Overview

Echomax® XLT transducers use ultrasonic technology to measure level in a wide range of bulk solids.

Benefits

- Sealed aluminum face
- Integral temperature sensor
- Self-cleaning and low maintenance
- Connect using only two wires
- Easy to install

Application

XLT transducers operate with Siemens SITRANS LU transceivers in measuring ranges from 0.9 to 60 m (1.8 to 200 ft) and temperatures up to +150 °C (+300 °F). A beam angle of just 5° provides accurate readings in deep, narrow tanks.

With increased signal sensitivity, the XLT transducers from Siemens can operate in difficult applications such as limestone, cement clinker and hot stone. All models have a sealed aluminum face to withstand very harsh environments.

During operation, Echomax transducers emit acoustic pulses in a narrow beam. The level transceiver measures the propagation time between pulse emission and reception of the echo to calculate the distance from the transducer to the material. Temperature variations are automatically compensated by the integral temperature sensor.

- Key Applications: bulk solids including limestone, cement clinker, hot stone and coal bunkers

Technical specifications

Mode of operation	
Measuring principle	Ultrasonic transducer
Input	
Measuring range	
• XLT-30	0.9 ... 30 m (3.0 ... 100 ft)
• XLT-60	1.8 ... 60 m (6.0 ... 200 ft)
Output	
Frequency	
• XLT-30	22 kHz
• XLT-60	13 kHz
Beam angle[1)]	5°
Accuracy	
Temperature error	Compensated by transducers internal temperature sensor
Rated operating conditions	
Ambient conditions	
• Ambient temperature	
- XLT-30 and XLT-60	-40 ... +150 °C (-40 ... +300 °F)
Design	
Weight	
• XLT-30	4.3 kg (9.5 lbs)
• XLT-60	6.6 kg (14.5 lbs)
Material (enclosure)	Aluminium, 304 stainless steel, polyester and silicone
Degree of protection	IP68
Color	
• XLT-30 and XLT-60	Red
Mounting	1" NPT [(Taper), ANSI/ASME B1.20.1]
Cable connection	2-core shielded/twisted, 0.5 mm^2 (20 AWG), silicone sheath
Cable (max. length)	365 m (1200 ft) with RG 62 AU coaxial cable
Certificates and approvals	CE (EMC certificate available on request), $CSA_{US/C}$, FM, ATEX II 2G 1D T5

1) Definition of beam width: twice the angle at which the off-axis transmission is 3 dB less than the acoustic pressure level of the transmission axis (as measured equidistant from the sensor face).

Echomax XLT

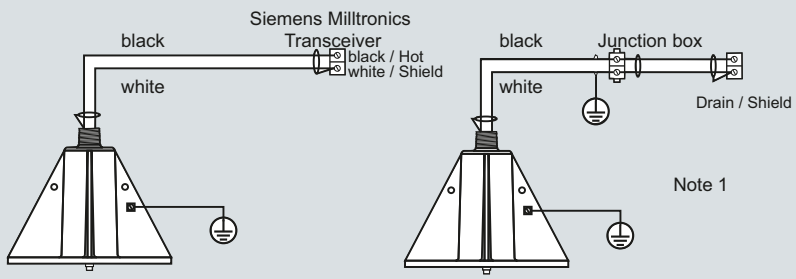
Selection and Ordering data		Order No.
Echomax® XLT-30, XLT-60, ultrasonic transducer		
High-frequency ultrasonic transducer designed for a wide variety of liquid and solid applications, for use with approved controllers. Includes integral temperature sensor. Measuring range: min. 0.9 m, max. 30 m Process connection: 1" NPT [(Taper), ANSI/ASME B1.20.1]		
XLT-30	C)	**7ML1141 -**
XLT-60	C)	**7ML1145 -**
		■■E■0
Facing		
XLT-30		**0**
XLT-60		**1**
XLT-30, nylon		**2**
XLT-60, nylon		**3**
Cable length		
1 m (3.28 ft)		**A**
5 m (16.40 ft)		**B**
10 m (32.81 ft)		**C**
20 m (65.62 ft)		**D**
30 m (98.43 ft)		**E**
50 m (164.04 ft)		**F**
70 m (229.66 ft)		**G**
80 m (262.47 ft)		**H**
90 m (295.28 ft)		**J**
100 m (328.08 ft)		**K**
Approvals		
ATEX II 2G 1D, CSA Class I Div. 1, FM Class I Div. 2, CE		**3**

C) Subject to export regulations AL: N, ECCN: EAR99

Selection and Ordering data		Order code
Further designs		
Please add "**-Z**" to Order No. and specify Order code(s).		
Acrylic coated, stainless steel tag [13 x 45 mm Stainless steel tag [69 x 50 mm (2.71 x 1.97")]: Measuring-point number/identification (max. 16 characters) specify in plain text		**Y15**
Operating Instructions		Order No.
Quick start manual, multi-language	C)	**7ML1998-5QS81**
Applications Guidelines, multi-language Note: The Applications Guidelines should be ordered as a separate line item on the order.	C)	**7ML1998-5HV61**
This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and Operating Instructions library.		
Accessories		
Tag, stainless steel with hole, 12 x 45 mm (0.47 x 1.77"), one text line for fastening on sensors		**7ML1930-1BJ**
Easy Aimer 2, 1" NPT galvanized		**7ML1830-1AP**
Easy Aimer 304 with stainless steel coupling		**7ML1830-1AU**
Easy Aimer 2, aluminum with M20 adapter and 1" and 1½" BSPT aluminum couplings		**7ML1830-1AX**
Easy Aimer 304, with M20 adapter and 1" and 1½" BSPT 304 SS couplings		**7ML1830-1GN**

C) Subject to export regulations AL: N, ECCN: EAR99

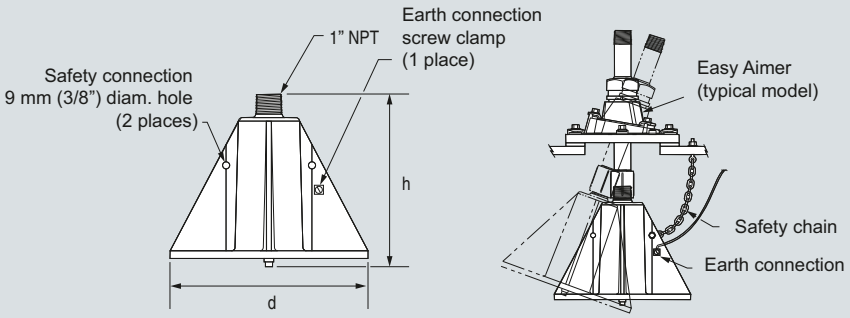
Schematics



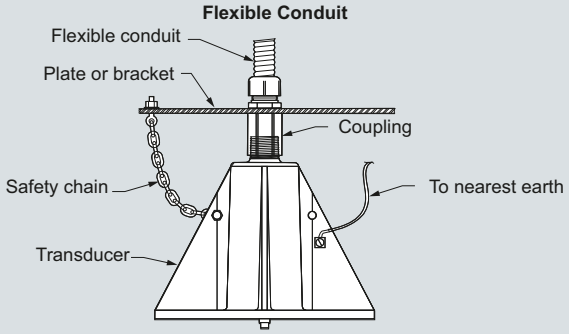
Note:
1. Extend cable using 18 AWG shield / twisted pair up to 100 m (333 ft).
2. Extend cable using RG-62 A/U coax for optimum signal to noise ratio up to 365 m (1200 ft).

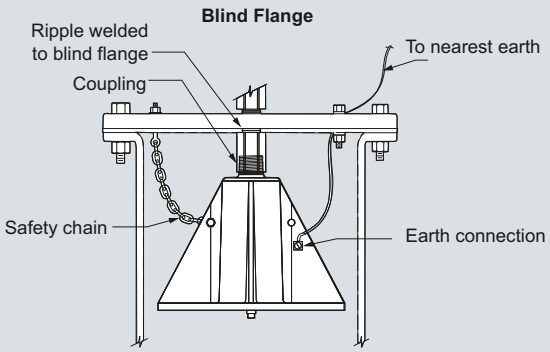
XLT ultrasonic transducer connections

Dimensional drawings



Mounting - Liquid Applications





XLT ultrasonic transducer, dimensions in mm (inch)

	XLT-30	XLT-60
d	264 mm (10.4")	335 mm (13.2")
h	249 mm (9.8")	324 mm (12.75")

FINE CONTROLS (UK) LTD

Fine Controls have been supplying process controls & instrumentation equipment since 1994, & now serves an ever expanding customer base, both in the UK & globally.

We offer a full range of valve & instrumentation products & services, with our product rangerepresenting leading technologies & brands:

Flow: Flow Meters & Transmitters, Flow Switches, Flow Control Valves & Batch Control Systems

Temperature: Temperature Probes & Thermowells, Temperature ransmitters,Temperature Regulators & Temperature Displays

Level: Level Transmitters & Switches

Pressure: Pressure Gauges &Transmitters, Precision & High Pressure Regulators & I-P Converters, Volume boosters.

Precision Pneumatics: Pressure Regulators, I-P Converters, Volume Boosters, Vacuum Regulators

Valves: Solenoid & Pneumatic Valves, Control Valves & Positioners, Actuated Ball, Globe or Diaphragm Valves & Isolation Valves

Services: Repair, Calibration, Panel Build, System Design & Commissioning

A rotork Brand FAIRCHILD

bürkert

SIEMENS

alcon SOLENOID VALVES

A rotork Brand

MIDLAND-ACS

A rotork Brand

Honeywell

Bourdon Baumer Group

SOLDO CONTROLS

A rotork Brand

Fine Controls (UK) LTD, Bassendale Road, Croft Business Park,
Bromborough, Wirral, CH62 3QL UK
Tel: 0151 343 9966
Email: sales@finecontrols.com