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# Two Dimensional Laser Scanner for Non-Contact Volumetric Measurement of Belt Conveyed Materials

## Model LM2D

### FEATURES

- Load Cell Replacement Alternative
- Non-contact Conveyor Volume and Speed
- Simple Installation During Conveyor Operation
- Totalizer for Real Time Mass Throughput Calculation
- No Routine Maintenance
- Integral Non-contact Belt Speed Sensor
- Integral Laser Pointer for Alignment
- Integral Dust Tubes



LM2D with Standard Mounting Bracket

LM2D

### SPECIFICATIONS

#### Measurement Range

Range	3ft / 1m to 8.2ft / 2.5m
Viewing Angle	+/- 60°
Resolution	1%
Distance Measuring Accuracy	1 inch / 25 mm
Volumetric Accuracy	3% typical

Update Rate 15 seconds typical

#### Output

Analog	4 x 4 - 20mA output
Serial	RS232

Input External trigger switch

#### Electric Power

Power Consumption 24 VDC @ 1.5A

Laser Safety Main laser: Class 1M (IEC 60825)  
Aiming laser: Class 3R (IEC 60825)  
(Avoid direct eye exposure)



Approvals General Approval

#### Optical

Optical Aperture	3 inch / 80 mm
Laser Beam Diameter	0.9 inch / 22 mm
Receiver Beam Diameter	2 inch / 50 mm
Beam Divergence	<0.2°

#### Environmental

Operating Temperature 32°F to 150°F / 0°C to 65°C  
**CAUTION:** Direct exposure to rain, snow or ice build-up will impair operation. Always use weather protection cover.

Pressure Atmospheric

Electrical Connection 2 x 1.5" FNPT  
2x Cable Gland Supplied

#### Dimensions

Diameter	4.9 inch / 127 mm
Length	28 inch / 714 mm
Weight	22 lbs / 10 Kg

#### Enclosure

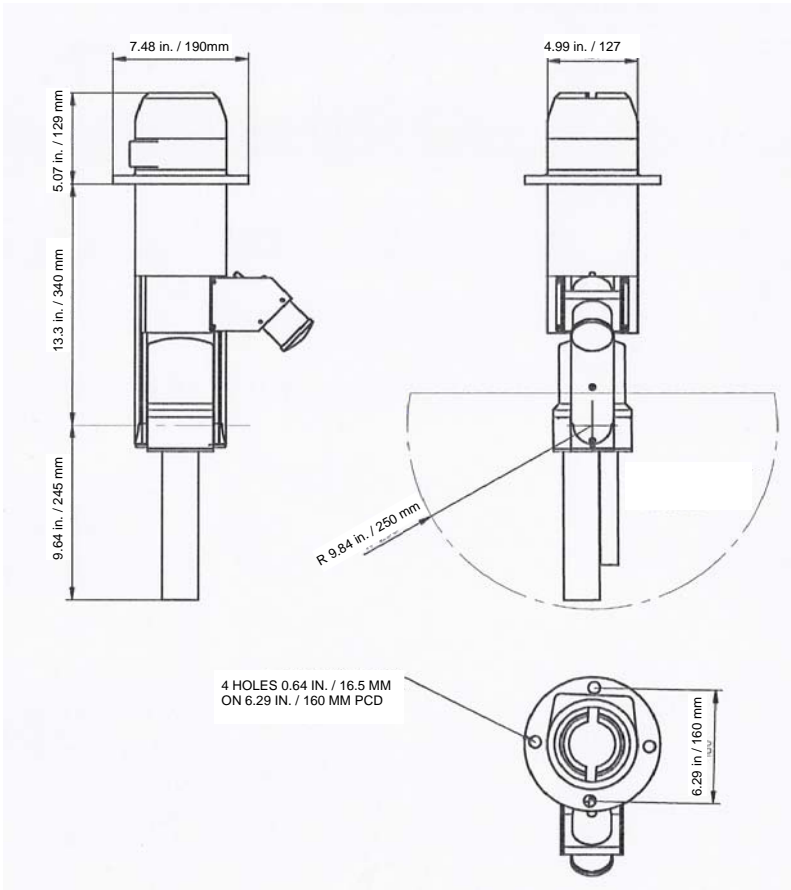
Enclosure Material Dual Compartment Powder Coated Aluminum  
Enclosure Rating IP65

Process Connection 4 holes 0.64in / 16.5mm Dia. on 6.29in / 160mm PCD

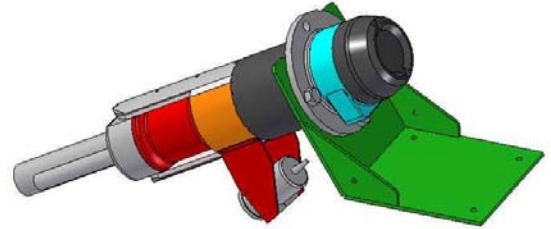
## ORDERING INFORMATION

**LM2D** - Standard Unit with Integral Laser Pointer, Dust tubes, Standard Mounting Bracket and Weather Protection Cover

### DIMENSIONS



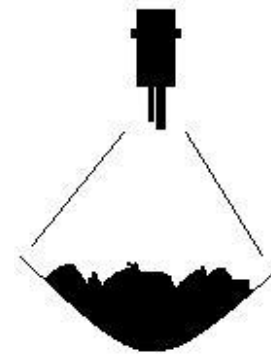
### TYPICAL MOUNTING SOLUTION LM2D with Standard Mounting Bracket



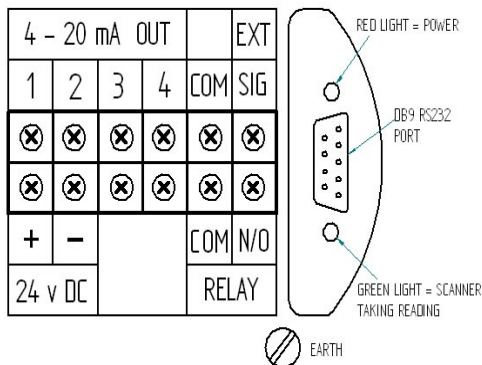
### 4-20 mA OUTPUT DESCRIPTION

1. Channel #1 = Flow (ft<sup>3</sup>/min or m<sup>3</sup>/min)
2. Channel #2 = Speed (ft/sec or m/sec)
3. Channel #3 = Area (ft<sup>2</sup> or m<sup>2</sup>)
4. Channel #4 = Totalizer (Engineering Units)

### APPLICATION DRAWING Material profile scanning principal



### TERMINAL CONNECTIONS



### TYPICAL APPLICATION

