

Technical Description

The 20K fiber-optic amplifiers incorporate a perfect balance between the ease of automatic push button setup and the more traditional manual approach. Both methods have advantages. Now you can mix and match these functions in one economical unit.

With a target in range of the fiber-optic sensing tip, a single push of the button is all that is required to setup the sensor. If your application calls for a little addition fine tuning due to target color or position changes, simply increase or decrease the gain using the "+" or "-" keys. This allows you to maintain complete control over the settings.

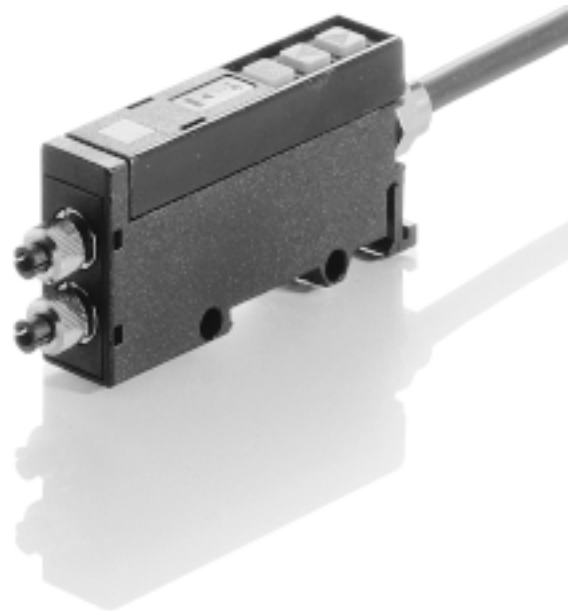
Using the keys, other operating parameters can be controlled. Two hysteresis settings are provided for high or low contrast targets. Light-on/Dark-on (NO and NC) functions can be changed. Timing functions are also provided. After all parameters have been set, the sensor can be locked to prevent further modification.

Features

- Automatic push-button setup
- Manual fine-tuning
- Remote access to setup functions
- Two selectable hysteresis settings
- On or off adjustable delay timing functions
- Output is both PNP and NPN (Push/Pull)
- Selectable light-on/dark-on operation
- Available in cable out or M8 quick disconnect
- Housing mounts on DIN-rail or through-hole panel mount

Applications

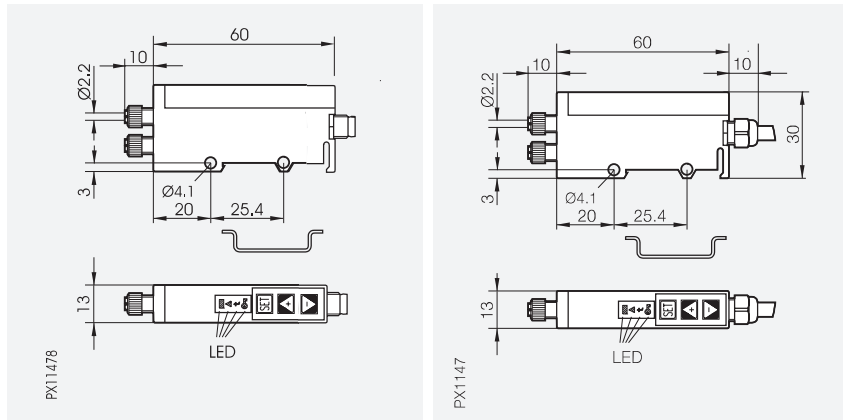
- Small parts detection
- Tight space restrictions
- Checking part features
- Counting tasks (i.e. counting drops)
- Precise parts positioning
- Handling and assembly
- Robotics



Block Style Optical Sensors

Plastic fiber amp
BOS 20K

Series	BOS 20K, quick disconnect	BOS 20K, cable out
	base unit for plastic fiber optics	
Sensing range	depends on fiber optics used	



	PNP/NPN	BOS 20K-ZU-1FR-S 75-C	BOS 20K-ZU-1FR-C-PU-02
Supply voltage U_B		10...30 V DC	
Voltage drop U_d at I_o		≤ 2 V	
Rated isolation voltage U_i		75 V	
Rated operational current I_o		≤ 100 mA	
No-load supply current I_o		≤ 45 mA	
Short-circuit protected		yes	
Permissible capacitance		0.05 μ F	
On/Off delay		≤ 500 μ s	
Frequency of operating cycles		1 kHz	
Utilization category		DC 13	
Output		PNP/NPN	
Timing function		on/off switching delay from 40 ms...5 sec setable	
Output function		○/● automatically switched	
Permissible ambient light		10,000 Lux	
Sensitivity adjustment		teach-in or manually using buttons	
Output function indication		LED green	
Operating/Error indication		LED red	
Ambient temperature range T_a		$-15...+55$ °C	
Degree of protection per IEC 529		IP 65	
Housing material		PMMA	
Material of sensing face		depends on fiber optics used	
Connection		M8 connector	2 m cable
No. of wires \times conductor cross section			4 \times 22 AWG
Weight		50 g	145 g
Recommended connector		BKS-S 74/BKS-S 75*	
Emitter type		red light visible 660 nm	

○/● = Light-On/Dark-On

*for side-by-side mounting on DIN-rail use only BKS-S 74



Connector orientation

Connection Diagrams

