



# NON-CONTACT ULTRASONIC LEVEL TRANSMITTER/SWITCH

LVS30 Series  
Starts at  
**\$350**



LVS31, \$350, and LVS30-MB mounting bracket, \$15, shown actual size.

- ✓ Low-Cost
- ✓ Analog or Setpoint Switched Output
- ✓ Plug and Play Setup—No Targets Needed
- ✓ Easy Setup Software for Windows® (Included)
- ✓ Built-In Temperature/Sound Speed Compensation
- ✓ Up to 32 Sensors on RS485 Multi-Drop Loop

The LVS30 Series of RoHS Compliant low-cost ultrasonic sensors that produce detection ranges from as close as 100 mm (4") to greater than 4 m (13'). Incorporating state-of-the-art ultrasonic technology, the sensors provide precision non-contact distance measurement for factory automation or industrial process control. The LVS30 series of sensors stand out over all other systems because of their affordability, extraordinary ease of operation, genuinely user-friendly software, versatility in user-controlled outputs, and the ability to be set up without using a target. They transmit narrow beam sound pulses at a user-selected rate (software triggered), the process returns echoes, and various outputs depending on the position of the target and programming parameters.

## SPECIFICATIONS (Typical at 24 Vdc, 22°C, 24 Vdc and 50% RH)

### Ultrasonic Frequency:

- LVS31: 210 kHz
- LVS32: 150 kHz
- LVS33: 95 kHz nominal

### System Beam Angle:

8 degrees conical

### Range:

- LVS31: 102 mm to 1.2 m (4" to 4')
- LVS32: 178 mm to 2.4 m (7" to 8')
- LVS33: 305 mm to 4.0 m (1 to 13')

**Resolution:** 0.25 mm (0.01")

29 mm  
(1.13")  
diameter



### Echo Detection Sensitivity:

User selectable

### Power Required:

12 to 24 Vdc (reverse polarity protected), 30 mA, typical

**Output Impedance:** 100 Ω for both modes of operation

### Proportional Mode (Analog Output)

#### Zero and Span Voltages:

Programmable from 0 to 10.25 Vdc (default: 0 to 10.0 Vdc)

**Loss of Echo Voltage:** Programmable from 0 to 10.25 Vdc (default: 10.25 Vdc)

**Response Time:** 60 ms

**Resolution:** 10-bit

### Switch Mode

**Setpoint Voltages:** 0 or 10.25 Vdc

#### Setpoint Hysteresis

(Programmable): 0 to 75%

**Response Time:** < 1 ms

#### Sampling Rate (Programmable):

0.1 to 100 Hz in 0.1 Hz increments (default: 10 Hz)

### Target Distance Averaging

#### Rolling Average:

From 1 to 32 samples

**Boxcar Average:** From 1 to 1024 samples (default: 1 sample)

### Loss-of-Echo Time-Out:

From 1 to 254 consecutive samples missed before time-out (factory default: 1 sample)

**Housing Material:** PVC

**Connection:** 1 NPT

**Transducer Surface:** Custom PPA

**Cable:** 5 conductor, PVC jacket, 22 AWG, 200 mm (18") pigtail [user-extendable for RS485 communication to 1500 m (5000')]

### Operating Temperature:

-20 to 65°C (-4 to 149°F)

**Storage Temperature:** -40 to 85°C (-40 to 185°F)

**Relative Humidity:** 0 to 95%, non-condensing

**Enclosure Rating:** NEMA 6 (IP67)

### Programming Requirements

#### Communications Converter:

RS232 (or USB)/RS485 with automatic send data control

**AVAILABLE FOR FAST DELIVERY!**

## To Order (Specify Model Number)

Model No.	Price	Description
LVS31	\$350	Ultrasonic level transmitter/switch 1.2 m (4') range
LVS32	365	Ultrasonic level transmitter/switch 2.4 m (8') range
LVS33	390	Ultrasonic level transmitter/switch 4 m (13') range
LVS30-MB	15	Optional mounting bracket
LVS30-SW	FREE	Programming software available free at <a href="http://omega.com/ftp">omega.com/ftp</a>
IC11-PLUS	128	Auto RS232 to RS422/485 converter

Comes complete with operator's manual and lock nut.

**Ordering Examples:** LVS31, ultrasonic level transmitter/switch, LVS30-MB, mounting bracket, \$350 + 15 = \$365.

LVS33, ultrasonic level transmitter/switch, \$390.

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