



General Specifications

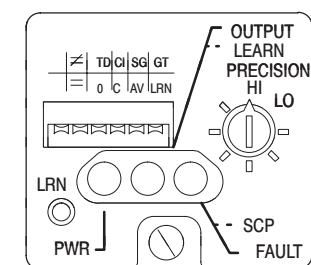
Models	2m Cable	42QA-G5LE-A2
	5-pin DC Micro	42QA-G5LE-D5
	5 pin DC Mini	42QA-G5LE-N5
Optical	Sensing Mode	Fixed Focus
	Sensing Distance	27mm (with AB #60-2694 FO cable) nominal 114mm (with AB #60-2738 range extender)
	Spot Size	5mm (with AB #60-2694 FO cable) nominal
	Transmitting LED	Tri-color red, green, blue
	Color Discrimination Operating Mode	Color only, color plus intensity (selectable via DIP switch)
	Precision Adjustment	8 position rotary switch
	Color Sampling Operating Mode	Single, average (selectable via DIP switch)
Electrical	Supply Voltage	10 to 30V DC
	Max Leakage Current	10uA
	Current Consumption	50mA nominal
	Response Time	(Single mode) 1.3ms; (average mode) 10ms (C+I mode) (Single mode) 2.6ms; (average mode) 10ms (C only mode)
	Protection	False pulse, reverse polarity on all leads, output short-circuit protected (100mA), transient/burst
	Output Type	Transistor
	Output Load Voltage/Current	30V DC, 100mA
Mechanical	Output Energized	Match/no match operate (selectable via DIP switch)
	Housing Material	Valox®
	Housing Cover Material	Radel
Environmental	Indicators	See User Interface below
	HF Ambient Light Rejection	25ft candles
	Incandescent Light Rejection	500ft candles
	Operating Temperature	0° to +55°C (32° to +131°F)
	Temperature Drift	+/- 10°C from learned temperature
	Operating Environment	Sensor body: NEMA 4, IP54 Optics assembly: IP40
	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
	Relative Humidity	Up to 95% noncondensing
Approvals	UL, cUL and CE marked for all applicable directives	

Features

- Fiber optic sensing design
- True RGB color discrimination
- Color only (C) and color plus intensity (C+) operating modes
- Eight precision settings
- Local and remote self-teach
- Adjustable sampling rates
- Selectable gated input
- Selectable 50ms pulse stretcher
- Cable, micro or mini QD connection

User Interface Panel

Switch	Label	Function	Switch Up	Switch Down
S1	None	Not used	—	—
S2	≠ / =	Select target match/no match	Output inactive (no match)	Output active (match) ①
S3	TD/0	Enable/disable time delay	50ms time delay active	No time delay ①
S4	CI/C	Select color + intensity mode/color only mode	Color + intensity mode active ①	Color only mode active
S5	SG/AV	Select single/average mode	Single sample mode active	Average sample mode active ①
S6	GT/LRN	Select gate/remote learn mode	Input functions as gating input	Input functions as remote learn ①



ColorSight™ 9000

Self-Teach Color Recognition

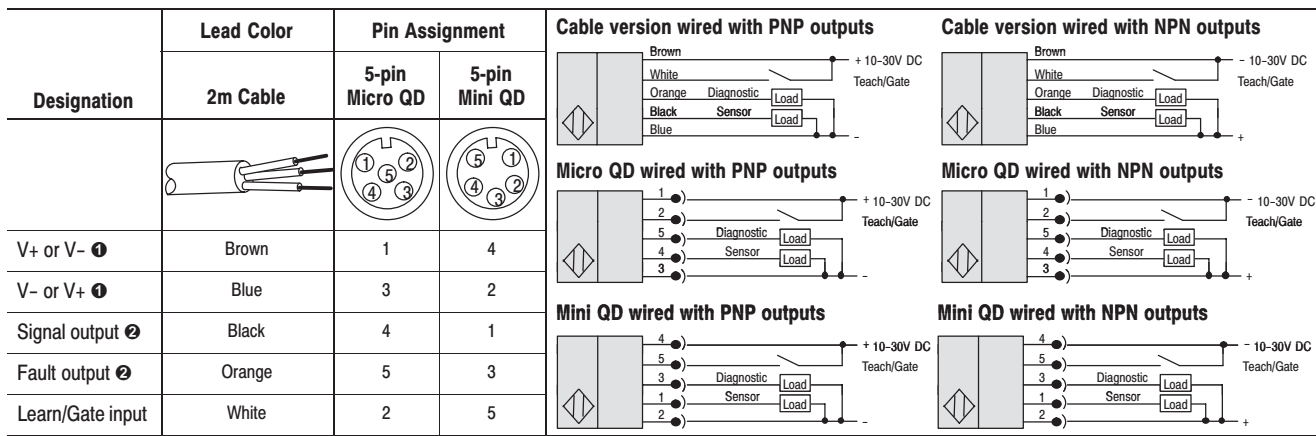
Indicators

Three LED indicators are provided to indicate a variety of conditions making it easy for installation and troubleshooting. The function of each is described in this table.

Label	Color	State	Condition
PWR	Green	OFF	Sensor power not present
		Steady	Sensor power present
OUTPUT/LEARN	Yellow	OFF	Output inactive
		Steady	Output active
		Flash	Learn mode activated
FAULT/SCP	Red	OFF	Sensor operating normally ❷
		Steady	Marginal detection of target ❸
		Flash	Output SCP active

- ❶ Factory default
- ❷ LED also OFF when LEARN pushbutton depressed.
- ❸ Includes failure to learn color during LEARN process

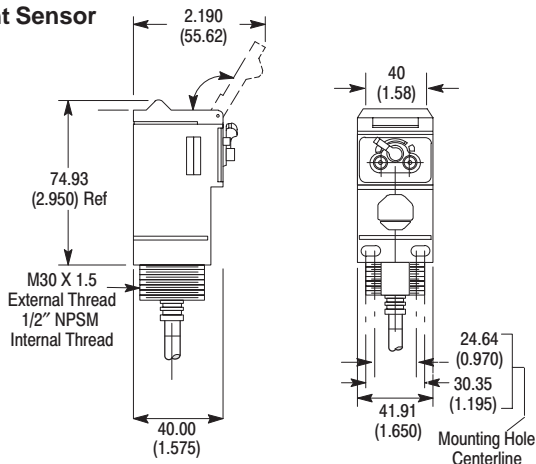
Wiring Diagrams



- ❶ Polarity of supply voltage defines sensor output type -i.e. PNP or NPN
- ❷ PNP when brown lead connected to V+ and blue lead connected to V-; NPN when brown lead connected to V- and blue lead connected to V+

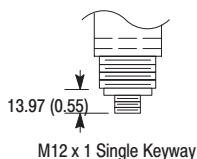
Dimensions—mm (inches)

ColorSight Sensor

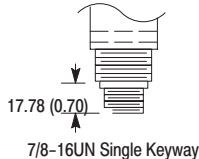


Connector Version

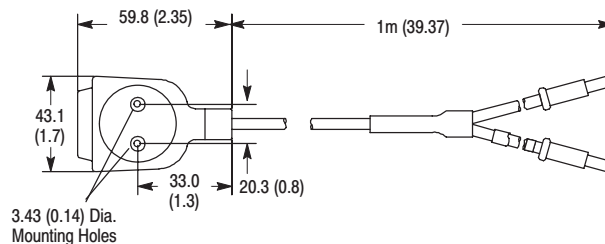
Micro Style



Mini Style

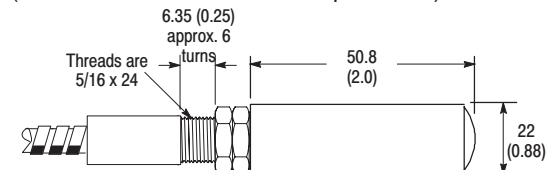


#60-2694 Fiber Optic Cable

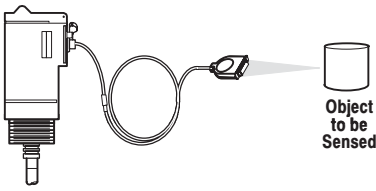


#60-2738 Range Extender

(shown fitted to a 43GR fiber optic cable)



Product Selection

Sensing Mode	Operating Voltage Supply Current	Sensing Distance	Output Energized	Output Type/ Capacity Response Time	Connection Type	Catalog Number
 <p>Spot Size: 5mm (0.20in) with A-B #60-2694 FO cable Emitter LED: Tri-color red, green, blue Indicators: Yellow: Output/Learn Green: Power Red: Fault/SCP</p>	10 to 30V DC 50mA	27mm (1 1/16in) with A-B #60-2694 FO cable	Selectable match/no match	PNP or NPN 30V DC @ 100mA 1.3 to 10ms	2m 300V cable	42QA-G5LE-A2
					5-pin DC micro	42QA-G5LE-D5
					5-pin DC mini	42QA-G5LE-N5

Recommended Fiber Optic Cables

Type	Sensing Tip Material	Fiber Diameter— mm (in)	Sheathing Material	Nominal Sensing Range—mm (in)	Catalog Number
Bifurcated	Brass	3.2 (0.125)	Stainless Steel	10 (0.4) ①	43GR-TBB25SL
	Plastic (Lensed)		PVC		43GR-TBB25ML
					27 (1.06)

① Sensing distance may be increased between approximately 38mm (1.5in) and 114mm (4.5in) when used with 60-2738 range extender.

Cordsets and Accessories

Description	Catalog Number	Description	Catalog Number	Description	Catalog Number
1.8m (6ft) 5-pin Mini QD Cordset	889N-F5AF-6F	Tilt/Swivel Bracket	60-2439	Range Extender	60-2738
2m (6.5ft) 5-pin Micro QD Cordset	889D-F5AC-2	Lensed Fiber Optic Cable	60-2694	Universal Mounting Assembly (for #60-2694 fiber optic cable)	60-2008