

Installation Instructions

PHOTOSWITCH® Bulletin 42CB High Speed 18mm Cylindrical

IMPORTANT: SAVE THESE INSTRUCTIONS FOR FUTURE USE.

Description

Bulletin 42CB are high speed 18mm cylindrical sensors available in several sensing modes, with various detection ranges.

The Fixed Focus Diffuse uses a visible red LED, all the other sensing modes use an infrared LED.

These sensors are available with 10–30V DC, either PNP or NPN output and selectable light/dark operate mode on each sensor.

The sensitivity adjustment potentiometer and two LED indicators are mounted in the rear. The LED's show the output is energized (yellow) and power is on (green).

Fast response time and the high switching frequency of all the Bulletin CB sensors (1kHz) allows for accurate detection of objects moving at high speed.

The right angle orientation of this bulletin reduces the overall dimension of the sensor, and reduces the chance of accidental tearing.

Features (continued)

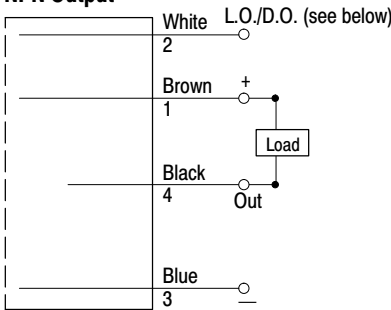
- Short circuit protection
- Reverse polarity protection
- Single turn sensitivity adjustment potentiometer
- Output energized (yellow) and power on (green) LED indicators
- Selectable light or dark operation (L.O./D.O.)

General Specifications

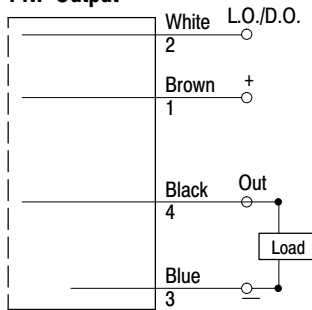
Relative Humidity	35 to 85%
Ambient Temperature	-13°F to 158°F (-25°C to +70°C)
Lens Material	Acrylic
Housing Material	Polyamide
Operating Environment	IEC IP65
Weight	90 grams (3.1oz)

Wiring

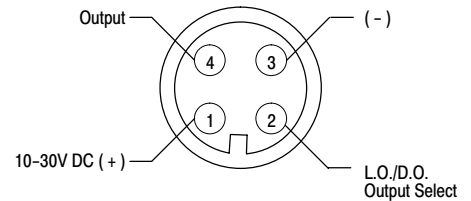
NPN Output



PNP Output



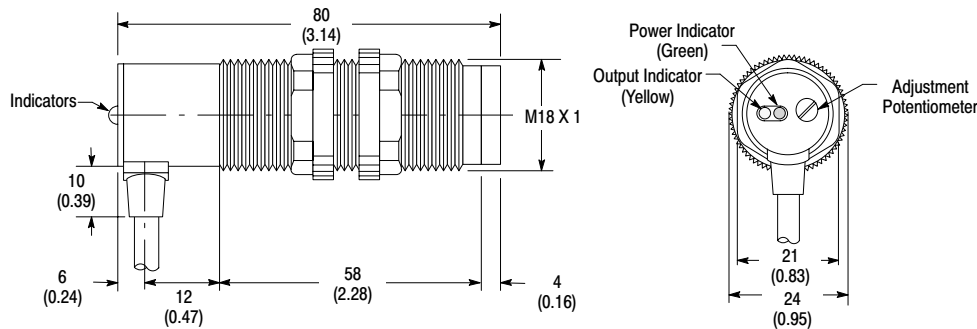
Micro Quick-Disconnect Versions



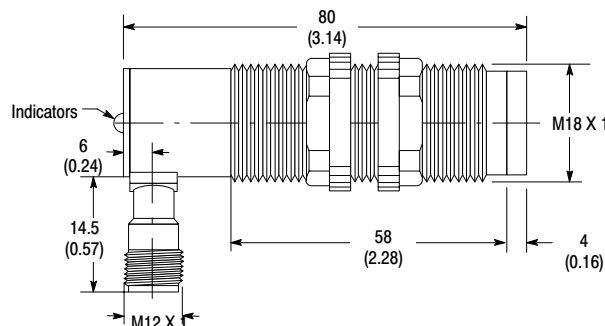
Selection of the output state: (white wire must be connected for operation): L.O. (White -), D.O. (White +)

Dimensions—mm (inches)

Cable Version



Quick-Disconnect Version



	Retroreflective	Polarized Retroreflective	Standard Diffuse	Fixed Focus Diffuse
Field of View	1.3°	1.6°	15° for Catalog Numbers 42CB-D1L_AF-__ 5.5° for Catalog Numbers 42CB-D1L_AL-__	7.8° for 12mm focal point 2.9° for 25mm focal point 1.2° for 50mm focal point
Transmitting LED	Infrared 880nm	Visible red 660nm	Infrared 880nm	Visible red 660nm
Connections	Cable Version: Catalog Numbers Ending in -L2 Quick-Disconnect Versions: Catalog Numbers Ending in -M4		4 conductor 300V PVC jacketed right angle cable 6.5ft (2m)	4-pin DC right angle micro style

Retroreflective

Operating Distance

Reflector	3:1 Margin	1:1 Margin
78mm (3in)	0.08m-5.4m (0.27ft-17.7ft)	0.08m-7.2m (0.27ft-23.6ft)

Polarized Retroreflective

Operating Distance

Reflector	2:1 Margin	1:1 Margin
78mm (3in)	0.2m-2m (0.67ft-6.7ft)	0.2m-2.8m (0.67ft-9ft)

Standard Diffuse

Operating Distance with White Paper

3:1 Margin	2:1 Margin	1:1 Margin	Catalog Number
4.5cm (1.7in)	7.5cm (2.9in)	15cm (5.9in)	42CB-D1LNAF-L2 42CB-D1LPAF-L2 42CB-D1LNAF-M4 42CB-D1LPAF-M4
30cm (11.8in)	60cm (23.6in)	100cm (39.3in)	42CB-D1LNAL-L2 42CB-D1LPAL-L2 42CB-D1LNAL-M4 42CB-D1LPAL-M4

Fixed Focus Diffuse

Operating Distance

Focal Point	Catalog Number
12mm (0.47in)	42CB-C2LNAY-L2 42CB-C2LPAY-L2 42CB-C2LNAY-M4 42CB-C2LPAY-M4
25mm (0.98in)	42CB-C2LNAZ-L2 42CB-C2LPAZ-L2 42CB-C2LNAZ-M4 42CB-C2LPAZ-M4
50mm (1.96in)	42CB-C2LNAC-L2 42CB-C2LPAC-L2 42CB-C2LNAC-M4 42CB-C2LPAC-M4

Retroreflective

Operating Voltage	Supply Current	Output Energized	Output Characteristics			Response Time	Catalog Number	
			Type	Max Load Current	Max Leakage Current		Cable	Quick-Disconnect
10-30V DC	20mA	Light/Dark Selectable	NPN	100mA	10 μ A	500 μ s	42CB-U1LNA-L2	42CB-U1LNA-M4
			PNP				42CB-U1LPA-L2	42CB-U1LPA-M4

Polarized Retroreflective

Operating Voltage	Supply Current	Output Energized	Output Characteristics			Response Time	Catalog Number	
			Type	Max Load Current	Max Leakage Current		Cable	Quick-Disconnect
10-30V DC	20mA	Light/Dark Selectable	NPN	100mA	10 μ A	500 μ s	42CB-P2LNA-L2	42CB-P2LNA-M4
			PNP				42CB-P2LPA-L2	42CB-P2LPA-M4

Standard Diffuse

Operating Voltage	Supply Current	Output Energized	Output Characteristics			Response Time	Catalog Number		
			Type	Max Load Current	Max Leakage Current		1:1 Margin	Cable	Quick-Disconnect
10-30V DC	20mA	Light/Dark Selectable	NPN	100mA	10 μ A	500 μ s	15cm (5.9in)	42CB-D1LNAF-L2	42CB-D1LNAF-M4
							100cm (39.3in)	42CB-D1LNAL-L2	42CB-D1LNAL-M4
			PNP				15cm (5.9in)	42CB-D1LPAF-L2	42CB-D1LPAF-M4
							100cm (39.3in)	42CB-D1LPAL-L2	42CB-D1LPAL-M4

Fixed Focus Diffuse

Operating Voltage	Supply Current	Output Energized	Output Characteristics			Response Time	Catalog Number		
			Type	Max Load Current	Max Leakage Current		Focal Point	Cable	Quick-Disconnect
10-30V DC	20mA	Light/Dark Selectable	NPN	100mA	10 μ A	500 μ s	12mm (0.47in)	42CB-C2LNAY-L2	42CB-C2LNAY-M4
							25mm (0.98in)	42CB-C2LNAZ-L2	42CB-C2LNAZ-M4
							50mm (1.96in)	42CB-C2LNAC-L2	42CB-C2LNAC-M4
			PNP				12mm (0.47in)	42CB-C2LPAY-L2	42CB-C2LPAY-M4
							25mm (0.98)	42CB-C2LPAZ-L2	42CB-C2LPAZ-M4
							50mm (1.96in)	42CB-C2LPAC-L2	42CB-C2LPAC-M4

Accessories

Description	Catalog Number
12mm Fixed Focus Lens Adaptor	61-6723
25mm Fixed Focus Lens Adaptor	61-6724
50mm Fixed Focus Lens Adaptor	61-6725
Right Angle Mounting Bracket	60-2615
Straight Mounting Bracket	60-2616

