

3DLinkPro

PRODUCT INFORMATION



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1 Product Description

1.1 Principle Function

The APM 3DLinkPro is used for easy bi-directional transfer of data between the APM 3DLevelScanner and a remote computer/system

Such data can be 4...20 mA signals, HART commands or proprietary data for different purposes such as software upgrades.

1.2 Area of Application

An easy and reliable standard GSM connection (using standard GSM frequencies) is available by using regular SIM cards for the APM 3DLinkPro connection.

The APM 3DLinkPro is often used:

1. Where wiring of a signal cable from the sensor to a processing unit is not possible or too complex
2. When customers require a very high degree of service, such connectivity allows the supplier connect to the designated unit and provide the necessary service whenever necessary.
3. When customers wish to upgrade the unit, for example from "APM 3DLevelScanner S" to "APM 3DLevelScanner M".

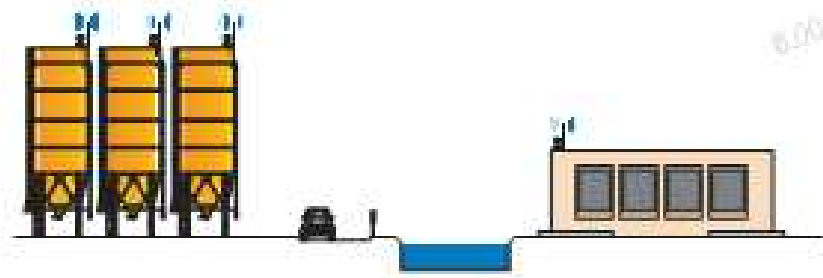
There is no limit to the range of the unit and properly authorized personnel can access the product from any location in the world where standard GSM communications exist.

1.3 Operation

The adjustment of parameters can be carried out for the instrument via a Windows-based PC (with the appropriate version of the APM 3DLevel Manager software installed). A GSM modem (EZ10 GSM modem), GSM antenna, power supply, and a USB to RS-232 converter to connect to the PC are required.

1.4 Application Examples

1. Overcoming obstacles
The APM 3DLinkPro can be used to overcome extremely difficult obstacles such as roads or rivers. The direct wiring of a signal cable would be too complex and in some cases even impossible if appropriate approvals are not granted.



2. Mobile plant components
Moving conveyor belts and mobile work zones are ideal applications for the APM 3DLinkPro.



3. Changing requests of the customers
The APM 3DLinkPro can be used when customers wish to upgrade a standard unit such as the "APM 3DLevelScanner S" to the more accurate "APM 3DLevelScanner M". When using the APM 3DLinkPro it is only a matter of deciding to upgrade – the process itself only requires a click of a button and the unit has been upgraded.
4. Highly-demanding customer service requests
The APM 3DLinkPro can play a critical role in applications where customer requests are made practically in real-time, or when a service engineer would otherwise need to be sent to a remote location. Using the APM 3DLinkPro the service engineer can immediately (with the right passwords) access the unit from his office and provide on-the-spot service support for the customer.

2 Type Overview



Operating Voltage:	10-30V
Signal Input:	4...20mA/HART/RS-485
Signal Output:	Standard GSM data link
Indication and Adjustment:	APM 3DLevel Manager Software
Mounting possibilities:	Wall Mounting

3 Mounting Instructions

3.1 Installation position

Select an installation position that can be easily reached for mounting and connecting. Wiring instructions are also located on a label on the inside of the unit's front cover.

The product is designed for wall mounting. By means of the supplied adjusting plugs, the instrument can be easily and quickly attached to any wall or ceiling surface.

4 Connecting to voltage supply

4.1 Preparing for Connection - Note on Safety Instructions

Always keep in mind the following safety instructions:

- Connect only in the complete absence of line voltage
- If over voltage surges are expected , then over-voltage arresters should be installed

Take note of safety instructions for Ex applications:



In hazardous areas you should observe appropriate regulations, acquire the necessary approvals and permits for the sensors and power supply units.

4.2 Select Power Supply

If the APM 3DLinkPro is being installed after the APM 3DLevelScanner unit has been installed or along with it and next to it then the voltage line to the APM 3DLevelScanner can be used to "feed" the APM 3DLinkPro as they have exactly the same limitation on the input Power supply

You can find detailed information on the power supply in chapter "Technical Data" in the "Supplement".

4.3 Wiring Diagram

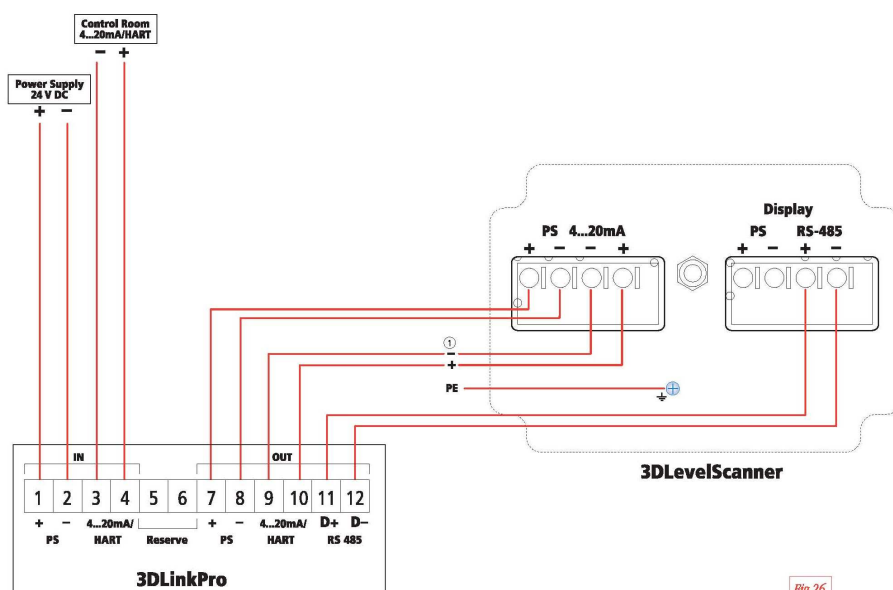


Fig.26

4.4 Connecting Cable

The APM 3DLinkPro power supply is connected with standard cable according to national installation standards. An outer cable diameter of 5...9 mm ensures the seal effect of the cable entry. If electromagnetic interference is expected, we recommend the use of screened cable for the signal lines.

Proceed as follows to connect cable to the power supply:

1. Loosen the four screws of the housing with a screw driver
2. Remove the housing cover
3. Unscrew the power supply lines from the left green connector of the 3DLevelScanner
4. Remove the cable from the 3DLeveScanner through the gland
5. Insert the cable through the left gland of the 3DLinkPro
6. Open the terminals with a screwdriver
7. Connect the wires to sockets "1" and "2" according to the diagram. Take note of the polarity.
8. Close the terminals
9. Tighten the compression nut of the cable entry. The seal ring must completely encircle the cable
10. Screw the housing cover back on
11. If the cable is screened please follow the procedure in the "cable screening and grounding" paragraph
12. Tighten the compression nut of the cable entry. The seal ring must completely encircle the cable

The electrical connection is finished.

4.5 Connecting the Communication (4...20mA/HART) to the APM 3DLinkPro

1. Unscrew the communication lines (2W of 4...20mA/HART) from the left green connector of the 3DLevelScanner.
2. Remove the cable from the 3DLeveScanner through the gland
3. Insert the cable through the left gland of the APM 3DLinkPro
4. Connect the wires to sockets "3" and "4" according to the wiring diagram, above.

4.6 Connecting the RS-485 wires to the APM 3DLinkPro

Connect two wires to sockets "11" and "12" according to the diagram below.

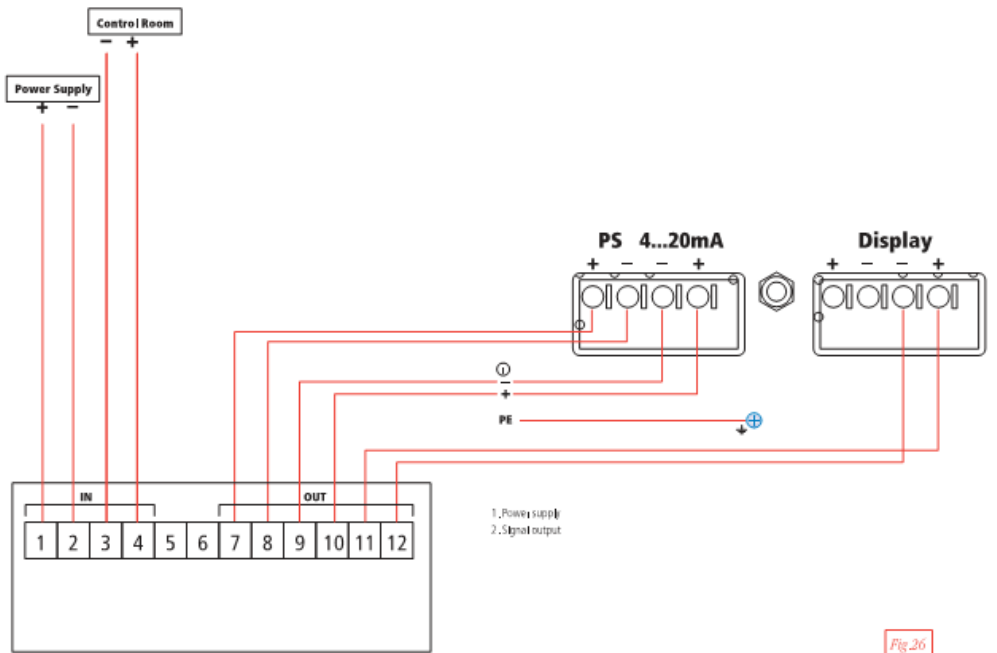


Fig.26

4.7 Connecting the outputs of the APM 3DLinkPro back to the APM 3DLevelScanner

Connect two wires to sockets "7" and "8" for the power supply of the APM 3DLevelScanner and two wires to sockets "9" and "10" for the 4...20mA/HART communication of the APM 3DLevelScanner according to the diagram below.

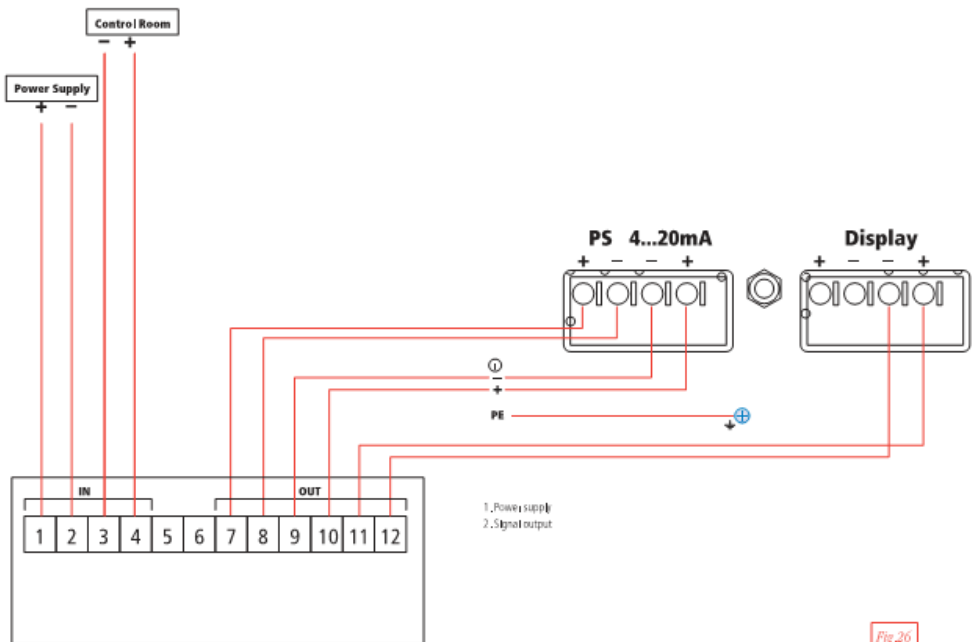


Fig.26

5 Operation Overview

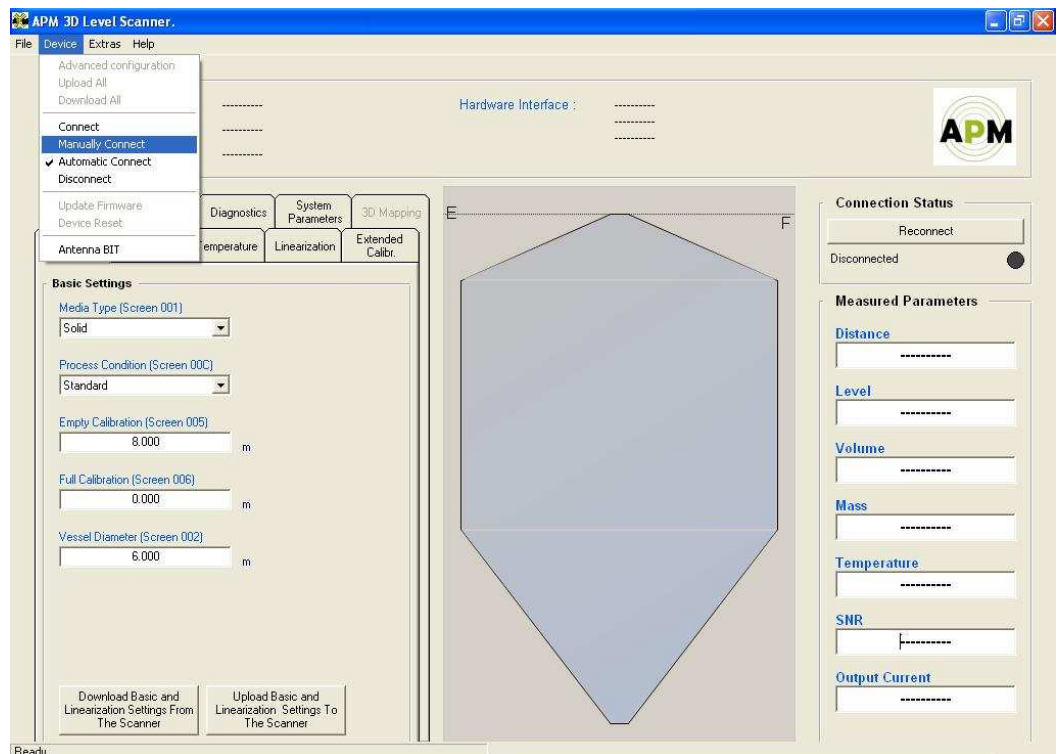
5.1 Getting connected and Parameter adjustment with 3DLevel Manger

The APM 3DLinkPro does not need to be adjusted.

The APM 3DLevelScanner can be adjusted using the APM 3DLinkPro by a windows PC running APM 3DLevel Manager software connected to a local GSM unit.

To get connected to an APM 3DLevelScanner that is connected to an APM 3DLinkPro:

- Open the 3DLevel Manager Software. (The most up-to-date basic APM 3DLevel Manger software may be downloaded free-of-charge from our homepage www.apm-solutions.com).
- On the drop-down Device menu select > Manually Connect (see below):



After selecting Manually Connect, a window will appear. Execute the steps below:



1. Choose the COM port of the computer to which the GSM is connected
2. Check the box "Use Modem"
3. Enter the number of the SIM card in the APM 3DLinkPro (the GSM box connected to the electronic card)
4. Press "Connect" button
5. The software should connect to the device via GSM modem.

You are now connected to the APM 3DLevelScanner using the APM 3DLinkPro and can fully control it, change the unit's parameters, upgrade software versions in the APM 3DLevelScanner and read-out log files and other types of requested parameters.

5.2 Disconnecting

Press the Disconnect button in the APM 3DLevelManager to end communication session.

6 Technical Data

Materials	polystyrene
Weight	1.420 kg
Dimensions	250X180X90 mm

Voltage Supply

Operating Voltage	10...30 V DC
Avg. Power consumption (Idle mode)	1.5W
Peak Power consumption (transmit mode)	18W

Connection Cable Standard screened cable

Ambient Conditions

Ambient, storage and transport temperature:
-30 ... +80 °C (-22 ... +176 °F)

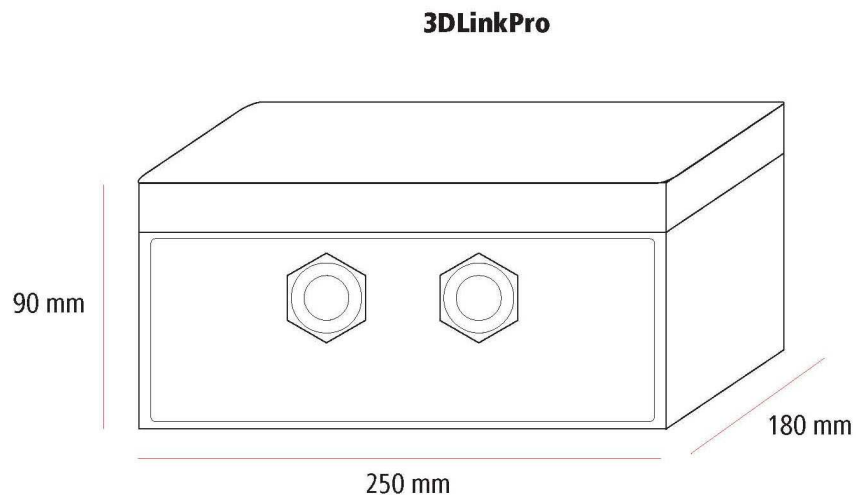
Protection IP66

Electromechanical Data

Cable entry/plug: 2 x cable entry M20x1.5 (cable-
ø5...9mm)

7 Dimensions

250X180X90 mm



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Product Code

- GSM-A-0907-AP – Remote APM 3DLinkPro (connected to the APM 3DLevelScanner)
- GSM-A-0907-AP-C – APM 3DLinkPro local unit (connected to the PC)

3DLinkPro

You can find at

www.apm-solutions.com

downloads of the following:

- **Brochures**
- **Data Sheets**
- **Operating instructions manuals**
- **Software**
- **Certificates**
- **Product information**

and much, much more



APM Automation Solutions Ltd

24 Habarzel Street
Tel Aviv 69710, Israel
Tel: +972 3 6488891
Fax : +972 3 6488892
info@apm-solutions.com
www.apm-solutions.com

Represented by

