VDT41M

- Suitable for three phase supplies up to 100A
- MID Approved
- Accuracy Class C (±0.5%)
- 4 module width, DIN rail installation
- Touch key design for easy setup and viewing of measurements
- Supports bi-directional measurement of active and reactive energy
- Multi-function parameter measurement for voltage, current, active power, reactive power, apparent power and power factor
- Offers RS485 Modbus communication and one passive pulse output

The VDT41M energy meter supports three phase and single phase direct connect loads up to 100A. This MID Approved meter can be used for billing applications and is highly accurate, class C (Cl. 0.5). It measures bi-directional energy, voltage, current, active power, reactive power, apparent power and power factor.

It provides an RS485 communication interface supporting Modbus and features a clear LCD screen. The touch key allows easy viewing of parameters and setup operations while the password protection function ensures data security.

Electrical Characteristics	
Rated voltage (Un)	230/400V AC
Operational voltage	L-N: 85 to 275V AC; L-L: 85 to 480V AC
Overload capacity of voltage	2 x Un for 1 second
Rate current(Ib) I	5A
Maximum current (Imax)	100A
Minimum current (Imin)	0.25A
Overload capacity of current	30 x Imax for 0.01 second
Operational frequency range	45 - 65Hz
Power consumption	<2W/10VA
Pulse constant	400 imp/kWh
Display	LCD with backlight
Maximum reading of energy	9999999.9 kWh/kVArh
Measurement type	3P4W, 3P3W, 1P2W

Measurement Accuracy	
Voltage, Current	±0.5%
Active power	±1.0%
Reactive power	±2.0%
Apparent power	±1.0%
Active energy	±0.5%
Reactive energy	±2.0%
Power factor	±1.0%
Frequency	±0.2%

Environmental Characteristics	
Operating temperature	-25 - +55ºC
Storage temperature	-40 - +80ºC
Humidity	< 90%, non-condensing
Pollution degree	2
Altitude	Up to 2000m

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Vibration	10 Hz to 150Hz, IEC 60068-2-6
IP Degree of Protection	IP51 front display
	IP30 meter body

Electromagnetic Characteristics

Electrostatic discharge	±8kV (contact discharge) ±15kV (air discharge)
Immunity to radiated fields	10V/m. 80 - 2000MHz
Immunity to electrical fast transients	±4kV
Immunity to surges	±4kV
Immunity to conducted disturbances	10V. 0.15-80MHz
Immunity to magnetic fields	IEC 61000-4-8
Immunity to voltage dips	IEC 61000-4-11
Radiated emissions	Class B, according EN55011
Conducted emissions	Class B, according EN55011
Harmonics emissions	IEC 61000-3-2

Safety

Overvoltage category	CAT III. according to IEC 61010-1
Measurement category	CAT III, according to IEC 61010-1

Insulation	AC Voltage Test : 4kV for 1 minute
Protective class	II, according IEC61010-1

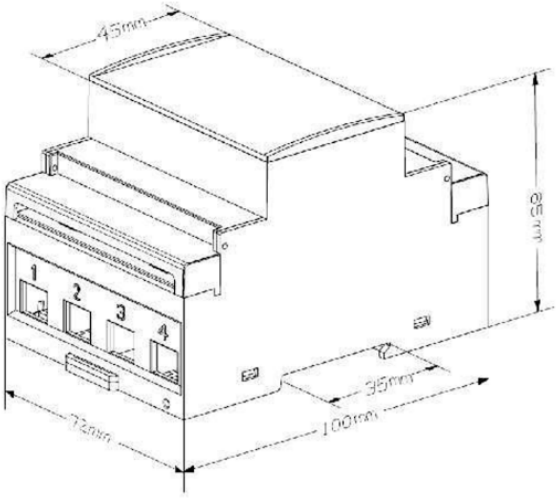
Communication

Interfaces standard and protocols	2-wire RS485, Modbus
Baud rate	1200 to 38400 bps, default is 9600 bps
Parity bit	None, Even, Odd. default is None
Stop bit	1 or 2, default is 1
Response time	< 100ms
Transmission mode	half-duplex
Transmission distance	Up to 1000m
Max. Bus loading	64 pc

Pulse Output

Interface type	Open collector opto-coupler
Pulse constant	Per pulse equal 0.001/ 0.01/0.1/1 kWh/kVArh
Pulse width	60 / 100 / 200 milliseconds
Pulse output type	Active energy / Reactive energy (Tot, Imp & Exp)
Class	Class A, according to IEC 62053-31
Input voltage	5 to 27 VDC

Dimensions



Wiring