VIVAX METROTECH

VM-550 Service Drop Locator Kit

Technical Specifications V1.6

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VM-550 Drop Locator Kit
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A. Description and Typical Applications

Item	Parameter	
Model Number	VM-550 Receiver	VM-550 Transmitter
	VX215-01	VX215-02
Description	VM-550 Three Frequency Locator Kit	
Uses	General-purpose locator used to detect buried pipe and cable services	

B. Receiver Characteristics

Item	Parameter	
Construction	High-impact ABS plastic housing with a carbon fiber reinforced antenna tube.	
Weight	1.41lbs *(0.64kg)*	
Dimensions	34.6in(L) x 3.1in(W) x 2.8in(H) *(880mm x 80mm x 70mm)*	
Display Type	Dot Matrix, 98 x 64 dots, COG LCD with backlight	
Controls	Four-button keypad	
Power Options	2 x AA (LR06) Alkaline batteries	
Battery Life	Typically 20 hours of continuous use at 70ºF *(21ºC)*	
Environmental	IP54	
Manufacturing	Designed and manufactured per ISO 9001:2015	
External Connectors	1 x Mini USB socket for programming	
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 • EN 61000-4-3 • EN 61000-4-8	Complies with FCC Rules Part 15 • CFR 47 Part 15: 2006
What's In the Box	- VM-550 Receiver - Battery holder - Mini USB lead	- Kit carry bag - Manual

C. Receiver Operational

Item	Parameter	
Information Displayed	- Signal level - Battery condition	- Mode selected
Operating Frequencies	- Passive: 50Hz, 60Hz - Active: 512Hz or 640Hz, 8.192kHz, and 83.1kHz *North America version use 60Hz power and 512Hz low frequency. All other versions use 50Hz power and 640Hz low frequency	
Operating Modes	Passive Power and active locate modes	
Gain / Scaling Control	Manual gain using "+" or "- "with one touch to return to center (60% of FSD)	
Sensitivity	Frequency: 50/60Hz 5mA for 20dB SNR and 10Hz bandwidth 512/640Hz 1.5mA for 20dB SNR and 10Hz bandwidth 8.192kHz 27uA for 20dB SNR and 10Hz bandwidth 83.1kHz 6uA for 20dB SNR and 10Hz bandwidth	
Accuracy	Depth range 5m *(16ft)*, accuracy +/-5% of depth Locate and depth accuracy are quoted for 20 degC and average soil conductivity. It is also assumed the return current localisation is deep compared to the target cable	
Compatible Transmitters	VM-550FF, All Loc series transmitters with the matching frequency range	

D. Transmitter Characteristics

Item	Parameter
Construction	High-impact ABS plastic
Weight	- With Alkaline battery tray: 2.47 lbs. *(1.12kg)* - With Rechargeable Li-ion battery tray: 2 lbs. (*0.92 kg.*)
Dimensions	18.1in(L) x 3.5in(W) x 2.6in(H) *(460mm x 90mm x 65mm)*
Display	Flashing red LED lights show active transmit and output modes.
Power Options	- 4 x Alkaline "D" cells - Optional Li-Ion rechargeable battery pack
Battery Life	At 1 watt, i.e., full output setting. - Alkaline – typically 12 hours - Li-ion – typically 36 hours - Based on maximum output into 300-ohm load and 50% duty cycle. At 70°F (21°C)

Environmental	IP54
External Connectors	1 x 3-pin XLR socket
Temperature Range	- Operating: -4ºF to 122ºF (*-20ºC to 50ºC*) - Storage: -40ºF to 140ºF (*-40ºC to 60ºC*)
Compliance/Approvals	Complies with European standard CE (Directive 99/5/EC) • EN 55011 • EN 61000-4-3 • EN 61000-4-2 • EN 61000-4-4 • EN 61000-4-5 • EN 61000-4-8 Complies with FCC rules part 15 • CFR 47 part 15
Manufacturing	Designed and manufactured per ISO 9001:2015
What's In the Box	- VM-550FF Transmitter - Direct Connection Leads (XLR plug with 10-foot (3.5m) red/black leads) - Ground stake - Carry strap
Compatible Accessories Options	- 2-inch *(50mm)* transmitter clamp - 4-inch *(100mm)* transmitter clamp - 5-inch *(125mm)* transmitter clamp - 9-inch *(230mm)* transmitter clamp - 18-inch (450mm) flexible transmitter clamp - Ground Extension Spool - Live Plug Connector (LPC Separation Filter) - to connect and use the transmitter on lines carrying up to 240V AC - LCC Live Cable Connector - to connect and use the transmitter on lines carrying up to 480V AC - Rechargeable Battery Pack - custom Li-Ion battery pack and charger - 12V DC Vehicle Power Lead - for charging the optional rechargeable battery from a vehicle

E. Transmitter Operational

Item	Parameter
Information Displayed	Solid and blinking LED shows - Frequency selected - Output power level
Transmitting Modes	- ***Induction mode*** – applies signal inductively using the internal antenna - ***Direct connection mode*** - applies signal directly to the cable by clipping one output lead to the cable, the other to an independent ground - ***Clamp mode*** – applies signal using an inductive clamp (aka toroid or coupler) that is placed around the target pipe or cable Modes are automatically selected when accessories are plugged in. The default mode (noaccessories) is Induction.

Transmitting Frequency by Mode	
Induction Mode	83.1kHz
Direct Connection Mode	512Hz or 640Hz, 8.192kHz, and 83.1kHz
Clamp Mode	8.192kHz, and 83.1kHz
Fault Find Mode	8kFF, Fault locating mode for use with vLoc accessory A-frame or VM-510FFL ground fault locator (8.192kHz amplitude modulated with 8Hz and phase-modulated with 2.66Hz)
Transmitting Mode Power Output	**Per FCC part 15:** • 1 watt – in High output level • 0.1 watt – in Low output level
Maximum Output Voltage	60V RMS
Maximum Output Current	70mA RMS constant current
Output Protection	Output protected against accidental connection to up to 240V AC
Audio Indication	- Connection quality – variable beep rate sound showing the better signal applied - Beep constantly – for high voltage detected
Controls	Use pushbuttons to select: - Power button: On / Off (Press and hold) - Low / High output (Short press) - Frequency
Compatible Receivers	VM-550, VM-560, VM-585, VM-510FFL+, vLoc3 Rx series

F. Rechargeable Battery Tray (optional accessory)

Item	Parameter
Description	- Custom Lithium-Ion battery tray with charger - Li-Ion batteries will withstand 500 charging life cycles
Input/output	Input: 8.4V ~ 8.5V Output: 6V ~ 8.4V
Battery Type	Li-Ion battery
Temperature Range	- Operating: 14ºF to 140ºF *(-10ºC to 60ºC)* - Storage : 14ºF to 113ºF *(-10ºC to 45ºC)*
Storage humidity	≤75% RH
Weight	1.26lb (*0.57kg*)
Dimension	8.3in(L) x 3.7in(W) x 2.5in(H) *(210mm x 93mm x 63mm)*

Shipping Weight	1.38lb (*0.63kg*)
Shipping Dimension	9in(L) x 3.7in(W) x 2.8in(H) *(228mm x 95mm x 70mm)*
Warranty	12 month

G. Kit Shipping and Packaging

Item	Parameter
Shipping Weight	- With alkaline batteries: 10.8lbs *(4.9kg)* - With Li-Ion batteries: 10.4lbs *(4.7kg)*
Shipping Dimension	39in(L) x 7.7in(W) x 4.7in(H) *(990mm x 195mm x 120mm)*

H. Warranty

Item	Parameter
Warranty	- 12 months - Extended warranty available

***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.*

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