



**VIVAX**  
**METROTECH**

# vLoc3-Pro

Technical Specifications V1.8



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## A. Description and Typical Applications

Item	Parameter
Model Name	vLoc3-Pro
Model Number	VX219-01
Description	Multi-purpose precision locator receiver
Intended Use	Locating & pinpointing the position of buried pipes, cables, and sondes

## B. Characteristics

Item	Parameter
Construction	High-impact thermoplastic (ABS) injection molded housing
Weight	4.6lbs (2.1kg)
Dimensions	12.6in(L) x 4.9in(W) x 26.6in(H) (321mm x 124mm x 676mm)
Display Type	High-Visibility Color Display, 4.3"/10cm with 480 x 272 resolution
Receiver Antennas	Two sets of Omnidirectional Antennas, each comprising: <ul style="list-style-type: none"> <li>• Two Compass antennas</li> <li>• Two Horizontal antennas</li> <li>• Two Vertical antennas</li> </ul>
Batteries	- Rechargeable custom Lithium-ion batteries with 100-240V AC mains charger - Six x AA Alkaline batteries
Battery Life	- Lithium-ion – typically *16 hours of continuous use at 70°F (21°C) - Alkaline – typically 6 hours of intermittent use at 70°F (21°C)  * Battery life varies with usage conditions such as backlight brightness, speaker volume, and Wi-Fi connectivity; continuous operation may reduce runtime compared to typical intermittent use.  Lithium-ion battery performance will gradually degrade over time and with repeated charge cycles, leading to reduced operating duration under continuous use. Re-charging cycles are approximately 500 times the life cycle.
Environmental	- IP65 and NEMA 4
External Connectors	- Accessory Socket – to charge the internal batteries and attach accessories - Mini USB socket for data transfer and software updates
Temperature Range	- Operating: -4°F to 122°F (-20°C to 50°C) - Storage: -40°F to 140°F (-40°C to 60°C)

	<ul style="list-style-type: none"> <li>- Recommended storage temperature for lithium-ion batteries is typically:               <ul style="list-style-type: none"> <li>• Long-term storage: 59°F to 77°F (15 °C to 25°C)</li> <li>• Short-term storage: 104°F (Up to 40°C)</li> <li>• Avoid: Temperatures below -4°F (-20°C) or above 140°F (60°C)</li> <li>• Storing batteries in a cool, dry place and at around 50% charge helps preserve battery health over time.</li> </ul> </li> </ul>	
<b>Compliance and Approvals</b>	<ul style="list-style-type: none"> <li>- Complies with European standard CE (Directive 99/5/EC)               <ul style="list-style-type: none"> <li>• EN 55011</li> <li>• EN 61000-4-2: A1 &amp; A2</li> <li>• EN 61000-4-3</li> <li>• EN 61000-4-8: A1</li> <li>• ETSI EN 300 330-2</li> <li>• ETSI EN 301 489-1</li> <li>• ETSI EN 301 489-3</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Complies with FCC Rules Part 15               <ul style="list-style-type: none"> <li>• CFR 47 part 2</li> <li>• CFR 47 Part 15</li> </ul> </li> </ul>
<b>Manufacturing</b>	Designed and manufactured per ISO 9001:2015	
<b>What's In the Box</b>	<ul style="list-style-type: none"> <li>- vLoc3-Pro Receiver</li> <li>- USB data transfer cable</li> <li>- Custom lithium-ion battery pack</li> <li>- 100-240V AC mains charger</li> <li>- Alkaline battery holder</li> <li>- User handbook</li> <li>- Soft carry bag</li> <li>- Combination Bluetooth &amp; Wi-Fi module (factory embedded not accessible)</li> </ul>	
<b>Network &amp; Wireless Interfaces</b>	<ul style="list-style-type: none"> <li>- Wi-Fi: IEEE 802.11b/g/n (2.4 GHz)</li> <li>- ASCII password entry support</li> <li>- Bluetooth: Version 4.2 (BR/EDR and Low Energy)</li> <li>- Dual-mode operation: Supports simultaneous Wi-Fi and Bluetooth connections</li> <li>- Data Rates:               <ul style="list-style-type: none"> <li>• Wi-Fi: Up to 72 Mbps</li> <li>• Bluetooth: Up to 3 Mbps</li> </ul> </li> </ul>	
<b>Compatible Accessories</b>	<ul style="list-style-type: none"> <li>- A-frame Fault Locator</li> <li>- Remote Antenna (Stethoscope)</li> <li>- External GPS Module</li> <li>- Vehicle Charging DC Lead</li> <li>- Range of Sondes (waterproof, self-contained transmitters for use in nonmetallic pipes &amp; ducts)</li> </ul>	

## C. Operational

Item	Parameter
<p><b>Information Displayed</b></p>	<p><b>Information screen:</b></p> <ul style="list-style-type: none"> <li>- GPS coordinates available in DD, DDM, DMS format</li> <li>- Measured signal current in mA or Amps</li> <li>- Measured estimated depth of signal in Ft. and inches, Inches, Meter</li> <li>- Data logging storage options store or discard</li> <li>- Incremental data log count per survey</li> </ul> <p><b>Status Bar Information:</b></p> <ul style="list-style-type: none"> <li>- Antenna configuration: Peak, Peak with arrows, Null, Broad, Broad with arrows, Delta Null, Omni Directional Peak, Omni Directional Broad</li> <li>- Continuous depth estimation</li> <li>- Continuous current measurement</li> <li>- Battery charge level condition</li> <li>- Speaker volume</li> <li>- Bluetooth status</li> <li>- GNSS Fix type status</li> <li>- Wi-Fi connection status</li> </ul> <p><b>Locate screen (Classic display):</b></p> <ul style="list-style-type: none"> <li>- Signal strength moving bar graph &amp; numeric value from 0% to 99.9%</li> <li>- Bar graph color-coded indicating distortion level</li> <li>- Peak level indicator</li> <li>- Proportional left/right null indication</li> <li>- Compass with full 360° line direction indicator</li> <li>- Gain level 0dB to 140dB</li> <li>- Frequency selected</li> <li>- Warnings when triggered</li> <li>- Plug and play automatic recognition of accessories</li> <li>- Accessory specific custom screens</li> </ul> <p><b>Customer definable start-up screen</b></p>
<p><b>Locate Perspectives</b></p>	<ul style="list-style-type: none"> <li>- <b>Classic Locate</b> – moving bar graph with numeric value showing signal strength</li> <li>- <b>Vector Locate Screen</b> – fully automatic gain control with information display               <ul style="list-style-type: none"> <li>• Offset distance measurement to signal</li> <li>• Directional left or right arrow to offset location</li> <li>• Continuous depth estimation</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• Locate signal uncertainty with scaled with circle indicator</li> <li>• Mini plan view for line orientation</li> <li>• Scale adjustment for deep utilities</li> <li>- <b>Transverse Graph Screen</b> - visual assessment of locate quality and distortion             <ul style="list-style-type: none"> <li>• Visual peak indicator</li> <li>• Visual null indicator</li> <li>• Comparison of peak and null signal simultaneously</li> </ul> </li> <li>- <b>Plan View Screen</b> – fully automatic gain graphical representation of the cable position independent of cable direction,             <ul style="list-style-type: none"> <li>• Directional guidance arrow</li> <li>• Line orientation</li> <li>• Locate uncertainty represented with dash lines</li> <li>• Locate Uncertainty Line – Color Change Indicator</li> </ul> </li> <li>- <b>Sonde Locate Screen</b> – directing arrow to move to the Sonde position along the polar axis             <ul style="list-style-type: none"> <li>• Directional guidance arrow</li> <li>• Null point indicator</li> <li>• Bar graph with peak signal response</li> <li>• Magnetic field alignment indicator</li> </ul> </li> </ul>
<p><b>Configuration</b></p>	<p>The intuitive setup menu enables the user to configure:</p> <ul style="list-style-type: none"> <li>- Speaker Volume</li> <li>- Sound configuration             <ul style="list-style-type: none"> <li>• FM</li> <li>• AM</li> </ul> </li> <li>- Display Backlight</li> <li>- Frequency</li> <li>- Locate Perspective</li> <li>- Language</li> <li>- Measurement units</li> <li>- Coordinate Format</li> <li>- Continuous information</li> <li>- Auto Power off</li> <li>- Warning             <ul style="list-style-type: none"> <li>• Overhead Cable</li> <li>• Swing</li> <li>• Shallow Depth</li> <li>• Overload</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>- Bluetooth/Wi-Fi Connection Enable/Disable</li> <li>- Bluetooth Pairing</li> <li>- Bluetooth auto connect</li> <li>- Wi-Fi Network connection</li> <li>- Wi-Fi auto connect</li> <li>- GPS RTK Sources</li> <li>- New Survey <ul style="list-style-type: none"> <li>• APWA Utility listing</li> </ul> </li> <li>- Log feature</li> <li>- Auto log feature</li> <li>- Set up frequency selection to toggle by “f” pushbutton</li> <li>- Change antenna mode by toggling “m” pushbutton</li> <li>- Change screen views selection to toggle by long press “m” pushbutton</li> </ul>
<b>Data Logging</b>	<ul style="list-style-type: none"> <li>- 50 million records of internal storage</li> <li>- Data can also be transferred over Bluetooth to the VMMap Mobile App</li> <li>- All parameters stored at each location, including depth, current, date, time, mode, gain setting, frequency, longitude, latitude</li> </ul>
<b>Data Transfer</b>	<p>Via the Vivax-Metrotech “MyLocator3” software application available free of charge from <a href="http://www.vivax-metrotech.com">www.vivax-metrotech.com</a>. Data can be saved in csv, klm, shp, txt, xls and xlsx formats. The transfer is via a USB cable connection from the locator to the host computer.</p>
<b>Operating Frequencies</b>	<ul style="list-style-type: none"> <li>- Configurable frequencies from 98Hz to 200kHz <ul style="list-style-type: none"> <li>• Dedicated Power 50Hz and 60Hz</li> <li>• Radio 10.0kHz - 22.7kHz bandwidth</li> <li>• Power harmonics for 50Hz or 60Hz regions</li> <li>• Optional SD-USA: 256Hz/512Hz, SD-EUROPE: 320Hz/640Hz</li> </ul> </li> </ul>
<b>Operating Antenna Modes</b>	<ul style="list-style-type: none"> <li>- Peak, Peak with arrows, Broad Peak</li> <li>- Broad with arrows</li> <li>- Null, Delta Null</li> <li>- Omni Directional Peak, Omni Directional Broad</li> </ul>
<b>Integrity Test</b>	<ul style="list-style-type: none"> <li>- Calibration Self-test <ul style="list-style-type: none"> <li>• Uses direct signal injection to test antenna transfer function (TRF)</li> </ul> </li> <li>- Distorted Frequency Test (DFT) <ul style="list-style-type: none"> <li>• Aids in selecting optimal locate frequencies in noisy environments</li> </ul> </li> </ul>
<b>Gain Control</b>	<ul style="list-style-type: none"> <li>- Manual gain using “+” or “-” keys</li> </ul>

	<ul style="list-style-type: none"> <li>- One-touch of "+" or "-" keys rescales to 60% of the bar graph scale</li> <li>- In Vector Screen automatic gain control is used, "+" and "-" keys act as zoom feature to keep target utility in view</li> <li>- In the Transverse Graph screen, "+" key saves the screen graph, "-" key clears the screen</li> </ul>	
<b>Accuracy</b>	Locate pinpointing accuracy:	<ul style="list-style-type: none"> <li>- Up to 9ft (3m) – +/- 3% of the depth</li> <li>- Over 9ft (3m) – +/- 5% of the depth</li> </ul>
	Depth measurement accuracy:	+/- 3%
	Current measurement accuracy:	<ul style="list-style-type: none"> <li>- +/- 3% of actual current – up to 9ft (3m)</li> <li>- +/- 5% of actual current – over 9ft (3m)</li> </ul>
	Depth range:	<ul style="list-style-type: none"> <li>- Dependent on the strength of the signal radiating to the locator</li> <li>- Maximum depth displayed 98ft (29m)</li> </ul>
	* Performance rated using a single undistorted signal source	
<b>Compatible Transmitters</b>	Loc series, Loc3 series, VM-550FF, VM-560FF, FLS series	

## D. Shipping and Packaging

Item	Parameter
<b>Shipping Weight</b>	10.5lbs (4.75kg)
<b>Shipping Dimension</b>	16.5in(L) x 11in(W) x 27.6in(H) (420mm x 280mm x 700mm)

## E. Warranty

Item	Parameter
<b>Warranty</b>	<ul style="list-style-type: none"> <li>- Two years</li> <li>- Optional extended warranty available</li> </ul>

## F. Software Updates

Item	Parameter
<b>Software</b>	<ul style="list-style-type: none"> <li>- The software can be upgraded using a PC with a USB port. Program updates and locator software updates are available via the free MyLocator3 app</li> <li>- Software updates provided over the air (OTA) when connected to Wi-Fi hotspot.</li> </ul>

**Disclaimer:** Product and accessory specifications and availability information are subject to change without prior notice.

**Performance Disclaimer**

Actual performance may vary depending on environmental conditions, user technique, and signal interference.

**Software & Firmware Disclaimer**

Functionality described may depend on the software or firmware version installed. Features are subject to modification through future updates.

**Battery & Power Disclaimer**

Battery life is estimated and may vary based on settings, usage, temperature, and battery age.

**Calibration Disclaimer**

Self-Test results confirm system consistency with factory calibration but do not replace periodic professional calibration if required by company policy or regulation.

**Compliance Disclaimer**

Compliance with regional standards may vary by country. Users are responsible for ensuring the product is used in accordance with local laws and regulations.

**Use Case Disclaimer**

The system is intended for professional utility locating and should not be used for purposes outside the manufacturer's defined scope.

**Third-Party Services Disclaimer**

Use of GNSS correction services or cloud platforms may require third-party subscriptions and are subject to their terms and availability.

**Feature Availability Disclaimer:**

Certain features, frequencies, or accessories may only be available in specific markets due to regional regulations or product certifications. Please consult your local Vivax-Metrotech representative for availability in your area.

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