UHZ Series Ultrasonic Sensors





Overview

The principle of ultrasonic sensors is based on the emission of a sound impulse and the measurement of the time elapsing of the return echo signal reflected by the detected object. The ultrasonic beam is well reflected by almost all materials (metal, wood, plastic, glass, liquid, etc.) and is not affected by colored,

transparent, or shiny objects. This allows the user to standardize on

This allows the user to standardize on one sensor for many materials without any extra setup or sensing concerns.

Measuring only 30 mm x 20 mm, these miniature sensors are specifically designed for applications with limited mounting space. Through-beam pair sensors are often the most accurate and reliable sensor configurations, but can also be the most costly when compared to traditional diffuse or retroreflective sensors. The low price of a UHZ series through-beam pair allows it to be a competitive alternative to similarly priced but less accurate sensors.

Ultrasonic sensors (rectangular) are ideal for detecting objects in applications where the use of a normal photocell does not, such as:

- level measurement: for tanks containing solid or liquid
- diameter or loop detection: for materials such as paper, sheet iron, etc.
- transparent object detection: for plastic or glass bottles, plastic filters, etc.

Ultrasonic Through-Beam	Sensors Specifications			
Specifications	UHZ			
Nominal Sensing Distance	300 mm [11.81 in]			
Operating Distance	NA			
Output Type	PNP/NPN, N.O./ N.C.			
Operating Voltage	18 - 30 VDC			
No Load Supply Current	< 40mA			
Operating (Load) Current	500mA			
Off-state (Leakage) Current	< 10µA @ 30 VDC			
Voltage Drop	NA			
Switching Frequency	150Hz			
Sensing Beam	Beam angle 15°			
Differential Travel (% of Nominal Distance)	NA			
Repeat Accuracy	NA			
Ripple	NA			
Time Delay Before Availability (tv)	NA			
Response Time	1ms			
Reverse Polarity Protection	Yes			
Short-Circuit Protection	Output short circuit and over current protection, reverse polarity protection			
Operating Temperature	5 to 140°F [-15 to +60°C]			
Protection Degree	IEC-IP67			
Indication/Switch Status	Yellow Output State			
Case Material	PBTP			
Active Head Material	Ceramic			
Shock/Vibration	per IEC EN 60947-5-2			
Tightening Torque	NA			
Weight	161g [5.68 oz]			
Connection	2m [6.5 ft] axial cable			
Agency Approvals	CE			

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The UHZ series of miniature ultrasonic sensors includes four models of rectangular through-beam units. These tiny 20 mm x 30 mm sensors have a maximum sensing distance of 300 mm, with no dead zone at close range. This enables object sensing at a variety of distances. All models have an LED indicator on the receiver and are IP67 protection rated.

With two pre-drilled mounting holes, the UHZ units can be surface mounted more easily than traditional 18 mm or 30 mm threaded tubular designs, which often require a separate mounting bracket or a large mounting hole and additional locknuts.

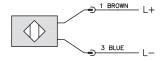
Features

- 30x20x12 mm emitter/receiver rectangular ultrasonic sensor
- · LED status indicator for all models
- · Complete protection against electrical damage
- IP67 protection
- · Strong plastic housing
- Switching frequency 150 Hz
- Sensing distance (sn): 300mm
- Beam angle: 15°
- Supply voltage: 18 30 VDC
- · Lifetime warranty

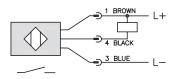
Rectangular Ultrasonic Through-Beam Sensors Selection Chart										
Part Number	Price	Voltage Range	Sensing Range	Switching Frequency	Sensing Beam	Through-Beam Component	Output Type	Connection Type	Wiring	
UHZ-AN-0A	1 \$197.00	18 - 30 VDC	11.81 in	150Hz	Ultrasonic	pair	NPN /N.O.	2m [6.5 ft] cable	Diagram 1	
UHZ-AP-0A	\$197.00		[0.3 m]	10002	150HZ Ultrasonic	pair	PNP/ N.O.	Zili [0.5 It] Cable	Diagram 2	

Wiring Diagram

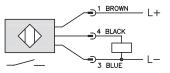
Emitter



Receiver (NPN) Diagram 1

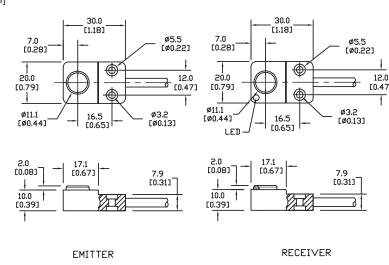


Receiver (PNP) Diagram 2



Dimensions

mm [inch]



Warning: These products are not safety sensors and are not suitable for use in personal safety applications.