U-GAGE®
M25U

Ultrasonic sensors designed to withstand the demands of sanitary applications

Endures severe high-temperature spray

Survives high-temperature, high-pressure washdown and harsh cleaning agents

▶ Presence detection of clear or colored containers during sanitizing

▶ Food process monitoring

▶ Position monitoring

▶ Aseptic bottling in contained environments

Outstanding performance and easy to use

▶ Robust stainless steel housing with 25 mm smooth barrel

▶ 10 to 30V dc operation with a choice of two ranges, depending on wiring

• Normal Speed with 500 mm range and 4 millisecond response time for longer-range applications

• High Speed with 250 mm range and 3 millisecond response time

▶ Wide operating temperature range of -20˚ to 70˚ C

▶ Bright LED indicators for power and output status

▶ Euro-style integral quick-disconnect

Robust stainless steel ultrasonic sensor functions where common ultrasonics fail.

The U-GAGE® M25U Sensor is purpose-built to deliver flawless operation in the harsh environment of food processing and other sanitary industries—withstanding high-pressure washdown and severe temperatures that cause ordinary ultrasonic sensors to fail after just a few weeks. A rugged stainless steel housing makes the M25U an ideal solution for clean-in-place (CIP) procedures routinely found in food and beverage applications.

▶ Features smooth 316 series stainless steel construction to withstand the toughest sanitary application challenges

▶ Cleans easily with no threads, gaps or seams to trap debris

▶ Withstands high-temperature sprays of up to 80˚ C and 1500 psi occurring every few hours

▶ Disinfects and cleans up with minimal effort

▶ Constructed of FDA approved materials

▶ Rated IP69K with fully encapsulated electronics

▶ Offers user-selectable dual range, depending on response time

▶ Features high immunity to ambient electrical and sonic noise

▶ Provides 10 to 30V dc operation with bipolar, NPN (sinking) and PNP (sourcing) output

▶ Indicates status using highly visible LEDs protected by a sealed, transparent cover

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BANNER®
more sensors, more solutions

U-GAGE® M25U Models, 10 to 30V dc

Models		Range and Frequency*	Cable	Output	Response Time	Data Sheet
M25UEQ8	Emitter	Normal Speed: 500 mm	4-pin Euro QD	—	—	137794
M25URBQ8	Receiver	High Speed: 250 mm 140 kHz	5-pin Euro QD	Bipolar NPN/PNP	Normal Speed: 4.0 ms High Speed: 3.0 ms	

*M25U receivers may be wired for either of two speed modes: Normal or High, depending on hookup. The Normal-Speed mode offers a sensing range of 500 mm. The Normal-Speed mode maximizes sensing energy, as is required in demanding environments. The High-Speed mode offers a sensing range of 250 mm. The High-Speed mode maximizes sensing response, as is needed in high-speed counting applications.

Quick-Disconnect (QD) Cordsets

Washdown Models

Cable: Polypropylene jacket and connector body, stainless steel coupling nut

Conductors: 22 AWG gold-plated brass contacts

Voltage Rating: 250V ac
Temperature: -40° to +105° C
Environmental Rating: IP68

Style	Model	Length	Dimensions	Female Pinout
5-pin Euro-style, straight	MQDCWD-506	2 m	42 Typ. ø 15.0 M12 x 1	1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray
	MQDCWD-530	9 m		

Standard Models

Cable: PVC jacket, PUR (polyurethane) connector body, nickel-plated brass coupling nut

Conductors: 22 or 20 AWG high-flex stranded, gold plated contacts

Voltage Rating: 250V ac/300V dc
Temperature: -40° to +90° C
Environmental Rating: IP67

Style	Model	Length	Dimensions	Female Pinout
5-pin Euro-style, straight	MQDC1-506 MQDC1-515 MQDC1-530	2 m 5 m 9 m	44 Typ. M12 x 1 ø 14.5	1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray
5-pin Euro-style, right-angle	MQDC1-506RA MQDC1-515RA MQDC1-530RA	2 m 5 m 9 m	32 Typ. 30 Typ. M12 x 1 ø 14.5	

Brackets

Models	Description
SMBM25A	• Swivel bracket with 25 mm mounting hole for sensor • Stainless steel with rounded edges for cleanliness in demanding environments • Non-metallic FDA compliant bushing for acoustically isolating M25U sensors • M10 x 1.5 mount on opposite side of clamping nuts
SMBM25B	• Swivel bracket with 25 mm mounting hole for sensor • Stainless steel with rounded edges for cleanliness in demanding environments • Non-metallic FDA compliant bushing for acoustically isolating M25U sensors • M10 x 1.5 mount on same side as clamping nuts

Dimensions

103 mm

ø 25 mm

Online Learning

Online Training & Tutorials

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

Q: How does an ultrasonic sensor work?

Q: When would I use an ultrasonic?

Q: How do ultrasonic sensors deal with noise and interference?

Q: What environmental conditions affect an ultrasonic sensor?

Q: What sorts of targets should I avoid when using an ultrasonic sensor?

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

Models to solve your toughest sensing challenges

A complete offering of housing styles, mounting options and sensing ranges means there is a Banner ultrasonic solution for the most difficult applications in your plant.

BANNER®

more sensors, more solutions