

### Overview



SITRANS LU150 is a short-range integrated ultrasonic level transmitter. This general purpose, 2 wire, 4 to 20 mA loop powered transmitter is ideal for liquids, slurries, and bulk materials in open or closed vessels to 5 m (16.4 ft).

### Benefits

- Easy to install, program, and maintain
- Accurate and reliable
- Sanitary models available
- Patented Sonic Intelligence echo processing
- Integral temperature compensation

### Application

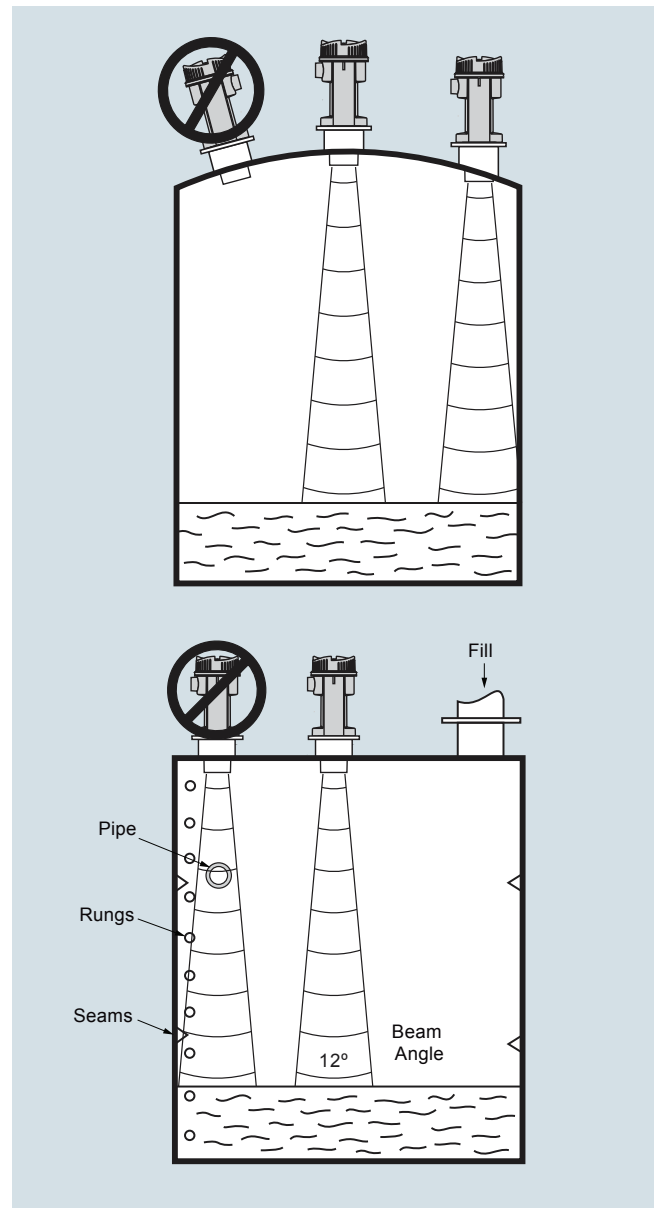
The transducer is available in PVDF copolymer, making the device suitable for use in a wide variety of applications.

SITRANS LU150 is easy to install and maintain, and can be quickly removed for cleaning as required by the food, beverage and pharmaceutical industries.

The reliability of the level data is based on the Sonic Intelligence echo processing algorithms. A filter discriminates between the true echo and false echoes from acoustic or electrical noises and agitator blades in motion. The ultrasonic pulse propagation time to the material and back is temperature-compensated and converted into distance for display, analog output.

- Key Applications: chemical storage vessels, filter beds, mud pits, liquid storage vessels, food applications

### Configuration



SITRANS LU150, mounting

## Level Measurement


Continuous level measurement – Ultrasonic transmitters

### SITRANS LU150


#### Technical specifications

<b>Mode of operation</b>	
Measuring principle	Ultrasonic level measurement
<b>Input</b>	
Measuring range	0.25 ... 5 m (0.8 ... 16.4 ft)
Frequency	54 kHz
<b>Output</b>	
• mA	4 ... 20 mA
- Span	Proportional/ inversely proportional
- Max. load	600 Ω in the loop at 24 V DC
<b>Power supply</b>	
Supply voltage	12 ... 30 V DC, 0.1 A surge
Max. power consumption	0.75 W (25 mA at 24 V DC)
<b>Certificates and approvals</b>	
	CE, CSA <sub>US/C</sub>
<b>Accuracy</b>	
• Error in measurement	0.25 % of measuring range (in air)
• Resolution	3 mm (0.125 inch)
• Temperature compensation	Built in
• Echo processing	Sonic Intelligence
<b>Rated operation conditions</b>	
• Beam angle	12°
• Ambient temperature	
- Standard	-30 ... +60 °C (-22 ... +140 °F)
- Metallic mounting	-20 ... +60 °C (-4 ... +140 °F)
• Max. static operating pressure	Normal atmospheric pressure
<b>Design</b>	
• Weight	1.3 kg (2.9 lb)
• Material	
- Electronics enclosure	PBT
- Transducer	PVDF copolymer
• Degree of protection	IP68 / NEMA 6 / TYPE 6
• Process connection	2" NPT [(Taper), ANSI/ASME B1.20.1] R 2" [(BSPT), EN 10226] or G 2" [(BSPP), EN ISO 228-1]
• Flange adapter	3" Universal, (fits DN 65, PN 10 and 3" ASME)
• Cable inlet	4" sanitary 1 inlet for M20, optional 1/2" NPT





#### Selection and Ordering data

**SITRANS LU150**  **7ML5201-** Article No.


Short-range integrated ultrasonic level transmitter, general purpose, 2 wire, 4 to 20 mA loop powered ideal for liquids, slurries, and bulk materials in open or closed vessels to 5 meters (16.4 feet)

 Click on the Article No. for the online configuration in the PIA Life Cycle Portal.

#### Transducer/Process connection (PVDF)

PVDF copolymer, 2" NPT [(Taper), ANSI/ASME B1.20.1]  **E**  
 PVDF copolymer, R 2" [(BSPT), EN 10226]  **F**  
 PVDF copolymer, G 2" [(BSPP), EN ISO 228-1]  **G**  
 PVDF copolymer, 4" Sanitary mounting  **J**

#### Cable inlet

M20 x 1.5 (no cable gland included)  **A**  
 M20 x 1.5 [General Purpose cable gland -20 ... +60 °C (-4 ... +140 °F) included] **B**  
 1/2" NPT stainless steel entry (no cable gland included) **C**

#### Selection and Ordering data

**Further designs** Order code

Please add **"-Z"** to Article No. and specify Order code(s).

Stainless steel tag [13 x 45 mm (0.5 x 1.75 inch)]: Measuring-point number/ identification (max. 20 characters) specify in plain text

**Y15**

Test certificate: Manufacturer's test certificate M to DIN 55350, Part 18 and to ISO 9000

**C11**

#### Operating Instructions

English **A5E34590123**  
 German **A5E36369862**  
 French **A5E36369877**  
 Spanish **A5E36369879**  
 Italian **A5E36646167**  
 Chinese **A5E35602199**

Note: Operating instructions should be ordered as a separate line on the order

This device is shipped with the Siemens Level and Weighing manual DVD containing the ATEX Quick Start and Operating Instructions library.

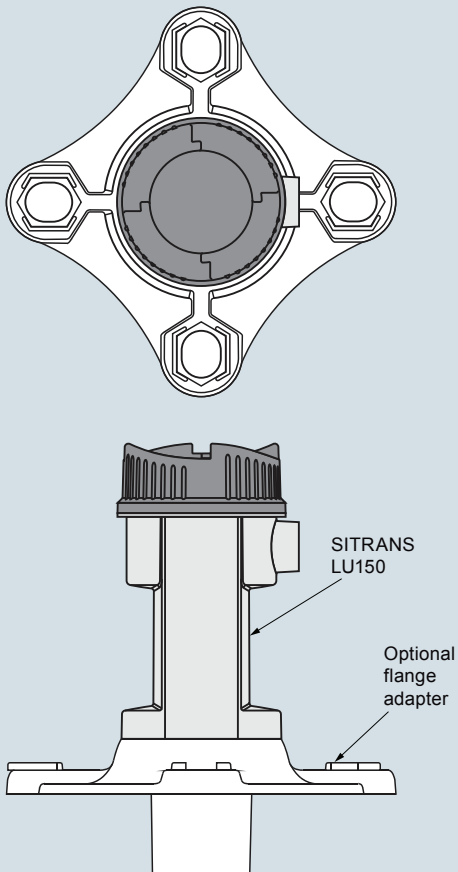
#### Accessories

Tag, stainless steel, 12 x 45 mm (0.47 x 1.77 inch), one text line **7ML1930-1AC**  
 Universal Box Bracket Mounting kit **7ML1830-1BK**  
 Sanitary 4" mounting clamp **7ML1830-1BR**  
 3" ASME, DN 65 PN 10, JIS 10K 3B ETFE Flange adapter for 2" NPT **7ML1830-1BT**  
 3" ASME, DN 65 PN 10, JIS 10K 3B ETFE Flange adapter for 2" BSPT **7ML1830-1BU**  
 2" NPT locknut, plastic **7ML1830-1DT**  
 2" BSPT locknut, plastic **7ML1830-1DQ**  
 Cable Gland - General Purpose -20 ... +60 °C (-4 ... +140 °F) **A5E34457564**

**Options**

**SITRANS LU150, Flange Adapter**

The SITRANS LU150 can be fitted with the optional 75 (3) flange adapter for mating to 3" ANSI, DIN 65 PN10 and JIS 10K3B flanges.



SITRANS LU150 Optional Flange Adapter, dimensions in mm (inch)

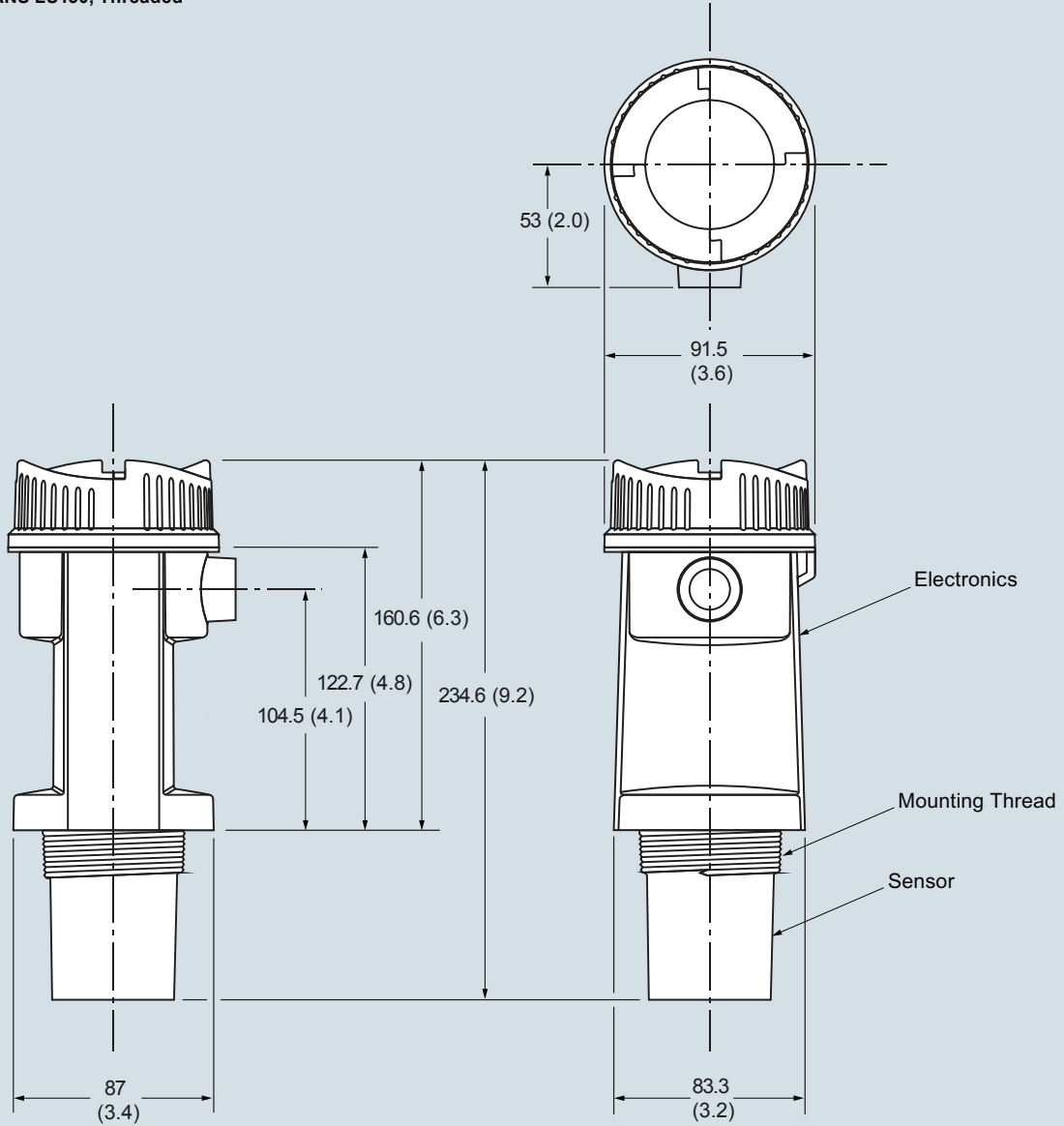
## Level Measurement

Continuous level measurement – Ultrasonic transmitters

### SITRANS LU150

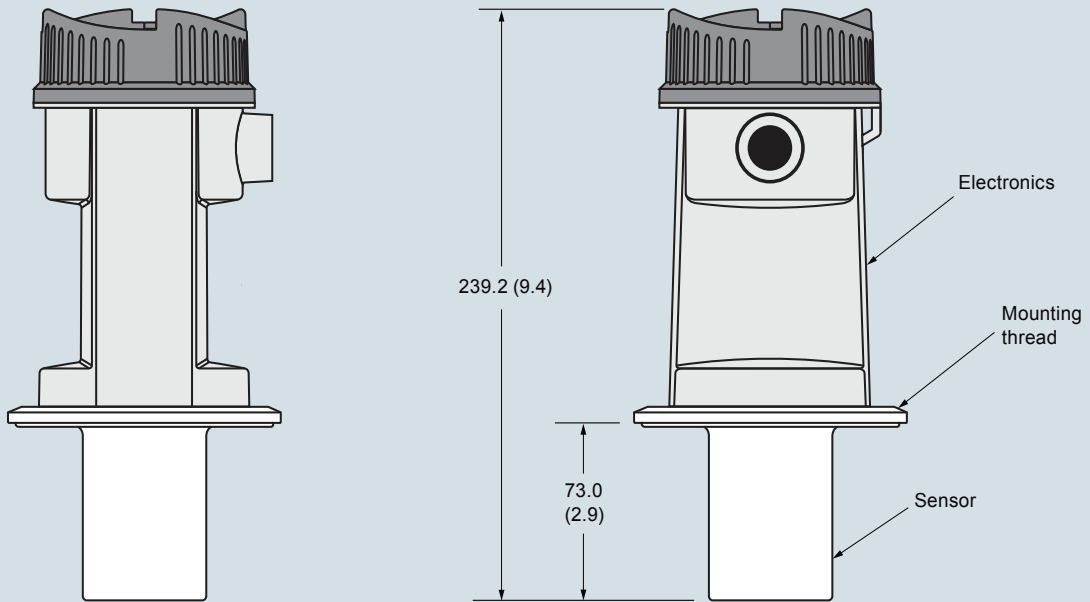
#### Dimensional drawings

SITRANS LU150, Threaded



SITRANS LU150, dimensions in mm (inch)

**SITRANS LU150, Sanitary**



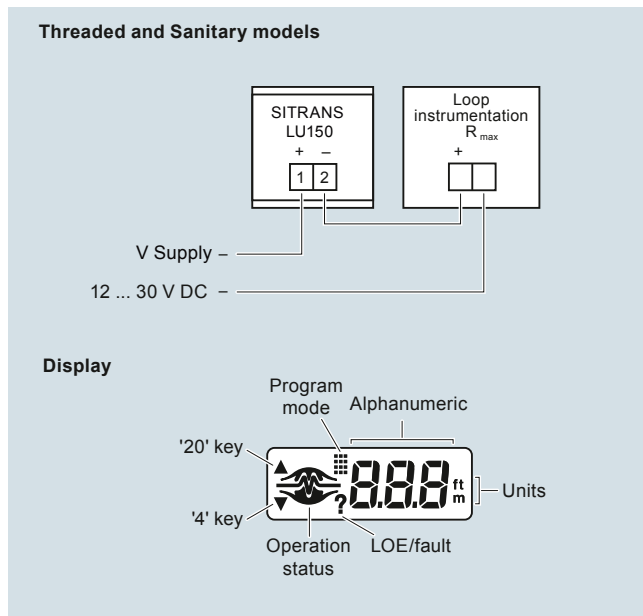
SITRANS LU150, dimensions in mm (inch)

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### SITRANS LU150

#### Schematics



SITRANS LU150 connections