

WORLD-BEAM® QS18 Adjustable-Field Sensors



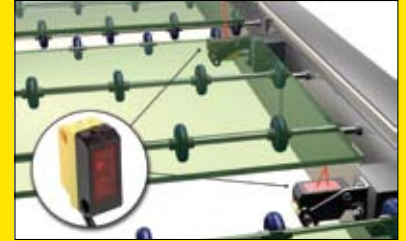
Compact WORLD-BEAM® QS18 Adjustable-Field Sensors reliably detect hard-to-see objects.

The WORLD-BEAM® QS18 Adjustable-field Background and Foreground Suppression Sensors reliably detect objects regardless of color, reflectivity, surface irregularities or background conditions. The universal mounting design makes installation quick and easy, while a simple screwdriver adjustment allows for precise set up of sensing range. With a compact and sealed housing, the QS18 Adjustable-field sensors deliver an exceptional sensing solution for small or difficult-to-reach areas.

- ▶ Rugged, compact WORLD-BEAM QS18 housing for mounting in confined spaces
- ▶ Background suppression or foreground suppression by model number
 - Background suppression models with an extended sensing range up to 300 mm
 - Foreground suppression (background detection) for reliable detection of objects of varying color and size when background is fixed
 - Short-range models for detecting thinner objects closer to the background
- ▶ Solid-state complementary or bipolar output
- ▶ Visible red LED or laser for easy sensor alignment
- ▶ Laser models with a narrow effective beam for small-object detection and precise position control
- ▶ Easy screwdriver adjustment for precise setting of cutoff
- ▶ Crosstalk avoidance algorithm to allow multiple sensors in close proximity on some models
- ▶ Sealed housing and protected circuitry for rugged environments; IP67 rated

Complete sensor line for precise and reliable detection of targets

Solves tough material handling and packaging problems



Through-the-Roller Detection
(Immune to factory lighting)

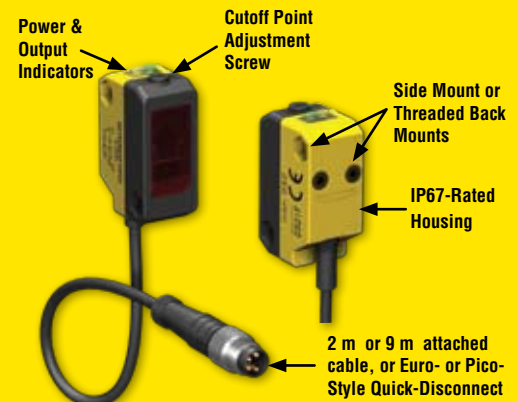


Part-in-Place Inspection
(Ignores reflective background)



Food Packaging Applications
(Detects dark objects)

Popular WORLD-BEAM® Housing and Simple Setup



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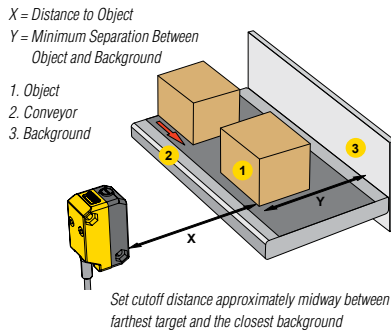
more sensors, more solutions

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WORLD-BEAM® QS18 Adjustable-Field Sensors

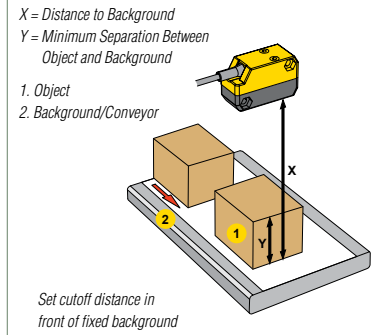
Background Suppression

- Operates in diffuse mode, detecting light returned by the object but ignoring light returned by the background
- Provides reliable detection when conditions behind the object are changing or the object is close to a background
- Ideal for small spaces where the background condition cannot be controlled, or the background makes a standard diffuse-mode sensor impractical



Foreground Suppression

- Operates in diffuse mode, detecting light returned by the background, but ignoring light returned by the object
- Similar in concept to a polarized retroreflective sensor; if sensor cannot see the background (reflector) the output switches
- Provides simple and reliable detection when object color, position or shape change but the background is stable
- Ideal for small spaces where mounting a reflector is not possible but a fixed background is present



WORLD-BEAM® QS18 Adjustable-Field with Background Suppression, 10 to 30V dc

→ visible red

Sensing Mode/LED	Models*	Range	Output	Response Time	Repeatability	Crosstalk Prevention	
	QS18VN6AF300	Adjustable Cutoff: 30 to 300 mm	NPN	2.5 ms	250 µs	Excellent	
	QS18VP6AF300		PNP				
	QS18AB6AF300		Bipolar NPN/PNP				
	CLASS 1 	QS18VN6AF100	Adjustable Cutoff: 20 to 100 mm	NPN	700 µs	175 µs	—
		QS18VP6AF100		PNP			
		QS18VN6AF40		NPN			
	CLASS 2 	QS18VP6AF40	Adjustable Cutoff: 15 to 40 mm	PNP	2.5 ms	250 µs	Excellent
QS18AB6AF40		Bipolar NPN/PNP					
QS18VN6LAF		NPN					
CLASS 1 	QS18VP6LAF	Adjustable Cutoff: 30 to 150 mm	PNP	700 µs	130 µs	Excellent	
	QS18VN6LAF250		NPN				
CLASS 2 	QS18VP6LAF250	Adjustable Cutoff: 50 to 250 mm	PNP	700 µs	130 µs	Excellent	
	QS18VN6LAF250		NPN				

WORLD-BEAM® QS18 Adjustable-Field with Foreground Suppression, 10 to 30V dc

→ visible red

Sensing Mode/LED	Models*	Range	Output	Response Time	Repeatability	Crosstalk Prevention	
	QS18VN6AFF200	Adjustable Cutoff: 30 to 200 mm	NPN	2.5 ms	250 µs	Excellent	
	QS18VP6AFF200		PNP				
	QS18AB6AFF200		Bipolar NPN/PNP				
	CLASS 1 	QS18VN6AFF40	Adjustable Cutoff: 15 to 40 mm	NPN	2.5 ms	250 µs	Excellent
		QS18VP6AFF40		PNP			
		QS18AB6AFF40		Bipolar NPN/PNP			

* Only 2 m cable models are listed. For 9 m cable, add suffix **W/30** to the model number (example, **QS18VN6AF300 W/30**).

QD Models: A model with a QD requires a mating cordset.

- For a 4-pin 150 mm Pico-style PVC pigtail QD, add suffix **Q** (example, **QS18VN6AF300Q**).
- For a 4-pin 150 mm Euro-style PVC pigtail QD, add suffix **Q5** (example, **QS18VN6AF300Q5**).

Brackets

Models	Description
	SMBQS18A <ul style="list-style-type: none"> Nickel-plated die-cast zinc Wrap-around bracket
	SMBQS18AF <ul style="list-style-type: none"> 14 ga., 304 stainless steel Right-angle mounting bracket

Quick-Disconnect (QD) Cordsets

Style	Models		Length
	Straight	Right-Angle	
4-pin Pico-style	PKG4-2	PKW4Z-2	2 m
4-pin Euro-style	MQDC-406	MQDC-406RA	2 m
	MQDC-415	MQDC-415RA	5 m
	MQDC-430	MQDC-430RA	9 m

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