Intermediate range laser level transmitter
LM80

Our Product Introduction

Basic Information

- Brand Name: ABB
- Model Number: LM80

Product Specification

- Customized Support: OEM
- Mounting Bracket: 316 Stainless Steel
- Supply Voltage Effect: 0.005% Span Per Volt
- Output Signal: 4~20mA
- Measurement Range: 0.1...0..100MPA
- Power Supply: 24VDC
- Operating Temperature: 40~85
- Electrical Output Signal: DC 0 ... 10
- Highlight: **oem abb pressure transmitter**, **20ma abb pressure transmitter**, **oem absolute pressure transmitter**

Product Description

The LM80 is a high performance laser transmitter that accurately measures level, distance and position over long ranges in extreme environments. It is a non-contact, level measuring instrument designed for granular solid materials and opaque liquids.

Overview

Based on pulsed laser technology, the LM80 embodies speed and accuracy in a single, easy to use and install product. Whether measuring a few meters into the confined space of a crusher, or to the bottom of the tallest silo, the LM80 with its laser pointer and long range is the plug-and-play solution to level measurement.

The LM80 features advanced timing and sophisticated signal processing for pinpoint accuracy at up to 100 m (330 ft.) for level applications and up to 150 m (500 ft.) for positioning applications.

FEATURES:

- Maintenance free, non-contact continuous level sensor
- Range up to 100 m (330 ft) for level applications
- Range up to 150 m (500 ft) for positioning applicationsEasy and intuitive setup
- No calibration required
- Continuous level monitoring for granular solid materials and opaque liquids
- Measures solids and opaque liquids at any angle
- Last Pulse Detection for Measurement with Light and Moderate Dust
- Built-in laser pointer for accurate alignment in narrow or tall vessels
- Auto-ranging to measure all levels
- Available non condensing heated optics prevent condensation issues
- No Beam Divergence = No False Echoes
- Rugged and Robust Aluminum Enclosure
- CSA, ATEX and IECEx potentially explosive atmosphere ratings

OPTIONS:

- Many mounting options
- Configuration device (LCD2)
- Non-condensing optics (heated lens)
- Stainless steel housing
- Tri-clover interface

Data

The LM80 uses a high speed laser pulse to measure distance. The laser light is emitted towards the surface and some of it reflects back to the instrument where it is detected by a sensitive optical receiver. The time it takes for the light to travel to the surface and back to the instrument is directly proportional to the distance between the instrument and the surface. Using a time-of-flight calculation, and knowing the height of the vessel, the LM80 accurately measures the distance to the target surface using the equation below:

$$\text{Level} = \text{height} - \frac{\text{speed of light} \times \text{time-of-flight}}{2}$$

The unique characteristics of laser light give the LM80 significant performance advantages over other technologies. The narrow, long range beam can measure both near and far distances while the optical wavelength makes it easy to evaluate applications. If you can see the surface clearly, the LM80 can measure the level.

The characteristic narrow beam divergence of the laser permits direct aiming to the target surface without interference from structure or falling material. With both continuous 4-20 mA and single point relay outputs, the LM80 can operate as a process control sensor while simultaneously providing high and low alarms.

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