

FEATURES

- Ultrasonic sensors
- insensitivity to countless materials, surface types, and colors
- Wood, metal, or plastic; colored, reflective or transparent
- Narrow Beam and Short Dead Band
- Temperature Compensated
- Intrinsically Safe CE & IP67 compliant in properly designed integrated system
- Tamperproof & Rugged
- IP67 Enclosure Rating
- Accurate under demanding environmental conditions

RS PRO Ultrasonic Level/Distance Sensor

RS Stock No.: 2565750



RS Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

Ultrasonic Level/Distance Sensors

Product Description

Ultrasonic sensors precisely detect objects made from various materials regardless of their shape, colour, or surface contour. They operate using high-frequency sound waves that are inaudible to the human ear.

- Liquid and Solid Level Measurement
- Position Detection
- Factory automation
- Tanks, Totes, Processing

General Specifications

Series	PVDF
Detection Range	300mm – 8000mm
Transducer Frequency	50KHz
Sensor Configuration	Diffuse Reflection
Output Type	1 analogue output 0—10V
Response Time	125 ms
Beam Angle	12°
Directivity (Deg)	
Sensitivity (mVp-p)	
Terminal Type	4-core cable
Communication Interface	
Indicator	
Wire Technique	4-wire
Electrical Connection	4-core cable
Cable Length	2m
Minimum Operating Temperature	-25 °C
Maximum Operating Temperature	75 °C
Shock Resistance	
Vibration Resistance	

Operating Voltage Range	12 to 30V DC
Current Consumption	≤15mA (No-load)
Voltage Drop	2V
Maximum Load	500 Ohm
Switching Frequency	
Switching Current	
Reverse Polarity Protection	Yes
Short Circuit Protection	Yes
Overload Protection	Yes

Ultrasonic Level/Distance Sensors

Body Style	Cylindrical
Thread Size	M30
Housing Material	PVDF
Front Material	PVDF
Dimensions	∅62mm x 110mm
Width / Diameter	∅60mm
Length	110mm
Depth	
Weight	400g

Protection Category

IP Rating	IP67
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Additional Information

EAN	
Custom Tariff Number	

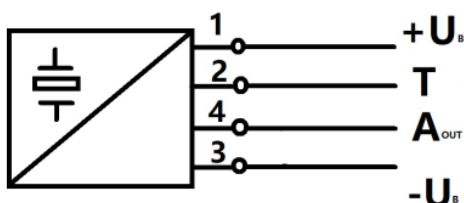
Classification

eCl@ss	
UNSPSC	

Approvals

Compliance/Certifications	CE / RoHS EN 60947-5-2:2020
Declarations	MFR Declaration of Conformity

Electrical Connection



1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

Wire Colors in accordance with EN 60947-5-2

Adjusting the evaluation limits

Adjusting the evaluation limits

The ultrasonic sensor features an analogue output with two teachable evaluation limits. These are set by applying the supply voltage $-U_B$ or $+U_B$ to the TEACH-IN input. The supply voltage must be applied to the TEACH-IN input for at least 1 s. LEDs indicate whether the sensor has recognised the target during the TEACH-IN procedure. The lower evaluation limit A1 is taught with $-U_B$, A2 with $+U_B$. Two different output functions can be set:

1. Analogue value increases with rising distance to object (rising ramp)
2. Analogue value falls with rising distance to object (falling ramp) Evaluation limits may only be specified within the first 5 minutes after Power on. To modify the evaluation limits later, the user may specify the desired values only after a new Power On.

TEACH-IN rising ramp ($A2 > A1$)

- Position object at lower evaluation limit
- TEACH-IN lower limit A1 with $-U_B$
- Position object at upper evaluation limit
- TEACH-IN upper limit A2 with $+U_B$

TEACH-IN falling ramp ($A1 > A2$):

- Position object at lower evaluation limit
- TEACH-IN lower limit A2 with $+U_B$
- Position object at upper evaluation limit
- TEACH-IN upper limit A1 with $-U_B$

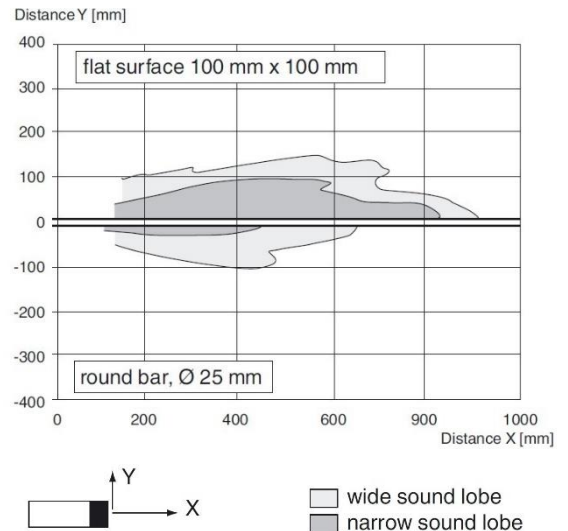
Default setting

A1: unusable area

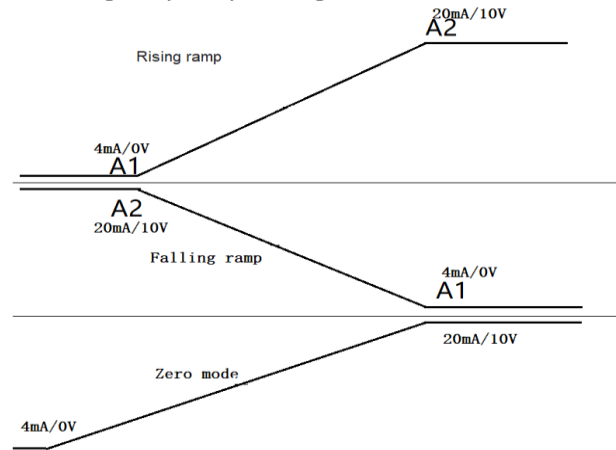
A2: nominal sensing range

Mode of operation: rising ramp

Characteristic response curve



Analog output operating modes



Drawing