



General Specifications

Light Source	See Product Selection
Unit Protection	False pulse
Supply Voltage	24V DC with suitable intrinsic safety barrier
Current Consumption	30mA maximum
Output Type	PNP and NPN
Output Mode	Light/dark operate selectable
Output Rating	20mA
Max Leakage Current	1μA
Response Time	1ms
Housing Material	Valox®
Lens Material	Acrylic (glass on polarized models)
LED Indicators	See User Interface below
Connection Types	Screw terminal
Supplied Accessories	None
Optional Accessories	Mounting brackets, reflectors, cordsets—see page R1-136
Operating Environment	NEMA 3, 4, 12, 13 (IP66)
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	-40°C to +65°C (-40°F to +150°F)
Relative Humidity	90% maximum
Approvals	UL listed, FM approved, and CE marked for all applicable directives

Features

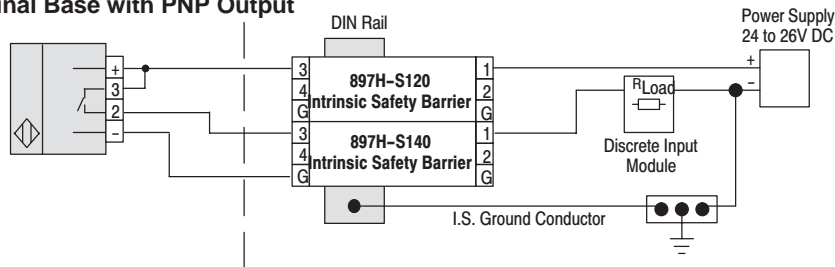
- Intrinsically Safe to North American standards
- Nonincendive for Division 2 hazardous (classified) locations
- Modular package for increased flexibility
- Wide variety of sensing modes
- Selectable light/dark operation
- Both NPN and PNP outputs
- Screw terminal connections

User Interface

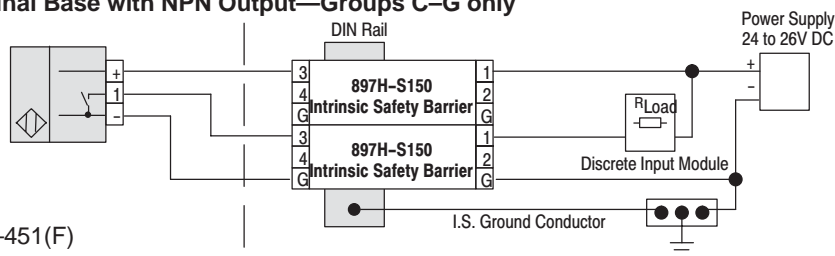
Label	Color	State	Status
Output	Red	OFF	Sensor output de-activated
		ON	Sensor output activated

Wiring Diagrams

Photohead and Terminal Base with PNP Output



Photohead and Terminal Base with NPN Output—Groups C-G only



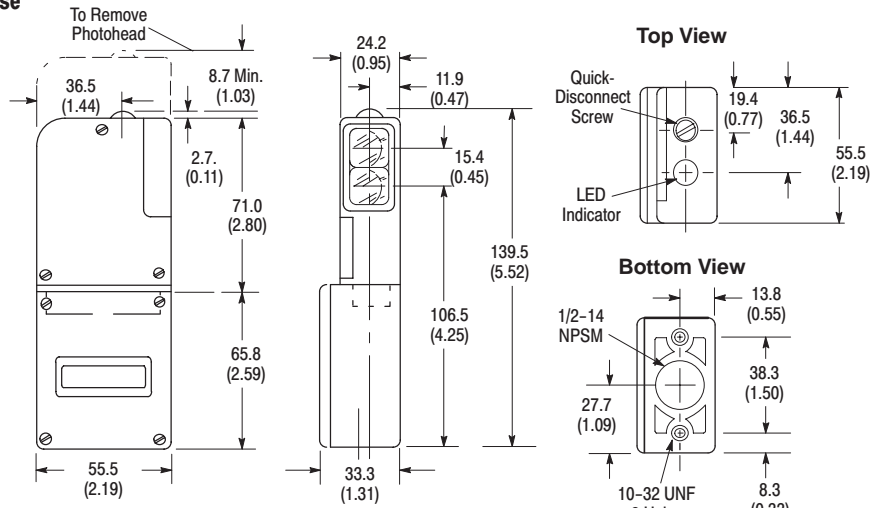
Control Drawing #133-451(F)

Series 5000

Intrinsically Safe

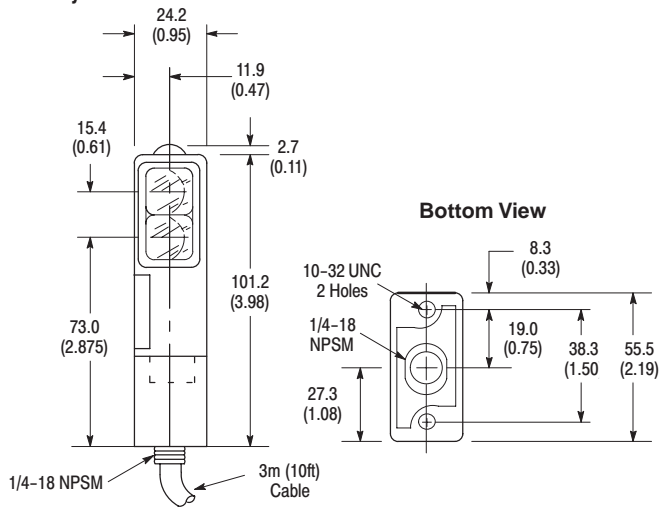
Dimensions (Applies to all versions)—mm (inches)

Terminal Style Power Base

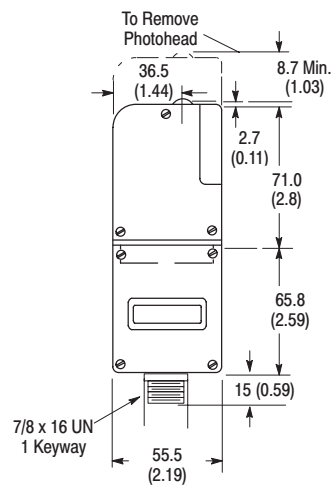


Note: Hardware included with sensor: two (2) nickel plated 10-32 mounting screws.

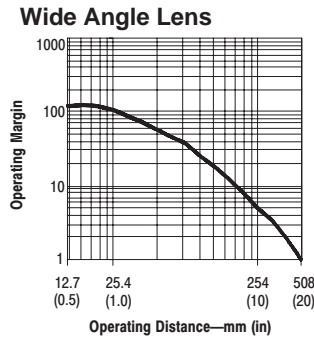
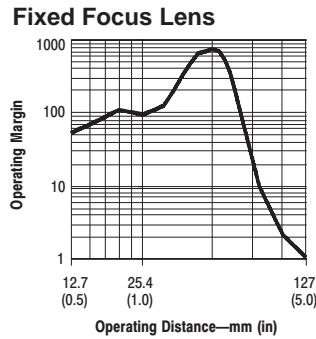
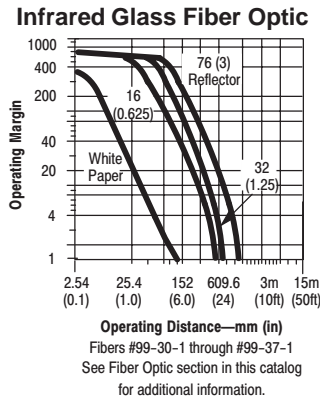
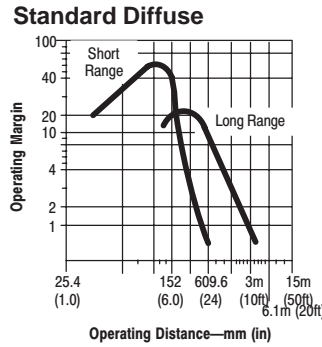
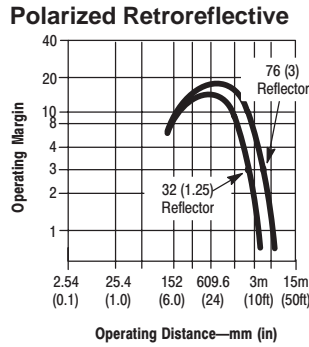
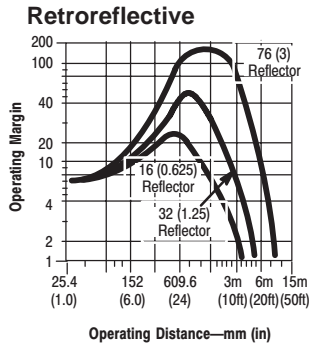
Cable Style Power Base



Quick-Disconnect Style Power Base

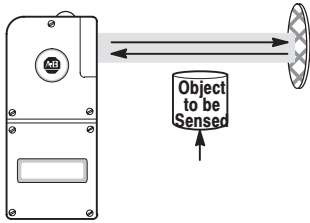
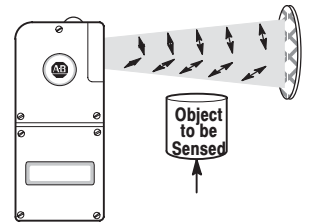


Typical Response Curve



Product Selection

Photohead

Sensing Mode	Sensing Distance	Output Energized	Output Type Capacity	Response Time	Catalog Number
 Retroreflective Field of View: 2.5° Emitter LED: Infrared 880nm	50.8mm (2in) to 10m (33ft) with 76mm (3") Reflector	Light/Dark Selectable	NPN and PNP 20mA at 29.5V DC	1ms	42DRU-5500
 Polarized Retroreflective Field of View: 2.5° Emitter LED: Visible 660nm	50.8mm (2in) to 6m (20ft) with 76mm (3") Reflector	Light/Dark Selectable	NPN and PNP 20mA at 29.5V DC	1ms	42DRU-5700

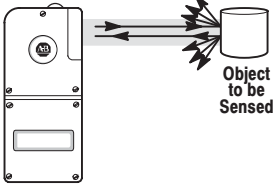
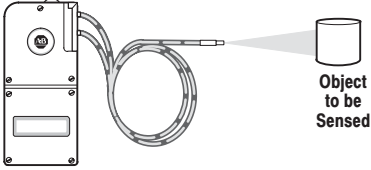
Refer to page R1-136 for cordsets and accessories.

Series 5000

Intrinsically Safe

Product Selection (continued)

Photohead

Sensing Mode	Sensing Distance	Output Energized	Output Type Capacity	Response Time	Catalog Number
 <p><i>Standard Diffuse</i> Field of View: 3° Emitter LED: Infrared 880nm</p>	50.8mm (2in) to Short Range: 0.4m (16in) Long Range: 2.1m (7ft) with White Paper	Light/Dark Selectable	NPN and PNP 20mA at 29.5V DC	1ms	42DRP-5500
 <p><i>Infrared Glass Fiber Optic/ Fixed Focus/Wide Angle Diffuse</i> Field of View: Depends on the glass fiber optics and lens type Emitter LED: Infrared 880nm</p>	—	Light/Dark Selectable	NPN & PNP 20mA at 29.5V DC	1ms	42DRA-5500

Power Base

Style	Operating Voltage	Supply Current	Catalog Number
Terminal	13-29.5V DC	26mA max at 13V DC 30mA max at 29.5V DC	42DTB-5500

Lens Assembly

Lens Type	Catalog Number
Fiber Optic	61-5550
Fixed Focus	61-5551
Wide Angle	61-5611

Cordsets and Accessories

Description	Page Number
Terminal Chambers	NO TAG
Mounting Assemblies	R1-233
Intrinsic Safety Barriers	R2-215
76mm (3in) Diameter Reflector	92-39
32mm (1.25in) Diameter Reflector	92-47