

VDS21MX

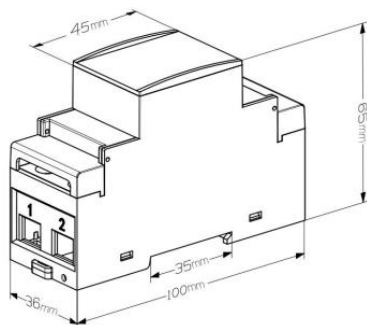
User Manual



1. Specification

Meter Type	Single Phase
Fitting Type	DIN Rail
Max. Current (Amps)	100A
MID Approved	Yes
Input Type	Direct Connect
Tariffs	Single
Import / Export	Import & Export
Module Width	2
Reference Voltage	230VAC
Frequency	50/60Hz
Accuracy (Active Energy)	C (Cl. 0.5)
Communication Protocol	Modbus RTU over RS485
Range of Modbus Add.	1 - 247
Baud Rate	1200, 2400, 4800, 9600, 19200, 38400
Pulse Output	Active or Reactive Energy (Sum, Import or Export)
Pulse Width (ms)	60, 100, 200
Pulse Constant (imp/kWh)	1, 10, 100, 1000
IP Rating	IP51 Front Display
LCD Display	8 digit LCD backlit display
Key Programming	2 touch buttons

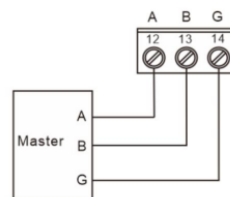
2. Dimensions



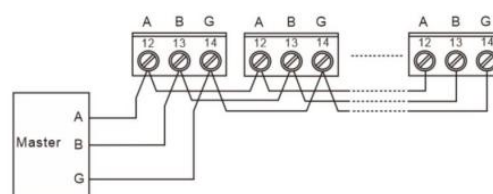
3. Wiring Diagrams



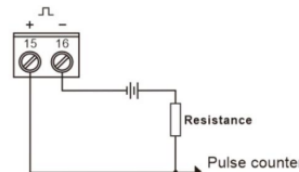
Max. Cable Size 25mm²



Single Meter Communications

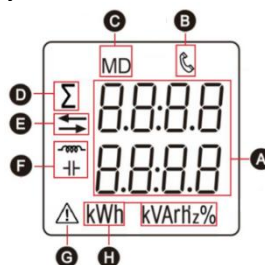


Multiple Meter Communications



Pulse Output Wiring

4. LCD Display



- A. Measured values.
- B. Communication icon, (displays for 2 seconds upon successful communication).
- C. Maximum demand icon.
- D. Sum icon, indicates measured value is imp. + exp.
- E. Direction of measured value, → indicates import and ← indicates export.

- F. Display icon of the load feature (i.e. , inductive or , capacitive).
- G. Warning status icon, (indicates over voltage, over current or power exceeds the limit)
- H. Unit of measurement.

5. Button Control

Button	Quick Press	3 Sec. Press
	Scroll through measured parameters or settings menu. Change values.	Return to previous menu.
	Move cursor between values in settings.	Enter settings main and sub menus. Confirm once settings changed.

6. Main Display Screen

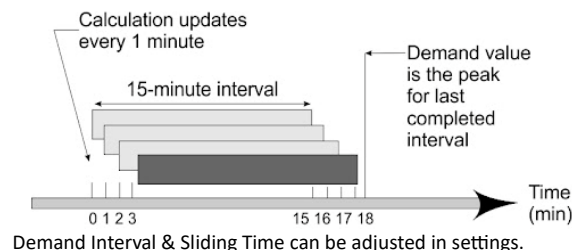
This is the default screen that is shown once the meter has been powered on. It displays measured parameters and communication settings. "Quick Press" the  button to scroll through the values.

LCD Display	Description
	Total Active Energy Example: 738.59kWh
	Import Active Energy Example: 30.09kWh
	Export Active Energy Example: 708.50kWh
	Total Reactive Energy Example: 2363.49kVArh
	Import Reactive Energy Example: 2300.26kVArh
	Export Reactive Energy Example: 63.23kVArh
	Voltage Example: 230.0V

	Current Example: 5.000A
	Active Power Example: 1.618kW
	Reactive Power Example: 15.13VAr
	Apparent Power Example: 1.592kVA
	Power Factor Example: 0.986
	Frequency Example: 50.03Hz
	Maximum Active Power Demand Example: 1.740kW
	Modbus Address Example: 1
	Baud Rate Example: 9600bps
	Parity Bit Example: None
	Pulse Output and Pulse Constant Example: 1000 imp/kWh (left icon indicates Sum)
	Meter Serial Number Example: 21031101

	Software Version Number Example: 0101.00
--	--

7. Demand Calculation Method



8. Set up

To enter the set up menu, “3 Sec. Press” the button to enter the password screen, (default password is 0000). “Quick Press” the button to move cursor between values and “Quick Press” the button to change them. “3 Sec. Press” the button to confirm.

“Quick Press” the button to scroll through the settings. “3 Sec. Press” the button to enter setting. “Quick Press” the button to move cursor between values and “Quick Press” the button to change them. “3 Sec. Press” the button when complete.

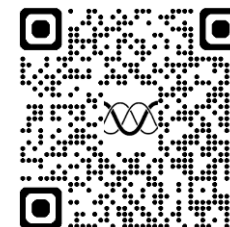
“3 Sec. Press” the button to exit or return to previous menu.

Communication Menu - SET COMM	
	Modbus Address Default: 001 Options: From 1- 247
	Baud Rate Default: 9600 Options: 1200, 2400, 4800, 9600, 19200, 38400
	Parity Bit Default: n (None) Options: n, e (Even), o (Odd)
	Stop Bit Default: 1 Options: 1, 2
System Menu - SET SYS	
	User Password Default: 0000 Options: Four digit combination from 0-9.

	Reset Max. Demand
Pulse Output Menu - SET PULS	
	Pulse Output Default: Active Energy (Sum) Options: Active Energy (Sum, Imp. or Exp.) or Reactive Energy (Sum, Imp. or Exp.)
	Pulse Constant Default: 1000 imp/kWh or kVArh Options: 1, 10, 100, 1000
	Pulse Width Default: 100ms Options: 60, 100, 200
Max. Demand Menu - SET dnd	
	Demand Interval Period Default: 60 minutes Options: 0-60
	Sliding Time Default: 1 minute Options: 0 – Demand Interval Period
Time Menu - SET TIME	
	Backlight Time Default: 60 minutes Options: On, Off, 5, 10, 30, 60, 120
	Auto Scroll Display Time Default: 0 seconds (Off) Options: 0-60

9. Modbus Protocol

To view or download, please use the following QR code:



Email – help@voltaris.co.uk