WORLD-BEAM® Q12 Series Sensors

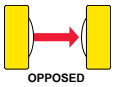
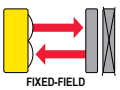
Miniature self-contained photoelectric sensors in universal housing

Standard Model **Chemical-Resistant Model**

- Bright, visible red (640 nm) light source
- Standard models available with 4-wire 2 m (6.5 ft) or 9 m (30 ft) cable or 3 or 4-wire 150 mm (6 in) pigtail with Pico-style M8 threaded connector
- Solid-state, bipolar outputs: one current sourcing (PNP) and one current sinking (NPN) standard on 4-wire models
- Single output solid-state PNP or NPN standard on Q3 models
- Light Operate (L.O.) or Dark Operate (D.O.), depending on model
- Models available with PFA chemical-resistant jacket (1200 psi washdown rated) for use in harsh environments (see *Chemical-Resistant Models* on page 1).
- Compact 8 mm (0.31 in) housing mounts almost anywhere
- Crosstalk avoidance circuitry for applications with multiple sensors
- LED status indicators for Power ON, Output Overload, Signal Received, and Marginal Signal
- Models with black housing are available

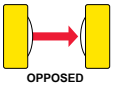
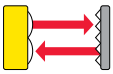
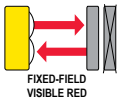
WARNING: Not To Be Used for Personnel Protection
Never use this device as a sensing device for personnel protection. Doing so could lead to serious injury or death. This device does not include the self-checking redundant circuitry necessary to allow its use in personnel safety applications. A sensor failure or malfunction can cause either an energized or de-energized sensor output condition.

Chemical-Resistant Models

Sensing Mode		Model[1] [2]	Range	Output
Opposed	640 nm Visible Red	Q126ECR	1.5 m (4.9 ft)	N/A
	Effective Beam: 5.7 mm (0.22 in) 	Q12AB6RCR		Bipolar LO
		Q12RB6RCR		Bipolar DO
Fixed-Field	Performance based on use of 90% reflectance white test card.			
	640 nm Visible Red 	Q12AB6FF15CR	13 mm (0.5 in) cutoff; 8 mm (0.3 in) focus	Bipolar LO
		Q12RB6FF15CR		Bipolar DO
		Q12AB6FF30CR	28 mm (1.1 in) cutoff; 14 mm (0.6 in) focus	Bipolar LO
		Q12RB6FF30CR		Bipolar DO
		Q12AB6FF50CR	48 mm (1.9 in) cutoff; 14 mm (0.6 in) focus	Bipolar LO
		Q12RB6FF50CR		Bipolar DO

1 Only standard 2 m (6.5 ft) cables are available for chemical-resistant models.
2 For black housing, add prefix **D** to the model number, for example, **DQ12AB6FF15CR**.

Standard Models

Sensing Mode		Model[3] [4]	Range	Output
640 nm Visible Red		**Q126E (emitter)**	2 m (6.5 ft)	N/A
Opposed	Effective Beam: 5.7 mm (0.22 in) 	**Q12AB6R**		Bipolar LO
		Q12RB6R		Bipolar DO
		Q12AP6RQ3		1 PNP LO
		Q12RP6RQ3		1 PNP DO
		Q12AN6RQ3		1 NPN LO
		Q12RN6RQ3		1 NPN DO
Polarized Retro[5]	640 nm Visible Red 	**Q12AB6LP**	1 m (40 in)	Bipolar LO
		Q12RB6LP		Bipolar DO
		Q12AP6LPQ3		1 PNP LO
		Q12RP6LPQ3		1 PNP DO
		Q12AN6LPQ3		1 NPN LO
		Q12RN6LPQ3		1 NPN DO
Retro [5]	640 nm Visible Red 	**Q12AB6LV**	1.5 m (59 in)	Bipolar LO
		Q12RB6LV		Bipolar DO
		Q12AP6LVQ3		1 PNP LO
		Q12RP6LVQ3		1 PNP DO
		Q12AN6LVQ3		1 NPN LO
		Q12RN6LVQ3		1 NPN DO
Performance based on use of 90% reflectance white test card.				
Fixed-Field	640 nm Visible Red 	**Q12AB6FF15**	15 mm (0.6 in) cutoff; 10 mm (0.4 in) focus	Bipolar LO
		Q12RB6FF15		Bipolar DO
		Q12AP6FF15Q3		1 PNP LO
		Q12RP6FF15Q3		1 PNP DO
		Q12AN6FF15Q3		1 NPN LO
		Q12RN6FF15Q3		1 NPN DO
		Q12AB6FF30	30 mm (1.2 in) cutoff; 16 mm (0.63 in) focus	Bipolar LO
		Q12RB6FF30		Bipolar DO
		Q12AP6FF30Q3		1 PNP LO
		Q12RP6FF30Q3		1 PNP DO
		Q12AN6FF30Q3		1 NPN LO
		Q12RN6FF30Q3		1 NPN DO
		Q12AB6FF50	50 mm (2 in) cutoff 16 mm (0.63 in) focus	Bipolar LO
		Q12RB6FF50		Bipolar DO

[3] For black housing, add prefix **D** to the model number, for example **DQ12AB6FF15.**

[4] **Q3 models:** 3-pin Pico-style (M8 threaded) 150 mm (6 in) pigtail QD. Not available for bipolar models. For 9 m (30 ft) cable, add suffix **W/30** to the model number, for example, **Q126E W/30**. For 4-pin Pico-style (M8 threaded) 150 mm (6 in) pigtail QD, add suffix **Q** to the model number, for example, **Q126EQ**. For 4-pin Euro-style (M12 threaded) 150 mm (6 in) pigtail QD, add suffix **Q5** to the model number, for example **Q126EQ5**.

[5] Retroreflective range is specified using one model **BRT-60X40C** retroreflector. Actual sensing range may be more or less than specified, depending upon efficiency and reflective area of the retroreflector(s) used.