



VIVAX

METROTECH

VM-550FF / VM-560FF 1-Watt Transmitters

Technical Specifications V1.3



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A. Typical Applications

Item	Parameter
Description	VM-550FF and VM-560FF 1-Watt Transmitters
Uses	Transmitting active signals for the location of buried pipes and cables Transmitting a fault-find frequency for the detection of cable faults Transmitting active signals for the location of camera systems pushrod cable

B. Characteristics

Item	Parameter
Construction	High-impact ABS plastic
Weight	With Alkaline batteries: 2.47 lbs. (1.12kg) With Rechargeable Li-ion batteries: 2 lbs. (0.92 kg.)
Dimensions	18.1in(L) x 3.5in(W) x 2.6in(H) (460mm x 90mm x 65mm)
Display	None, flashing red LED lights show active transmit and output modes
Power Supply	4 x Alkaline "D" cells Optional Li-Ion rechargeable battery pack
Battery Life	At 1 watt, i.e., full output setting. <ul style="list-style-type: none"> - 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 and NEMA 4
External Connectors	1 x 3 pin XLR socket
Temperature Range	Operating: -4°F to 122°F (-20°C to 50°C) Storage: -40°F to 140°F (-40°C to 60°C)
Compliance/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 61000-4-3, 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	Under ISO 9001:2015
Standard Accessories (Supplied with)	- Direct Connection Leads (XLR plug with 10-foot (3.5m) red/black leads)

Transmitter)	<ul style="list-style-type: none"> - Ground stake - Alkaline batteries - Carry Strap
Compatible Accessories Options	<ul style="list-style-type: none"> - 2-inch (50mm) transmitter clamp - 4-inch (100mm) transmitter clamp - 5-inch (125mm) 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 powering and charging the optional rechargeable battery from a vehicle
Frequencies	<ul style="list-style-type: none"> - Direct connection mode / Clamp mode: VM-550FF: 512Hz or 640Hz, 8.192kHz, and 83.1kHz VM-560FF: 512Hz or 640Hz, 8.192kHz, and 480kHz - Induction Mode: VM-550FF: 83.1kHz VM-560FF: 480kHz - Fault Find Mode: VM-550FF, VM-560FF 8kFF, Fault locating mode for use with vLoc accessory A-frame or VM-510 ground fault locator (8.192kHz amplitude modulated with 8Hz and phase-modulated with 2.66Hz) <p>* Modes are automatically selected when accessories are plugged in.</p>

C. Operational

Item	Parameter
Information Displayed	Solid and blinking LED shows <ul style="list-style-type: none"> - Frequency selected - Output power level
Transmitting Modes	<p>Induction mode – applies signal inductively using the internal antenna -</p> <p>Direct connection mode – applies signal directly to the cable by clipping one output lead to the cable, the other to an independent ground -</p> <p>Clamp mode – applies signal using an inductive clamp (aka toroid or coupler) that is placed around the target pipe or cable</p>

	* Modes are automatically selected when accessories are plugged in. The default mode (no accessories) is Induction.
Transmitting Frequency by Mode	<ul style="list-style-type: none"> - Direct connection mode / Clamp mode: VM-550FF: 512Hz or 640Hz, 8.192kHz, and 83.1kHz VM-560FF: 512Hz or 640Hz, 8.192kHz, and 480kHz - Induction Mode: VM-550FF: 83.1kHz VM-560FF: 480kHz - Fault Find Mode: VM-550FF, VM-560FF 8kFF, Fault locating mode for use with vLoc accessory A-frame or VM-510 ground fault locator (8.192kHz amplitude modulated with 8Hz and phase-modulated with 2.66Hz) <p>* Modes are selected automatically when accessories are plugged in.</p>
Power Output	<ul style="list-style-type: none"> - Per FCC part 15: <ul style="list-style-type: none"> • 1 watt – in High output level • 0.1 watt – in Low output level
Maximum Output Voltage	60V RMS
Output Current	Maximum output current = 70mA RMS constant current
Output Protection	Output protected against accidental connection to up to 240V AC
Audio indication	<ul style="list-style-type: none"> - Connection quality – variable beep rate sound showing the better signal applied - Beep constantly – for high voltage detected
Controls	<p>Use pushbuttons to select:</p> <ul style="list-style-type: none"> - Power button: On / Off (Press and hold) - Low / High output (Short press) - Frequency
Compatible Receivers	VM-550, VM-560, VM-585, VM-510FFL+, vLoc3-Cam

D. Rechargeable Battery Tray (optional accessory)

Item	Parameter
Description	<p>Custom Lithium-Ion battery pack and charger</p> <p>Li-Ion batteries will withstand 500 charging life cycles</p>
Input/output	<p>Input: 8.4V ~ 8.5V</p> <p>Output: 6V~8.4V</p>

Temperature Range	Operating: 14°F to 140°F (-10°C to 60°C) Storage : 14°F to 113°F (-10°C to 45°C)
Storage Humidity	≤ 75% RH
Weight	1.26lb (0.57kg)
Dimensions	8.3in(L) x 3.7in(W) x 2.5in(H) (210mm x 93mm x 63mm)
Shipping Weight	1.38lb (0.63kg)
Shipping Dimensions	9in(L) x 3.7in(W) x 2.8in(H) (228mm x 95mm x 70mm)
Warranty	One Year

E. Shipping and Packaging

Item	Parameter		
Shipping Weight	Transmitter	with Alkaline Batteries	with Li-ion and charger
	VM-550FF	9.3lbs (4.2kg)	8.82lbs (4kg)
	VM-560FF	9.48lbs (4.3kg)	9lbs (4.1kg)
Shipping Dimension	39in(L) x 7.7in(W) x 4.7in(H) (990mm x 195mm x 120mm)		

F. Warranty

Item	Parameter
Warranty	<ul style="list-style-type: none"> - One Year - Extended warranty available

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