

WORLD-BEAM® QS30H20 Opposed-Mode Water Sensors



Reliable liquid detection in WORLD-BEAM® housing



Detect water and water-based liquids inside containers

- ▶ Fluid filled IV bags
- ▶ HDPE milk containers
- ▶ Clear glass test tubes
- ▶ Colored PET beverage bottles
- ▶ Etched or frosted glass containers
- ▶ Liquid point level in sight glass
- ▶ Thin walled PFA/FEP tubes
- ▶ Nozzle spray verification



Versatile models to meet demanding requirements

- ▶ Robust housing with 30 mm threaded barrel and integrated side mount
- ▶ Receivers with a choice of outputs and range
 - Models with bipolar NPN/PNP output and 2 m range
 - High-gain models with bipolar NPN/PNP output and 4 m range
 - Analog (0-10V) output with 4 m range



High-power, infrared sensor for reliable detection of water and water-based liquids

The WORLD-BEAM® QS30H20 Sensor uses a 1450 nm sensing beam to burn through many types of thin-walled glass and plastic containers, creating contrast for reliable liquid detection. The QS30H20 Sensor is an innovative addition to Banner's complete line of cost-effective, rugged and powerful WORLD-BEAM photoelectric sensors.

Liquid detection for challenging clear or translucent plastic or glass containers

- ▶ Emits light that water-based liquids will attenuate, enhancing contrast in challenging low-contrast applications
- ▶ Burns through many plastic and glass containers
- ▶ Detects water-based liquids including liquor, beer, shampoos, conditioners, lotions and sauces
- ▶ Penetrates many labels (material thickness and type dependent)
- ▶ Features WORLD-BEAM QS30 housing with popular 30 mm threaded lens and side mount
- ▶ Specified ranges of up to 4 m (longer range possible)
- ▶ Offers built-in electronic crosstalk avoidance
- ▶ Resists harsh environments with rugged IP67 (NEMA 6) housing and encapsulated electronics
- ▶ Rated PW12 (1200 psi washdown)
- ▶ Offers choice of 10 to 30V dc operation with bipolar, NPN (sinking) and PNP (sourcing) output or 15 to 30V dc with analog (0-10V) output
- ▶ Delivers highly visible power and output status indicators
- ▶ Includes accessory apertures to attenuate or shape the beam

- ▶ Light operate (LO) or dark operate (DO), depending on model (discrete only)
- ▶ Operating temperature from -20° to 60° C
- ▶ Large output status indicator on back of receiver
- ▶ Bright LED status indicators on sensor top
- ▶ 2 m or 9 m attached cable or 5-pin Euro-style pigtail quick-disconnect

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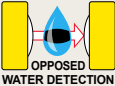
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WORLD-BEAM® QS30H20 Models

Sensing Mode	Models*	Range†	Cable	Supply Voltage	Output	Data Sheet	
 <p>Opposed (Effective Beam: 13 mm) 1450 nm infrared</p>	QS30EXH20	—	2 m	10 to 30V dc	—	136166	
	QS30EXH20Q5		5-pin Euro Pigtail QD				
	QS30ARH20	2 m	2 m		Bipolar NPN/PNP LO		
	QS30ARH20Q5		5-pin Euro Pigtail QD				
	QS30RRH20		2 m		Bipolar NPN/PNP DO		
	QS30RRH20Q5		5-pin Euro Pigtail QD				
	QS30ARXH20	4 m	2 m		10 to 30V dc		Bipolar NPN/PNP LO
	QS30ARXH20Q5		5-pin Euro Pigtail QD				
	QS30RRXH20		2 m				
	QS30RRXH20Q5	5-pin Euro Pigtail QD	4 m		2 m		15 to 30V dc
	QS30RXH20OU	2 m					
	QS30RXH20UQ5	5-pin Euro Pigtail QD					

* For 9 m cable, add suffix **W/30** to the 2 m model number (example, **QS30EXH20 W/30**).

A model with a QD connector requires a mating cordset.

† Sensors can be used at ranges greater than listed for applications that require less excess gain. Please contact the factory for assistance on your long-range applications.

Dimensions



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sensors

A complete resource for tutorials, product questions and answers—and the mechanics and theory behind sensor technology available online at www.bannerengineering.com

Q: Why does the sensor burn through some materials but not others?

Q: Does the color of the container matter?

Q: Is there a certain percentage of water necessary?

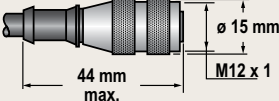

Q: Can I use this sensor to tell the percentage of water content?

Q: Does the color of the liquid matter?





Q: Can I control the gain on this sensor?

Go online for answers to these questions or to pose your own!

Quick-Disconnect (QD) Cordsets

Style	Model	Length	Dimensions	Female Pinout
5-pin Euro-style, straight	MQDC1-506 MQDC1-515 MQDC1-530	2 m 5 m 9 m		1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray 

Brackets

Models	Description
 SMBQS30L	<ul style="list-style-type: none"> Right-angle bracket for cabled sensors 14-ga. stainless steel ±12° tilt adjustment Clearance for M4 (#8) hardware
 SMBQS30LT	<ul style="list-style-type: none"> Tall right-angle bracket for QD sensors with straight cordset connectors 14-ga. stainless steel ±8° tilt adjustment
 SMBQS30Y	<ul style="list-style-type: none"> Heavy-duty die-cast bracket with M18 vertical mounting option ±8° tilt adjustment for cabled sensors Nuts and lockwasher included
 SMB30SC	<ul style="list-style-type: none"> Swivel bracket with 30 mm mounting hole for sensor Black reinforced thermoplastic polyester Stainless steel mounting and swivel locking hardware included

Opposed-Mode Apertures

Aperture	Model	Description
Circular hole	APQS30-040	1 mm dia. - 6 each
	APQS30-100	2.5 mm dia. - 6 each
	APQS30-200	5 mm dia. - 6 each
Horizontal slot	APQ30-040H	1 x 12 mm dia. - 6 each
	APQS30-100H	2.5 x 12 mm dia. - 6 each
	APQS30-200H	5 x 12 mm dia. - 6 each
Vertical slot	APQ30-040V	1 x 17 mm dia. - 6 each
	APQ30-100V	2.5 x 17 mm dia. - 6 each
	APQ30-200V	5 x 17 mm dia. - 6 each
Kit	APQS30-DVHX2	Kit (two of each) -18 total
	APQS30-DVH	Kit (included with each emitter/receiver) containing one each of aperture models: APQS30-040, APQS30-040H, APQS30-040V

NOTE: The use of apertures will reduce the excess gain.

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