

LMT Series

Magnetostrictive level transmitter LMT100 & 200 models



Quick Start Guide
K-TEK Level products

Measurement made easy

Contents

1	Electrical Connections	4
2	Mounting	4
3	Easy Setup	5

Sales



Service



Introduction

The LMT Series of level transmitters is a modular range of field mounted, microprocessor-based electronic transmitters, utilizing multiple sensor technologies. Accurate and reliable measurement of liquid levels is provided in even the most difficult and hazardous industrial environments. The LMT Series can be configured to provide specific industrial output signals, according to 4-20 mA with HART digital communication. The LMT Series consists of two models: LMT100 (insertion-mounted) and LMT200 (mounted on gauge (KM26)).

Standard Precautions

CAUTION

Only qualified and authorized personnel are to be tasked with the installation, electrical connection, commissioning and maintenance of the transmitter. Qualified personnel are those individuals who have experience in the installation, electrical connection, commissioning and operation of the transmitter or similar devices and hold the necessary qualifications. These qualifications include but not limited to:

- Training or instruction – authorization to operate and maintain devices or systems according to safety engineering standards for electrical circuits, high pressures and aggressive media
- Training or instruction in accordance with safety engineering standards regarding maintenance and use of adequate safety systems.

Since the transmitter may form a link within a safety chain, it is recommended that the device be replaced immediately if defects are detected. In the event of use in a hazardous area, only non-sparking tools are to be used.

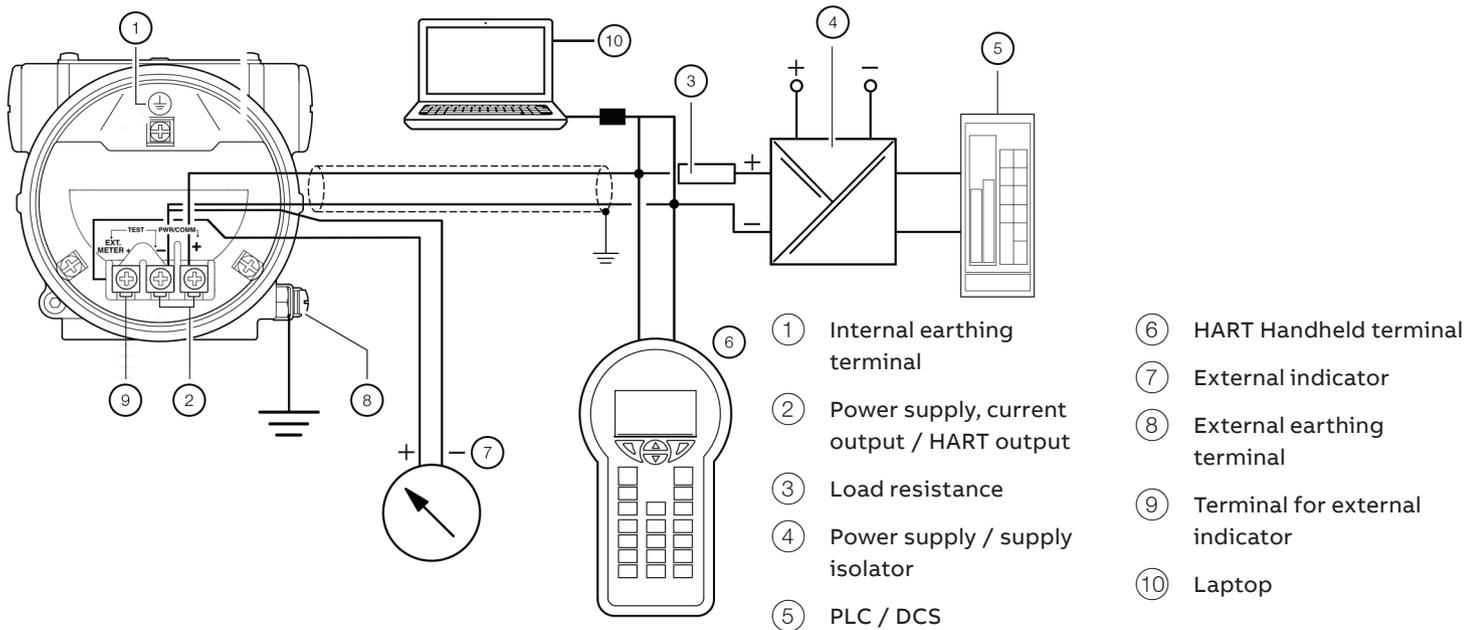
IMPORTANT NOTE

Read the LMT Series operating instructions carefully before working with the product. For personal and system safety and for optimum performance, make sure you thoroughly understand the contents before installing, using or maintaining this instrument.

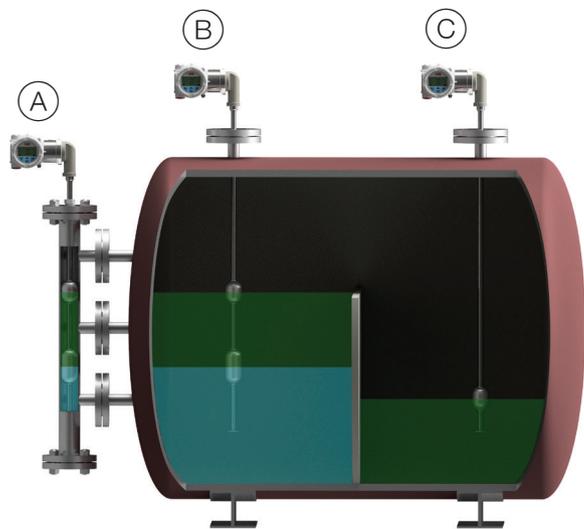
Features

- High accuracy: 0.01% of full scale or + 1.27mm
- Never requires re-calibration: set it & forget it
- Superior Sensor (Patent #5,473,245)
- Local indication with HMI display
- Dual compartment housing with separate field terminal compartment
- Loop powered to 22m (75ft) probe length
- Total and/or interface level measurement
- Pressure to 165.48 bar (2400 psig) Std. 124.1 bar (1800 psig)
- Temperature range: -195.5 to 426.6°C (-320 to 800°F) with options
- Field replaceable/upgradable electronics module
- Built-in RFI / EMI filter
- Field Replaceable / Upgradable Electronics Module
- Digital Communications
- Online Self-verification

1 Electrical Connections



2 Mounting



LMT100 Transmitters installations:

- Ⓐ Installed in external chambers in a level and interface measurement application
- Ⓑ Installed directly into vessel, measuring level and interface level
- Ⓒ Installed directly into vessel measuring level only

Figure 1 LMT100 Mounting

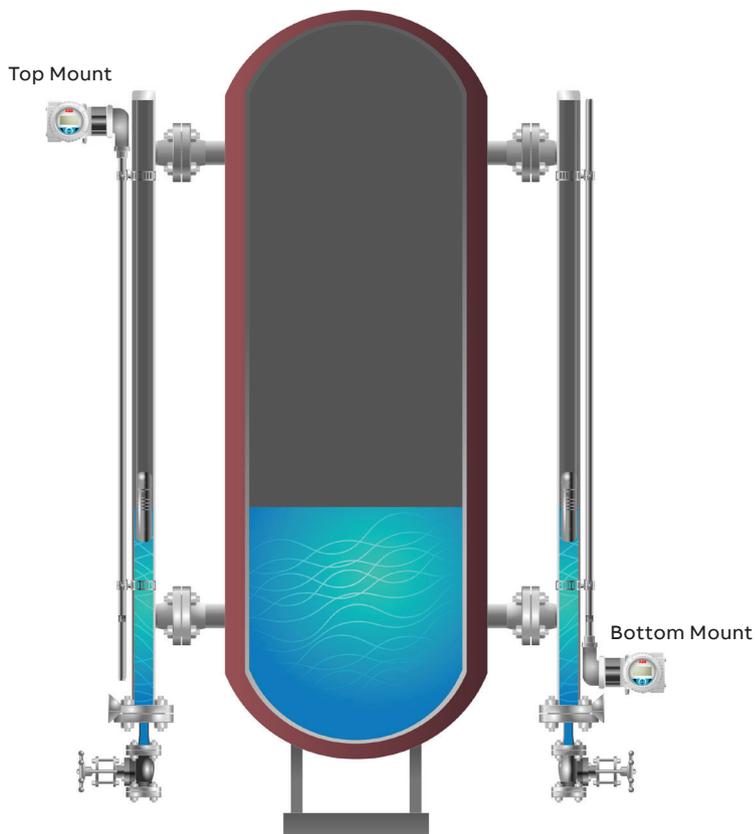


Figure 2 LMT200 Mounting

3 Easy Setup

- 1 Log on to the LMT at the Standard or Advanced access level.



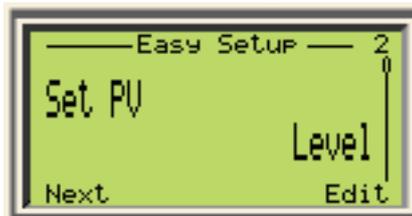
- 2 Select Easy Setup in the main menu.



- 3 Select a language in the “Easy Setup” menu and press .



- 4 Select available option of primary variable in the “Easy Setup” menu and press .



- 5 Select available option of units of measure in the “Easy Setup” menu and press .



- 6 Set LRV in the “Easy Setup” menu and press .

LRV is the lower range value which corresponds to 4 mA current out value.



- 7 Set URV in the “Easy Setup” menu and press .

URV is the upper range value which corresponds to the 20 mA current out value.



- 8 Set Damping time in the “Easy Setup” menu and press .

Damping allows smoothing step response in the device output.



- 9 Select displayed variable in the “Easy Setup” menu and press .

Sets the selected process variable on the first line on the process display.



- 10 Set a tag in the “Easy Setup” menu and press .

A tag is a quick way to identify the device.



*For detailed commission/operation steps refer to LMT operating instructions.

Specifications (Refer to LMT100/200 Datasheets for Details)	
Electronic transmitter:	
Repeatability	± 0.005% of Full Scale or 0.305 mm (0.012 in), whichever is greater
Non-linearity	± 0.01% of Full Scale or 0.864 mm (0.034in), whichever is greater
Measuring accuracy	± 0.01% of Full Scale or 1.27 mm (0.050 in), whichever is greater
Supply voltage	12 to 42 Vdc - 4-20mA HART loop powered
Output/Communications	4-20mA HART7®
User Interface	Interactive display, DTM, EDDL with NE107 messaging
Power consumption	4-20mA
	HART mode (4.0mA)
Ambient temperature	-40 to 85°C (-40 to 185°F) Ambient
Humidity	0 to 100% RH
Electrical connection	Two M20 x 1.5 or two 1/2in. FNPT, adapters and bus connectors also available
Ingress protection	IP66, NEMA 4X
Sensor tube:	
Material	316/L Stainless Steel
Process temperature	LMT100: -195.5 to 121.1°C (-320 to 250°F)
Process pressure	LMT100: -1.0 to 124.1 bar @ 149°C (-14.7 to 1800 psig @ 300°F)
Probe length	LMT100: 304.8mm to 9.14m (1 to 30ft) / LMT200: 304.8mm to 15.24m (1 to 50ft)

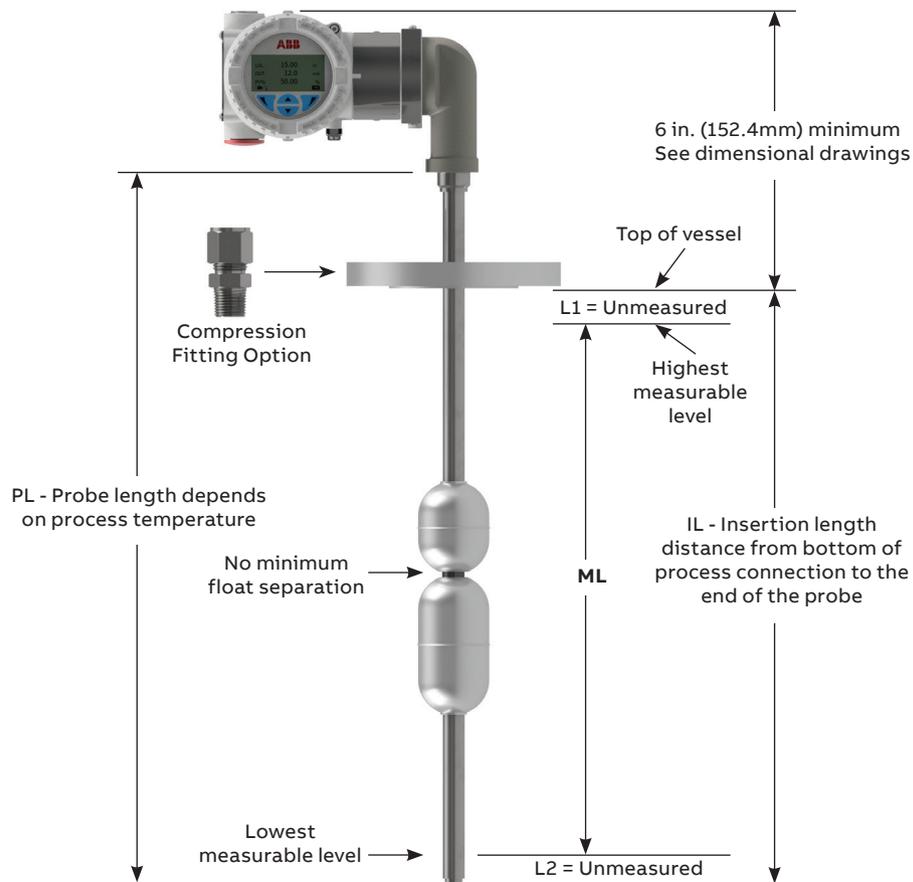


Figure 3 LMT General Model

ABB Inc.

Industrial Automation
125 E. County Line Road
Warminster, PA 18974 USA
Tel: +1 215 674 6000
Fax: +1 215 674 7183

ABB Engineering (Shanghai) Ltd.

No. 4528, KangXin Hwy.
Pudong New District
Shanghai, 201319, P.R. China
Phone: +86 10 64231407
Service: +86 4008209696
E-mail: sales-support.kq@cn.abb.com
Service e-mail: instrumentservice.abbchina@cn.abb.com

www.abb.com/level

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB does not accept any responsibility whatsoever for potential errors or possible lack of information in this document

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents - in whole or in parts - is forbidden without prior written consent of ABB.

Copyright© 2018 ABB All rights reserved

3KXL141100R4401

