



VIVAX
METROTECH

vLoc3-ML

Technical Specifications V1.1



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A. Typical Applications

Item	Parameter
Description	<ul style="list-style-type: none"> - Multi-purpose precision locator receiver - Electronic marker-ball detection
Uses	<ul style="list-style-type: none"> - Locating & pinpointing the position of buried pipes and cables - Detection of any one of nine marker balls types buried to a depth of 6ft (2m)

B. Receiver Assembly

Item	Parameter
Construction	High impact ABS injection molded housing
Weight	5.7lbs (2.6kg)
Dimensions	12.2in(L) x 6.3in(W) x 28.4in(H) (310mm x 159mm x 721mm)
Display Type	Transmissive 480 x 272 Pixel, 16-bit Color, High Visibility LCD, 4.3"
Receiver Antennas	Two sets of 3D antennas for location and depth, EMS transmit and receive antennas.
Batteries	<ul style="list-style-type: none"> - Six x AA Alkaline batteries - Rechargeable custom Lithium-ion batteries with 100-240V AC mains charger
Battery Life	<ul style="list-style-type: none"> - Alkaline – typically 12 hours intermittent use at 70F° (21C°) - Lithium-ion – typically 27 hours intermittent use at 70F° (21C°) (with full backlight turned on). - Re-charging cycles over 500 times life cycle. Battery life varies with temperature.
Environmental	IP65 and NEMA 4
External Connectors	<ul style="list-style-type: none"> - Accessory Socket – to change the internal batteries and attach accessories - Mini-USB socket for data transfer and programming
Temperature Range	<ul style="list-style-type: none"> - Operating: -4F° to 122F° (-20C° to 50C°) <ul style="list-style-type: none"> • Storage: -40F° to 140F° (-40C° to 60C°)
Compliance and Approvals	<ul style="list-style-type: none"> - Complies with European standard CE (Directive 99/5/EC) <ul style="list-style-type: none"> • EN 55011 • EN 61000-4-2: A1 & A2 • EN 61000-4-3 • EN 61000-4-8: A1

	<ul style="list-style-type: none"> • ETSI EN 300 330-2 • ETSI EN 301 489-1 • ETSI EN 301 489-3 • Complies with FCC Rules Part 15 • CFR 47 part 2 <p>- CFR 47 Part 15</p>
Standard Accessories (What's in the box)	<ul style="list-style-type: none"> - Custom Li-ion receiver battery - 100-240V AC mains charger - 6 x AA Alkaline battery holder - 6 x AA Alkaline batteries - Mini-USB data cable - Soft carry bag - User handbook
Compatible Accessory Options	<ul style="list-style-type: none"> - Portable Transmitters: Loc3-5Tx, Loc3-10Tx, VM-550FF, VM-560FF - Range of Sondes (waterproof self-contained transmitters for use in pipes & ducts) - Accessory A-frame (for sheath fault finding) - Remote Antenna - GPS Module - Bluetooth module - Vehicle charging lead (Lithium-ion battery)

C. Operational

Item	Parameter
Information Displayed	<ul style="list-style-type: none"> - Push button depth on marker - Marker reference number and icon - Response to marker ball - Circular bar graph and variable pitch tone to indicate signal strength - - Manual EMS (Electronic Marker System) gain control - Standard "Bar graph" Locate with Peak, Peak with arrows, Null, Broad, Delta Null, Omni Directional Peak, Omni Directional Broad - Transverse Graph Mode - visual assessment of signal quality and distortion - Dedicated Sonde Locate - directing arrow to move to the Sonde position along the polar axis - Vector Screen - fully automatic locate including offset, depth and locate uncertainty - Plan View Screen - fully automatic graphical representation of the cable position

	<p>independent of cable direction</p> <ul style="list-style-type: none"> - Signal strength - moving bar graph & numeric value - Proportional left/right indication - Compass: full 360°-line direction indicator - Plug and play automatic recognition of accessories - Accessory specific custom screens - Line location - depth & current measurement - Sonde location - depth measurement - Gain level (in dB) - Frequency selected - Battery condition - Speaker volume - Bluetooth and GPS status - Product configuration menu & submenus - Customer definable start up screen
Configuration	<ul style="list-style-type: none"> - Intuitive setup menu enables user to configure: <ul style="list-style-type: none"> • Setup 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/m) • Sound (Pitch) – normal/modulated • Language • Continuous depth/current options • Loudspeaker level • Backlight • Bluetooth pairing if fitted • Transmitter Radio Link if fitted • Warnings (Excessive Tilt, Overhead Signal, Shallow Cable, Signal Overload) • Auto shut down – configurable to power down at five minutes, ten minutes, or never

Operating Frequencies Pre-defined Marker Ball Frequencies	Frequency list defined below: <table><tr><th>Ref #</th><th>Utility</th><th>Frequency (Hz)</th></tr><tr><td>1</td><td>Power (Red)</td><td>169,800</td></tr><tr><td>2</td><td>Water (Blue)</td><td>145,700</td></tr><tr><td>3</td><td>Sanitary (Green)</td><td>121,600</td></tr><tr><td>4</td><td>Telephone (Orange)</td><td>101,400</td></tr><tr><td>5</td><td>Gas (Yellow)</td><td>83,000</td></tr><tr><td>6</td><td>CATV (Orange/Black)</td><td>77,000</td></tr><tr><td>7</td><td>Non-potable Water (Purple)</td><td>66,350</td></tr><tr><td>8</td><td>EDF (French Power) (natural)</td><td>40,000</td></tr><tr><td>9</td><td>Power Europe (Blue/Red)</td><td>134,000</td></tr></table> ***Note: #9 – some markets only***		Ref #	Utility	Frequency (Hz)	1	Power (Red)	169,800	2	Water (Blue)	145,700	3	Sanitary (Green)	121,600	4	Telephone (Orange)	101,400	5	Gas (Yellow)	83,000	6	CATV (Orange/Black)	77,000	7	Non-potable Water (Purple)	66,350	8	EDF (French Power) (natural)	40,000	9	Power Europe (Blue/Red)	134,000
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Data Logging	<ul style="list-style-type: none">- 50 million record internal storage- All parameters stored at each location including depth, current, date, time, mode, gain setting, frequency, locate uncertainty, longitude, latitude and height above sea-level- If connected to GPS (via Bluetooth) data also recorded with coordinates and date time																															
Data Transfer	Uses Vivax-Metrotech “MyLocator” software application tool available free of charge from www.vivax-metrotech.com. Data can be saved in xlx, txt, fhp, kml (Google earth) formats.																															
Operating Frequencies	<ul style="list-style-type: none">- Configurable frequencies from 98Hz to 200 kHz<ul style="list-style-type: none">• Power 50Hz and 60Hz• Radio 22.7kHz, 10kHz bandwidth- Optional “Signal Direction” (SD) - enhanced product model giving direction of outgoing current. SD-USA: 256Hz/512Hz, SD-EUROPE: 320Hz/640Hz																															
Operating Modes	<ul style="list-style-type: none">- Marker Locate Mode- Classic Locate (2-section Bar graph)- Transverse Graph Mode- Plan View (Omni Directional)- Vector Locate (Lateral Position & Depth)- Sonde Locate																															
Gain / Scaling Control	Manual gain using “+” or “-” with one touch to return to center (60% of FSD) “+” or “-” used to rescale the vector screen dependent on cable depth and offset																															
Accuracy	Locate pinpointing accuracy:	<ul style="list-style-type: none">- Over 9ft (3m) – 5% of depth- Up to 9ft (3m) – 3% of depth																														
	Depth measurement accuracy:	3% of depth																														

	Current measurement accuracy:	<ul style="list-style-type: none"> - 3% of actual current – up to 9ft (3m) - 5% of actual current – over 9ft (3m)
	Depth range:	Dependent on strength of signal radiating to locator
	Marker Depth Accuracy:	<ul style="list-style-type: none"> - 4% of depth – up to 4ft (1.2m) - 10% of depth – up to 5ft (1.5m) <p>Typical accuracy with ball markers</p>
	Performance rated using a single undistorted signal source	
Compatible Transmitter	Loc3-5Tx, Loc-5STx, Loc-5DTx, Loc3-10Tx, Loc-10Tx, VM-550FF, VM-560FF, Loc-1Tx	

D. Shipping and Packaging

Item	Parameter
Shipping Weight	14.9lbs (6.76kg) (receiver only)
Shipping Dimension	16.5in(L) x 11in(W) x 27.6in(H) (420mm x 280mm x 700mm) (receiver only)

E. Warranty

Item	Parameter
Warranty	Two years (Optional extended warranty available)

F. Firmware Updates

Item	Parameter
Software	Software can be upgraded using a PC with USB port. Programs & locator software are available via MyLocator3 app

All products are designed and manufactured per ISO 9001:2015.

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