A. vLocDM2 Typical Applications

Item	Parameter
Description	Pipeline defect mapper receiver and transmitter
Uses	- Locating and pinpointing coating defects on buried pipelines - Profiling the CP current distribution on a pipeline network - Identification of short circuits from pipelines to other structures - Long distance pipeline location - Transmitting active signals for the location of coating defects on buried pipes

B. vLocDM2 Receiver Assembly

Item	Parameter
Construction	- Carbon fiber reinforced antenna tube - High impact thermoplastic (ABS) injection molded housing - Removable ABS foot molding containing magnetometer
Weight	6lbs *(2.7kg)*
Dimension	11.7in(L) x 5.5in(W) x 30in(H) *(262mm x 122mm x 750mm)*
Display Type	Sharp TFT LCD ¼ VGA color display, 3.52in *(89mm)*
Receiver Antennas	2 x Peak antennas, 1 x null antenna, 1 x compass antenna, 1 x magnetometer
Batteries	- Rechargeable Lithium-ion batteries with 100-240V AC mains charger - Replaceable (6 x standard Alkaline AA batteries) batteries can be used when required
Battery Life	- Alkaline – typically 8 hours intermittent use at 70ºF *(21ºC)* - Lithium-ion – typically 24 hours continuous use at 70ºF *(21ºC)* (with full backlight turned on). Re-charging cycles approx. 500 times life cycle. Battery life varies with temperature.
Bluetooth	- Plug and play custom Bluetooth interface
External Connectors	- 1 x Socket for USB accessories & analogue accessories - 1 x Mini USB socket for data transfer / programming - 1 x Socket for battery charger - 1 x Standard USB (Memory stick) socket for data transfer (Future feature)
Approvals	- Complies with European standard CE (Directive 99/5/EC) • EN 55011 • EN 61000-4-2: A1 & A2 • EN 61000-4-3 • EN 61000-4-8: A1 • 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 • CFR 47 Part 15
Standard Accessories	- Bluetooth Module - Holux GPS (Bluetooth connectivity) - Transmitter: Loc-150Tx and connection leads - A-frame

	- USB data cable - 100-240V AC mains receiver charger (for Lithium-ion battery) - Soft carry bag (inclusive of accessories bag) - User handbook - Desktop application (desktop programming data management) • User selectable configuration management • Replication of user configuration
Accessories (Optional)	- Remote Antenna USB - Sondes (waterproof self-contained transmitters for use in pipes & ducts) • D18-33-SR44 - 0.75in(Dia.) x 3.1in(L) *(18mm x 80mm)*, 33 kHz, range 15ft *(4.5m)*, 2 x button cell batteries • D38-33-AA – 1.5in(Dia.) x 4.1in(L) *(38mm x 105mm)*, 33 kHz, range 16.3ft *(5m)*, 1 x AA battery • D38-09-AA – 1.5in(Dia.) x 4.1in(L) *(38mm x 105mm)*, 9.82 kHz, range 16.3ft *(5m)*, 1 x AA battery • D38-83-AA – 1.5in(Dia.) x 4.1in(L) *(38mm x 105mm)*, 83 kHz, range 16.3ft *(5m)*, 1 x AA battery • D64-33-6LR61 – 2.5in(Dia.) x 7.3in(L) *(64mm x 186mm)*, 33 kHz, range 26ft *(8m)*, 1 x 6LR61 battery • D64-09-6LR61 – 2.5in(Dia.) x 7.3in(L) *(64mm x 186mm)*, 9.82 kHz, range 26ft *(8m)*, 1 x 6LR61 battery • D64-83-6LR61 – 2.5in(Dia.) x 7.3in(L) *(64mm x 186mm)*, 83 kHz, range 26ft *(8m)*, 1 x 6LR61 battery • D23F-512-AA / D23F-640-AA – 1in(Dia.) x 18in(L) *(23mm x 456mm)*, 512Hz or 640Hz, range 20ft *(7m)*, flexible Sonde in 3 sections for use in cast iron pipes as well as non metallic pipes, 1 x AA battery

C. vLocDM2 Receiver Operational

Item	Parameter
Information Displayed	- Signal strength - moving bar graph & numeric value - Mode indication (“Peak”, “Null” and “Peak with proportional left/right arrows” location) - Proportional left/right indication - Compass: line direction indicator - vLocDM2 signal direction - Plug and play automatic recognition of accessories - Accessory specific custom screen - Line location - depth & current measurement - Measurement of vLocDM2 mapping current - Gain level (in dB) - Battery condition - Speaker volume - Operating frequency - Bluetooth and GPS status - Configuration menu & submenus

	- Start up screen – product and USB accessories software revision - Customer definable start up screen - Distance from last reading (when GPS facility activated) - Log number - Real time vLocDM2 mapping and on screen graphing (walk back feature) - "Walk back feature" giving physical position on graph allowing the user to walk back to a point of interest. - Real time A-frame fault mapping and on screen graphing
Configuration	Intuitive setup menu enables user to configure vLocDM2 receiver or use MyLocator2 application to configure vLocDM2 receiver: 1. Setup frequency selection to toggle by "f" pushbutton 2. Setup location mode selection to toggle by "M" pushbutton 3. Units of measure (feet/meter) 4. Power and radio modes – 50Hz or 60Hz environments 5. Sound (Pitch) – normal/modulated 6. Language 7. Continuous depth/current options 8. Loudspeaker level 9. Backlight 10. Bluetooth pairing if fitted
Internal Data Logging	- At least 1000 records. - All parameters stored at each location including Depth, Current, Mode, Gain Setting, and Frequency. - If connected to GPS (via Bluetooth) data also recorded with coordinates and date time. - Files can be saved as .kml, .txt, .xls, .shp, csv - Data transfer program MyLocator2 available from www.vivax-metrotech.com
Operating Frequencies	vLocDM2 (magnetometer) frequencies: 3Hz/6Hz , 4Hz/8Hz vLocDM2 related locate frequencies: 98Hz, 128Hz, 512Hz, 640Hz Configurable frequencies from 16Hz to 200 kHz. Vivax-Metrotech Corporation retains the right to make additions or deletions to this list at any time
Operating Modes	- Peak - Null - Peak with proportional left/right arrows
Gain Control	Manual gain using "+" or "-" with one touch to return to center (60% of FSD)
Performance Using Single Undistorted Signal Source	Locate pinpointing accuracy: - up to 9ft *(3m)* – 3% of depth - over 9ft *(3m)* – 5% of depth
	Depth measurement accuracy: - 3% of depth
	Current measurement accuracy:

	- 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 – Generally up to 15ft *(5m)*
Compatible With Transmitter	Loc-150Tx, Loc-10Tx, Loc-5Tx, Loc-1Tx

D. Loc-150Tx Transmitter Assembly

Item	Parameter
Construction	High impact ABS
Weight	27.5lbs *(12.5kg)*
Dimension	16.7in(L) x 10.3in(W) x 12.9in(H) *(425mm x 262mm x 328mm)*
Display Type	Monochrome dot matrix display 2.4in x 1.3in *(60mm x 32mm)*
Power Supply	- Cathodic Protection (nominally 26V - 60V DC) (max 14A) - 100 – 250V AC mains power (max 4A) - or 12V DC external supply or higher (output power is limited when using 12V DC) (max 8A)
External Connectors	- 100 – 250V AC mains input - three pin “Multi-Con-X” connector (Male) - DC Input - two pin “Multi-Con-X” connector (Male) - Transmitter output - two pin “Multi-Con-X” connector (Female) - Fuse sockets – mains input fuse (5A, 250V), output fuse (10A, 250V)
Output Protection	Output fuse protected against accidental connection to up to AC/DC 250V
Approvals	- Complies with European standard CE (Directive 99/5/EC) (Pending) • EN 55011 • EN 61000-4-3 • EN 61000-4-2: A1 & A2 • EN 61000-4-8: A1 • ETSI EN 300 330-2 • ETSI EN 301 489-1 • ETSI EN 301 489-3 - Complies with FCC Rules Part 15 (Pending) • CFR 47 part 2 • CFR 47 Part 15
Standard Accessories (Supplied With Transmitter)	- 1 x direct connection lead (with two cables each 10ft*(3.5m)* long with crocodile clips) - 1 x DC input lead (with two cables each 10ft *(3.5m)* long with crocodile clips) - 1 x 9ft *(3m)* mains input lead

E. Loc-150Tx Transmitter Operational

Item	Parameter
Information Displayed	- Output Frequency - Output Current setting - Output Current - Output Voltage (info menu) - Operating Temperature (info menu)
Signal Application Modes	- ***Direct connection mode only***- applies signal directly to the cable by clipping one output lead to the pipe, the other to an independent ground or anode bed.
Transmitting Frequencies (Varies By Country & Market)	- 98Hz, 128Hz, 512Hz, 640Hz, 3Hz/98Hz, 3Hz/128Hz, 4Hz/98Hz, 4Hz/128Hz; - ELF1-3Hz/6Hz/98Hz; - ELF2-3Hz/6Hz/128Hz; - ELF3-4Hz/8Hz/98Hz; - ELF4-4Hz/8Hz/128Hz; - 3Hz/6Hz/512Hz; - 3Hz/6Hz/640Hz;

	- 4Hz/8Hz/512Hz; - 4Hz/8Hz/640Hz Other multiple frequencies in the range of 3Hz to 2kHz available upon request.
Transmitting Mode Power Output	- Powered by AC: 150W - Powered by DC: 12-28V, 50W; > 28V, 150W
Output Voltage	Maximum output voltage = 120V RMS
Output Current	Maximum output current = 4A RMS with up to 2 frequencies. Output limited to 3A RMS with 3 simultaneous frequencies.
Controls	2 Rotary/Push control knobs to select: - Frequency - Output level - Information - ACTIVE/STANDBY pushbutton One On/OFF pushbutton
Compatible With Receivers	vLocDM & vLocDM2

F. Sensitivity

Mode	Sensitivity at 3.2ft *(1m)*
3Hz DM Mapping Frequency	1 mA
50Hz/ Power Mode	7.5 mA
Radio Mode	20 µA
512Hz / 640Hz	400 µA
8 kHz	40 µA
32 kHz and Above	25 µA

G. Environmental

Item	Parameter
Temperature Range	Operating : - 4ºF to 122ºF *(-20ºC to 50ºC)* Storage : -40ºF to 140ºF *(-40ºC to 60ºC)*
Weather Proof	IP54 and NEMA 4
Shipping Weight	vLocDM2 Receiver: 12lbs *(5.5kg)* Loc-150Tx Transmitter: 44.1lbs *(20kg)*
Shipping Dimension	vLocDM2 Receiver: 13.0(L) x 8.7in(W) x 32.7in(H) *(330mm x 220mm x 830mm)* Loc-150Tx Transmitter: 21.7in(L) x 15.2in(W) x 18.3in(H) *(550mm x 385mm x 465mm)*

H. Warranty

Item	Parameter
Warranty	12 months

I. Upgrade

Item	Parameter
Software	Software can be upgraded using a PC with USB port. Programs & locator software will be available via email. Additional frequencies will be available free of charge.

J. A-frame

Item	Parameter
Construction	Carbon fiber
Sensitivity	2MΩ
Weight	4.0lbs *(1.80kg)*
Dimension	28.3in(L) x 25.2in(W) x 1.6in(H) *(720mm x 640mm x 40mm)*
Weather Proof	IP54
Shipping Weight	9.9lbs *(4.50kg)*
Shipping Dimension	31.5in(L) x 27.8in(W) x 4.5in(H) *(800mm x 705mm x 115mm)*

K. Holux Bluetooth GPS

Item	Parameter
Overview	The M-1200 high performance Bluetooth™ GPS Receiver which featured with: - Dual interface (Bluetooth + GPS - mouse)
	- Compatible with Bluetooth™ Serial Port Profile (SPP) completely - Built-in rechargeable Lithium-ion battery without external power supply
Weight	- 0.07lbs *(30g)*
Dimension	- 2.63in(L) x 0.9in(W) x 0.63in(H) *(67mm x 23mm x 16mm)*
Specification	- Tracks up to 32 satellites - Receiver: L1, 1575.42 MHz - C/A code: 1.023 MHz - Update rate: 1Hz - Antenna type: built-in patch antenna - Minimum signal tracked: -159dBm - On/Off switch: slide switcher - Lithium-ion battery lasts for 15 hours of use.
LED Indication	- Bluetooth - Navigation update - Battery/charger status indication
Temperature Range	- Store Temperature : -4ºF to 140ºF (-20ºC to 60ºC) : -22ºF to 176ºF (-30ºC to 80ºC) (Without Lithium-ion battery) - Operation Temperature : 14ºF to 140ºF (-10ºC to 60ºC)

L. Features

Item	Parameter
Enhanced Features	- Removable foot - Reduced size and weight with enhanced ergonomic design - Improved power management and Lithium-ion rechargeable batteries provide longer battery life - Auto detects batteries type (Lithium-Ion/Alkaline) and displays appropriate status. - Non-reflective display - Enable / Disable auto shut off mode - USB data Logging - Analogue channel - Overload protection

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

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