



Description

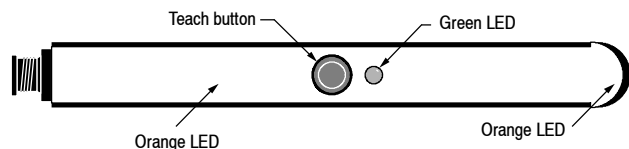
The 45LSP is family of optical fork sensors housed in a plastic enclosure. Fork sensors offer self-contained transmitted beam sensing, ideal for applications that require reliable parts detection. The simple push button teach-in sensitivity adjustment, several connection options and multiple mounting features (via side thru-holes, rear threaded inserts, or optional dovetail brackets) make the 45LSP an economical, easy to use solution for typical applications such as small parts detection, edge detection, parts counting, gear tooth detection, dimension verifications, etc.

Features

- Detection of objects as small as 0.2 mm (0.008 in.)
- Highly visible power and output LED indicators with output indication along both sides of the fork
- Remote teach and teach button lock on 4-pin models
- Light or dark operate selectable
- Multiple mounting options: thru-holes, threaded holes and dovetail
- Easy installation with no alignment required
- 3- and 4-pin pico (M8) QD models

User Interface

LED Color	State	Status
Orange	OFF	Output de-energized
	ON	Output energized
	Flashing	Teach mode or short circuit protection active
Green	OFF	Power is OFF
	ON	Power is ON
	Flashing	Teach mode



Specifications

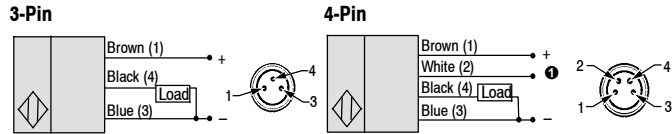
Environmental	
Certifications	cULus Listed and CE Marked for all applicable directives
Operating Environment	IP67
Operating Temperature [C (F)]	-20...+60° (-4...+140°)
Optical	
Sensing Modes	Transmitted beam
Sensing Gap	30, 50, 80, and 120 mm
Light Source	Visible red LED (640 nm)
LED Indicators	See User Interface below
Adjustments	Teach button
Electrical	
Voltage	10...30V DC
Current Consumption	30 mA max
Sensor Protection	Short circuit, reverse polarity
Outputs	
Response Time	250 μS
Output Type	PNP or NPN by cat. no.
Output Mode	Light or dark operate selectable (via teach button or remote)
Output Current	100 mA max
Mechanical	
Housing Material	Polycarbonate
Connection Types	4-pin DC pico (M8) QD connector, 3-pin DC pico (M8) QD connector
Optional Accessories	Cordsets and dovetail mounting brackets

45LSP

Optical Fork Sensor

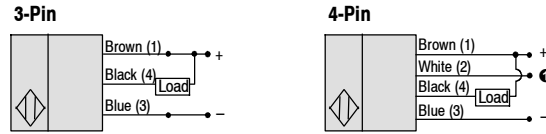
Wiring Diagrams

PNP Models

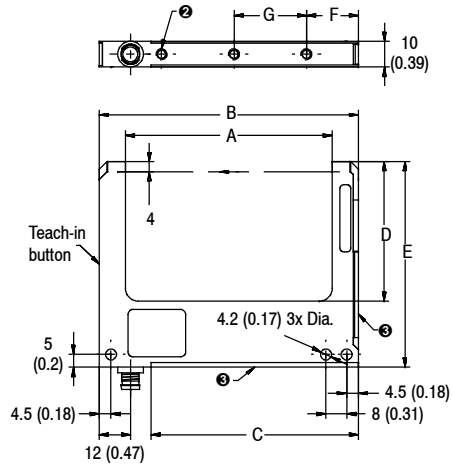


① Remote teach.

NPN Models



Approximate Dimensions [mm (in.)]



Cordsets and Accessories

Description	Cat. No.
2 m (6.5 ft) 3-pin DC pico QD	889P-F3AB-2
2 m (6.5 ft) 4-pin DC pico QD	889P-F4AB-2
Dovetail mounting bracket	44B-BKT

- ② M4 threaded inserts, 6 mm maximum depth.
- ③ Dovetail mounting

Gap Size	A	B	C	D	E	F	G
30 mm	30 (1.18)	50 (1.97)	30 (1.18)	34 (1.34)	59.5 (2.34)	20 (0.79)	—
50 mm	50 (1.97)	70 (2.76)	50 (1.97)	54 (2.13)	79.5 (3.13)	20 (0.79)	28 (1.10)
80 mm	80 (3.15)	100 (3.93)	80 (3.15)	54 (2.13)	79.5 (3.13)	20 (0.79)	2 x 28
120 mm	120 (4.72)	140 (5.51)	120 (4.72)	54 (2.13)	79.5 (3.13)	20 (0.79)	3 x 28

Product Selection

Sensing Gap	Resolution [mm (in.)]Ⓞ	Operating Voltage	Output Mode	Connection Type	Output Type	Cat. No.
30 mm	0.2 (0.008)Ⓞ	10...30 V DC	Light or dark operate selectable	3-pin pico	PNP	45LSP-2LPA1-P3
					NPN	45LSP-2LNA1-P3
4-pin pico	PNP			45LSP-2LPA1-P4		
	NPN			45LSP-2LNA1-P4		
50 mm	0.2 (0.008)			3-pin pico	PNP	45LSP-2LPA2-P3
					NPN	45LSP-2LNA2-P3
4-pin pico	PNP			45LSP-2LPA2-P4		
	NPN			45LSP-2LNA2-P4		
80 mm	0.2 (0.008)	3-pin pico	PNP	45LSP-2LPA3-P3		
			NPN	45LSP-2LNA3-P3		
4-pin pico	PNP	45LSP-2LPA3-P4				
	NPN	45LSP-2LNA3-P4				
120 mm	0.4 (0.016)	3-pin pico	PNP	45LSP-2LPA4-P3		
			NPN	45LSP-2LNA4-P3		
4-pin pico	PNP	45LSP-2LPA4-P4				
	NPN	45LSP-2LNA4-P4				

- Ⓞ Not over the entire temperature range. For maximum precision, allow for a heating period of approximately 15 minutes.
- Ⓞ For detection of objects less than 0.9 mm (0.035 in.), the object should be placed ≥10 mm away from the LED light source.