



RightSight DC model with short 18 mm base

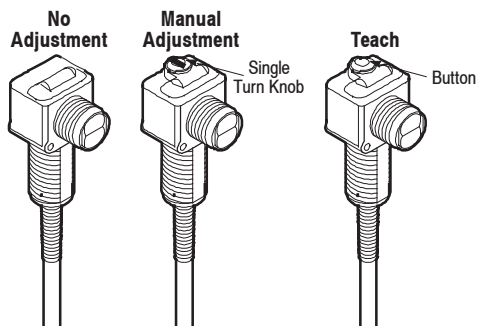
Features

- Compact right angle housing
- Flexible 18 mm mounting options
- 1200 psi washdown rating
- Non-adjustable, adjustable and teach versions
- 360° visible LED indicators
- Reverse polarity protection
- Short-circuit protected outputs
- Fast 1 ms response time (DC)
- False pulse protection
- Variety of output types
- Laser models available (see page 1-108)

Specifications

Environmental	
Certifications	UL Listed, CSA Certified and CE Marked for all applicable directives
Operating Environment	NEMA 4X, 6P, IP67 (IEC 529); 1200 psi (8270 kPa) washdown, IP69K
Operating Temperature [C (F)]	-25...+70° (-13...+158°) ≤ 132V AC/DC -25...+55° (-13...+131°) ≥ 132V AC/DC
Vibration	10...55 Hz, 1 mm amplitude, meets or exceeds IEC 60068-2-6
Shock	30 g with 1 ms pulse duration, meets or exceeds IEC 60068-2-27
Relative Humidity	5...95% (noncondensing)
Ambient Light Immunity	Incandescent light 5000 lux
Optical	
Sensing Modes	Retroreflective, polarized retroreflective, diffuse, background suppression, sharp cutoff, fixed focus, fiber optic, transmitted beam
Sensing Range	See Product Selection table on page 1-34
Field of View	See Product Selection table on 1-34
Light Source	Visible red LED (660 nm) or infrared LED (880 nm)
LED Indicators	See User Interface below
Adjustments	Sensitivity potentiometer, teach button, or fixed by cat. no.
Electrical	
Voltage	10.8...30V DC, 21.6...264V AC
Current Consumption	35 mA max (DC), 25 mA max (AC)
Sensor Protection	False pulse, reverse polarity, overload, short circuit
Outputs	
Response Time	1 ms (4 ms for transmitted beam) DC models 8.3 ms (16.6 ms for transmitted beam) AC models
Output Type	PNP or NPN by cat. no., PNP and NPN, N-MOSFET
Output Mode	Complementary light or dark operate, light or dark operate by cat. no.
Output Current	100 mA
Output Leakage Current	0.1 mA max (DC); 0.4 mA max (AC)
Mechanical	
Housing Material	Mindel
Lens Material	Acrylic
Cover Material	Udel
Connection Types	2 m cable, 4-pin DC micro (M12) QD, 4-pin pico (M8) QD
Supplied Accessories	18 mm fastening nuts
Optional Accessories	See mounting brackets, reflectors, and cordsets on page 1-39

User Interface



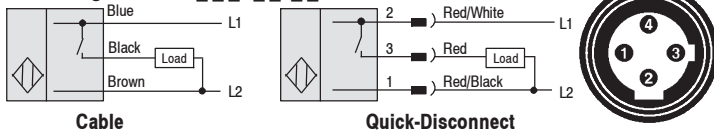
Color	State	Status—Nonteach Version	Status—Teach Version
Yellow	OFF	Output de-energized	Output de-energized
	ON	Output energized	Output energized
	Flashing	SCP active	NA
Orange	OFF	Margin < 2.5	Normal operation
	ON	Margin > 2.5	Teach mode active
	Flashing	Output SCP active (AC models only)	Teach mode active or output SCP active
Green	OFF	Sensor not powered, SCP active, output active	Sensor not powered
	ON	Sensor powered	Sensor powered
	Flashing	NA	Unstable margin condition or output SCP active

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

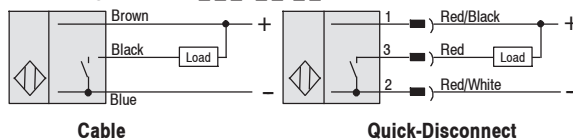
Wiring Diagrams ①②

21.6...264V AC/DC Sensors

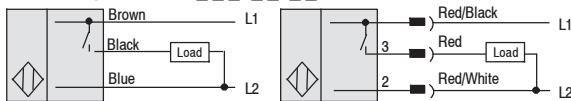
AC Wiring for 42EF- C - Models



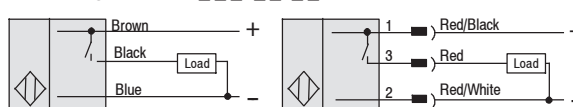
DC Wiring for 42EF- C - Models



AC Wiring for 42EF- F - Models



DC Wiring for 42EF- F - Models



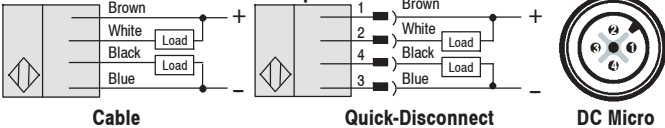
Transmitted Beam Source

21.6...264V AC/DC

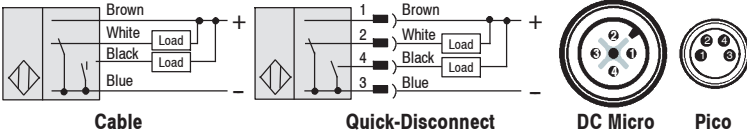


10.8...30V DC Sensors

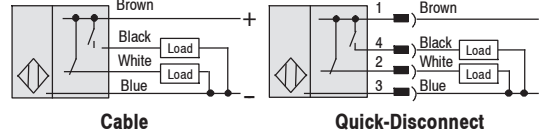
Models with Dual NPN and PNP Outputs



Models with Complementary NPN Outputs



Models with Complementary PNP Outputs

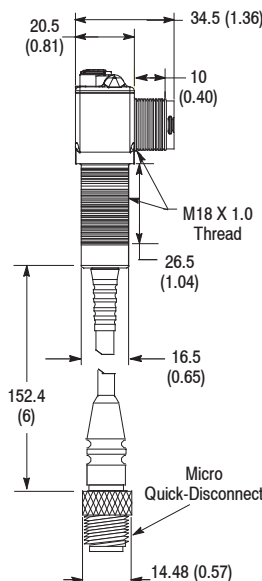


① For Rockwell Automation programmable controller compatible interface, refer to publication 42-2.0.

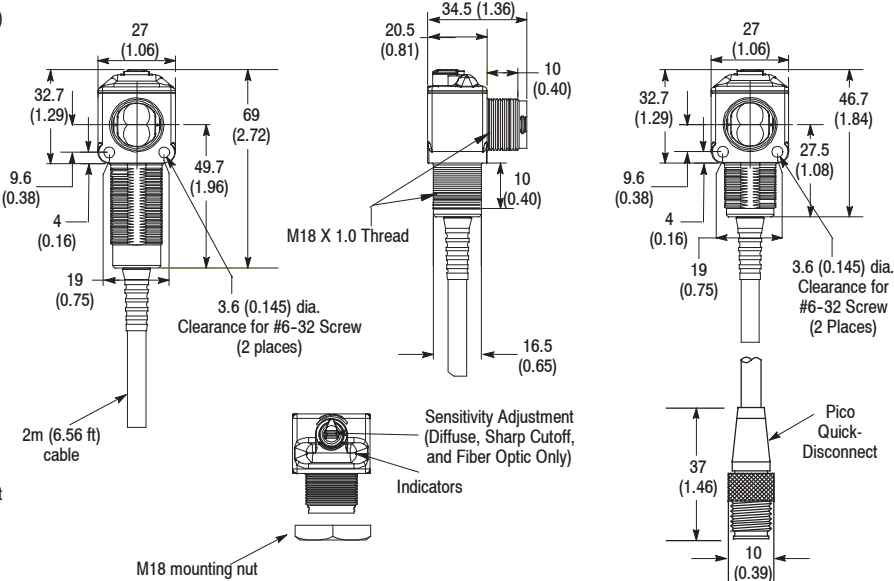
② All wire colors on quick-disconnect models refer to Rockwell Automation cordsets.

Approximate Dimensions [mm (in.)]

AC/DC and DeviceNet Models



DC Models



Note: All sensors supplied with one M18 mounting nut (Cat. No. 75012-097-01) except fiber optic models which come with two M18 mounting nuts (Cat. No. 75012-025-01).



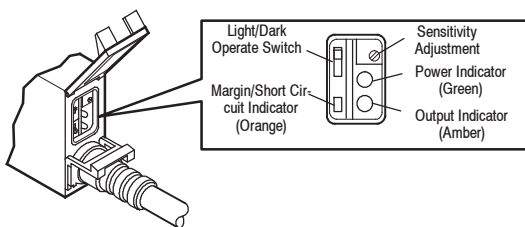
Specifications

Environmental	
Certifications	UL, CSA and CE Marked for all applicable directives
Operating Environment	NEMA 4X, 6P, IP67, 1200 psi (8270 kPa) washdown
Operating Temperature [C (F)]	-20...+70° (-4...+158°)
Vibration	10...55 Hz, 1 mm amplitude, meets or exceeds IEC 60947-5-2
Shock	30 g with 1 ms pulse duration, meets or exceeds IEC 60947-5-2
Relative Humidity	5...95%
Optical	
Sensing Modes	Retrotreflective, polarized retroreflective, diffuse, wide angle diffuse, fixed focus diffuse, transmitted beam, fiber optic
Sensing Range	See Product Selection table on page 1-45
Field of View	See Product Selection table on page 1-45
Light Source	Visible red LED (660 nm), infrared LED (880 nm)
LED Indicators	See User Interface below
Adjustments	Multi-turn potentiometer
Electrical	
Voltage	10.8...30V DC, 21.6...250V AC/DC
Current Consumption	30 mA max. (DC)
Sensor Protection	Overload, short circuit, reverse polarity, false pulse
Outputs	
Response Time	See Product Selection table on page 1-45
Output Type	PNP and NPN (DC), MOSFET (AC/DC)
Output Mode	Light operate or dark operate selectable
Output Current	100 mA @ 30V DC max
Output Leakage Current	0.1 mA max (DC), 1.7 mA (AC/DC)
Mechanical	
Housing Material	Noryl 190X
Lens Material	Acrylic
Connection Types	2 m cable (24 AWG), 4-pin DC micro (M12) QD, 3-pin AC micro (M12)
Supplied Accessories	75012-097-01 18 mm locknut
Optional Accessories	See mounting brackets, reflectors, and cordsets on page 1-47

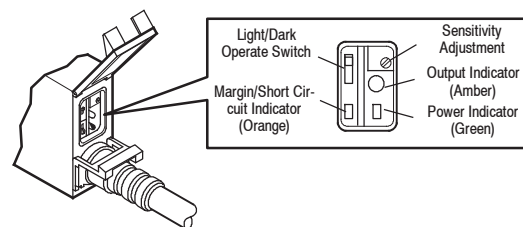
Features

- Compact rectangular size with standard 18 mm mounting nose
- Visible indicators for power, output, and 2.5X margin/short circuit
- Short circuit protection in all versions, including two-wire universal voltage versions
- False pulse protection
- Switch selectable light or dark operation
- Access to sensor adjustments through captive cover that does not require tools for access
- Eight sensing modes available
- Rated to withstand high temperature 1200 psi washdowns
- 300 μs high speed DC versions
- No tools are required to attach fiber optic cables to either glass or plastic fiber optic sensors

User Interface



NOTE: The power indicator will turn off when the output indicator is on. The cat. no. for the Rear Snap Cover is 60-2679.

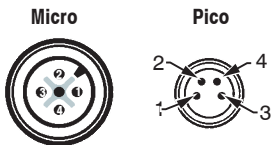
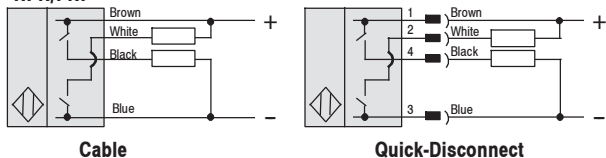


NOTE: The power indicator will turn off when the output indicator is on. The cat. no. for the Rear Snap Cover is 60-2679.

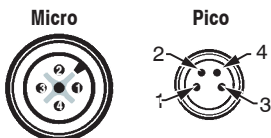
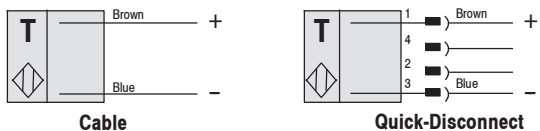
Wiring Diagrams ①②

11...30V DC Sensors

NPN/PNP

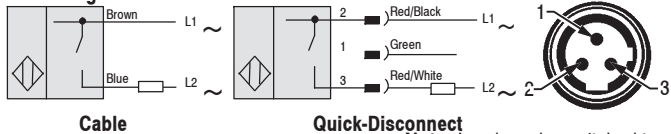


Transmitted Beam Source

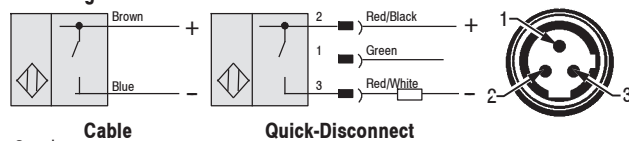


22...250V AC/DC Sensors

AC Wiring

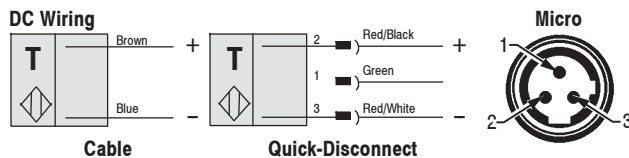
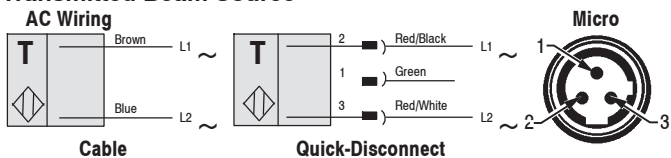


DC Wiring



Note: Load can be switched to pin 2 or brown.

Transmitted Beam Source

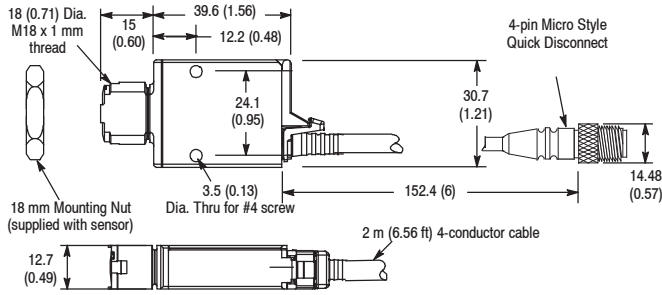


① For Rockwell Automation programmable controller compatible interface, refer to PHOTOSWITCH® Photoelectric Sensors and Programmable Controller Interface Manual at www.ab.com/literature.

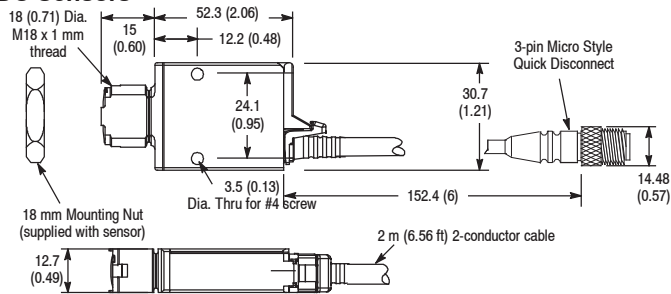
② Quick-disconnect wiring codes shown are valid for Rockwell Automation cables only.

Approximate Dimensions [mm (in.)]

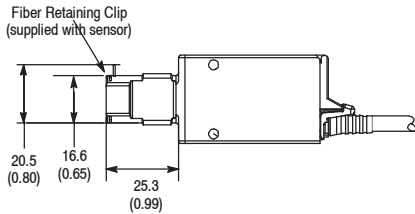
DC Sensors



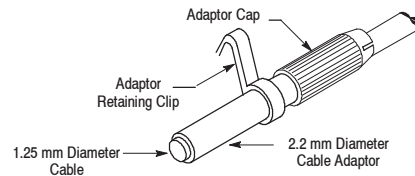
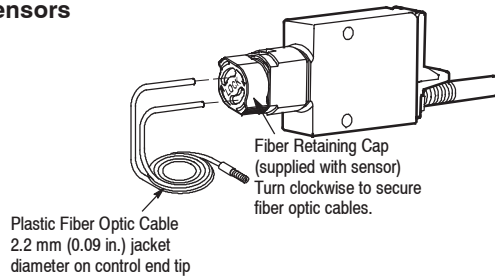
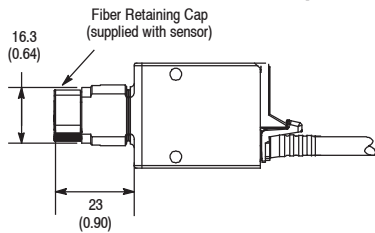
AC/DC Sensors



Infrared Glass Fiber Optic Sensors



Visible Red Plastic Fiber Optic Sensors

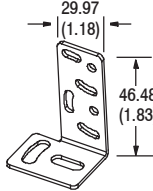
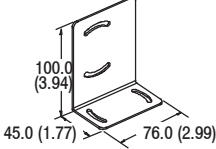
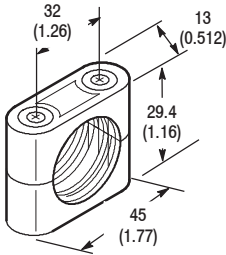
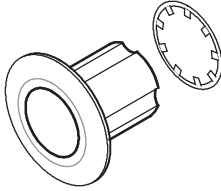
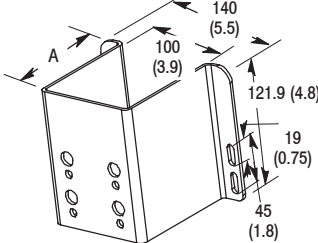


Special Glass Fiber Optic cables are also available with 2.2 mm (0.09 in.) diameter control end tips.

NOTE: Cat. No. 61-6731 adaptors are required for smaller fiber optic cables with jacket diameters of 1.25 mm (0.05 in.).

Accessories

Mounting Brackets

Description	Cat. No.	Used for	Approximate Dimensions [mm (in.)]
Stainless steel mounting bracket	60-BKTL-SS	44B 42JS VisiSight	
Mounting bracket	60-2677	45MLD	
Clamp style bracket fits any 18 mm sensor.	871A-BP18	RightSight MiniSight 42CA, 42CB	
Flush mount adaptor allows any 18 mm sensor to be mounted flush against panel surface.	60-2590	RightSight MiniSight 42CA, 42CB	
Heavy duty impact bracket of #12 steel can be used with swivel/tilt bracket.	60-2695 A = 76 mm (3 in.)	RightSight MiniSight Series 9000 ColorSight LaserSight	
	60-2702 A = 117 mm (4.6 in.)	ClearSight 9000	
Heavy duty impact bracket of #12 steel can be used with swivel/tilt bracket.	60-2725	Series 9000	