



### 3DLevelScanner

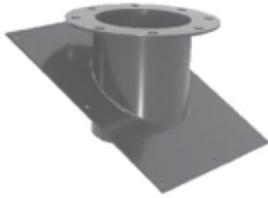
3D scanners provide continuous, non-contact level measurement using dust-penetrating technology for unsurpassed bin volume accuracy. Unlike single point devices, BinMaster's 3DLevelScanners measure multiple points to detect irregular material surfaces, cone up/down conditions, or sidewall buildup. Advanced acoustics-based technology is proven to perform in powders and bulk solids contained in bins, tanks, silos, and domes.

Description	CODE	Part No.
<b>STANDARD</b>		
3DLevelScanner-S with 7.67" diameter horn, 20-36 VDC, 4-20 mA output / Hart protocol, and RS-485 communications. Determines the average volume of stored materials based on a 30° beam angle in silos up to 14' diameter and 200' tall. Unit comes with internal LCD display and 3DVision software. Hazardous location approved, FM listed for Class I, II, Division 1, Groups C, D, E, F & G. One year warranty.	3DLS-S	730-0559
3DLevelScanner-M with 7.67" diameter horn, 20-36 VDC, 4-20 mA output / Hart protocol, and RS-485 communications. Accurate readings of level and volume of stored materials based on a 70° beam angle. Wider beam angle is appropriate for silos up to 45' in diameter and 200' tall, and where improved accuracy in smaller silos is required. Unit comes with internal LCD display and 3DVision software. Hazardous location approved, FM listed for Class I, II, Division 1, Groups C, D, E, F & G. One year warranty.	3DLS-M	730-0560
3DLevelScanner-MV with 7.67" diameter horn, 20-36 VDC, 4-20 mA output / Hart protocol, and RS-485 communications. Accurate readings of level and volume of stored materials based on a 70° beam angle. Wider beam angle is appropriate for silos up to 45' in diameter and 200' tall, and where improved accuracy in smaller silos is required. Identical to the Model 3DLS-M, with the addition of a special tool that allows 3D graphical representation of the stored contents for display on a remote computer screen. Unit comes with internal LCD display and 3DVision software. Hazardous location approved, FM listed for Class I, II, Division 1, Groups C, D, E, F & G. One year warranty.	3DLS-MV	730-0561
<b>HIGH TEMPERATURES</b>		
3DLevelScanner-S with extended temperature up to 365°F with 7.67" diameter horn, 20-36 VDC, 4-20 mA output / Hart protocol, and RS-485 communications. Determines the average volume of stored materials based on a 30° beam angle in silos up to 14' diameter and 200' tall. Unit comes with internal LCD display and 3DVision software. No hazardous location approvals. One year warranty.	3DLS-S-HT	730-0634
3DLevelScanner-M with extended temperature up to 365°F with 7.67" diameter horn, 20-36 VDC, 4-20 mA output / Hart protocol, and RS-485 communications. Accurate readings of level and volume of stored materials based on a 70° beam angle. Wider beam angle is appropriate for silos up to 45' in diameter and 200' tall, and where improved accuracy in smaller silos is required. Unit comes with internal LCD display and 3DVision software. No hazardous locations approvals. One year warranty.	3DLS-M-HT	730-0635
3DLevelScanner-MV with extended temperature up to 365°F with 7.67" diameter horn, 20-36 VDC, 4-20 mA output / Hart protocol, and RS-485 communications. Accurate readings of level and volume of stored materials based on a 70° beam angle. Wider beam angle is appropriate for silos up to 45' in diameter and 200' tall, and where improved accuracy in smaller silos is required. Identical to the Model 3DLS-M, with the addition of a special tool that allows 3D graphical representation of the stored contents for display on a remote computer screen. Unit comes with internal LCD display and 3DVision software. No hazardous location approvals. One year warranty.	3DLS-MV-HT	730-0636
<b>TEFLON-COATED TRANSDUCER</b>		
3DLevelScanner-S with Teflon-coated 7.67" diameter horn, 20-36 VDC, 4-20 mA output / Hart protocol, and RS-485 communications. Determines the average volume of stored materials based on a 30° beam angle in silos up to 14' diameter and 200' tall. Unit comes with internal LCD display and 3DVision software. Hazardous location approved, FM listed for Class I, II, Division 1, Groups C, D, E, F & G. One year warranty.	3DLS-S-TC	730-0637

Description	CODE	Part No.
3DLevelScanner-M with Teflon-coated 7.67" diameter horn, 20-36 VDC, 4-20 mA output / Hart protocol, and RS-485 communications. Accurate readings of level and volume of stored materials based on a 70° beam angle. Wider beam angle is appropriate for silos up to 45' in diameter and 200' tall, and where improved accuracy in smaller silos is required. Unit comes with internal LCD display and 3DVision software. Hazardous location approved, FM listed for Class I, II, Division 1, Groups C, D, E, F & G. One year warranty.	3DLS-M-TC	730-0638
3DLevelScanner-MV with 7.67" diameter horn, 20-36 VDC, 4-20 mA output / Hart protocol, and RS-485 communications. Accurate readings of level and volume of stored materials based on a 70° beam angle. Wider beam angle is appropriate for silos up to 45' in diameter and 200' tall, and where improved accuracy in smaller silos is required. Identical to the Model 3DLS-M, with the addition of a special tool that allows 3D graphical representation of the stored contents for display on a remote computer screen. Unit comes with internal LCD display and 3DVision software. Hazardous location approved, FM listed for Class I, II, Division 1, Groups C, D, E, F & G. One year warranty.	3DLS-MV-TC	730-0639
<b>RL ACOUSTIC</b>		
Acoustic level sensor RL, 4-20 mA and RS-485 output. Four-wire 24 VDC power. Maximum operating temperature 185°F (85°C). Unit comes with internal LCD display and 3DVision software. One year warranty.	3DLS-RL	730-0646
Acoustic level sensor RL with Teflon-coated horn, 4-20 mA and RS-485 output. Four-wire 24 VDC power. Maximum operating temperature 185°F (85°C). Unit comes with internal LCD display and 3DVision software. FM listed for Class I, II, Division 1, Groups C, D, E, F & G. One year warranty.	3DLS-RL-TC	730-0652
Acoustic level sensor RL High Temperature, 4-20 mA and RS-485 output. Four-wire 24 VDC power. Maximum operating temperature 365°F (185°C). Unit comes with internal LCD display and 3DVision software. FM listed for Class I, II, Division 1, Groups C, D, E, F & G. One year warranty.	3DLS-RL-HT	730-0647
<b>MULTIPLE SCANNER SYSTEMS</b>		
3DLevelScanner-MVL is for use in multiple scanner systems that include the 3D visualization feature. It features a 7.67" diameter horn, 20-36 VDC, 4-20 mA output / Hart protocol, and RS-485 communications. When used in a multi-scanner system, it provides accurate readings of level and volume for stored materials based on two or more synchronized MVL units. The multiscanner system provides an analog output which represents (as a default value) the overall volume of the contents of the entire silo. Unit comes with internal LCD display and 3DVision software. A controller (purchased separately) calculates volume and unifies the visualization by integrating data from multiple scanners. Appropriate for silos up to 200' tall. Hazardous location approved, FM listed for Class I, II, Division 1, Groups C, D, E, F & G. One year warranty.	3DLS-MVL	730-0626
3DLevelScanner-MVL with extended temperature up to 365°F is for use in multiple scanner systems that include the 3D visualization feature. It features a 7.67" diameter horn, 20-36 VDC, 4-20 mA output / Hart protocol, and RS-485 communications. When used in a multi-scanner system, it provides accurate readings of level and volume for stored materials based on two or more synchronized MVL units. The multiscanner system provides an analog output which represents (as a default value) the overall volume of the contents of the entire silo. Unit comes with internal LCD display and 3DVision software. A controller (purchased separately) calculates volume and unifies the visualization by integrating data from multiple scanners. Appropriate for silos up to 200' tall. No hazardous location approvals. One year warranty.	3DLS-MVL-HT	730-0644
3DLevelScanner-MVL is for use in multiple scanner systems that include the 3D visualization feature. It features a 7.67" diameter horn, 20-36 VDC, 4-20 mA output / Hart protocol, and RS-485 communications. When used in a multi-scanner system, it provides accurate readings of level and volume for stored materials based on two or more synchronized MVL units. The multiscanner system provides an analog output which represents (as a default value) the overall volume of the contents of the entire silo. Unit comes with internal LCD display and 3DVision software. A controller (purchased separately) calculates volume and unifies the visualization by integrating data from multiple scanners. Appropriate for silos up to 200' tall. Hazardous location approved, FM listed for Class I, II, Division 1, Groups C, D, E, F & G. One year warranty.	3DLS-MVL-TC	730-0643
<b>MULTIPLE SCANNER CONTROLLER</b>		
Multi-scanner system controller with 3DVision software. The software processes the measurement data recorded by each of the scanners in the multi-scanner system in the silo, open bin, or warehouse. A special algorithm combines the data from the scanners in the system and provides general vessel information as well as volume, minimum and maximum level, distance and mass. When used with 3DLS-MVL/HT/TC models, the software also provides a 3D visualization.	IC-3DMVL	730-0648
<b>WIRELESS TRANSCEIVERS &amp; ACCESSORIES</b>		
Ubiquiti - Wireless Ethernet Modem - WEM	WEM	730-0673
Ubiquiti - Rocket M5 Base Station Radio	Rocket M5 56 GHz	530-0814

Description	CODE	Part No.
Ubiquiti - Base Station 56Ghz Antenna	Antenna	303-0025
MCK - Media converter kit in NEMA 4X enclosure 10" x 8" x 4"	MCK	730-0674
ETH-USB - Ethernet to USB adapter	ETH-USB	344-0013
<b>CONNECTION ACCESSORIES</b>		
BinMaster 3D MultiVision software works in conjunction with all models of the 3DLevelScanner sensors to provide measurement data to a Windows®-based computer. The software is used to view the inventory in multiple silos, and over multiple locations (unlimited users).	3DVS	730-0598
Isolated USB to RS-485 converter used to connect USB port to RS-485 network	RS-485-USBI	530-0174
ft. of RS-485 communication cable, shielded twin axial, twisted pair, low capacitance, Belden 3105A	Data Cable	398-0543
USB to HART modem	USB-HRT	344-0016
UESP211 - TCP-IP to serial communication adapter	UESP211	344-0006
PSDC-1 - 24 VDC / 30 VA, NEMA 1 din rail mounted power supply	PSDC-1	399-0022
PSDC-4 - 24 VDC / 30 VA, NEMA 4X enclosure mounted power supply	PSDC-4	730-0577
<b>MOUNTING PLATES</b>		
3DMP-CS - 0° Mild carbon steel powder coated mounting plate, 13.38" diameter with 11.75" bolt hole circle	3DMP-CS	416-0565
3DMP-SS - 0° stainless steel mounting plate, 13.38" diameter with 11.75" bolt hole circle	3DMP-SS	416-0566
3DMP-CS0 - 0° Mild carbon steel powder coated mounting assembly (must order with 0° mounting plate)	3DMP-CS0	416-0571
3DMP-CS5 - 5° Mild carbon steel powder coated mounting assembly (must order with 0° mounting plate)	3DMP-CS5	416-0551
3DMP-CS10 - 10° Mild carbon steel powder coated mounting assembly (must order with 0° mounting plate)	3DMP-CS10	416-0552
3DMP-CS15 - 15° Mild carbon steel powder coated mounting assembly (must order with 0° mounting plate)	3DMP-CS15	416-0553
3DMP-CS20 - 20° Mild carbon steel powder coated mounting assembly (must order with 0° mounting plate)	3DMP-CS20	416-0554
3DMP-CS30 - 30° Mild carbon steel powder coated mounting assembly (must order with 0° mounting plate)	3DMP-CS30	416-0555
3DMPK-CS0 - Flat mild carbon steel mounting plate and 0° mild carbon steel powder coated mounting assembly	3DMPK-CS0	416-0650
3DMPK-CS5 - Flat mild carbon steel mounting plate and 5° mild carbon steel powder coated mounting assembly	3DMPK-CS5	416-0651
3DMPK-CS10 - Flat mild carbon steel mounting plate and 10° mild carbon steel powder coated mounting assembly	3DMPK-CS10	416-0652
3DMPK-CS15 - Flat mild carbon steel mounting plate and 15° mild carbon steel powder coated mounting assembly	3DMPK-CS15	416-0653
3DMPK-CS20 - Flat mild carbon steel mounting plate and 20° mild carbon steel powder coated mounting assembly	3DMPK-CS20	416-0654
3DMPK-CS30 - Flat mild carbon steel mounting plate and 30° mild carbon steel powder coated mounting assembly	3DMPK-CS30	416-0655
<b>EXTENSION KITS</b>		
3DLevelScanner 2' neck extension kit, contains top and bottom stainless steel fittings, 2' connection cable, and 2' threaded galvanized extension pipe. Total separation distance 2.5'.	3DEXT-KIT 2G	416-0592
3DLevelScanner 4' neck extension kit, contains top and bottom stainless steel fittings, 4' connection cable, and 4' threaded galvanized extension pipe. Total separation distance 4.5'.	3DEXT-KIT 4G	416-0593
3DLevelScanner 6' neck extension kit, contains top and bottom stainless steel fittings, 6' connection cable, and 6' threaded galvanized extension pipe. Total separation distance 6.5'.	3DEXT-KIT 6G	416-0594
3DLevelScanner 10' neck extension kit, contains top and bottom stainless steel fittings, 10' connection cable, and 10' threaded galvanized extension pipe. Total separation distance 10.5'.	3DEXT-KIT 10G	416-0595
3DLevelScanner 1' neck extension kit, contains top and bottom stainless steel fittings, 1' connection cable, and stainless steel coupler. Total separation distance 1'.	3DEXT-KIT 1S	416-0662
3DLevelScanner 2' neck extension kit, contains top and bottom stainless steel fittings, 2' connection cable, and 2' threaded stainless steel extension pipe. Total separation distance 2.5'.	3DEXT-KIT 2S	416-0596
3DLevelScanner 4' neck extension kit, contains top and bottom stainless steel fittings, 4' connection cable, and 4' threaded stainless steel extension pipe. Total separation distance 4.5'.	3DEXT-KIT 4S	416-0597

Description	CODE	Part No.
3DLevelScanner 6' neck extension kit, contains top and bottom stainless steel fittings, 6' connection cable, and 6' threaded stainless steel extension pipe. Total separation distance 6.5'.	3DEXT-KIT 6S	416-0598
3DLevelScanner 10' neck extension kit, contains top and bottom stainless steel fittings, 10' connection cable, and 10' threaded stainless steel extension pipe. Total separation distance 10.5'.	3DEXT-KIT 10S	416-0599
3DLevelScanner 2' neck extension kit, contains top and bottom stainless steel fittings, 2' connection cable, NO PIPE (customer supplies own pipe up to 2' length)	3DEXT-KIT 2NP	416-0600
3DLevelScanner 4' neck extension kit, contains top and bottom stainless steel fittings, 4' connection cable, NO PIPE (customer supplies own pipe up to 4' length)	3DEXT-KIT 4NP	416-0601
3DLevelScanner 6' neck extension kit, contains top and bottom stainless steel fittings, 6' connection cable, NO PIPE (customer supplies own pipe up to 6' length)	3DEXT-KIT 6NP	416-0602
3DLevelScanner 10' neck extension kit, contains top and bottom stainless steel fittings, 10' connection cable, NO PIPE (customer supplies own pipe up to 10' length)	3DEXT-KIT 10NP	416-0603



30° mounting plate



Scanner with flat mounting plate inserts through 30° mounting plate



Assembled flat and 30° mounting plates



0° Mounting Plate



Pre-Assembly

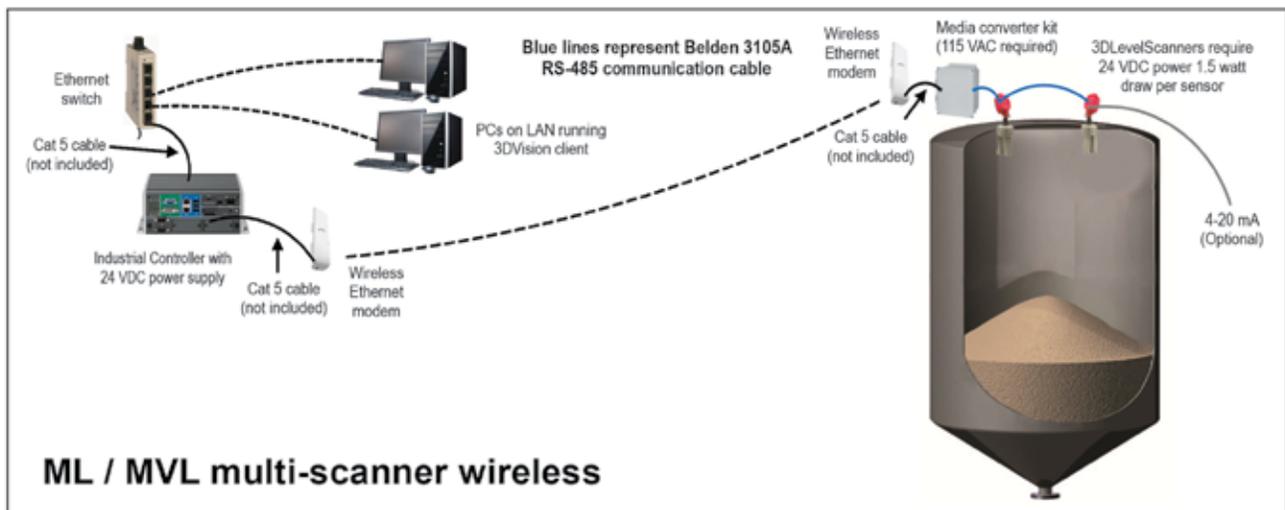
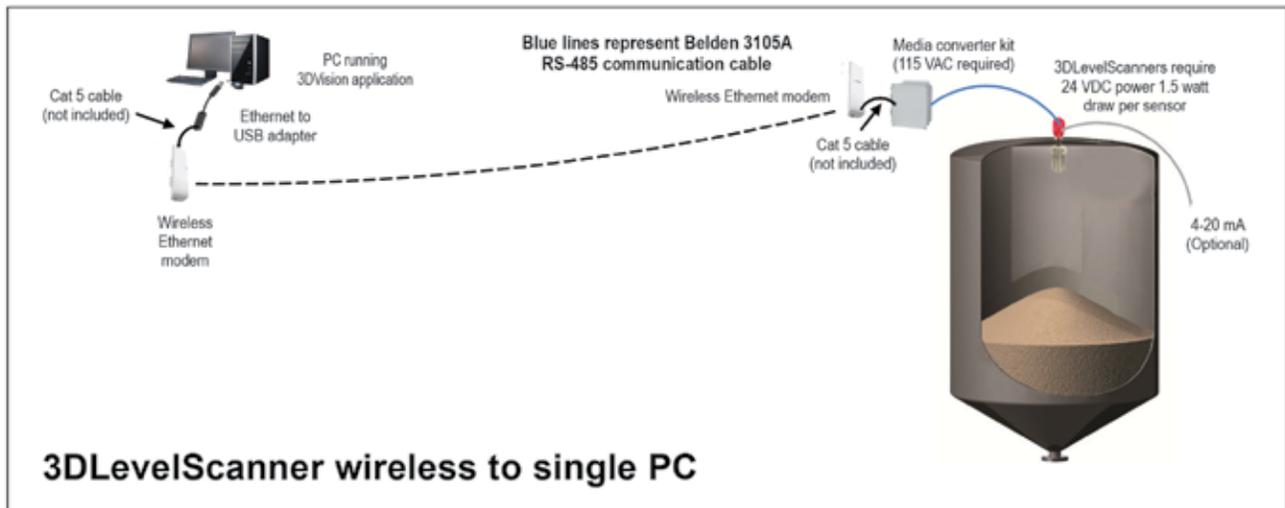
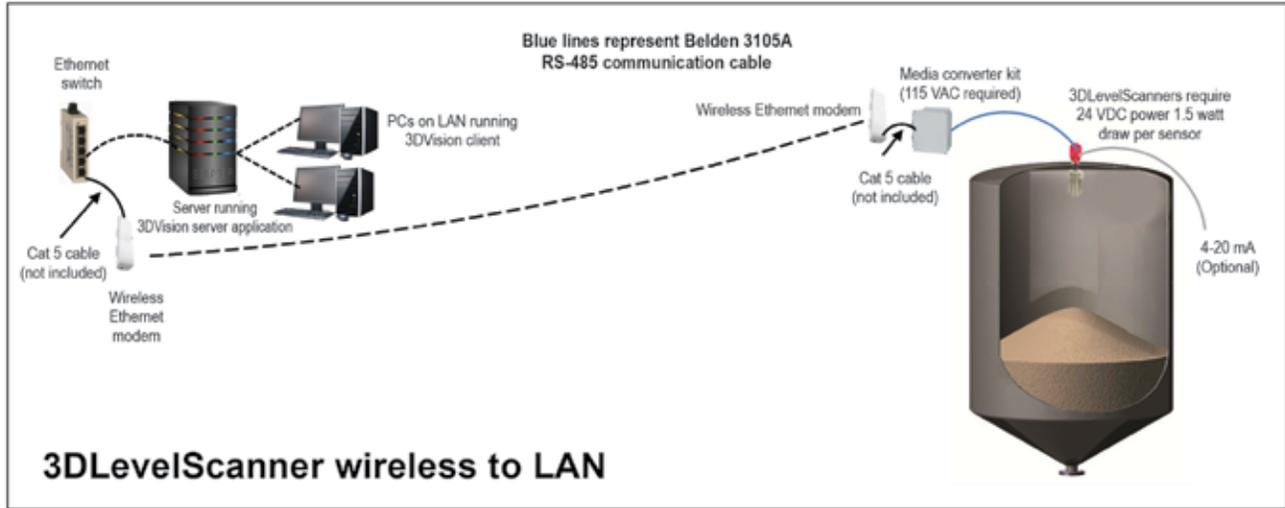


Assembled



The 3DLevelScanner optional neck extensions are used when it's necessary to lower the horn assembly of the Scanner below obstacles through a thick roof or on a raised socket. The neck extensions in 1', 2', 4', 6', and 10' lengths allow the 3DLevelScanner to be effectively installed without any degradation in performance or the need for special structural alterations or adapters.

## 3DLevelScanner – Wireless Configurations



Description	Part No.
<b>3DLEVELSCANNER PARTS</b>	
3DLevelScanner electronic card ATEX/FM type "S"	530-0611
3DLevelScanner electronic card ATEX/FM type "M"	530-0612
3DLevelScanner electronic card ATEX/FM type "MV"	530-0613
3DLevelScanner electronic card ATEX/FM type "ML"	530-0737
3DLevelScanner electronic card ATEX/FM type "MVL"	530-0736
3DLevelScanner transducer	530-0705