



VIVAX

METROTECH

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

Technical Specifications V1.6



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 : +1-408-734-3880
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 : +1-408-734-3880
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
96110 Schesslitz

Tel : +49 9542 77227-43
Website : www.vivax-metrotech.de
Email : SalesEU@vxmt.com

China

Vivax-Metrotech (Shanghai) Ltd.

Building 10, Lane 1158 Zhongxin Rd.,
Songjiang District, Shanghai, China, 201615

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

A. Description and Typical Applications

Item	Parameter	
Model Number	VM-550 Transmitter	VM-560 Transmitter
	VX215-02	VX215-04
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. - 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: -4°F to 122°F (-20°C to 50°C) Storage: -40°F to 140°F (-40°C to 60°C)
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-550 or VM-560 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 powering and charging the optional rechargeable battery from a vehicle	

C. 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 (no accessories) is Induction.
Transmitting Frequency by Mode	- Direct connection mode: VM-550FF: 512Hz or 640Hz, 8.192kHz, and 83.1kHz VM-560FF: 512Hz or 640Hz, 8.192kHz, and 480kHz - Clamp mode: VM-550FF: 8.192kHz, and 83.1kHz VM-560FF: 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) * Modes are selected automatically when accessories are plugged in.
Power Output	- Per FCC part 15: • 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	- 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-Cam

D. Rechargeable Battery Tray (optional accessory)

Item	Parameter
Description	Custom Lithium-Ion battery pack and charger Li-Ion batteries will withstand 500 charging life cycles
Input/output	Input: 8.4V ~ 8.5V Output: 6V~8.4V
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	- One Year - Extended warranty available

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