

45FSL Visible Red or White Plastic Fiber Optic

General Purpose DIN Style



General Specifications

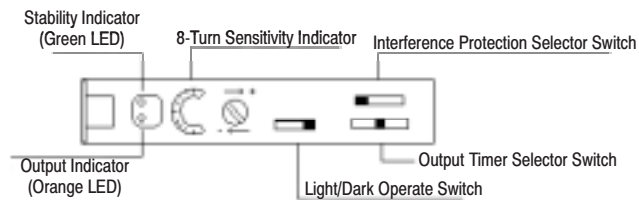
Light Source	Red or white by model
Unit Protection	Overload, short circuit, reverse polarity, false pulse
Supply Voltage	12–24V DC
Current Consumption	40mA maximum
Output Type	NPN or PNP by model
Output Mode	Light/dark operate selectable
Output Rating	100mA @ 30V DC
Max Leakage Current	0.5ma
Response Time	30µs, 250µs, 500µs
Housing Material	ABS resin
Lens Material	Not applicable
LED Indicators	Orange: output; green: stability
Connection Types	2m 4 conductor 24AWG cable; 4-pin pico QD, Power Bus cables
Optional Accessories	Cordsets—see page R1–81
Operating Environment	NEMA 1, IP 40
Vibration	10–55Hz, 1mm amplitude, Meets or exceeds IEC 60947-5-2
Shock	10g, 3 directions, 3 times
Operating Temperature	-25°C to +55°C (-13°F to +131°F)
Relative Humidity	35...85%
Approvals	CE marked for all applicable directives

Features

- Choose from red or white light source
- Dual LED indicators
- Manual sensitivity adjustment
- Selectable 40ms on/off delay output timer
- DIN rail mountable
- “Power-Bus” option
- A 4/8 sensor cross-talk protection
- Reverse polarity, false pulse and transient noise protection (500V)

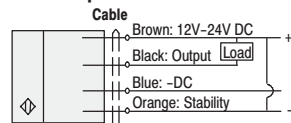
User Interface Panel

LED	State	Condition
Green	OFF	Unstable light signal
	ON	Stable light signal
Orange	OFF	Output OFF
	ON	Output ON

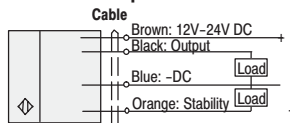


Wiring Diagrams

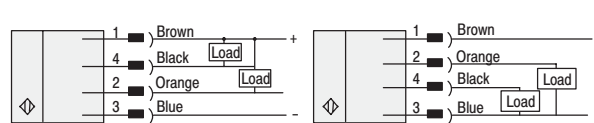
Cable NPN Output



Cable PNP Output



Quick-Disconnect

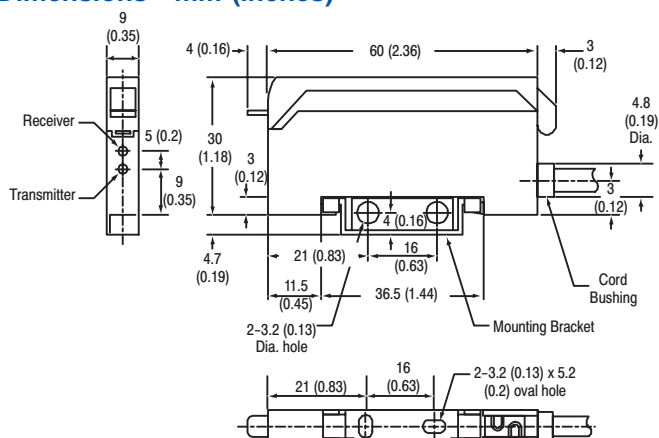


Pico



Note: Details regarding connection of Allen-Bradley Bulletin 42FSL photoelectric sensors to Allen-Bradley Programmable Controllers can be found in publication 42-2.0.

Dimensions—mm (inches)



Typical Response Curves for Visible Red LED

Contact Rockwell Automation product support at 1.440.646.5800.

Color Contrast Sensing

For the Light Source Selector Guide, please refer to page R1-22.

Typical Plastic Fiber Optic Cable Selection—mm (in)

LED	Sensing Mode	Plastic Fiber Diameter	Typical Fiber Model	Maximum Range
Red	Diffuse (Bifurcated Fiber)	1 (0.040)	43PR-NES57ZS	Contact Rockwell Automation product support at 1.440.646.5800.
		0.5 (0.020)	43PR-NJS53ZM	
	Transmitted Beam (Individual Fiber)	1 (0.040)	43PT-NJS56FS	
		0.5 (0.020)	43PT-NBS52FM	
White	Diffuse (Bifurcated Fiber)	1 (0.040)	43PR-NES57ZS	
	Transmitted Beam (Individual Fiber)		43PT-NJS56FS	

Product Selection

Sensing Mode	Operating Voltage	Response Time	Output Characteristics		LED	Catalog Number		
			Type	Max Load Current		Cable	Pico	Power Bus (QD required)
<p>Field of View: Refer to Plastic Fiber Optic section page R1-208 Emitter LED: Visible red 660nm, Visible white Indicators: Orange: Output, Green: Stability</p>	12-24V DC +/- 10%	Selectable 250µs or 500µs	PNP	Output: 100ma Stability: 50ma	Red	45FSL-2LHE-A2	45FSL-2LHE-P4	45FSL-2LHE-C4 ①
					White	45FSL-5LHE-A2	45FSL-5LHE-P4	45FSL-5LHE-C4 ①
			NPN		Red	45FSL-2LGE-A2	45FSL-2LGE-P4	45FSL-2LGE-C4 ①
					White	45FSL-5LGE-A2	45FSL-5LGE-P4	45FSL-5LGE-C4 ①
		30µs	PNP		Red	45FSL-2LWE-A2	45FSL-2LWE-P4	45FSL-2LWE-C4 ①
					White	45FSL-5LWE-A2	45FSL-5LWE-P4	45FSL-5LWE-C4 ①
			NPN		Red	45FSL-2LVE-A2	45FSL-2LVE-P4	45FSL-2LVE-C4 ①
					White	45FSL-5LVE-A2	45FSL-5LVE-P4	45FSL-5LVE-C4 ①

① PowerBus master/4 conductor QD = 45F-A4C-A2
 PowerBus slave/2 conductor QD = 45F-A2C-A2

Cordsets and Accessories

Description	Catalog Number	Description	Catalog Number	Description	Catalog Number
Pico QD Cordset, Straight, 4-pin, 2m	889P-F4AB-2	PowerBus master/4 conductor QD	45F-A4C-A2	Fiber Optic Adaptor Replacements 1.25mm-2.2mm O.D. 1.00mm-2.2mm O.D.	61-6731 61-6742
Fiber Optic Cables	R1-169	PowerBus slave/2 conductor QD	45F-A2C-A2	Mounting Assembly	60-2638