LV461

Amplifier for fiber optics



up to 300mm

up to 80mm

10 - 30 V DC

- Thin construction and small outer dimensions for easy integration if installation space is tight
- PNP and NPN switching output
- Switch for changing between light and dark switching
- Switch for changing between short response time and higher range
- 20-turn potentiometer for sensitivity adjustment provide for optimal adaptation to the application
- Indicator diode for operation and switching output
- Connection via cable or cable with M8 connector

IEC 60947...

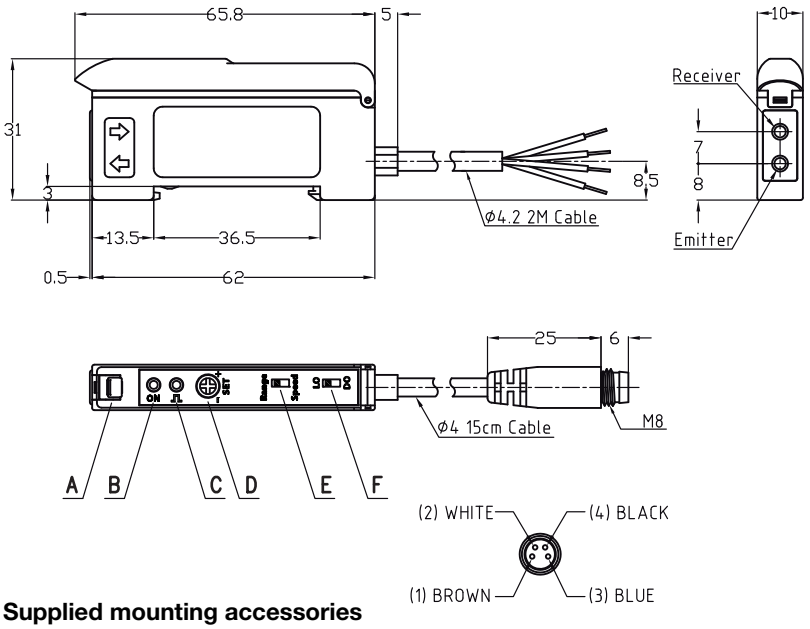
IEC 60947...

Accessories:

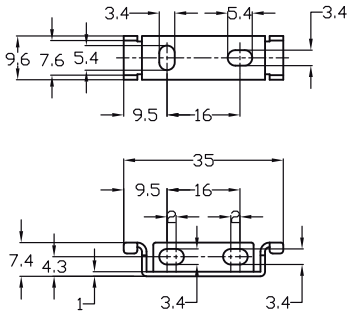
(available separately)

- Plastic fiber optics (KF, KFX)
- Ready-made cables (KB …)

Dimensioned drawing



Supplied mounting accessories



A Lever for fiber optic clamp
B Green indicator diode - readiness for operation
C Red indicator diode - switching output
D Potentiometer for sensitivity adjustment
E Switch operating mode 'Range' / 'Speed'
F Switch light (LO)/dark (DO) switching

Electrical connection



en 01-2012/05 50118004

We reserve the right to make changes • DS_LV461_en_50118004.fm

Specifications

	Throughbeam principle	Scanning principle
Optical data		
Operating range/scanning range [1]	up to 300mm	up to 80mm
Light source	LED (modulated light)	
Wavelength	680nm (visible red light)	
Timing	**Operating mode 'Range'**	**Operating mode 'Speed'**
Switching frequency [2]	250Hz	500Hz
Response time	1ms	2ms
Delay before start-up	≤ 150ms	
Electrical data		
Operating voltage U_B	12 … 24VDC ± 10%	
Residual ripple	≤ 10% of U_B	
Open-circuit current	≤ 40mA	
Switching output	antivalent transistor outputs pin 4/black: PNP, pin 2/white: NPN	
Function	light/dark switching, adjustable by means of a switch	
Signal voltage high/low	≥ (U_B-2.5V)/≤ 2.5V	
Output current	≤ 100mA	
Sensitivity	adjustable via 20-turn potentiometer	
Indicators		
LED green	ready for operation	
Red LED	switching output active	
Mechanical data		
Housing	ABS	
Weight	35g with 2000mm cable 65g with 150mm cable and M8 connector	
Connection type	cable 2000mm, 4 x 0.25mm², or cable 150mm with M8 connector, 4-pin	
Fiber optic connection	clamp	
Environmental data		
Ambient temp. (operation/storage)	-10°C … +60°C/-40°C … +70°C	
Protective circuit [3]	2, 3	
Protection class	IP 54	
Standards applied	EN 60947-5-2	
Options		
Operating mode switch	selection of '**range**' or '**speed**' operating mode	

1) Range/scanning range depending on the fiber optics used
2) With a duty cycle of 1:1
3) 2=polarity reversal protection, 3=short circuit protection for all outputs

Order guide

	Designation	Part no.
Connection type		
Cable 2000mm, 4 x0.25mm²	LV461.1/P2	50118398
Cable 150mm with M8 connector, 4-pin	LV461.1/P2-150-M8	50118399

Tables

Notice!

Detailed specifications on the range/scanning range are enclosed in the data sheets of our fiber optics type **KF** or **KFX**.

Diagrams

Remarks

- **Approved purpose**: This product may only be used by qualified personnel and must only be used for the approved purpose. This sensor is not a safety sensor and is not to be used for the protection of persons.