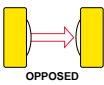
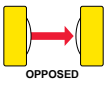
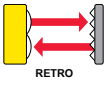
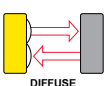
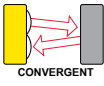
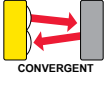
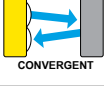
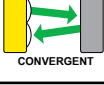
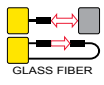
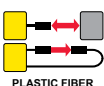


MINI-BEAM dc-Voltage Series

Self-contained photoelectric sensors

Models

Sensing Mode		Range	LED	Model	
 OPPOSED	Opposed Emitter	3 m (10 ft)	Infrared 880 nm	SM31E	
	Opposed Receiver			SM31R	
	Opposed Emitter - Long Range	30 m (100 ft)		SM31EL	
	Opposed Receiver - Long Range			SM31RL	
 OPPOSED	Opposed Emitter - Clear Plastic Detection	0 to 300 mm (0 to 12 in) Actual range varies, depending on the light transmission properties of the plastic material being sensed.	Visible Red 650 nm	SM31EPD	
	Opposed Receiver - Clear Plastic Detection			SM31RPD	
 RETRO	Non-Polarized Retroreflective	5 m (15 ft)		Visible Red 650 nm	SM312LV
 POLAR RETRO	Polarized Retroreflective	55 mm to 2 m (2 in to 7 ft)			SM312LVAG
	Extended-Range Polarized Retroreflective	10 mm to 3 m (0.4 in to 10 ft)	SM312LP		
 DIFFUSE	Diffuse	380 mm (15 in)	Infrared 880 nm	SM312D	
		300 mm (12 in)		SM312DBZ	
	Divergent Diffuse	130 mm (5 in)		SM312W	
 CONVERGENT	Convergent	16 mm (0.65 in) Focus			SM312C
		43 mm (1.7 in) Focus	SM312C2		
 CONVERGENT		16 mm (0.65 in) Focus	Visible Red 650 nm	SM312CV	
		43 mm (1.7 in) Focus		SM312CV2	
 CONVERGENT		16 mm (0.65 in) Focus	Visible Blue 475 nm	SM312CVB	
		49 mm (1.9 in) Focus		SM312CV2B	
 CONVERGENT		16 mm (0.65 in) Focus	Visible Green 525 nm	SM312CVG	
		49 mm (1.9 in) Focus		SM312CV2G	
 GLASS FIBER	Glass Fiber Optic	Range varies, depending on sensing mode and fiber optics used.	Infrared 880 nm	SM312F	
			Visible Red 650 nm	SM312FV	
			Visible Blue 475 nm	SM312FVB	
			Visible Green 525 nm	SM312FVG	
 PLASTIC FIBER	Plastic Fiber Optic		Visible Red 650 nm	SM312FP	
			Visible Blue 475 nm	SM312FPB	
			Visible Green 525 nm	SM312FPG	
	Special High-Power Option Plastic Fiber Optic			Visible Red 650 nm	SM312FPH

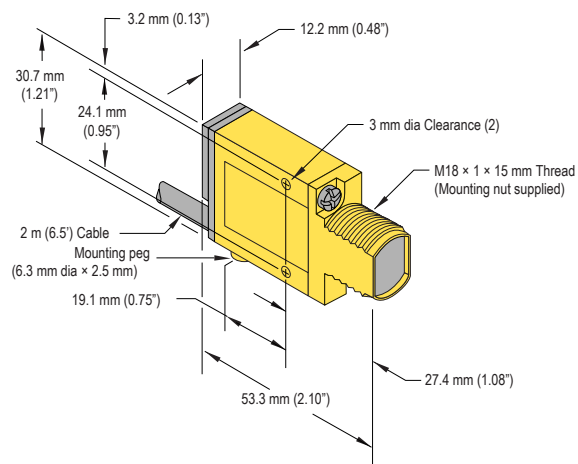
Standard 2 m (6.5') cable models are listed.

- 9 m (30') cable: add suffix "W/30" (e.g., SM31EW/30).
- 4-pin Euro QD models: add suffix "QD" (e.g., SM31EQD).
- 150 mm (6") QD Pigtail: add suffix "QDP" (e.g., SM31EQDP).

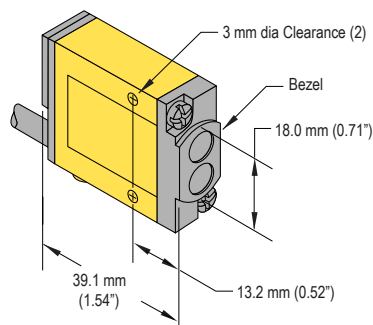
For a 0.3 ms response: add suffix "MHS" (eg., SM31EMHS).

Dimensions

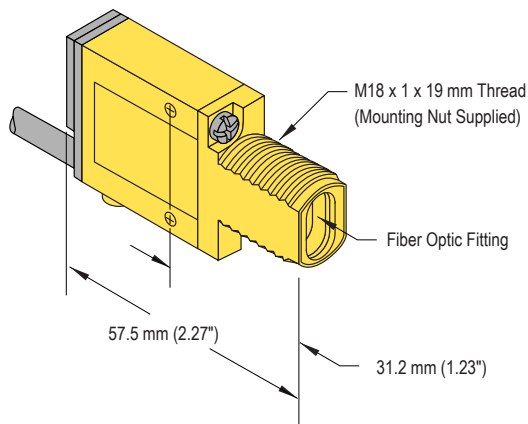
Models with suffix E, EL, EPD, R, RL, RPD, LV, LVAG, LP, D, C, C2, CV, CV2, CVG, CV2G, CVB, and CV2B



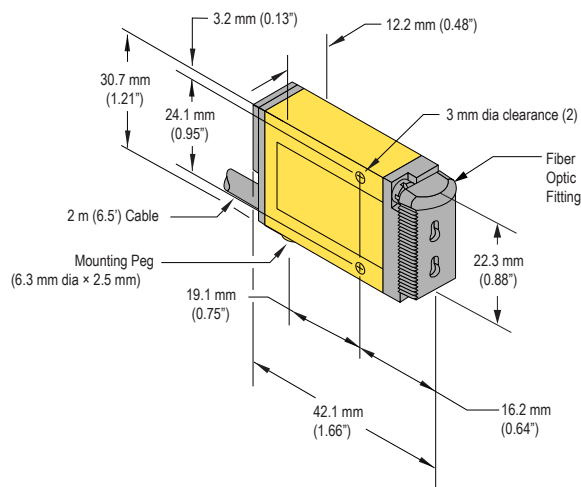
Models with suffix DBZ and W



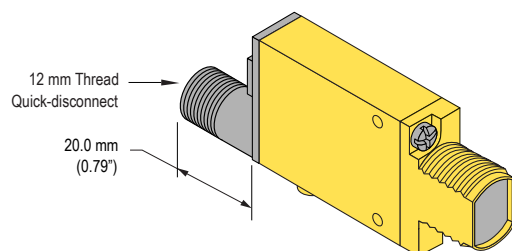
Models with suffix F, FV, FVB, and FVG



Models with suffix FP, FPB, FPG, and FPH



QD Models



Sensor Features

Gain (Sensitivity) Adjustment Screw

Alignment Indicator Device (AID)*

Light/Dark Operate Select Switch

Clockwise: Light Operate (outputs conduct when sensing light is received).
Counterclockwise: Dark Operate (outputs conduct when sensing light is not received).

*U.S. Patent no. 4356393