

## Level measurement

Continuous level measurement  
Radar level transmitters

### SITRANS LR150

#### Overview



SITRANS LR150 is a compact radar transmitter for continuous level measurement of liquids, slurries, and solids to a range of 15 m (49.2 ft).

#### Benefits

- Bluetooth connectivity for easy setup with SITRANS mobile IQ.
- Optional HMI with pushbutton programming and local diagnostic data.
- Chemically resistant PVDF sensor.
- HART 7.0 communication for intelligent integration into your application.
- W band FMCW radar yields narrow beam with small antenna for superior performance in short range applications.
- Approved for open air applications outside of a tank.
- 2 mm accuracy and zero near range distance yields optimum inventory management capability.
- Compact design fits in limited space installations.
- Hazardous area variants available for safe use in explosive gas or dust environments (pending).

#### Application

SITRANS LR150 is a W band FMCW radar level transmitter, with a chemically resistant PVDF sensor, for years of trouble-free, reliable measurement service.

4 to 20 mA loop powered with HART, providing accurate level measurement to ranges of 15 m (49.2 ft). Measurement is possible, non-intrusively, through plastic vessel tops for easy installation. Programming is convenient using the Bluetooth connection and SITRANS mobile IQ application on your smart device or locally with an optional HMI.

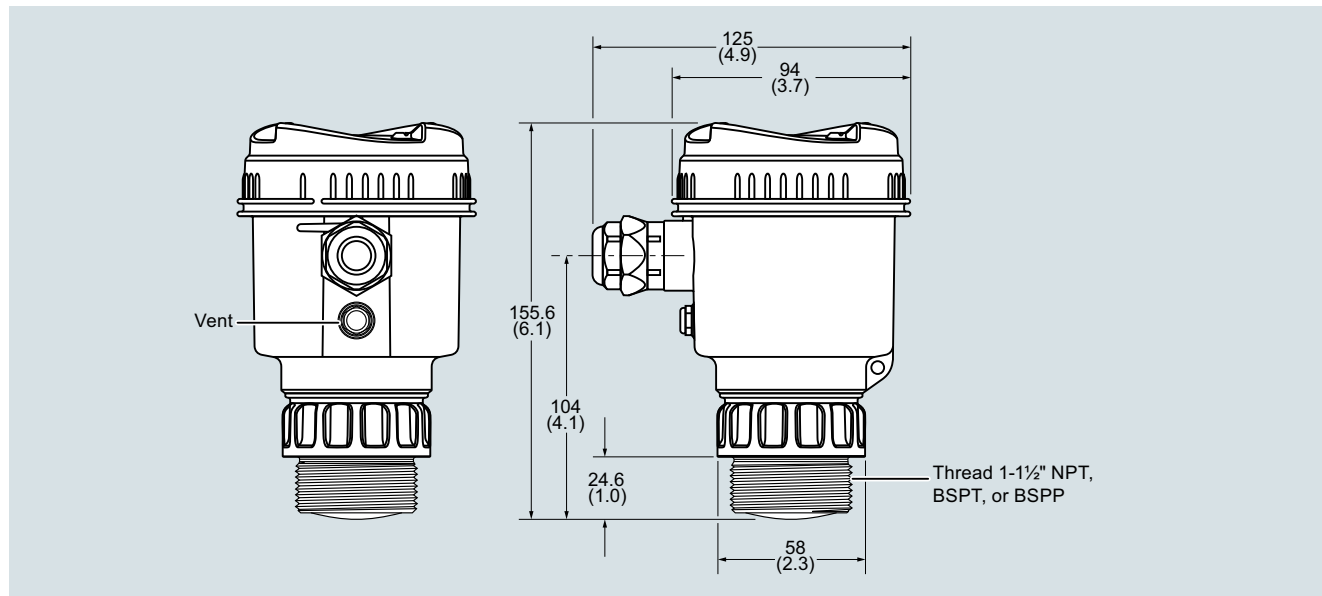
#### Technical specifications

<b>Mode of operation</b>	
Measuring principle	W band FMCW radar
Measuring range	0 ... 15 m (0 ... 49.2 ft)
Frequency	80 GHz nominal
Beam angle	8°
<b>Power Supply</b>	
HART	
• Voltage	12 ... 35 V DC
• Current	4 ... 20 mA
<b>Communications</b>	
4 ... 20 mA	HART 7.0
<b>Accuracy</b>	
	± 2 mm
<b>Rated operating conditions</b>	
Vessel pressure	-1 ... +3 bar (14.50 ... 43.51 psi g)
Ambient temperature	-40 ... +70 °C (-40 ... +158 °F)
Process temperature	-40 ... +70 °C (-40 ... +158 °F)
Storage temperature	-40 ... +80 °C (-40 ... +176 °F)
<b>Design</b>	
Weight	0.5 kg (1.1 lb)
Material (sensor)	PVDF
Material (enclosure)	PBT
Process connection	1-½" NPT, 1-½" BSPT or 1-½" BSPP
Degree of protection	IP66/IP67
Cable inlet	M20 or ½" NPT
<b>Certificates and approvals</b>	
	CE
<b>Programming</b>	
SITRANS mobile IQ App	SITRANS mobile IQ is a Bluetooth app that provides an intuitive interface to quickly configure, set up and monitor SITRANS LR100 series (available for Android, Apple and Windows devices). For more information: <a href="http://www.siemens.com/mobileIQ">http://www.siemens.com/mobileIQ</a>
Optional HMI	4 button with display of variables and diagnostic data
SIMATIC PDM	SIMATIC PDM allows for remote PC configuration and diagnostics (for installation on a network).

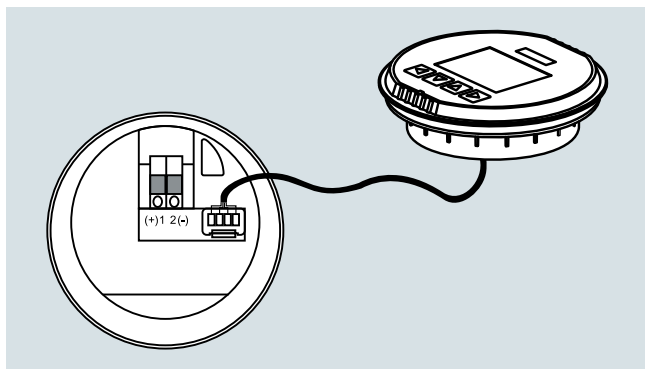
Selection and ordering data	Article No.	Order code
<b>SITRANS LR150 Radar level transmitter</b> Non-contact, 15 m (49.2 ft) range, for liquids and solids. <a href="#">Click on the Article No. for the online configuration in the PIA Life Cycle Portal.</a>	<b>7ML534</b> 0 - A A 0 7 - 4	
<b>Bluetooth function</b> Disabled Enabled	0 1	
<b>Process connection</b> 1-½" NPT R 1-½" (BSPT) G 1-½" (BSPP)	A B C	
<b>Type of protection</b> Non Ex (ordinary locations)	A	
<b>Electrical connections/cable entry</b> M20 ½" NPT	F K	
<b>Local HMI</b> Without display (closed lid of PBT/PC material) With display (closed lid of PBT/PC material) With display (clear lid with plastic window of PC material)	0 1 3	
		<b>Further designs</b> Please add "-Z" to Article No. and specify Order code(s). Tag (device parameter, max. 32 characters) plate stainless steel 304/1.4301
		<b>Operating Instructions</b> All literature is available to download for free, in a range of languages, at <a href="http://www.siemens.com/processinstrumentation/documentation">http://www.siemens.com/processinstrumentation/documentation</a>
		<b>Accessories</b> SIMATIC RTU3030C compact, remote data manager with alarming Intrinsically Safe barrier SITRANS RD100, loop powered display - see Chapter 7 SITRANS RD150, remote digital display for 4 to 20 mA and HART devices - see Chapter 7 SITRANS RD200, universal input display with Modbus conversion - see Chapter 7 SITRANS RD300, dual line display with totalizer and linearization curve and Modbus conversion - see Chapter 7 For applicable back up point level switch -see point level measurement section
		Article No. <b>6NH3112-3BA00-0XX0</b> <b>7NG4124-1AA00</b> <b>7ML5741-.....-</b> <b>7ML5742-.....-</b> <b>7ML5740-.....-</b> <b>7ML5744-.....-</b>

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**SITRANS LR150****Dimensional drawings**

SITRANS LR150, dimensions in mm (inch)

**Circuit diagrams**

SITRANS LR150 connections