VIVAX METROTECH

vLoc3-5000 System

Technical Specifications V1.5

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A. Typical Applications

Item	Parameter
Description	Multi-purpose precision buried utility locator receiver and transmitter
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 • EN 61000-4-2: A1 & A2 • EN 61000-4-3 • ETSI EN 301 489-1 • ETSI EN 301 489-3 - Complies with FCC Rules Part 15 • CFR 47 part 2 • CFR 47 Part 15

	• EN 61000-4-8: A1 • ETSI EN 300 330-2
Manufacturing	ISO 9001:2015
Standard Equipment **(Comes with the** **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.