



Exclusive USA distributor for APM Automation Solutions, Ltd

Accurate Measurement of Bulk Solids & Powder

Dust Penetrating Technology

Accurate Inventory Management

3 Dimensional View



3D LevelScanner™



**Non-contact sensor measures many of the most difficult
Bulk Solids applications, such as:**

Coal · Cement · Gravel · Sand · Fly Ash

Soy Beans · Flour · Sugar · Grain

Plastic Pellets · Powder · Wood Chips



Unprecedented measurement accuracy; dramatically improves efficiency, which translates into major cost savings and fast return on investment (ROI).

Inventory management; enables streamlined production, delivery optimization and elimination of costly emergency fills.

Measurement Parameters; average level, volume, mass, min & max distance and temperature are available with the MV version. The industry standard signal output of 4-20mA represents volume.

Specifications

Measuring range	230 feet
Ambient Temperature	-40 ... 185 °F
Process Temperature	-40 ... 185 °F
Process Pressure	-2.9 to 14.5 psi
Minimum Product Density	12.5 lb/ft ³ (0.2 g/cc)
Signal Output	4 to 20 mA / HART®/ RS-485
Display	4 lines x 20 characters LCD
Max Signal Load	500 ohm
Supply Voltage	24 ... 36 VDC
Power Consumption	Max 2.1 W
Current Limit	22 mA
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Sensor Frequency	3.5 – 5 KHz
Beam Angle (S version)	30°
Beam Angle (M, MV versions)	70°
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Materials - Housing / Antenna	Powder coated, die cast Aluminum
Materials - Housing Window	Polycarbonate
Mounting	8" opening typical (Other options available)
Weight	25 pounds
Protection	IP 66/67 (equivalent to NEMA 4, 4X and 6)
Vibration Resistance	2g from 5 to 200 Hz
Recommended Wiring	3 twisted shielded pairs for power and signals
Approvals (optional)	ATEX II ½ D, 2D (Intrinsic Safety Barriers required) equivalent to Div I & II, Class I, II & III, Groups E, F, & G Factory Mutual (FM) pending

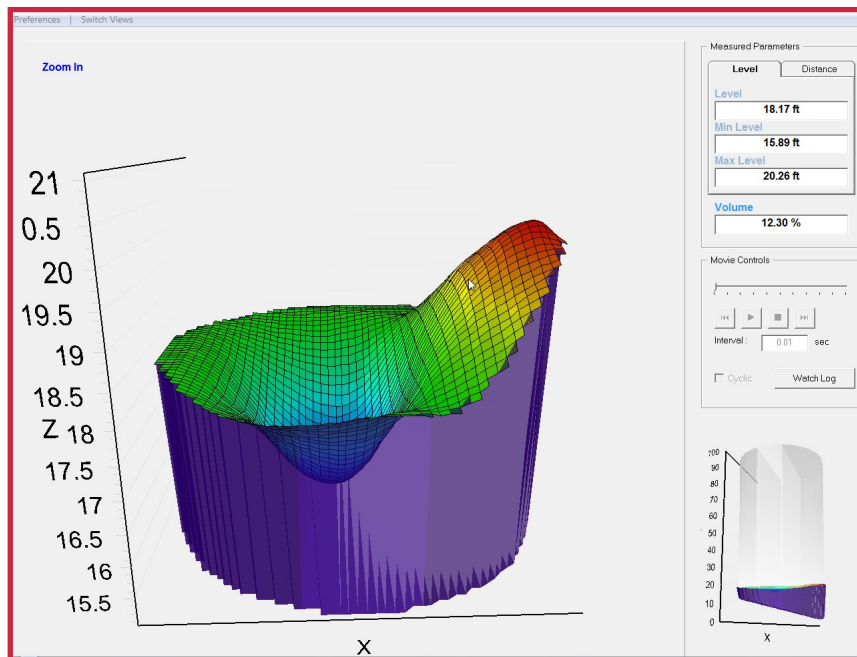
How It Works

The 3DLevelScanner™ employs a 2-dimensional array beam-former to transmit low frequency pulses and to receive echoes of the pulses from the contents of the silo, bin or other container. Unlike competitive devices, the frequency employed in the 3DLevelScanner™ is very low. As a result, it is not attenuated by dust or humidity above the materials surface. The devices' digital signal processor samples and analyzes two characteristics of the received echoes.

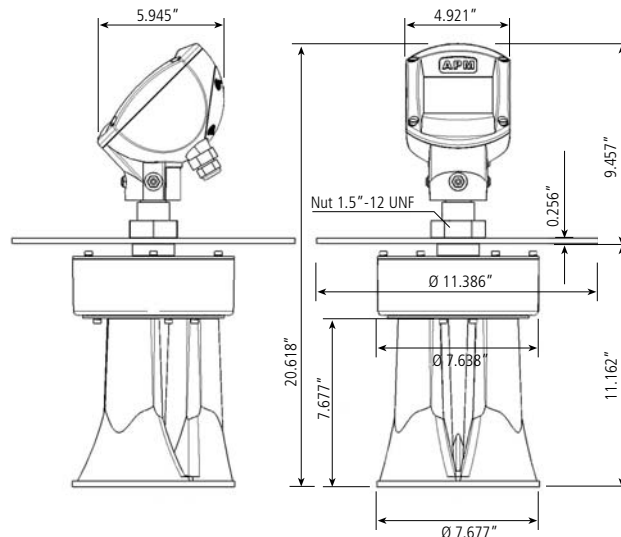
Based on both times of flight and directions of arrival, the patent pending algorithm, embedded in the processor, generates a 3-dimensional image of the surface.

All measured parameters of Volume, Average Level, Min & Max Level, Mass and Temperature can be displayed on a remote screen as shown below.

Using the 3D Level Manager software (included) this data is transferred to a PC using RS-485, HART® protocol and Modbus®, or remotely from the optional 3D LinkPro™ using GSM cellular communications. In addition, the silo volume is available as a standard 4 – 20 mA signal.



Dimensions



3DLevelScanner™

Bulk Solids Measurement
Level Volume & Weight

Industries



Food and Beverage

Chemical

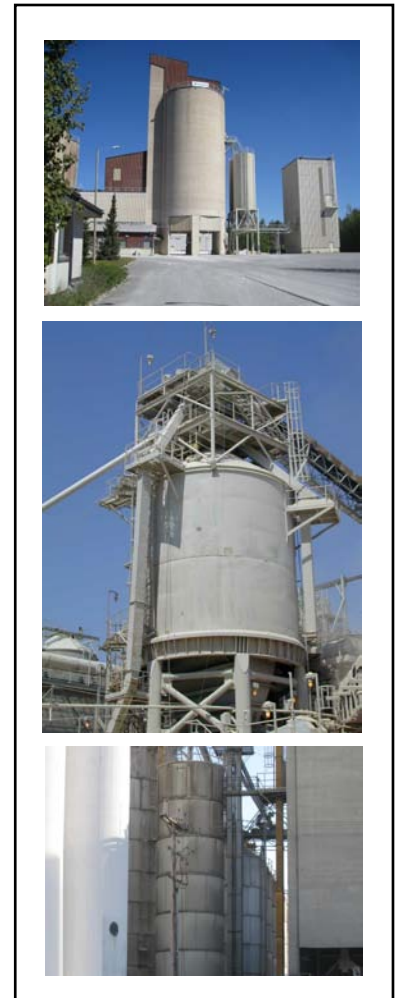
Aggregates

Pharmaceutical

Power

Plastics

Cement



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