



**VIVAX**  
**METROTECH**

# vLoc3-DM

Technical Specifications V1.4



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## A. Description and Typical Applications

Item	Parameter
Model Name	vLoc3-DM
Model Number	VX222-01
Description	Pipeline defect mapper receiver
Intended Use	<ul style="list-style-type: none"> <li>- Locating and pinpointing coating defects on buried pipelines</li> <li>- Profiling the CP current distribution on a pipeline network</li> <li>- Identification of short circuits from pipelines to other structures</li> <li>- Long-distance pipeline location</li> <li>- Locating &amp; pinpointing the position of buried pipes and cables</li> </ul>

## B. Characteristics

Item	Parameter
Construction	High-impact thermoplastic (ABS) injection molded housing
Weight	5.7lbs (2.6kg)
Dimensions	12.3in(L) x 4.6in(W) x 30.8in(H) (312mm x 116mm x 783mm)
Display Type	High-Visibility Color Display, 4.3"/10cm with 480 x 272 resolution
Receiver Antennas	<ul style="list-style-type: none"> <li>- 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> </li> <li>- Low-Frequency Field Sensor Foot</li> </ul>
Batteries	<ul style="list-style-type: none"> <li>- Six x AA Alkaline batteries</li> <li>- Rechargeable custom Lithium-ion batteries with 100-240V AC mains charger</li> </ul>
Battery Life	<ul style="list-style-type: none"> <li>- Alkaline – typically 12 hours of intermittent use at 70°F (21°C)</li> <li>- Lithium-ion – typically 27 hours of intermittent use at 70°F (21°C)</li> </ul> <p>* With the backlight activated, battery life varies with temperature; re-charging cycles are approximately 500 times the life cycle</p>
Environmental	IP65 and NEMA 4
External Connectors	<ul style="list-style-type: none"> <li>- Accessory Socket – to change the internal batteries and attach accessories</li> <li>- Mini-USB socket for data transfer and programming</li> </ul>
Temperature Range	<ul style="list-style-type: none"> <li>- Operating: -4°F to 122°F (-20°C to 50°C)</li> </ul>

	<ul style="list-style-type: none"> <li>- Storage: -40°F to 140°F (-40°C to 60°C)</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> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• ETSI EN 301 489-1</li> <li>• ETSI EN 301 489-3</li> <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-DM Receiver</li> <li>- Attachable Low-Frequency Field Sensor Foot</li> <li>- Factory-fitted GPS Module</li> <li>- Bluetooth module</li> <li>- Custom lithium-ion battery pack</li> <li>- 100-240V AC mains charger</li> <li>- Six x AA Alkaline battery holder</li> <li>- Mini-USB data transfer cable</li> <li>- User handbook</li> <li>- Padded carry bag</li> </ul>	
<b>Compatible Accessories</b>	<ul style="list-style-type: none"> <li>- A-frame fault and holiday locator</li> <li>- Remote Antenna (Stethoscope)</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
<b>Information Displayed</b>	<p><b>Information screen:</b></p> <ul style="list-style-type: none"> <li>- Real-time horizontal accuracy in 2DRMS</li> <li>- Distance from last logged current point</li> <li>- Current direction</li> <li>- DM current warning</li> <li>- GPS coordinates</li> <li>- Current on the line</li> <li>- Depth reading</li> </ul>

	<ul style="list-style-type: none"> <li>- Logging options</li> <li>- Enter the graph screen option</li> </ul> <p><b>Status Bar Information:</b></p> <ul style="list-style-type: none"> <li>- Antenna configuration: Peak, Peak with arrows, Broad Peak, Null, Delta Null, Omni Directional Peak, Omni Directional Broad</li> <li>- Line location - depth &amp; current measurement</li> <li>- Battery condition</li> <li>- Speaker volume</li> <li>- Bluetooth and GNSS status</li> <li>- Low-frequency field sensor connected</li> </ul> <p><b>Locate screen (Classic display):</b></p> <ul style="list-style-type: none"> <li>- Distance from last recorded reading (if GPS is active)</li> <li>- Signal strength - moving bar graph &amp; numeric value</li> <li>- Bar graph color-coded, indicating distortion level</li> <li>- Peak level indicator</li> <li>- Proportional left/right indication</li> <li>- Compass: full 360°-line direction indicator</li> <li>- Gain level (in dB)</li> <li>- Frequency selected</li> <li>- Configuration menus, including GNSS status and data logging transfer status</li> <li>- Depth and current</li> <li>- Warnings (if activated)</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 a value showing signal strength</li> <li>- <b>Vector Locate Screen</b> – fully automatic locate including offset, depth and locate uncertainty</li> <li>- <b>Transverse Graph Screen</b> - visual assessment of locate quality and distortion</li> <li>- <b>Plan View Screen</b> – fully automatic graphical representation of the cable position independent of cable direction, including depth/current and locate uncertainty.</li> <li>- <b>Sonde Locate Screen</b> – directing arrow to move to the Sonde position along the polar axis</li> </ul>
<p><b>Configuration</b></p>	<p><b>The intuitive setup menu enables the user to configure the following:</b></p> <ul style="list-style-type: none"> <li>- Setup frequency selection to toggle by “<b>f</b>” pushbutton</li> <li>- Setup location mode selection to toggle by “<b>m</b>” pushbutton</li> <li>- Setup screen views selection to toggle by long press “<b>m</b>” pushbutton</li> <li>- Units of measure (feet/meters)</li> </ul>

	<ul style="list-style-type: none"> <li>- Sound – normal or modulated pitch</li> <li>- Language</li> <li>- Continuous depth/current options</li> <li>- Loudspeaker level</li> <li>- Backlight brightness</li> <li>- Bluetooth pairing</li> <li>- Warnings (Excessive Tilt, Overhead Signal, Shallow Cable, Signal Overload)</li> <li>- Auto shut down – configurable to power down at five minutes, ten minutes, or never</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 for storage via cellular connectivity into the cloud using the Vivax-Metrotech application, VM MAP</li> <li>- All parameters stored at each location, including depth, current, date, time, mode, gain setting, frequency, locate uncertainty, longitude, latitude, and height above sea level</li> </ul>
<b>Data Transfer</b>	<ul style="list-style-type: none"> <li>- Via the Vivax-Metrotech "MyLocator3" software application 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.</li> </ul> <p style="text-align: center;"><b>Or</b></p> <ul style="list-style-type: none"> <li>- Cellular transfer to the VMMap Cloud (Vivax-Metrotech Cloud) via the VMMap mobile app</li> </ul>
<b>Operating Frequencies</b>	<ul style="list-style-type: none"> <li>- Configurable frequencies from 98Hz to 200 kHz</li> <li>- ELF) 3Hz/6Hz/98Hz</li> <li>- (ELF) 4Hz/8Hz/98Hz</li> <li>- 3Hz/6Hz/512Hz</li> <li>- 4Hz/8Hz/512Hz</li> <li>- 4Hz/8Hz/640Hz</li> <li>- 3Hz/6Hz/640Hz</li> <li>- Power 50Hz and 60Hz</li> <li>- Radio 22.7kHz, 10kHz bandwidth</li> <li>- Signal Direction" (SD) - enhanced frequency indicating the direction of the transmitter's signal. SD-USA: 256Hz/512Hz, SD-EUROPE: 320Hz/640Hz</li> </ul>
<b>Operating Modes</b>	<ul style="list-style-type: none"> <li>- Peak, Peak with arrows, Broad Peak</li> <li>- Null, Delta Null</li> <li>- Omni Directional Peak, Omni Directional Broad</li> </ul>
<b>Gain Control</b>	<ul style="list-style-type: none"> <li>- Manual gain using "+" or "-" keys</li> <li>- One-touch of "+" or "-" keys rescales to 60% of the bar graph scale</li> <li>- In Vector Screen, "+" and "-" keys act as zoom feature to keep the target utility in view</li> <li>- In the Transverse Graph screen, the "+" key saves the screen graph, "-" key clears the screen</li> </ul>

<b>Accuracy</b>	Locate pinpointing accuracy:	<ul style="list-style-type: none"> <li>- Over 9ft (3m) – 5% of depth</li> <li>- Up to 9ft (3m) – 3% of depth</li> </ul>
	Depth measurement accuracy:	+/- 5% of depth
	Current measurement accuracy:	<ul style="list-style-type: none"> <li>- 5% of actual current – over 9ft (3m)</li> <li>- 3% of actual current – up to 9ft (3m)</li> </ul>
	<i>* Performance rated using a single undistorted signal source</i>	
<b>Compatible Transmitters</b>	Loc3-25Tx, Loc-150Tx	

## D. Shipping and Packaging

Item	Parameter
Shipping Weight	15.7lbs (7.1kg)
Shipping Dimension	14.1in(L) x 11in(W) x 29.8in(H) (358mm x 279mm x 756mm)

## E. Warranty

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

## F. Software Updates

Item	Parameter
Software	The software can be upgraded using a PC with a USB port. Program updates & locator software updates are available via the free MyLocator3 app.

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