



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 are available in either dual NPN and PNP output version or a complementary NPN or PNP light/dark operate output version. 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 MOSMOSFET 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 8–4 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

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Allen-Bradley



RightSight DC model
with short 18mm base



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
- Variety of output types

General Specifications

	DC	AC/DC
Sensing Modes	See Product Selection page NO TAG	
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	Dual NPN and PNP Complementary NPN or PNP	MOSFET
Output Mode	Light/dark operate	Light/dark operate (by model)
Output Rating	100mA @ 30V	100mA @ 264V
Response Time	1ms (4ms for Transmitted Beam) (16.6ms for Transmitted Beam)	8.3ms (16.6ms for T.B.)
Housing Material	Mindel	
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) 22AWG 300V PVC cable	
Supplied Accessories	18mm mounting nut	
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 +55°C (-13°F to +131°F) ≥ 132V AC/DC -25°C to +70°C (-13°F to +158°F) ≤ 132V AC/DC;	
Relative Humidity	5% to 95% (noncondensing)	
Approvals	UL listed, CSA certified, and CE marked for all applicable directives	

LED Indicators

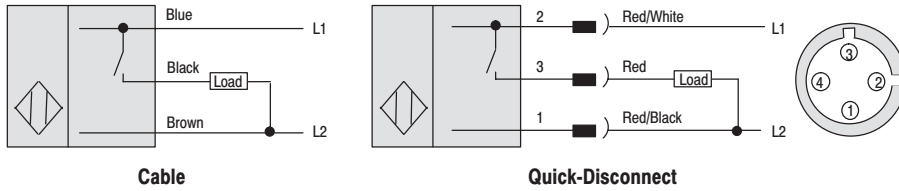
Label	Color	State	Status
Output	Yellow	OFF	Output de-energized
		ON	Output energized
		Flashing	SCP active
Margin	Orange	OFF	Margin < 2.5
		ON	Margin > 2.5
		Flashing	Output SCP active (AC models only)
Status	Green	OFF	Sensor not powered, SCP active, output active
		ON	Sensor powered

Note: For DC models output and margin LEDs alternate flashing when SCP active.

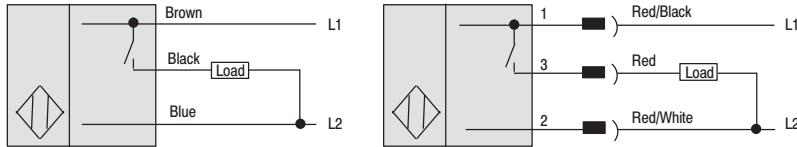
Wiring Diagrams

21.6–264V AC/DC Sensors

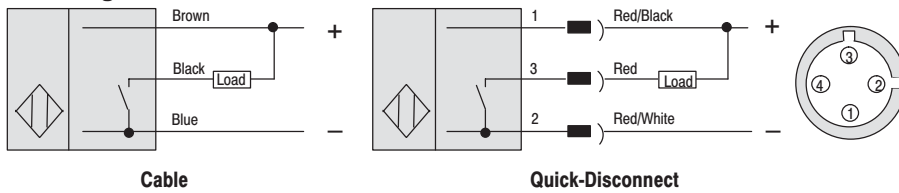
AC Wiring for 42EF- C Models



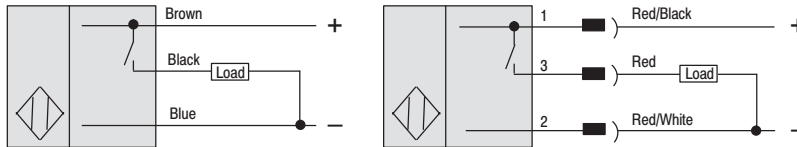
AC Wiring for 42EF- F Models



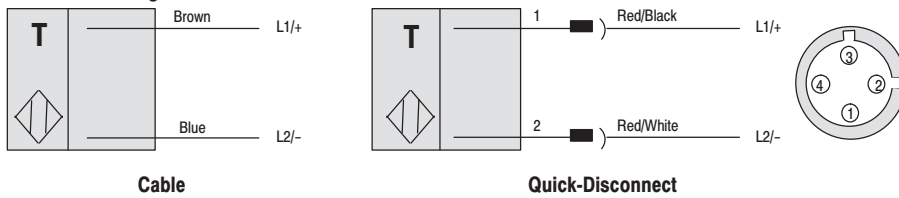
DC Wiring for 42EF- C Models



DC Wiring for 42EF- F Models



**Transmitted Beam Source
AC and DC Wiring**

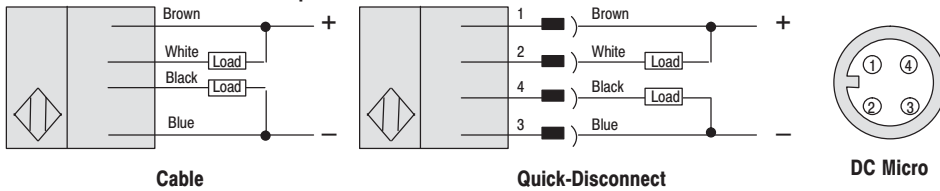


- ❶ For Allen-Bradley programmable controller compatible interface, refer to publication 42-2.0.
- ❷ All wire colors on quick-disconnect models refer to Allen-Bradley 889D cordsets.

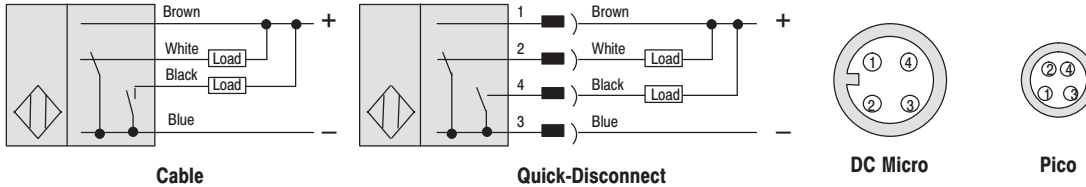
Wiring Diagrams ①②

10.8–30V DC Sensors

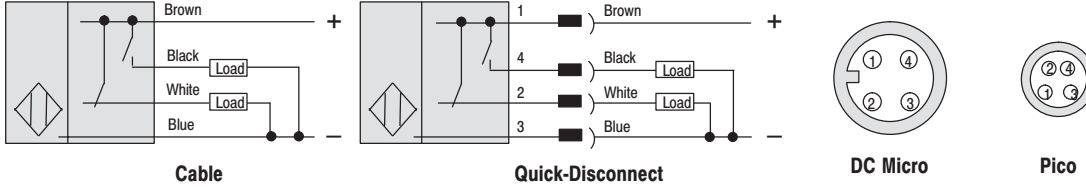
Models with Dual NPN and PNP Outputs



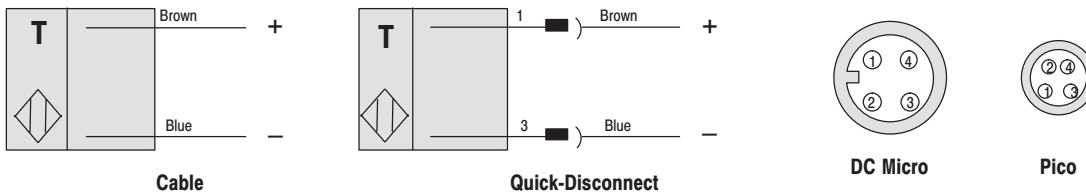
Models with Complementary NPN Outputs



Models with Complementary PNP Outputs



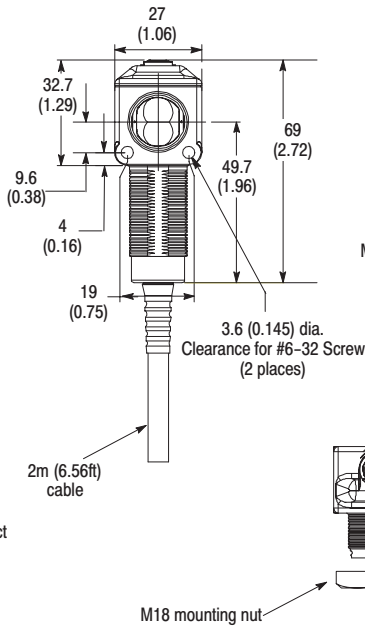
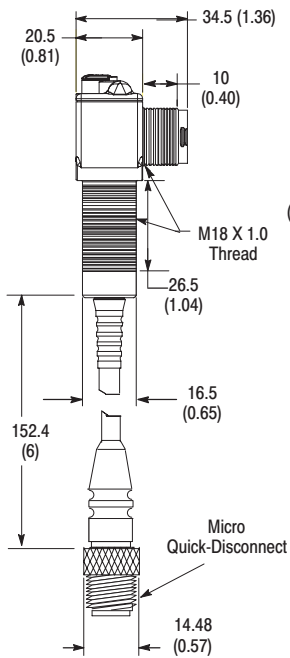
Transmitted Beam Source—All Models



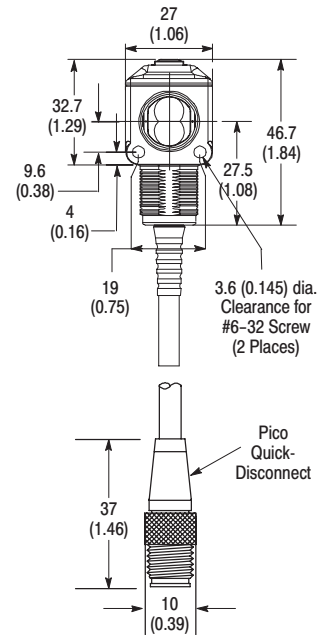
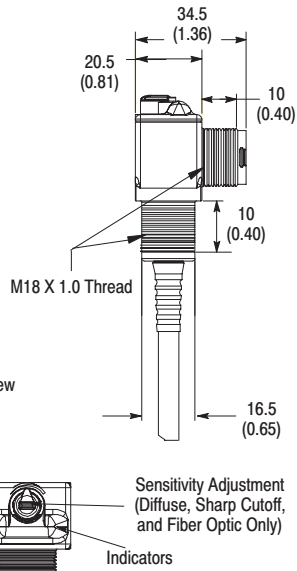
① For Allen-Bradley programmable controller compatible interface, refer to publication 42–2.0.
 ② All wire colors on quick-disconnect models refer to Allen-Bradley 889D cordsets.

Dimensions—mm (inches)

AC/DC and DeviceNet Models



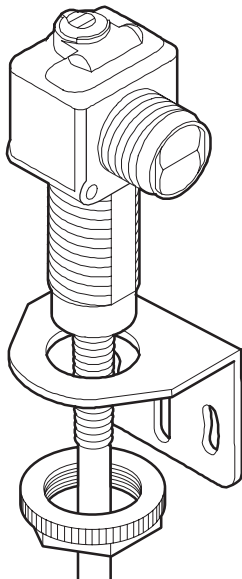
DC Models



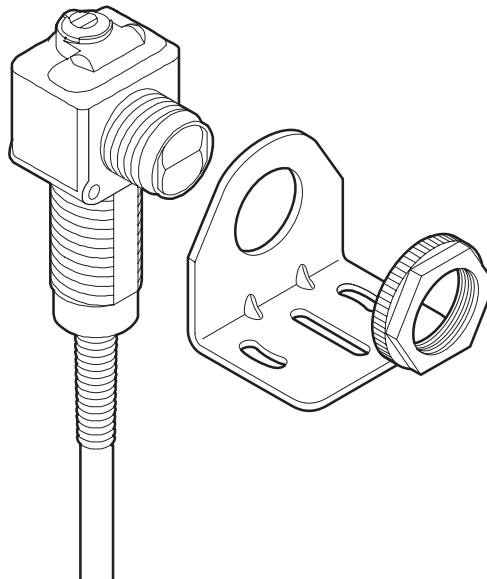
Note: All sensors supplied with one M18 mounting nut (catalog number 75012-097-01) except fiber optic models which come with two M18 mounting nuts (catalog number 75012-025-01).

Mounting Options

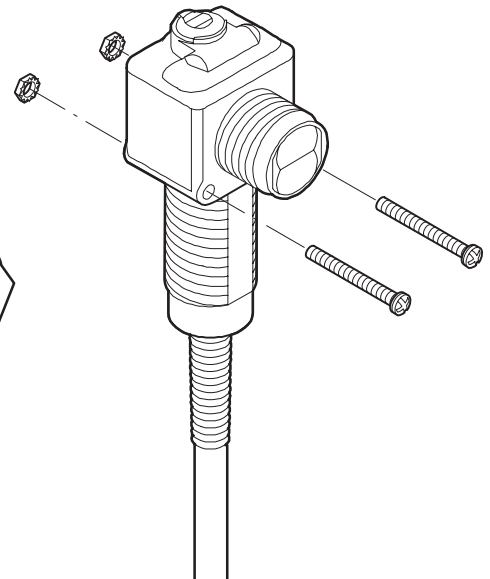
Base Mount



Nose Mount

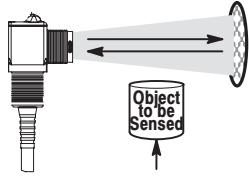


Through-hole Mount



RightSight™ Retroreflective

Standard On/Off



Description

RightSight retroreflective sensors can be used to detect opaque objects such as cartons and totes. They are intended primarily for use in applications where an opaque target will completely block the effective beam between sensor and reflector.

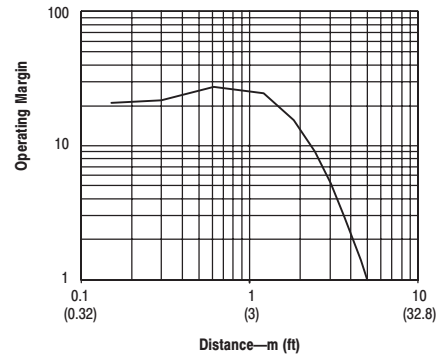
Specifications

Field of View	2.5°
Emitter LED	Visible Red 660nm

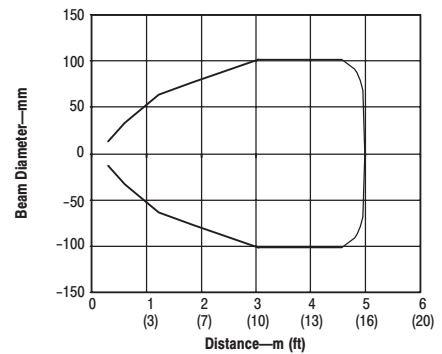
QD Cordsets and Accessories

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
76mm (3in) Diameter Reflector	92-39
32mm (1.25in) Diameter Reflector	92-47
Mounting Bracket Swivel/Tilt	60-2649

Typical Response Curve

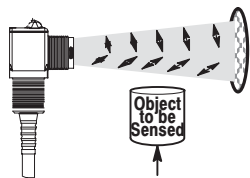


Beam Pattern



Product Selection

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 4.5m (14.7ft)	Dark Operate	NPN and PNP 100mA 1ms	0.1mA	2m 300V cable	42EF-U2KBB-A2 <i>New</i>		
		Light Operate			4-pin DC micro QD	42EF-U2KBB-F4 <i>New</i>		
		Dark Operate	P-MOSFET 100mA 8.3ms		0.01mA	2m 300V cable	42EF-U2SFB-A2 <i>New</i>	
		Light Operate			4-pin AC micro QD	42EF-U2SFB-G4 <i>New</i>		
21.6-132V AC/DC 15mA		2m 300V cable	Dark Operate	N-MOSFET 100mA 8.3ms	0.4mA	4-pin AC micro QD	42EF-U2RFB-A2 <i>New</i>	
			Light Operate			4-pin AC micro QD	42EF-U2RFB-G4 <i>New</i>	
			Dark Operate	N-MOSFET 100mA 8.3ms		0.4mA	2m 300V cable	42EF-U2SCB-A2 <i>New</i>
			Light Operate				4-pin AC micro QD	42EF-U2SCB-G4 <i>New</i>
21.6-264V AC/DC 15mA	2m 300V cable	Dark Operate	N-MOSFET 100mA 8.3ms	0.4mA	4-pin AC micro QD		42EF-U2RCB-A2 <i>New</i>	
		Light Operate			4-pin AC micro QD		42EF-U2RCB-G4 <i>New</i>	



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.

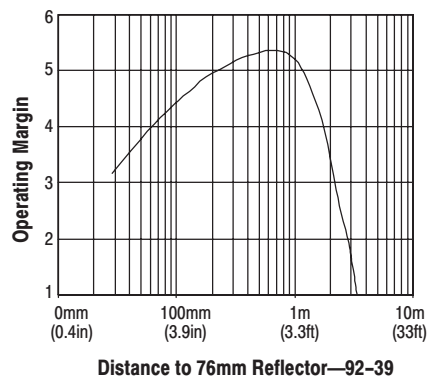
Specifications

Field of View	1.5°
Emitter LED	Visible Red 660nm

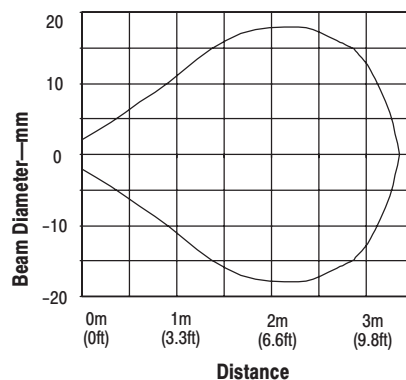
QD Cordsets and Accessories

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 Reflector	92-39
32mm (1.25in) Diameter Reflector	92-47
Mounting Bracket Swivel/Tilt	60-2649

Typical Response Curve



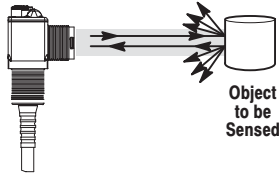
Beam Pattern



Product Selection

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)	Dark Operate	NPN and PNP 100mA 1ms	0.1mA	2m 300V cable	42EF-P2KBB-A2
		Light Operate			4-pin DC micro QD	42EF-P2KBB-F4
		Complementary Light and Dark Operate	NPN/100mA 1ms		2m 300V cable	42EF-P2JBB-A2
					4-pin DC micro QD	42EF-P2JBB-F4
			PNP/100mA 1ms		2m 300V cable	42EF-P2MNB-A2
					4-pin DC micro QD	42EF-P2MNB-F4
					4-pin pico QD	42EF-P2MNB-Y4
					2m 300V cable	42EF-P2MPB-A2
		4-pin DC micro QD	42EF-P2MPB-F4			
		4-pin pico QD	42EF-P2MPB-Y4			
21.6-132V AC/DC 15mA	25mm (1in) to 3m (9.8ft)	Dark Operate	P-MOSFET/100mA 8.3ms	0.01mA	2m 300V cable	42EF-P2SFB-A2
		Light Operate			4-pin AC micro QD	42EF-P2SFB-G4
		Dark Operate	2m 300V cable		42EF-P2RFB-A2	
			4-pin AC micro QD		42EF-P2RFB-G4	
21.6-264V AC/DC 15mA	25mm (1in) to 3m (9.8ft)	Dark Operate	N-MOSFET/100mA 8.3ms	0.4mA	2m 300V cable	42EF-P2SCB-A2
		Light Operate			4-pin AC micro QD	42EF-P2SCB-G4
		Dark Operate	2m 300V cable		42EF-P2RCB-A2	
			4-pin AC micro QD		42EF-P2RCB-G4	





Specifications

Field of View	5°
Emitter LED	Infrared 880nm

QD Cordsets and Accessories

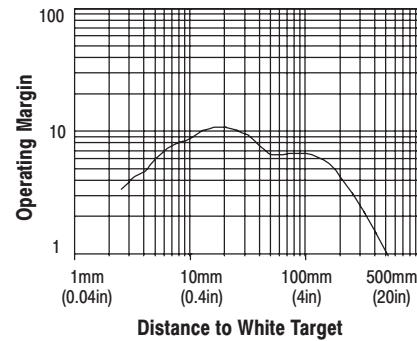
Description	Catalog Number
DC Micro QD Cordset, Straight, 4-pin, 2m	889D-F4AC-2
AC Micro QD Cordset, Straight, 4-pin, 2m	889R-F4AEA-2
Pico QD Cordset, Straight, 4-pin, 2m	889P-F4AB-2
Mounting Bracket Swivel/Tilt	60-2649

Description

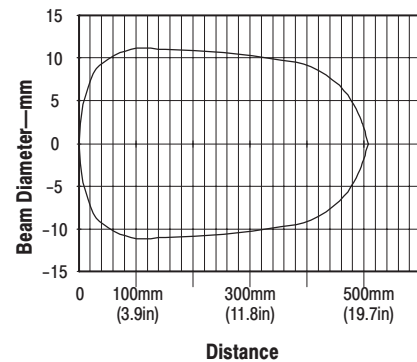
RightSight standard diffuse sensors are designed to detect light directly reflected by the target surface. The nominal range of these sensors is measured to a standard white paper target. Actual range will depend on the reflectivity of the target.

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.

Typical Response Curve

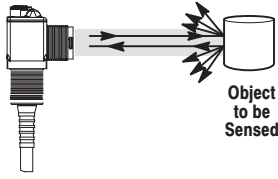


Beam Pattern



Product Selection

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)	Dark Operate	NPN and PNP 100mA 1ms	0.1mA	2m 300V cable	42EF-D1KBAK-A2
		Light Operate			4-pin DC micro QD	42EF-D1KBAK-F4
		Complementary Light and Dark Operate	NPN/100mA 1ms		2m 300V cable	42EF-D1JBAK-A2
					4-pin DC micro QD	42EF-D1JBAK-F4
			PNP/100mA 1ms		2m 300V cable	42EF-D1MNAK-A2
					4-pin DC micro QD	42EF-D1MNAK-F4
					4-pin pico QD	42EF-D1MNAK-Y4
					2m 300V cable	42EF-D1MPAK-A2
		4-pin DC micro QD	42EF-D1MPAK-F4			
		4-pin pico QD	42EF-D1MPAK-Y4			
21.6-132V AC/DC 15mA	3mm (0.12in) to 500mm (20in)	Light Operate	P-MOSFET/100mA 8.3ms	0.01mA	2m 300V cable	42EF-D1RFAK-A2
		Dark Operate			4-pin AC micro QD	42EF-D1RFAK-G4
		Light Operate	N-MOSFET/100mA 8.3ms		2m 300V cable	42EF-D1SFAK-A2
					4-pin AC micro QD	42EF-D1SFAK-G4
Dark Operate	N-MOSFET/100mA 8.3ms	2m 300V cable	42EF-D1RCAK-A2			
		4-pin AC micro QD	42EF-D1RCAK-G4			
Light Operate	N-MOSFET/100mA 8.3ms	N-MOSFET/100mA 8.3ms	0.4mA	2m 300V cable	42EF-D1SCAK-A2	
				4-pin AC micro QD	42EF-D1SCAK-G4	
Dark Operate	N-MOSFET/100mA 8.3ms	N-MOSFET/100mA 8.3ms	0.4mA	2m 300V cable	42EF-D1SCAK-A2	
				4-pin AC micro QD	42EF-D1SCAK-G4	



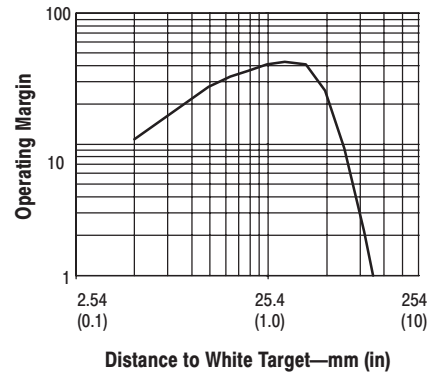
Specifications

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



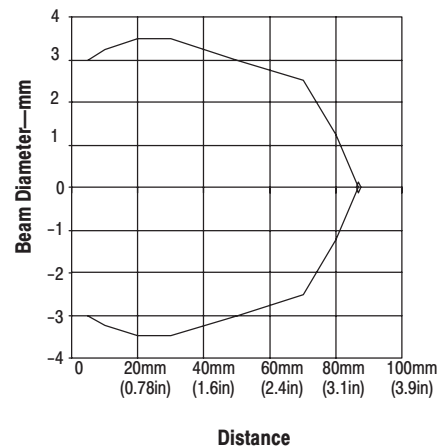
Description

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.

Beam Pattern



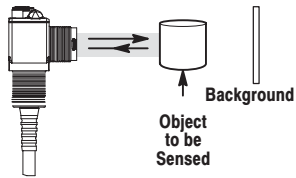
Product Selection

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)	Dark Operate	NPN and PNP 100mA 1ms	0.1mA	2m 300V cable	42EF-S1KBA-A2
		Light Operate			4-pin DC micro QD	42EF-S1KBA-F4
		Complementary Light and Dark Operate	PNP/100mA 1ms		2m 300V cable	42EF-S1JBA-A2
					4-pin DC micro QD	42EF-S1JBA-F4
			NPN/100mA 1ms		2m 300V cable	42EF-S1MPA-A2
					4-pin DC micro QD	42EF-S1MPA-F4
					4-pin pico QD	42EF-S1MPA-Y4
					2m 300V cable	42EF-S1MNA-A2
		4-pin DC micro QD	42EF-S1MNA-F4			
		4-pin pico QD	42EF-S1MNA-Y4			
21.6–132V AC/DC 15mA		Light Operate	P-MOSFET/100mA 8.3ms	0.01mA	2m 300V cable	42EF-S1RFA-A2
		Dark Operate			4-pin AC micro QD	42EF-S1RFA-G4
		Light Operate	2m 300V cable		42EF-S1SFA-A2	
			4-pin AC micro QD		42EF-S1SFA-G4	
21.6–264V AC/DC 15mA		Light Operate	N-MOSFET/100mA 8.3ms	0.4mA	2m 300V cable	42EF-S1RCA-A2
		Dark Operate			4-pin AC micro QD	42EF-S1RCA-G4
		Light Operate	2m 300V cable		42EF-S1SCA-A2	
			4-pin AC micro QD		42EF-S1SCA-G4	

Allen-Bradley

RightSight™ Background Suppression

Standard On/Off



Specifications

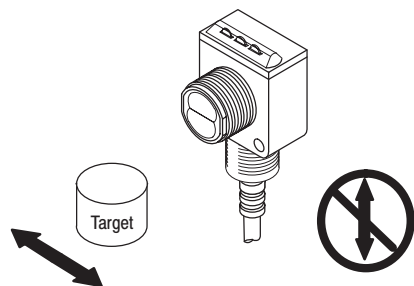
Field of View	50mm (2in): 20° 100mm (3.9in): 8°
Emitter LED	Infrared 880nm

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.

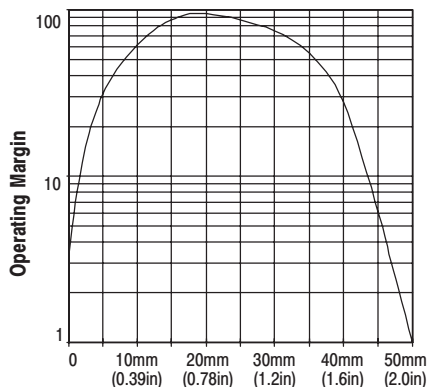
For reliable background suppression, a minimum separation distance of 6mm (0.24in) is recommended between the target and the background.

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

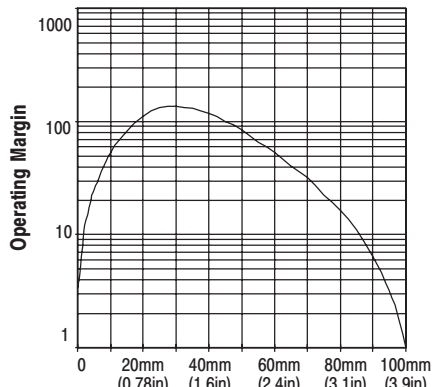
Typical Response Curves

50mm



Distance to White Target

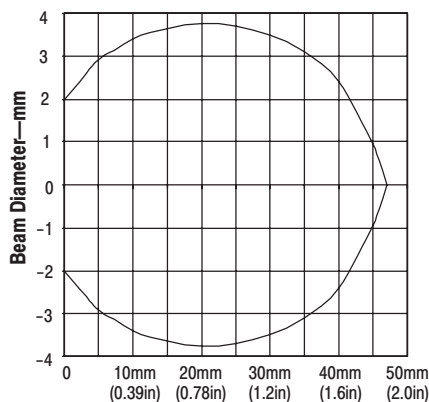
100mm



Distance to White Target

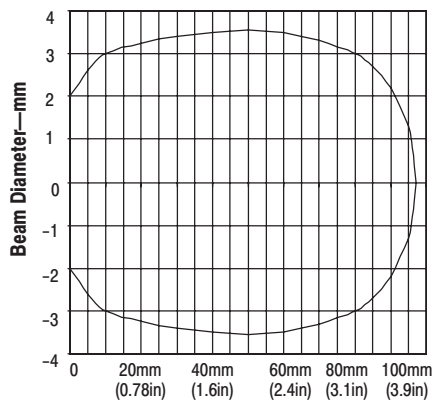
Beam Patterns

50mm



Distance

100mm



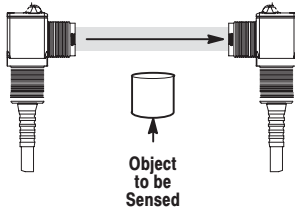
Distance

Product Selection

Operating Voltage/ Current	Sensing Distance	Output Energized	Output Type/ Capacity Response Time	Max Leakage Current	Connection Type	Catalog Number		
10.8–30V DC 35mA	50mm (1.97in)	Dark Operate	NPN and PNP 100mA 1ms	0.1mA	2m 300V cable	42EF-B1KBBC-A2		
		Light Operate			4-pin DC micro QD	42EF-B1KBBC-F4		
					Dark Operate	2m 300V cable	42EF-B1JBBC-A2	
		Light Operate				4-pin DC micro QD	42EF-B1JBBC-F4	
	100mm (3.94in)				Dark Operate	NPN and PNP 100mA 1ms	2m 300V cable	42EF-B1KBBE-A2
		Light Operate			4-pin DC micro QD		42EF-B1KBBE-F4	
					Dark Operate		2m 300V cable	42EF-B1JBBE-A2
		Light Operate					4-pin DC micro QD	42EF-B1JBBE-F4
	3mm (0.12in) to 50mm (2in)		Complementary Light and Dark Operate		NPN 100mA 1ms		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
					4-pin DC micro QD	42EF-B1MPBC-F4		
						4-pin pico QD	42EF-B1MPBC-Y4	
					3mm (0.12in) to 100mm (3.9in)		Complementary Light and Dark Operate	NPN 100mA 1ms
		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					
21.6–132V AC/DC 15mA			3mm (0.12in) to 50mm (2in)	PNP-FET/100mA 8.3ms		0.01mA		2m 300V cable
	Light Operate	4-pin AC micro QD						42EF-B1RFBC-G4
		Dark Operate			2m 300V cable		42EF-B1SFBC-A2	
	Light Operate				4-pin AC micro QD		42EF-B1SFBC-G4	
		3mm (0.12in) to 100mm (3.9in)	Dark Operate		2m 300V cable		42EF-B1RFBE-A2	
	4-pin AC micro QD				42EF-B1RFBE-G4			
					2m 300V cable		42EF-B1SFBE-A2	
	4-pin AC micro QD						42EF-B1SFBE-G4	
21.6–264V AC/DC 15mA	3mm (0.12in) to 50mm (2in)	N-MOSFET 100mA 8.3ms	0.4mA	2m 300V cable	42EF-B1RCBC-A2			
				Light Operate	4-pin AC micro QD	42EF-B1RCBC-G4		
					Dark Operate	2m 300V cable	42EF-B1SCBC-A2	
				Light Operate		4-pin AC micro QD	42EF-B1SCBC-G4	
	3mm (0.12in) to 100mm (3.9in)				Dark Operate	2m 300V cable	42EF-B1RCBE-A2	
				4-pin AC micro QD		42EF-B1RCBE-G4		
						2m 300V cable	42EF-B1SCBE-A2	
				4-pin AC micro QD			42EF-B1SCBE-G4	

Allen-Bradley

PHOTOSWITCH[®] Photoelectric Sensors
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.

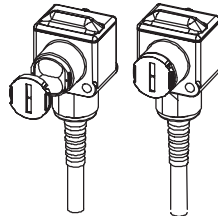
Specifications

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

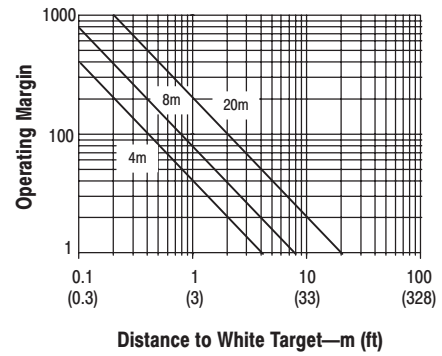
Apertures



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

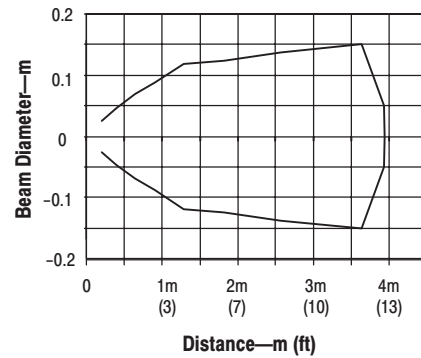
- 1mm Qty. 20 #60-2660
- 2mm Qty. 20 #60-2661
- 4mm Qty. 20 #60-2662
- Aperture Set (4 each) #60-2659

Typical Response Curve

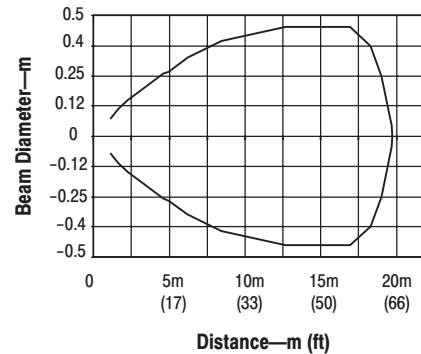


Beam Pattern

4m Receiver Models



20m Receiver Models



Product Selection 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 DC 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 AC micro QD	42EF-E1QZB-G4

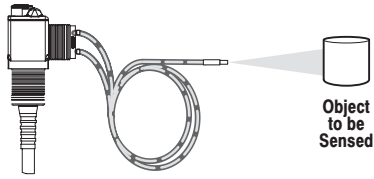
Product Selection for Receivers

Operating Voltage/ Current	Operating Distance	Output Energized	Output Type/ Capacity Response Time	Max Leakage Current	Connection Type	Catalog Number		
10.8–30V DC 25mA	20m (65.6ft)	Dark Operate	NPN and PNP 100mA 4ms	0.1mA	2m 300V cable	42EF-R9KBB-A2		
		Light Operate			4-pin DC micro QD	42EF-R9KBB-F4		
	4m (13.1ft)	Dark Operate			2m 300V cable	42EF-R9JBB-A2		
		Light Operate			4-pin DC micro QD	42EF-R9JBB-F4		
	8m (26.25ft)	Dark Operate			2m 300V cable	42EF-R9KBBV-A2		
		Light Operate			4-pin DC micro QD	42EF-R9KBBV-F4		
	4m (13ft)	Dark Operate			2m 300V cable	42EF-R9JBBV-A2		
					4-pin DC micro QD	42EF-R9JBBV-F4		
		Light Operate	2m 300V cable		42EF-R9KBBT-A2			
			4-pin DC micro QD		42EF-R9KBBT-F4			
		Complementary Light and Dark Operate	2m 300V cable		42EF-R9JBBT-A2			
			4-pin DC micro QD		42EF-R9JBBT-F4			
			2m 300V cable		42EF-R9MNBV-A2			
			4-pin DC micro QD		42EF-R9MNBV-F4			
	8m (26.25ft)	Dark Operate	NPN/100mA 4ms		4-pin DC pico QD	42EF-R9MNBV-Y4		
			PNP/100mA 4ms		2m 300V cable	42EF-R9MPBV-A2		
		Light Operate	NPN/100mA 4ms		4-pin DC micro QD	42EF-R9MPBV-F4		
			PNP/100mA 4ms		4-pin DC pico QD	42EF-R9MPBV-Y4		
	20m (65.6ft)	Dark Operate	NPN/100mA 4ms		2m 300V cable	42EF-R9MNBV-A2		
			PNP/100mA 4ms		4-pin DC micro QD	42EF-R9MNBV-F4		
		Light Operate	NPN/100mA 4ms		4-pin DC pico QD	42EF-R9MNBV-Y4		
			PNP/100mA 4ms		2m 300V cable	42EF-R9MPBT-A2		
	21.6–132V AC/DC 15mA	4m (13ft)	Dark Operate		P-MOSFET/100mA 8.3ms 16.6ms	0.01mA	2m 300V cable	42EF-R9SFBV-A2
			Light Operate				4-pin AC micro QD	42EF-R9SFBV-G4
Dark Operate			2m 300V cable	42EF-R9RFBV-A2				
			4-pin AC micro QD	42EF-R9RFBV-G4				
8m (26.25ft)		Dark Operate	N-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	
20m (65.6ft)		Dark Operate	N-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	
21.6–264V AC/DC 15mA	8m (26.25ft)	Dark Operate	N-MOSFET/100mA 16.6ms	0.4mA	2m 300V cable	42EF-R9SCB-A2		
		Light Operate			4-pin AC micro QD	42EF-R9SCB-G4		
	20m (65.6ft)	Dark Operate			2m 300V cable	42EF-R9SCB-A2		
		Light Operate			4-pin AC micro QD	42EF-R9SCB-G4		
21.6–264V AC/DC 15mA	8m (26.25ft)	Dark Operate	N-MOSFET/100mA 16.6ms	0.4mA	2m 300V cable	42EF-R9RCB-A2		
		Light Operate			4-pin AC micro QD	42EF-R9RCB-G4		
	20m (65.6ft)	Dark Operate			2m 300V cable	42EF-R9RCB-A2		
		Light Operate			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



Specifications

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

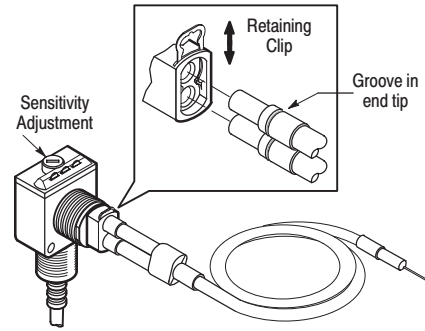
QD Cordsets and Accessories

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

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.



Glass Fiber Optic Cables—mm (inches)

Sensing Mode	Fiber Model	Typical Range
Diffuse (Bifurcated Fiber)	43GR-TBB25SL	38 (1.5)
	43GR-TFS10ML	21 (0.8)
Transmitted Beam (Individual Fiber)	43GT-FAS25SL	457 (18)
	43GT-TFS10ML	152 (6)

Product Selection

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	Dark Operate	NPN and PNP 100mA 1ms	0.1mA	2m 300V cable	42EF-G1KBA-A2			
		Light Operate			4-pin DC micro QD	42EF-G1KBA-F4			
		Complementary Light and Dark Operate	NPN/100mA 1ms		2m 300V cable	42EF-G1JBA-A2			
					4-pin DC micro QD	42EF-G1JBA-F4			
			PNP/100mA 1ms		2m 300V cable	42EF-G1MNA-A2			
					4-pin DC micro QD	42EF-G1MNA-F4			
		21.6-132V AC/DC 15mA	Depends on Glass Fiber Optic cable selected		Light Operate	P-MOSFET/100mA 8.3ms	0.01mA	4-pin pico QD	42EF-G1MNA-Y4
								Dark Operate	2m 300V cable
4-pin DC micro QD	42EF-G1MPA-F4								
Light Operate	4-pin pico QD			42EF-G1MPA-Y4					
	Dark Operate			2m 300V cable	42EF-G1RFA-A2				
4-pin AC micro QD				42EF-G1RFA-G4					
21.6-264V AC/DC 15mA	Depends on Glass Fiber Optic cable selected	Light Operate	N-MOSFET/100mA 8.3ms	0.4mA	2m 300V cable	42EF-G1SFA-A2			
					Dark Operate	4-pin AC micro QD	42EF-G1SFA-G4		
		Light Operate				2m 300V cable	42EF-G1RCA-A2		
					Dark Operate	4-pin AC micro QD	42EF-G1RCA-G4		
2m 300V cable	42EF-G1SCA-A2								
4-pin AC micro QD	42EF-G1SCA-G4								