Description

RightSight photoelectric sensors offer high-performance general purpose sensing in a compact, flexible package. They are designed for applications where simplified installation and maintenance are required. Suitable for general purpose environments, these sensors can also be used in areas where a rugged photoelectric sensor is required.

RightSight sensors can be through-hole mounted flush against a mounting surface, or can be attached with an 18mm threaded mounting nose or base. Just 35mm (1.4in) deep, the RightSight can be used in many areas where industry-standard 18mm mounting is desired and a short mounting depth is required.

Designed to withstand the rigors of food processing and material handling environments, all RightSight sensors can withstand repeated 8270kPa (1200 psi) high temperature washdowns.

Highly visible indicators allow quick verification of operation from a wide viewing area. Three indicators display power, output, and operating margin status. The margin indicator verifies a minimum 2.5X operating margin and flashes if an output is shorted.

To simplify installation and configuration, only those sensing modes which require sensitivity adjustments (fiber optic and diffuse) contain a one-turn knob on the top of the sensor.

RightSight photoelectric sensors are available in two types:

Standard On/Off sensors offer a fast 1ms response time and 10.8–30V DC operation. They have a shorter mounting base and can be ordered with either NPN or PNP complementary light/dark operate outputs. For extra flexibility, models with universal voltage 21.6–264V AC/DC may be selected. These sensors have a longer mounting base and provide a MOSFET output which is short-circuit protected across the entire voltage range. Both light/dark operate models are available.

DeviceNet™ Compatible sensors interface directly to this industry-standard plant floor network. They not only provide simple On/Off indication, but also advanced logic and diagnostic information. These include timers, counters, motion detection, and static or dynamic margin diagnostics. Each sensor may be programmed for COS (change-of-state) or strobing protocol operation. Refer to page 8–6 for a complete description.

Features

- Compact right angle housing
- Flexible 18mm mounting options
- 1200psi washdown rating
- No user adjustments
- 360° visible LED indicators
- Reverse polarity protection
- Short-circuit protected outputs
- Fast 1ms response time (DC)
- False pulse protection

General Information

Sensing Modes

Standard On/Off

Accessories

RightSight™

Standard On/Off

RightSight DC model with short 18mm base

General Specifications

	DC	AC/DC
Sensing Modes	See Selection Guide page 1–6	
Unit Protection	False pulse, reverse polarity, overload, short circuit	
Supply Voltage	10.8 to 30V	21.6 to 264V
Current Consumption	35mA max.	25mA max
Output Type	NPN or PNP (by model)	MOSFET
Output Mode	Light/dark operate (both)	Light/dark operate (by model)
Output Rating	100mA @ 30V	100mA @ 264V
Response Time	1ms (4/8ms for T.B.)	8.3ms (16.6ms for T.B.)
Housing Material	Noryl®	
Lens Material	Acrylic	
Cover Material	Udel	
LED Indicators	See table below	
Connection Types	4-pin DC micro QD; 4-pin AC micro QD; 4-pin DC pico QD 2m (6.5ft) 300V PVC cable	
Supplied Accessories	Two 18mm mounting nuts	
Optional Accessories	Cordsets, mounting brackets, reflectors	
Operating Environment	NEMA 4X, 6P, IP67 (IEC529); 1200psi (8270kPa) washdown	
Vibration	10–55Hz, 1mm amplitude, Meets or exceeds IEC 60947–5–2	
Shock	30G with 1ms pulse duration, Meets or exceeds IEC 60947–5–2	
Operating Temperature	–25°C to +70°C (–13°F to +158°F) ≥132V AC/DC; –25°C to +55°C (–13°F to +131°F) ≤132V AC/DC	
Relative Humidity	5% to 95%	
Approvals	UL listed, CSA certified, and CE marked for all applicable directives	

Features

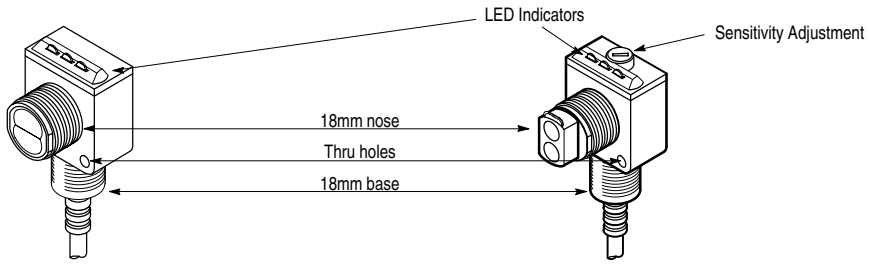
- Compact right angle housing
- Flexible 18mm mounting options
- 1200psi washdown rating
- No user adjustments
- 360° visible LED indicators
- Reverse polarity protection
- Short-circuit protected outputs
- Fast 1ms response time (DC)
- False pulse protection

Label	Color	State	Status
Output	Yellow	OFF	Output de-energized
		ON	Output energized
Margin	Orange	OFF	Margin < 2.5
		ON	Margin > 2.5
		Flashing	Output SCP active (short-circuit)
Status	Green	OFF	Sensor not powered
		ON	Sensor powered

Note: Green LED turns off when output activated.

RightSight Nonadjustable Sensor

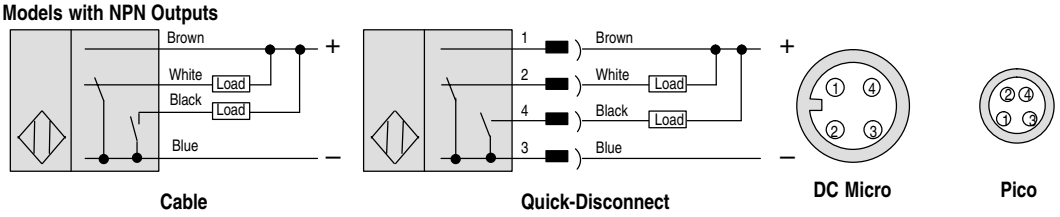
RightSight Adjustable Sensor



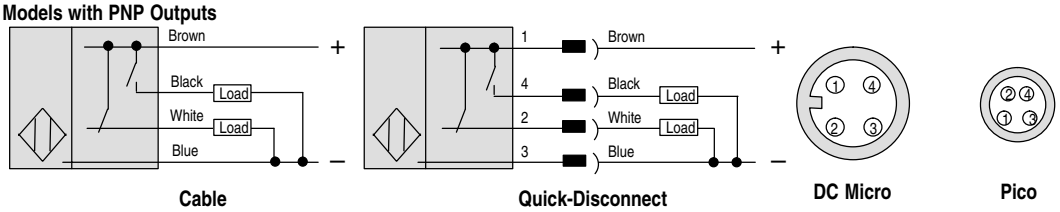
Wiring Diagrams❶❷

10.8–30V DC Sensors

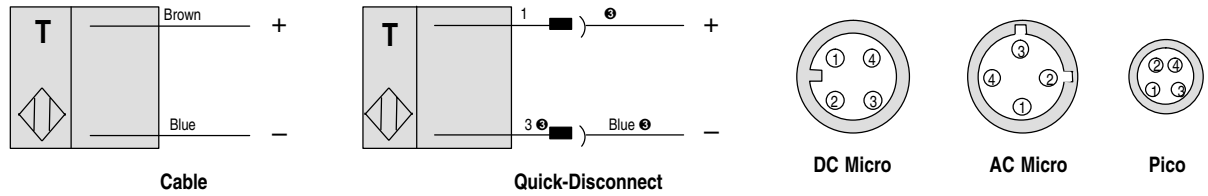
Models with NPN Outputs



Models with PNP Outputs

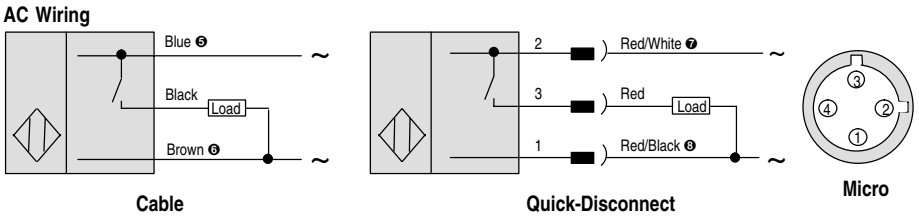


Transmitted Beam Source—All Models

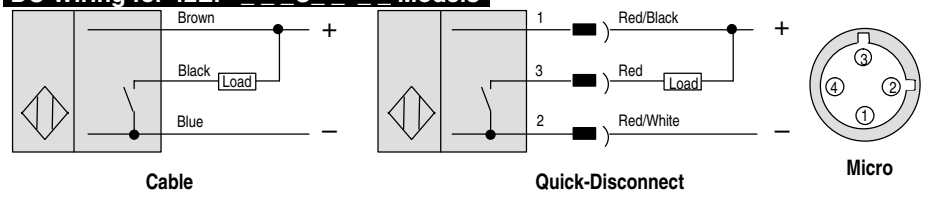


21.6–264V AC/DC Sensors

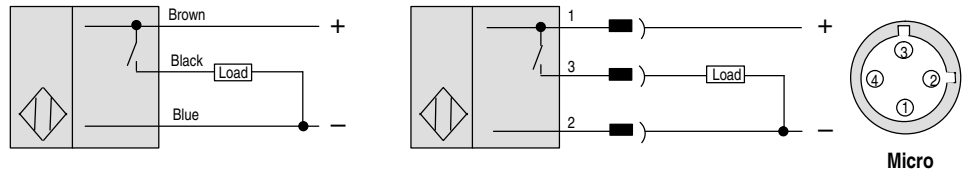
AC Wiring



DC Wiring for 42EF–_ _ _C_ _–_ _ Models



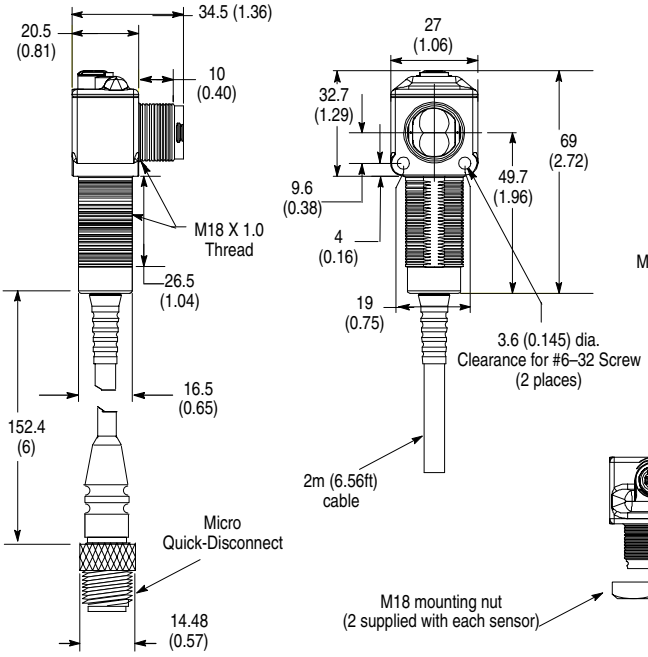
DC Wiring for 42EF–_ _ _F_ _–_ _ Models



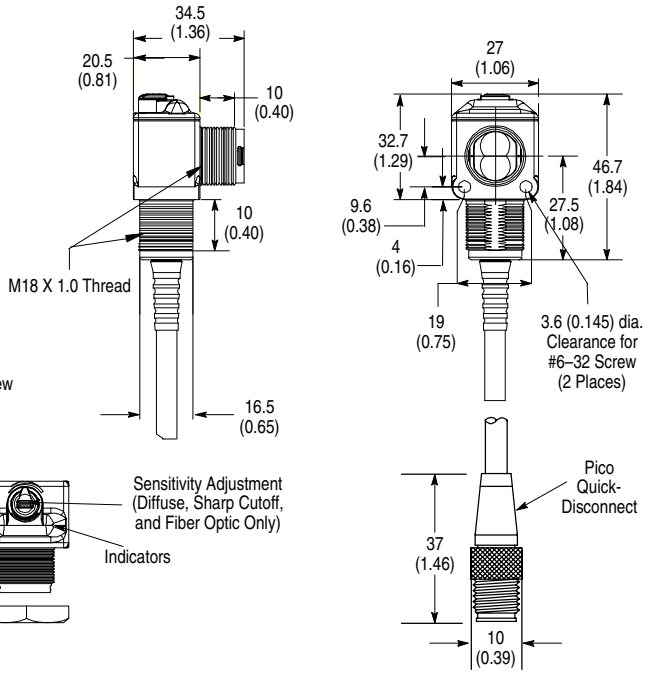
❶ For Allen-Bradley programmable controller compatible interface, refer to publication 42–2.0.
❷ Quick-disconnect wiring codes shown are valid for Allen-Bradley 889D cordsets only.
❸ Red/black (1) red/wt (2) for AC models.
❹ Pin 2 for AC models.
❺ Brown for 42EF–_ _ _F_ _–_ _ models.
❻ Blue for 42EF–_ _ _F_ _–_ _ models.
❼ Red/black for 42EF–_ _ _F_ _–_ _ models.
❽ Red/white for 42EF–_ _ _F_ _–_ _ models.

Dimensions—mm (inches)

AC/DC and DeviceNet Models

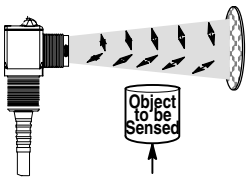


DC Models



RightSight™ Polarized Retroreflective

Standard On/Off



Description

RightSight polarized retroreflective sensors can be used to detect most objects, including shiny objects such as shrink wrapped products, bright metals, foils, etc. They are intended primarily for use in applications where an opaque target will completely block the effective beam between sensor and reflector.

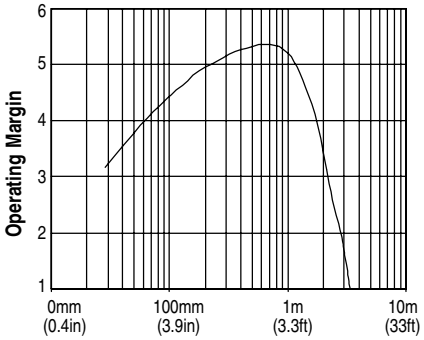
Specifications

Field of View	1.5°
Emitter LED	Visible Red 660nm

QD Cordsets and Accessories

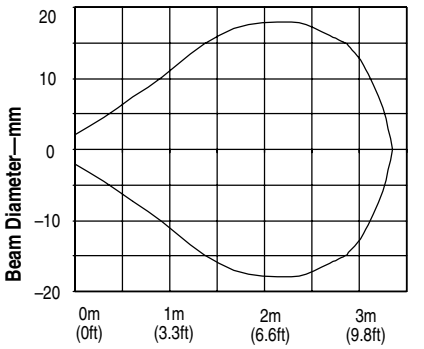
Description	Catalog Number
DC Micro QD Cordset, Straight, 4-pin, 2m	**889D–F4AC–2**
AC Micro QD Cordset, Straight, 4-pin, 2m	**889R–F4AEA–2**
Pico QD Cordset, Straight, 4-pin, 2m	**889P–F4AB–2**
76mm (3in) Diameter with Center Mount Hole	**92–39**
32mm (1.25in) Diameter	**92–47**
Mounting Bracket Swivel/Tilt	**60–2649**

Typical Response Curve



Distance to 76mm Reflector—92–39

Beam Pattern

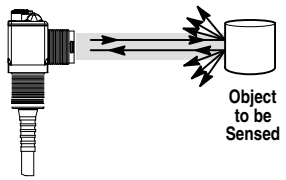


Selection Guide

Operating Voltage/ Current	Sensing Distance	Output Energized	Output Type/ Capacity Response Time	Max Leakage Current	Connection Type	Catalog Number
10.8–30V DC 35mA	25mm (1in) to 3m (9.8ft)	2 Complementary LO/DO Outputs	NPN/100mA 1ms	0.1mA	2m 300V cable	**42EF–P2MNB–A2**
					4-pin DC micro QD	**42EF–P2MNB–F4**
					4-pin pico QD	**42EF–P2MNB–Y4**
			PNP/100mA 1ms		2m 300V cable	**42EF–P2MPB–A2**
					4-pin DC micro QD	**42EF–P2MPB–F4**
					4-pin pico QD	**42EF–P2MPB–Y4**
21.6–264V AC/DC 15mA		Dark Operate	NPN MOSFET/100mA 8.3ms	0.4mA	2m 300V cable	**42EF–P2SCB–A2**
					4-pin AC micro QD	**42EF–P2SCB–G4**
		Light Operate			2m 300V cable	**42EF–P2RCB–A2**
					4-pin AC micro QD	**42EF–P2RCB–G4**
21.6–132V AC/DC 15mA		Dark Operate	PNP MOSFET/100mA 8.3ms	0.01mA	2m 300V cable	**42EF–P2SFB–A2**
					4-pin AC micro QD	**42EF–P2SFB–G4**
		Light Operate			2m 300V cable	**42EF–P2RFB–A2**
					4-pin AC micro QD	**42EF–P2RFB–G4**

RightSight™ Standard Diffuse

Standard On/Off



Description

RightSight standard diffuse sensors are designed to detect light directly reflected by the target surface. The nominal range of these sensors is measured to a standard white paper target. Actual range will depend on the reflectivity of the target.

A single turn sensitivity adjustment is provided to maximize sensor performance in various applications. Successful application of standard diffuse sensors can be challenging, and caution must be used to avoid detecting the background behind the target, or detecting other objects in the target area.

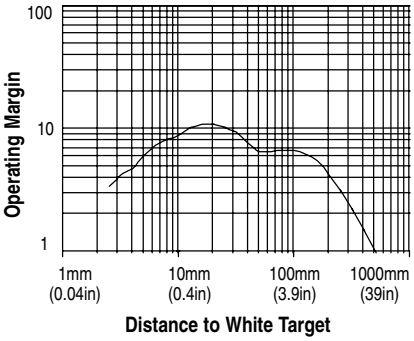
Specifications

Field of View	5°
Emitter LED	Infrared 880nm

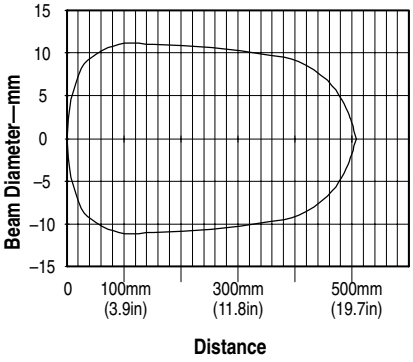
QD Cordsets and Accessories

Description	Catalog Number
DC Micro QD Cordset, Straight, 4-pin, 2m	**889D–F4AC–2**
AC Micro QD Cordset, Straight, 4-pin, 2m	**889R–F4AEA–2**
Pico QD Cordset, Straight, 4-pin, 2m	**889P–F4AB–2**
Mounting Bracket Swivel/Tilt	**60–2649**

Typical Response Curve

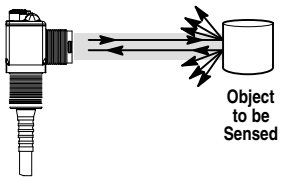


Beam Pattern



Selection Guide

Operating Voltage/ Current	Sensing Distance	Output Energized	Output Type/ Capacity Response Time	Max Leakage Current	Connection Type	Catalog Number
10.8–30V DC 35mA	3mm (0.12in) to 500mm (20in)	2 Complementary LO/DO Outputs	NPN/100mA 1ms	0.1mA	2m 300V cable	**42EF–D1MNAK–A2**
					4-pin DC micro QD	**42EF–D1MNAK–F4**
					4-pin pico QD	**42EF–D1MNAK–Y4**
			PNP/100mA 1ms		2m 300V cable	**42EF–D1MPAK–A2**
					4-pin DC micro QD	**42EF–D1MPAK–F4**
					4-pin pico QD	**42EF–D1MPAK–Y4**
21.6–264V AC/DC 15mA		Light Operate	NPN MOSFET/100mA 8.3ms	0.4mA	2m 300V cable	**42EF–D1RCAK–A2**
					4-pin AC micro QD	**42EF–D1RCAK–G4**
		Dark Operate			2m 300V cable	**42EF–D1SCAK–A2**
					4-pin AC micro QD	**42EF–D1SCAK–G4**
21.6–132V AC/DC 15mA		Light Operate	PNP MOSFET/100mA 8.3ms	0.01mA	2m 300V cable	**42EF–D1RFAK–A2**
					4-pin AC micro QD	**42EF–D1RFAK–G4**
		Dark Operate			2m 300V cable	**42EF–D1SFAK–A2**
					4-pin AC micro QD	**42EF–D1SFAK–G4**



Description

Sharp cutoff diffuse sensors are ideal for short range applications where it is desirable to detect reflections from the target surface, yet ignore reflections from background surfaces or objects directly behind the target.

These sensors are also especially suited for use in applications when high frequency lighting is present. This type of lighting can false trigger conventional photoelectric sensor. The RightSight sharp cutoff diffuse sensor will provide between 10 and 40 times more immunity when compared to a conventional photoelectric sensor.

A single turn sensitivity adjustment is provided to maximize sensor performance in various applications.

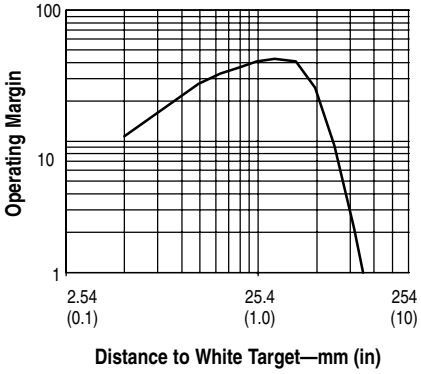
Specifications

Field of View	7°
Emitter LED	Infrared 880nm

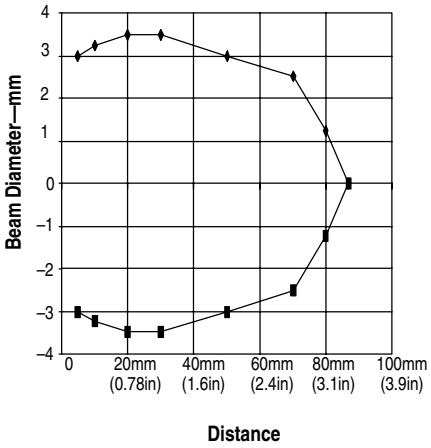
QD Cordsets and Accessories

Description	Catalog Number
DC Micro QD Cordset, Straight, 4-pin, 2m	**889D–F4AC–2**
AC Micro QD Cordset, Straight, 4-pin, 2m	**889R–F4AEA–2**
Pico QD Cordset, Straight, 4-pin, 2m	**889P–F4AB–2**
Mounting Bracket Swivel/Tilt	**60–2649**

Typical Response Curve



Beam Pattern

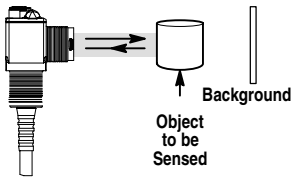


Selection Guide

Operating Voltage/ Current	Sensing Distance	Output Energized	Output Type/ Capacity Response Time	Max Leakage Current	Connection Type	Catalog Number
10.8–30V DC 25mA	3mm (0.12in) to 130mm (5in)	2 Complementary LO/DO Outputs	PNP/100mA 1ms	0.1mA	2m 300V cable	**42EF–S1MPA–A2**
					4-pin DC micro QD	**42EF–S1MPA–F4**
					4-pin pico QD	**42EF–S1MPA–Y4**
			NPN/100mA 1ms		2m 300V cable	**42EF–S1MNA–A2**
					4-pin DC micro QD	**42EF–S1MNA–F4**
					4-pin pico QD	**42EF–S1MNA–Y4**
21.6–264V AC/DC 15mA		Light Operate	NPN MOSFET/100mA 8.3ms	0.4mA	2m 300V cable	**42EF–S1RCA–A2**
					4-pin AC micro QD	**42EF–S1RCA–G4**
		Dark Operate			2m 300V cable	**42EF–S1SCA–A2**
					4-pin AC micro QD	**42EF–S1SCA–G4**
21.6–132V AC/DC 15mA		Light Operate	PNP MOSFET/100mA 8.3ms	0.01mA	2m 300V cable	**42EF–S1RFA–A2**
					4-pin AC micro QD	**42EF–S1RFA–G4**
		Dark Operate			2m 300V cable	**42EF–S1SFA–A2**
					4-pin AC micro QD	**42EF–S1SFA–G4**

RightSight™ Background Suppression

Standard On/Off

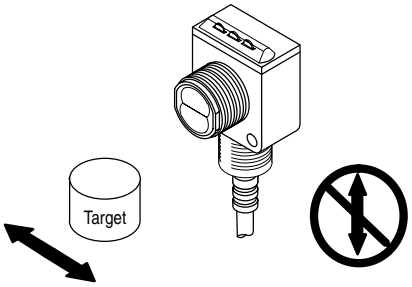


Description

Background suppression sensors are ideal for short range applications where it is desirable to detect reflections from the target surface, yet ignore reflections from background surfaces or objects directly behind the target.

Background suppression sensors contain two active photoelectric sensing elements, calibrated to detect objects in front of and behind the nominal sensing distance. When a target is not present, the sensor can actively detect a background and turn the output on or off.

RightSight background suppression sensors are among the easiest photoelectric sensors to apply. The sensors are non-adjustable to simplify installation and maintenance. Select the appropriate target range: 50mm (2.0in) or 100mm (3.9in) and RightSight will automatically reject most reflections beyond that range.



Due to the detection method, targets traveling horizontal to the sensor's optics are detected, i.e., left to right or front to back. Targets traveling vertically may not be accurately detected.

For reliable background suppression, a minimum separation distance of 6mm (0.24in) is recommended between the target and the background.

Specifications

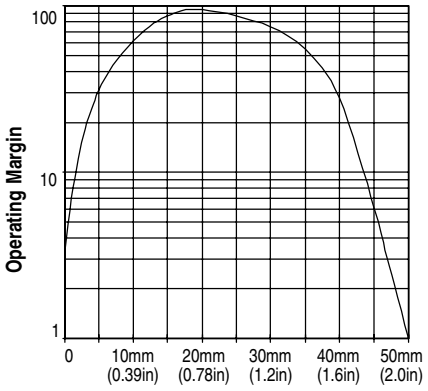
Field of View	50mm (2in): 20° 100mm (3.9in): 8°
Emitter LED	Infrared 880nm

QD Cordsets and Accessories

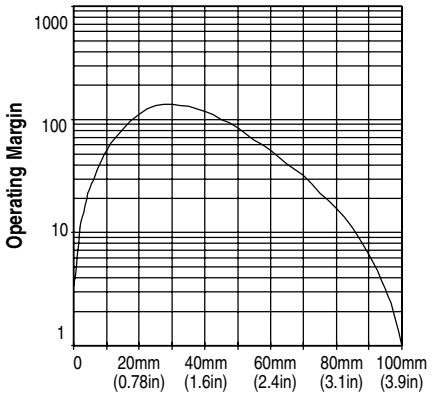
Description	Catalog Number
DC Micro QD Cordset, Straight, 4-pin, 2m	**889D–F4AC–2**
AC Micro QD Cordset, Straight, 4-pin, 2m	**889R–F4AEA–2**
Pico QD Cordset, Straight, 4-pin, 2m	**889P–F4AB–2**
Mounting Bracket Swivel/Tilt	**60–2649**

Typical Response Curves

50mm

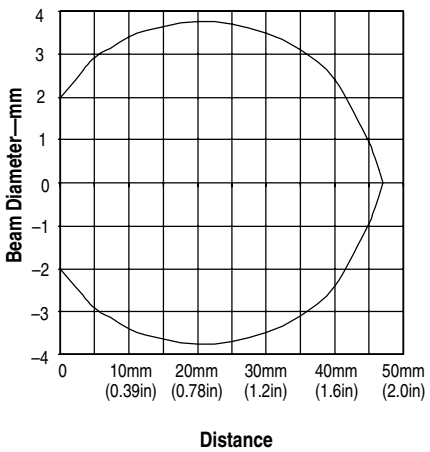


100mm

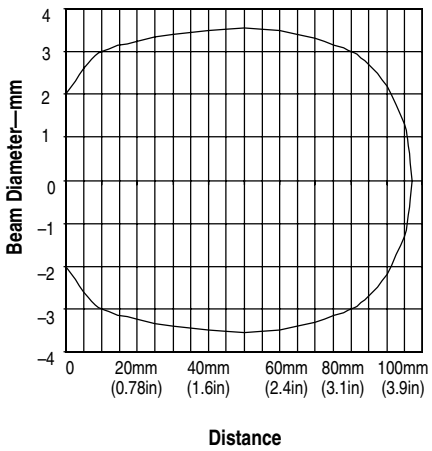


Beam Patterns

50mm



100mm

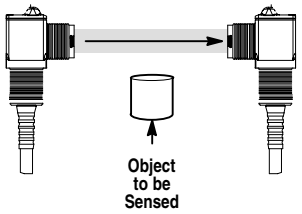


Selection Guide

Operating Voltage/ Current	Sensing Distance	Output Energized	Output Type/ Capacity Response Time	Max Leakage Current	Connection Type	Catalog Number
10.8–30V DC 35mA	3mm (0.12in) to 50mm (2in)	2 Complementary LO/DO Outputs	NPN 100mA 1ms	0.1mA	2m 300V cable	**42EF–B1MNBC–A2**
					4-pin DC micro QD	**42EF–B1MNBC–F4**
					4-pin pico QD	**42EF–B1MNBC–Y4**
			PNP 100mA 1ms		2m 300V cable	**42EF–B1MPBC–A2**
					4-pin DC micro QD	**42EF–B1MPBC–F4**
					4-pin pico QD	**42EF–B1MPBC–Y4**
	3mm (0.12in) to 100mm (3.9in)		NPN 100mA 1ms		2m 300V cable	**42EF–B1MNBE–A2**
					4-pin DC micro QD	**42EF–B1MNBE–F4**
					4-pin pico QD	**42EF–B1MNBE–Y4**
			PNP 100mA 1ms		2m 300V cable	**42EF–B1MPBE–A2**
					4-pin DC micro QD	**42EF–B1MPBE–F4**
					4-pin pico QD	**42EF–B1MPBE–Y4**
21.6–264V AC/DC 15mA	3mm (0.12in) to 50mm (2in)	Light Operate	NPN MOSFET 100mA 8.3ms	0.4mA	2m 300V cable	**42EF–B1RCBC–A2**
					4-pin AC micro QD	**42EF–B1RCBC–G4**
		Dark Operate			2m 300V cable	**42EF–B1SCBC–A2**
					4-pin AC micro QD	**42EF–B1SCBC–G4**
	3mm (0.12in) to 100mm (3.9in)	Light Operate			2m 300V cable	**42EF–B1RCBE–A2**
					4-pin AC micro QD	**42EF–B1RCBE–G4**
		Dark Operate			2m 300V cable	**42EF–B1SCBE–A2**
					4-pin AC micro QD	**42EF–B1SCBE–G4**
21.6–132V AC/DC 15mA	3mm (0.12in) to 50mm (2in)	Light Operate	PNP MOSFET/100mA 8.3ms	0.01mA	2m 300V cable	**42EF–B1RFBC–A2**
					4-pin AC micro QD	**42EF–B1RFBC–G4**
		Dark Operate			2m 300V cable	**42EF–B1SFBC–A2**
					4-pin AC micro QD	**42EF–B1SFBC–G4**
	3mm (0.12in) to 100mm (3.9in)	Light Operate			2m 300V cable	**42EF–B1RFBE–A2**
					4-pin AC micro QD	**42EF–B1RFBE–G4**
		Dark Operate			2m 300V cable	**42EF–B1SFBE–A2**
					4-pin AC micro QD	**42EF–B1SFBE–G4**

RightSight™ Transmitted Beam

Standard On/Off



Description

For most applications, transmitted beam sensing provides the most reliable operation. Transmitted beam sensing generally provides the highest operation margin, reducing the need for cleaning of sensor lenses or reflective targets. Transmitted beam sensing is also typically the best choice for sensing in difficult environments where dust, mist, and other contaminants are present.

RightSight transmitted beam sensors are available in both short and long ranges, 4m (13ft) and 20m (66ft), respectively. The short-range version is ideally suited for installation in high noise environments where the sensor will be mounted close to motor starters, variable speed drives and other high frequency devices. The long-range version should only be used when the sensing distance exceeds 4m (13ft).

Easily mounted slit apertures are available for use when sensing smaller objects at reduced ranges.

The beam pattern for a transmitted beam sensor represents the boundary within which the receiver responds to the emitter, assuming there is no angular misalignment. Angular misalignment between the emitter and receiver will decrease the size of the sensing area. Margins shown are achieved when sensors are used in matched operating voltage pairs, i.e., AC/DC emitter with AC/DC receiver or DC emitter with DC receiver.

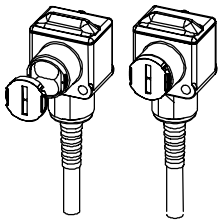
Specifications

Field of View	7°
Emitter LED	Infrared 880nm

QD Cordsets and Accessories

Description	Catalog Number
DC Micro QD Cordset, Straight, 4-pin, 2m	**889D–F4AC–2**
AC Micro QD Cordset, Straight, 4-pin, 2m	**889R–F4AEA–2**
Pico QD Cordset, Straight, 4-pin, 2m	**889P–F4AB–2**
Apertures, 1mm slot	**60–2660**
Apertures, 2mm slot	**60–2661**
Apertures, 4mm slot	**60–2662**
Aperture set	**60–2659**
Mounting Bracket Swivel/Tilt	**60–2649**

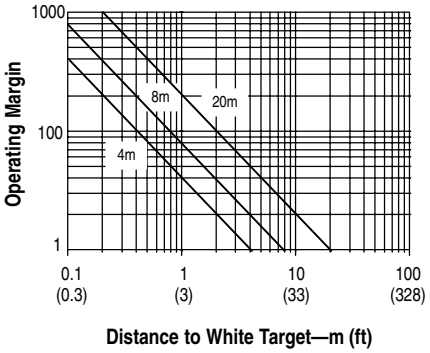
Apertures



Note: 18mm nut must be installed prior to installing aperture if threads on optics snout are to be used.

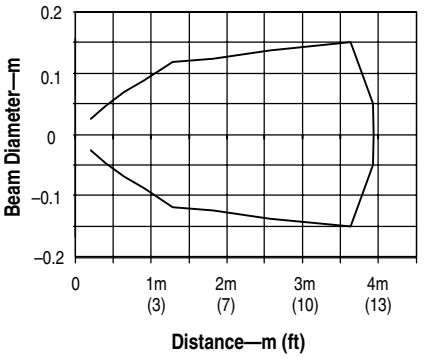
1mm Qty. 20 #**60–2660**
2mm Qty. 20 #**60–2661**
4mm Qty. 20 #**60–2662**
Aperture Set (4 each) #**60–2659**

Typical Response Curve

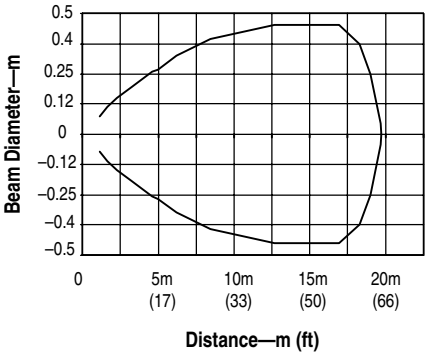


Beam Pattern

4m Receiver Models



20m Receiver Models



Selection Guide for Light Sources

Operating Voltage Supply Current	Max Sensing Distance	Connection Type	Catalog Number
10.8–30V DC 25mA	Depends on Receiver	2m 300V cable	42EF–E1EZB–A2
		4-pin micro QD	42EF–E1EZB–F4
		4-pin pico QD	42EF–E1EZB–Y4
21.6–264V AC/DC 15mA		2m 300V cable	42EF–E1QZB–A2
		4-pin micro QD	42EF–E1QZB–G4
		4-pin pico QD	42EF–E1QZB–Y4

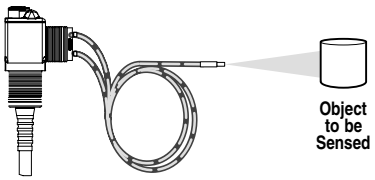
Selection Guide for Receivers

Operating Voltage/ Current	Operating Distance	Output Energized	Output Type/ Capacity Response Time	Max Leakage Current	Connection Type	Catalog Number
10.8–30V DC 25mA	25mm (1in) to 4m (13ft)	2 Complementary LO/DO Outputs	NPN/100mA 4ms	0.1mA	2m 300V cable	42EF–R9MNBV–A2
					4-pin DC micro QD	42EF–R9MNBV–F4
					4-pin DC pico QD	42EF–R9MNBV–Y4
			PNP/100mA 4ms		2m 300V cable	42EF–R9MPBV–A2
					4-pin DC micro QD	42EF–R9MPBV–F4
					4-pin DC pico QD	42EF–R9MPBV–Y4
21.6–132V AC/DC 15mA		Dark Operate	PNP MOSFET/100mA 8.3ms	0.01mA	2m 300V cable	42EF–R9SFBV–A2
					4-pin AC micro QD	42EF–R9SFBV–G4
		Light Operate			2m 300V cable	42EF–R9RFBV–A2
					4-pin AC micro QD	42EF–R9RFBV–G4
21.6–264V AC/DC 15mA		Dark Operate	NPN MOSFET/100mA 16.6ms	0.4mA	2m 300V cable	42EF–R9SCBV–A2
					4-pin AC micro QD	42EF–R9SCBV–G4
		Light Operate			2m 300V cable	42EF–R9RCBV–A2
					4-pin AC micro QD	42EF–R9RCBV–G4
10.8–30V DC 25mA	25mm (1in) to 8m (26.25ft)	2 Complementary LO/DO Outputs	NPN/100mA 4ms	0.1mA	2m 300V cable	42EF–R9MNBT–A2
					4-pin DC micro QD	42EF–R9MNBT–F4
					4-pin DC pico QD	42EF–R9MNBT–Y4
			PNP/100mA 4ms		2m 300V cable	42EF–R9MPBT–A2
					4-pin DC micro QD	42EF–R9MPBT–F4
					4-pin DC pico QD	42EF–R9MPBT–Y4
21.6–264V AC/DC 15mA		Dark Operate	NPN MOSFET/100mA 16.6ms	0.4mA	2m 300V cable	42EF–R9SCBT–A2
					4-pin AC micro QD	42EF–R9SCBT–G4
		Light Operate			2m 300V cable	42EF–R9RCBT–A2
					4-pin AC micro QD	42EF–R9RCBT–G4
10.8–30V DC 25mA	25mm (1in) to 20m (66ft)	2 Complementary LO/DO Outputs	NPN/100mA 8ms	0.1mA	2m 300V cable	42EF–R9MNB–A2
					4-pin DC micro QD	42EF–R9MNB–F4
					4-pin DC pico QD	42EF–R9MNB–Y4
			PNP/100mA 8ms		2m 300V cable	42EF–R9MPB–A2
					4-pin DC micro QD	42EF–R9MPB–F4
					4-pin DC pico QD	42EF–R9MPB–Y4
21.6–264V AC/DC 15mA		Dark Operate	NPN MOSFET/100mA 16.6ms	0.4mA	2m 300V cable	42EF–R9SCB–A2
					4-pin AC micro QD	42EF–R9SCB–G4
		Light Operate			2m 300V cable	42EF–R9RCB–A2
					4-pin AC micro QD	42EF–R9RCB–G4

Note: For maximum performance, transmitted beam sources should be combined with matched operating voltage receivers, i.e., AC/DC source with AC/DC receiver or DC source with DC receiver. Reduced operating distance and margin will result from mixed operating voltage pairs.

RightSight™ Infrared Glass Fiber Optic

Standard On/Off



Description

RightSight infrared fiber optic sensors are best suited for applications where the sensor cannot be placed at the actual sensing position. Infrared sensors with glass fiber optic cables provide the greatest sensing distances and are the most stable when sensing a wide variety of colors.

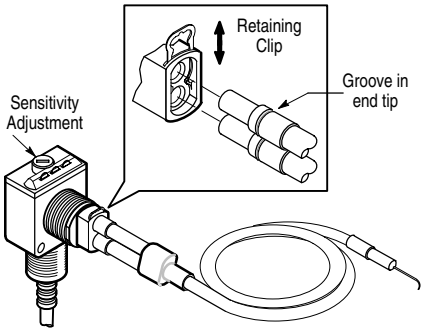
RightSight glass fiber optic sensors will withstand repeated 8270kPa (1200psi) washdowns when used with any Allen-Bradley glass fiber optic cable. However, for best results, PVC sheathed glass fiber optic cables are recommended for use in applications where washdown will occur.

Specifications

Field of View	Depends on Glass Fiber Optic cable selected
Emitter LED	Infrared 880nm

QD Cordsets and Accessories

Description	Catalog Number
DC Micro QD Cordset, Straight, 4-pin, 2m	**889D–F4AC–2**
AC Micro QD Cordset, Straight, 4-pin, 2m	**889R–F4AEA–2**
Pico QD Cordset, Straight, 4-pin, 2m	**889P–F4AB–2**
Mounting Bracket Swivel/Tilt	**60–2649**



Glass Fiber Optic Cables—mm (inches)

Sensing Mode	Glass Fiber Dia.	Fiber Model	Typical Range
Diffuse (Bifurcated Fiber)	3.1 (0.125)	99–32–1	38 (1.5)
	1.1 (0.046)	99–275–1	21 (0.8)
Transmitted Beam (Individual Fiber)	3.1 (0.125)	99–50–1	457 (18)
	1.1 (0.046)	99–715–1	152 (6)

Selection Guide

Operating Voltage/ Current	Sensing Distance	Output Energized	Output Type/ Capacity Response Time	Max Leakage Current	Connection Type	Catalog Number
10.8–30V DC 35mA	Depends on Glass Fiber Optic cable selected	2 Complementary LO/DO Outputs	NPN/100mA 1ms	0.1mA	2m 300V cable	**42EF–G1MNA–A2**
					4-pin DC micro QD	**42EF–G1MNA–F4**
					4-pin pico QD	**42EF–G1MNA–Y4**
			PNP/100mA 1ms		2m 300V cable	**42EF–G1MPA–A2**
					4-pin DC micro QD	**42EF–G1MPA–F4**
					4-pin pico QD	**42EF–G1MPA–Y4**
21.6–264V AC/DC 15mA		Light Operate	NPN MOSFET/100mA 8.3ms	0.4mA	2m 300V cable	**42EF–G1RCA–A2**
					4-pin AC micro QD	**42EF–G1RCA–G4**
		Dark Operate			2m 300V cable	**42EF–G1SCA–A2**
					4-pin AC micro QD	**42EF–G1SCA–G4**
21.6–132V AC/DC 15mA		Light Operate	PNP MOSFET/100mA 8.3ms	0.01mA	2m 300V cable	**42EF–G1RFA–A2**
					4-pin AC micro QD	**42EF–G1RFA–G4**
		Dark Operate			2m 300V cable	**42EF–G1SFA–A2**
					4-pin AC micro QD	**42EF–G1SFA–G4**