

# LaserSight™ 9000

## Class II Laser Sensor



### General Specifications

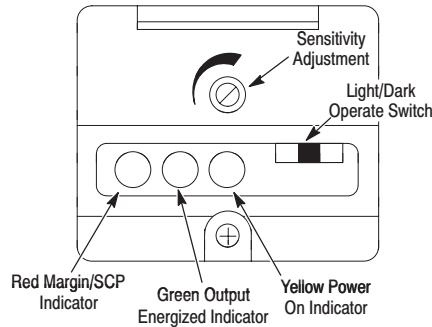
<b>Laser Classification</b>	<1mW peak, Class II per US21 CFR1040.10 (EN 60 825)
<b>Unit Protection</b>	Overload and short circuit (DC only), reverse polarity, false pulse
<b>Supply Voltage</b>	24V DC, 120V AC, 220V AC
<b>Current Consumption</b>	70mA max
<b>Output Type</b>	NPN and PNP (DC), SPDT relay (AC)
<b>Output Mode</b>	Light/dark operate selectable
<b>Output Rating</b>	250mA (PNP/NPN); 2A (EM Relay)
<b>Max Leakage Current</b>	10µA
<b>Response Time</b>	500µs to 23ms by output type
<b>Housing Material</b>	Valox®
<b>Lens Material</b>	Acrylic
<b>LED Indicators</b>	See User Interface below
<b>Connection Types</b>	4-pin DC micro and mini QD, 2m 300V 22AWG cable (DC) 5-pin mini QD, 2m 300V 22AWG cable (AC)
<b>Supplied Accessories</b>	#129-130 mounting kit
<b>Optional Accessories</b>	Cordsets, mounting brackets—see page R1-74
<b>Operating Environment</b>	NEMA 3, 4X, 6P, 12, 13; IP67 (IEC 529) 1200psi washdown
<b>Vibration</b>	10-55Hz, 1mm amplitude, Meets or exceeds IEC 947-5-2
<b>Shock</b>	30g with 1ms pulse duration, Meets or exceeds IEC 947-5-2
<b>Operating Temperature</b>	-10°C to +40°C (-14°F to +104°F) DC versions
<b>Relative Humidity</b>	5...95%
<b>Approvals</b>	UL listed, CSA certified, and CE marked for all applicable directives

### Features

- Class II laser light source
- Long range polarized retroreflective and transmitted beam sensing modes
- Visible red beam for easy alignment
- Robust 30mm housing
- Both NPN and PNP outputs (DC)
- SPDT relay output (AC)
- Selectable light/dark operate
- Micro, mini QD, 2m cable connections

### User Interface Panel

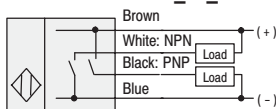
Label	Color	State	Status
Margin/S CP	Red	OFF	Margin < 2.5
		ON	Margin > 2.5
		Flashing	Output SCP active
Output	Green	OFF	Output not activated
		ON	Output activated
Power	Yellow	OFF	Sensor not powered
		ON	Sensor powered



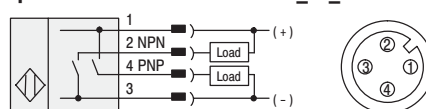
### Wiring Diagrams

#### DC Models

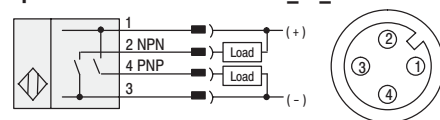
##### Cable Model: 42GR\_-9\_L0



##### 4-pin DC Micro QD Model: 42GR\_-9\_L0-QD

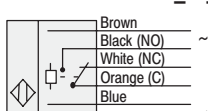


##### 4-pin DC Mini QD Model: 42GR\_-9\_L0-QD1



#### AC Models

##### Cable Model: 42GR\_-9\_L2



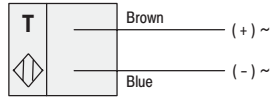
##### 5-pin AC Mini QD Model: 42GR\_-9\_L2-QD



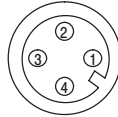
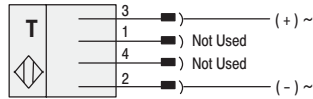
**Wiring Diagrams (continued)**

**Transmitted Beam Source**

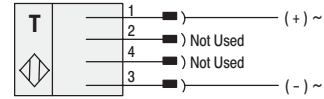
**Cable Model: 42GRL-90L0**



**AC/DC Mini QD Model: 42GRL-90L2-QD**

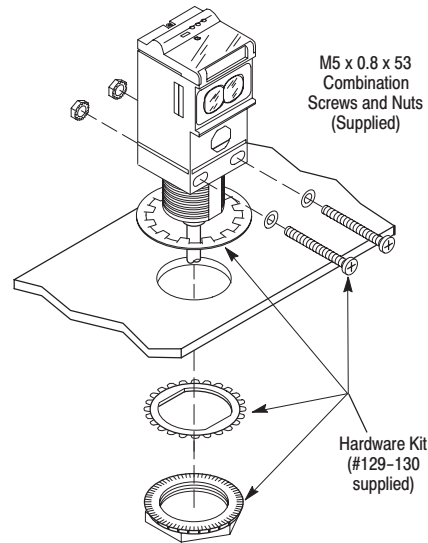
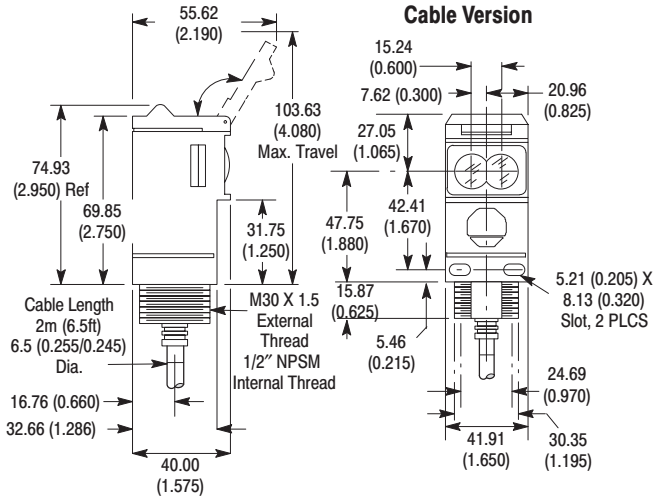


**DC Micro QD Model: 42GRL-90L0-QD**



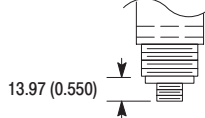
**Dimensions—mm (inches)**

**All Versions**



**Connector Version**

**Micro Style**



**Mini Style**

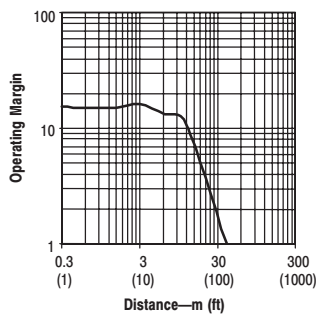


**Thread Size**

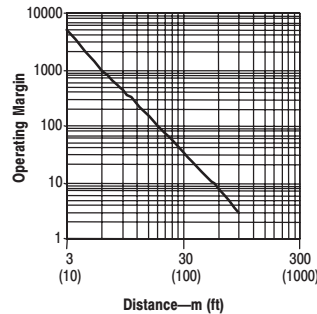
Micro Style	M12 x 1 1 Keyway
Mini Style	7/8-16 UN 1 Keyway

**Typical Response Curve**

**Polarized Retroreflective**



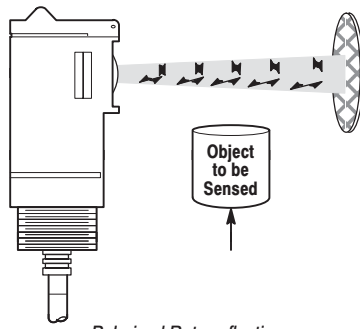
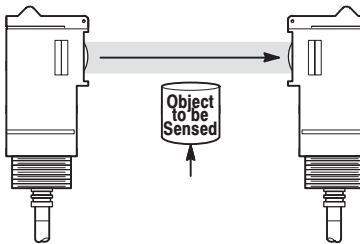
**Transmitted Beam**



# LaserSight™ 9000

## Class II Laser Sensor

### Product Selection

Sensing Mode	Operating Voltage Supply Current	Sensing Distance	Output Energized	Output Type/ Capacity Response Time	Connection Type	Catalog Number	
 <p><i>Polarized Retroreflective</i></p> <p>Spot Size: 19mm (3/4in) @ 40m (130ft) Emitter LED: Visible Laser, 650nm</p>	10-30V DC 45mA	30cm (1ft) to 40m (130ft)	Selectable Light/Dark Operate	PNP/250mA NPN/250mA 500µs	2m 300V cable	42GRU-92L0	
					4-pin DC micro	42GRU-92L0-QD	
					4-pin DC mini	42GRU-92L0-QD1	
	110-132V AC 70mA				SPDT EM Relay 2A/132V AC 1A/150V DC 15ms	2m 300V cable	42GRU-92L2
						5-pin mini	42GRU-92L2-QD
 <p><i>Transmitted Beam</i></p> <p>Emitter LED: Visible Laser, 650nm</p>	10-264V AC/DC 10mA	300m (1000ft)	NA Light Source		2m 300V cable	42GRL-90L0 ①	
					4-pin micro	42GRL-90L0-QD①	
					4-pin mini	42GRL-90L2-QD①	
	10-40V DC 25mA	5m (16ft) to 300m (1000ft)	Selectable Light/Dark Operate	PNP/250mA NPN/250mA 5ms max.	2m 300V cable	42GRR-90L0	
					4-pin micro	42GRR-90L0-QD	
					4-pin mini	42GRR-90L0-QD1	
	70-264V AC/DC 10mA			SPDT EM Relay 2A/132V AC 1A/264V AC 1A/150V DC 23ms	2m 300V cable	42GRR-90L2	
					5-pin mini	42GRR-90L2-QD	

① Temperature rating -10°C to +40°C for 24V DC operation. Reduce by 5°C for 120V AC and 10°C for 220V AC operation.

### Cordsets and Accessories

Description	Catalog Number	Description	Catalog Number	Description	Catalog Number
1.8m (6ft) 4-pin mini QD cordset	889N-F4AF-6F	2m (6.5ft) 4-pin DC micro QD cordset	889D-F4AC-2	Reflector, 3in dia.	92-39
1.8m (6ft) 5-pin mini QD cordset	889N-F5AF-6F	Tilt/Swivel Bracket	60-2439		