VIVAX METROTECH

vLoc3-5000 System

Technical Specifications V1.6

VIVAX METROTECH™

VIVAX METROTECH

Worldwide Locations

World Headquarters, United States of America

Vivax-Metrotech Corporation
3251 Olcott Street, Santa Clara, CA 95054, USA

T/Free : 1-800-446-3392
Tel : +1-408-734-1400
Fax : +1-408-734-1415
Website : www.vivax-metrotech.com
Email : SalesUSA@vxmt.com

Central/South America and the Caribbean

Ventas para América Latina
3251 Olcott Street, Santa Clara, CA 95054, USA

T/Free : 1-800-446-3392
Tel : +1-408-734-1400
Fax : +1- 408-743-5597
Website : www.vivax-metrotech.com
Email : LatinSales@vxmt.com

Canada

Vivax Canada, Inc.
41 Courtland Ave Unit 8, Vaughan, ON L4K 3T3, Canada

Tel : +1-289-846-3010
Fax : +1-905-752-0214
Website : www.vivax-metrotech.ca
Email : SalesCA@vxmt.com

United Kingdom

Vivax-Metrotech Ltd.
Unit 1, B/C Polden Business Centre, Bristol Road, Bridgwater, Somerset, TA6 4AW, UK

Tel : +44(0)1793 822679
Website : www.vivax-metrotech.co.uk
Email : SalesUK@vxmt.com

France

Vivax-Metrotech SAS
Technoparc - 1 allée du Moulin Berger, 69130 Ecully, France

Tel : +33(0)4 72 53 03 03
Fax : +33(0)4 72 53 03 13
Website : www.vivax-metrotech.fr
Email : SalesFR@vxmt.com

Germany

Metrotech Vertriebs GmbH
Am steinernen Kreuz 10a
D-96110 Schesslitz

Tel : +49 954 277 227 43
Website : www.vivax-metrotech.de
Email : SalesEU@vxmt.com

China

Vivax-Metrotech (Shanghai) Ltd.
3/F No.90, Lane 1122 Qinzhou Rd.(N),
Shanghai, China 200233

Tel : +86-21-5109-9980
Fax : +86-21-2281-9562
Website : www.vivax-metrotech.com
Email : SalesCN@vxmt.com.cn

A. Description and Typical Applications

Item	Parameter
Model Name	vLoc3-5000
Model Number	VX224-01
Description	Multi-purpose precision buried utility locator receiver
Intended Use	Locating & pinpointing the position of buried pipes and cables Collect data for analysis and mapping

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	Transmissive 480 x 272 Pixel, 16-bit Color, High Visibility LCD, 4.3"/10cm
Receiver Antennas	Two sets of Omnidirectional Antennas, each comprising: • Two Compass Antennas • Two Horizontal Antennas • Two Vertical antennas
Batteries	- Six x AA Alkaline batteries - Rechargeable custom Lithium-ion batteries with 100-240V AC mains charger
Battery Life	- Alkaline – typically 12 hours intermittent use at 70ºF (21ºC) - Lithium-ion – typically 27 hours intermittent use at 70ºF (21ºC) * With backlight activated, battery life varies with temperature, 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: -4ºF to 122ºF (*-20ºC to 50ºC*), Storage: -40ºF to 140ºF (-40ºC to 60ºC)
Compliance and Approvals	- Complies with European standard CE (Directive 99/5/EC) • EN 55011 • ETSI EN 301 489-1 • ETSI EN 301 489-3 - Complies with FCC Rules Part 15

	• EN 61000-4-2: A1 & A2 • EN 61000-4-3 • EN 61000-4-8: A1 • ETSI EN 300 330-2	• CFR 47 part 2 • CFR 47 Part 15
Manufacturing	Designed and manufactured per ISO 9001:2015	
What's In the Box	- vLoc3-5000 Receiver - USB data transfer cable - Custom lithium-ion battery pack - 100-240V AC mains charger	- Six x AA Alkaline battery holder - Six x AA Alkaline batteries - User handbook - Carry bag or hard case (decided at the time of ordering)
Compatible Accessories	- MLA (Marker Locator Attachment) to locate buried EMS Markers - A-frame fault locator - Remote Antenna (Stethoscope) - Vehicle Charging DC Lead - TX-Link - Factory installed, for remote operation of the Loc3 series transmitter - Range of Sondes (waterproof, self-contained transmitters for use in nonmetallic pipes & ducts)	

C. Operational

Item	Parameter
Information Displayed	**Information screen:** - Real-time horizontal accuracy in 2DRMS - SiS Reset - GPS coordinates - Current on the line - Depth reading - Loging options **Status Bar Information:** - Antenna configuration: Peak, Peak with arrows, Broad Peak, Null, Delta Null, Omni Directional Peak, Omni Directional Broad - Line location - depth & current measurement - Battery condition - Speaker volume - Bluetooth and GNSS status (If installed) - Radio link to transmitter status (if installed) **Locate screen (Classic display):**

	- Signal strength - moving bar graph & numeric value - Bar graph color-coded indicating distortion level - Peak level indicator - Proportional left/right indication - Compass: full 360°-line direction indicator - Gain level (in dB) - Frequency selected - Product configuration menu & submenus, including GNSS status and data logging transfer status. - Customer definable start-up screen - Depth and current - Warnings (if activated) - Plug and play automatic recognition of accessories - Accessory specific custom screens **Customer definable start-up screen**
Locate Perspectives	- **Classic Locate** – moving bar graph with a value showing signal strength - **Vector Locate Screen** – fully automatic locate including offset, depth and locate uncertainty - **Transverse Graph Screen** - visual assessment of locate quality and distortion - **Plan View Screen** – fully automatic graphical representation of the cable position independent of cable direction, including depth/current and locate uncertainty. - **Sonde Locate Screen** – directing arrow to move to the Sonde position along the polar axis
Configuration	The Intuitive setup menu enables the user to configure: - Set up frequency selection to toggle by "*f*" pushbutton - Setup location mode selection to toggle by "*m*" pushbutton - Setup screen views selection to toggle by long press "*m*" pushbutton - Units of measure (feet/meters) - Sound (Pitch) – normal or modulated - Language - Continuous depth and current options - Loudspeaker level - Backlight - Bluetooth pairing if installed - Transmitter Radio Link if installed - Warnings (Excessive Tilt, Overhead Signal, Shallow Cable, Signal Overload) - Auto shut down – configurable to power down at five minutes, ten minutes, or never

Data logging	- 50 million record internal storage - Data can also be transferred for storage, via cellular connectivity, into the cloud using the Vivax-Metrotech application, VMMAP - All parameters stored at each location including depth, current, date, time, mode, gain setting, frequency, locate uncertainty, longitude, latitude, and height above sea-level	
Data Transfer	- Via the Vivax-Metrotech "MyLocator3" software application available free of charge from www.vivax-metrotech.com. 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. **Or** - Cellular transfer to the VMMap Cloud (Vivax-Metrotech Cloud) via the VMMap mobile app	
Operating Frequencies	- Configurable frequencies from 98Hz to 200kHz • Power 50Hz and 60Hz • Radio 10.0kHz - 22.7kHz bandwidth - Signal Direction - enhanced product model giving the direction of outgoing current: • SD-USA: 256Hz/512Hz, SD-EUROPE: 320Hz/640Hz - Signal Select – a real-time measurement of signal bleed-over caused by capacitive o inductive coupling to other utilities: • SIS-491Hz, SIS-982Hz, SIS-8440Hz, SIS-9.82kHz, SIS-35kHz	
Operating Modes	- Peak, Peak with arrows, Broad Peak - Null, Delta Null - Omni Directional Peak, Omni Directional Broad	
Gain Control	Manual gain using “+” or “-” keys One-touch of “+” or “-” keys rescales to 60% of the bar graph scale In Vector Screen, “+” and “–” keys act as zoom feature to keep target utility in view In the Transverse Graph screen, “+” key saves the screen graph, “–” key clears the screen	
Accuracy	Locate pinpointing accuracy:	- Over 9ft (3m) – +/- 5% of depth - Up to 9ft (3m) – +/- 3% of depth
	Depth measurement accuracy:	+/- 5% of depth
	Current measurement accuracy:	- +/- 5% of actual current – over 9ft *(3m)* - +/- 3% of actual current – up to 9ft *(3m)*
	Depth range:	Dependent on the strength of the signal radiating to the locator
	* Performance rated using a single undistorted signal source	
Compatible Transmitters	Loc-10SiSTx, and Loc3-10SiSTx	

D. Communications

Item	Parameter
Bluetooth	- Internal Bluetooth for communicating with: - External GPS or data logging devices - Apple® devices - Android™ devices
GPS	- GPS, GLONASS, Galileo - 2.5m accuracy - Internal GNSS module
Transmitter Link	Optional Tx-Link (Remote transmitter control from the receiver)

E. Shipping and Packaging

Item	Parameter
vLoc3-5000 Receiver in a SOFT KIT BAG.	Shipping Weight：16lbs. *(7.3kg)*. Shipping Dimension：30in(L) x 11in(W) x 14in(H) *(762mm x 279mm x 356mm)*
vLoc3-5000 Receiver in a HARD CASE.	Shipping Weight：20lbs. *(9.1kg)*. Shipping Dimension：34in(L) x 15in(W) x 20in(H) *(864mm x 381mm x 508mm)*

F. Warranty

Item	Parameter
Warranty	- Two years - Optional extended warranty available

G. 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 specifications and availability information are subject to change without prior notice.