# 3DLevelScanner HC™

Advanced technology for measuring corrosive materials in silos to provide accurate volume and material profile information

GLOBAL TECHNOLOGY SYSTEMS

APM

*Changing the market from level to volume*

www.onthelevel.com

The 3DLevelScanner HC™ is designed using high performing materials to protect it from the harshest and most corrosive materials and allow it to measure in production and storage of quick lime, ammonia, PTA, oils, salts, salt mines and many other harsh materials and environments. This has been achieved by using the right protective high performing materials:

- HALAR coating for the mechanical parts
- VITON for the O-rings and rubbers
- Specially coated stainless steel fasteners

This allows the 3DLevelScanner HC™ to maintain its dust-penetrating ability as well as the ability to measure even materials with low dielectric constant, and its built-in self-cleaning technology that makes it practically maintenance-free.

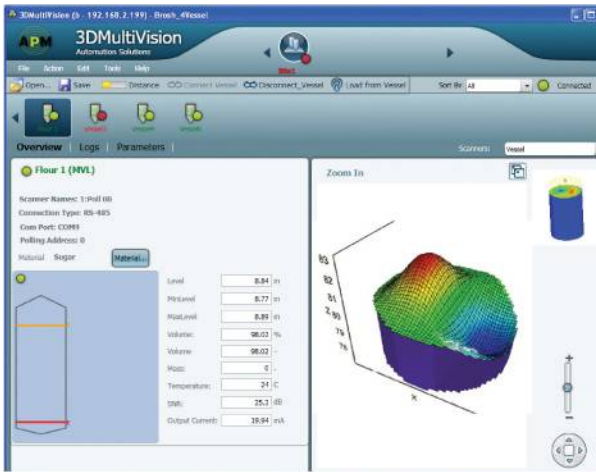
The 3DLevelScanner HC™ works with many materials on the USA's DOT class 8 material list, such as:

- Acetic Acid
- Ammonium Hydroxide
- Benzene and PTA
- Butanol
- Calcium Hydroxide and Quick Lime
- Hydrochloric Acid
- Methanol
- Methylene Chloride
- Nitric Acid
- Potassium Hydroxide
- Sodium Chlorite
- Sodium Hypochlorite
- Sulfuric Acid

3DLevelScanner HC™ includes an array of three antennas that generate low-frequency acoustic signals and receive echo signals from the silo's contents. Using three antennas provides a detailed view of the material's surface, allowing high accuracy volume measurements and a 3D representation of material formation. Surface visualization can be shared by remote computer in the control room.

The 3DLevelScanner HC™ is a continuous measurement device that can be connected to any PLC or SCADA system, making it the ultimate control system that allows managers to see in real time what is actually going on inside the silo.

Managers can now see in real time, what is going on inside extremely corrosive environments



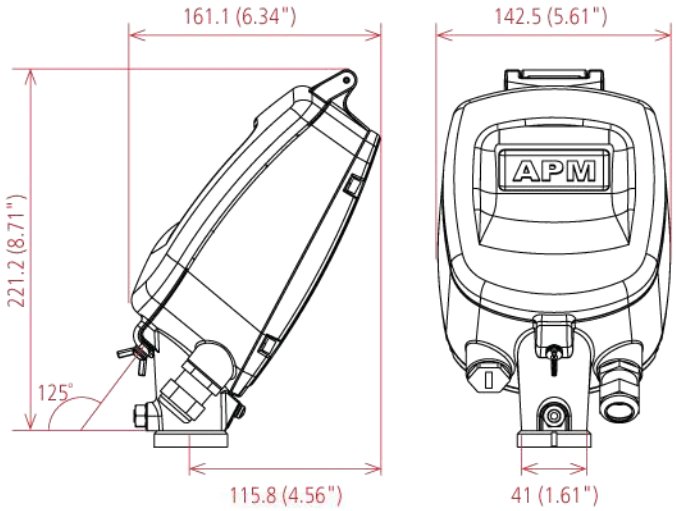

# Technical Data

| | | |
|---|---|---|
| **Materials, non-wetted parts** | | |
| Housing | | Painted aluminum die casting |
| Inspection window in housing | | Polycarbonate |
| Antenna | | corrosive resistant coated aluminum die casting |
| **Weight** | | |
| 3DLevelScanner | | 5.6 Kg (12.35 lb) |
| **Output variable** | | |
| Output signal | | Active 4...20mA/HART/RS485/Modbus |
| Resolution | | 10 µA |
| Fault signal | | Current output unchanged, 22 mA, >3.6 mA (adjustable) |
| Current limitation | | 22 mA |
| Maximal Load | | 400 Ohm |
| **Communication** | | |
| Type | | RS485/Modbus/HART |
| **Ambient conditions** | | |
| Ambient, storage and transport temperature | | -40...85°C (-40...+185°F) |
| **Process conditions** | | |
| Vessel pressure | | -0.2...3 bar (-2.9...43.5 PSI) |
| **Process temperature** | | |
| Measured on the process fitting | | -40...+85°C (-40...+350°F) |
| Vibration resistance | | Mechanical vibrations with 2g and 5...200 Hz |
| **Electromechanical data** | | |
| Cable entry/plug | | 1 x M20x1.5 (cable-Ø 8...12mm), 1 x blind stopper M20x1.5 |
| | Or | 2 x cable entry ½" NPT |
| **Display panel** | | |
| LCD | | 4 lines x 20 characters |
| Adjustment elements | | 4 keys |

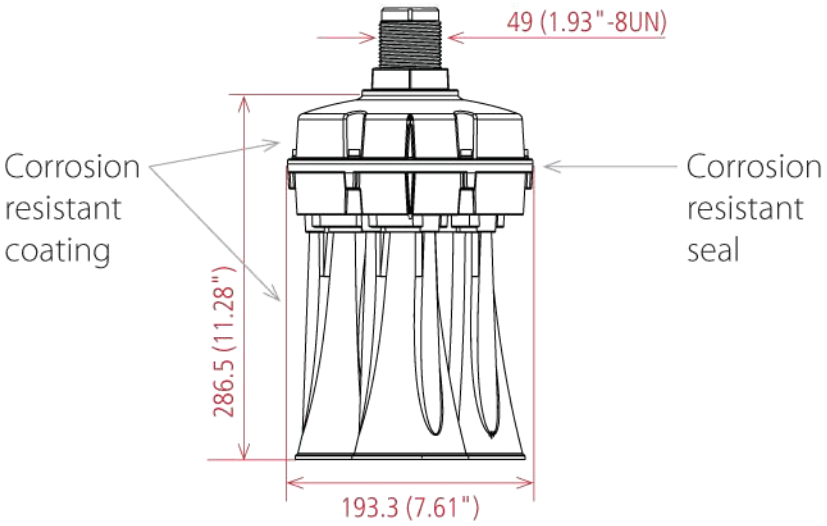
| | |
|---|---|
| **Power supply – 4-wire instrument (Active) 4...20 mA / HART** | |
| Supply voltage | 18...32 VDC |
| Power consumption | max 1.5 W @ 24VDC |
| **Electrical protective measures** | |
| Protection | IP67 according to IEC 60529 |
| **CE** | |
| EMC | |
| Emission | EN 61326:1997 (class B) |
| Susceptibility | IEC / EN 61326:1997 + A1:1998 + A2:2001 + A3:2003 |
| NSR (73/23/EWG) | EN 61010-1:2001 |
| **FCC** | |
| Conformity | to part 15 of the FCC regulations |
| | FCC 47 CFR part 15:2007, subpart B, class A |
| **Measurement characteristics** | |
| Frequency | 2 KHz to 10 KHz |
| Beam angle | 30 - 70 degrees |

# Dimensions

**3DLevelScanner**
**Housing**




**3DLevelScanner**
**with horn antenna in threaded version**

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