switchable / cable	<b>LFK-3066-101</b>
NPN light/dark-ON switchable / S8	<b>LFS-3066-101</b>
PNP light/dark-ON switchable / cable	<b>LFK-3066-103</b>
PNP light/dark-ON switchable / S8	<b>LFS-3066-103</b>
PNP light/dark-ON switchable	<b>LFK-3066-403</b>
+ IO-Link / cable	
PNP light/dark-ON switchable	<b>LFS-3066-403</b>
+ IO-Link / connector S8	
Compatible connectors (page 268)	E, F
Wiring (pages 198-199)	Diagram 6

\* Optical fibers (pages 200 - 219)

Inductive

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Ultrasonic

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