PowerLogic®
PM1000 series power meter and
DM6000 series digital panel meter

Technical data sheet

Schneider Electric

PM1000 series power meter
Functions and characteristics

PowerLogic™ PM1000 power meter front display (above), and rear (below).

The PowerLogic PM1000 series power meters are easy-to-use, cost-effective meters that offer the basic measurement capabilities required to monitor an electrical installation.

Characterized by their rugged construction, compact size and low installation costs, these state-of-the-art multi-function meters are ideal for control panels, motor control centers and genset panels.

Applications

- Power monitoring operations
- Load studies and circuit optimization
- Equipment monitoring
- Meter's outputs can be used by control devices
- Preventative maintenance

Main characteristics

Accurate metering
The meter conforms to accuracy class 1.0 as per IEC 62052-11 and IEC 62053-21.

Easy-to-read display
The bright, alphanumeric, 15mm-high LED display provides three lines for measurement values with four digits per line. The display auto-scales for Kilo, Mega and Giga values. Auto scrolling mode allows for easy reading.

Analog load bar
The color-coded analog load bar indicates the percentage of load through 12 LED segments.

Turbo Key access to information
The Turbo Key button lets you access the most commonly viewed parameters or enter setup mode with a single push of the button.

Quick and easy installation
Setup is done through the front panel keys. Quick entry to setup during power up by TURBO key. Direct connection for metering voltage inputs up to 480 Vac L-L.

Color-keyed terminal board labeling
The color-keyed label on the terminal board helps ensure accurate wiring.

Secure settings
Safeguard access to setup parameters with unique password protection. A keypad lock lets you display a user selected page by default.

Part number

Description	Part #
PM1200 power meter with basic readings, energy and demand parameters, and summary screens with an RS485 communication port	**METSEPM1200**

DM6000 series digital panel meter
Functions and characteristics

DM6000 series digital panel meter front display (above), and rear (below)

The PowerLogic DM6000 series digital panel meters offer the basic measurement capabilities required to monitor an electrical installation.

Characterized by their rugged construction, compact size and low installation costs, these state-of-the-art meters are ideal for control panels, motor control centers and genset panels.

Applications

- Power monitoring operations
- Equipment monitoring
- Preventive maintenance

Main characteristics

Easy-to-read display
The bright, alphanumeric 15mm-high LED display provides three lines for measurement values with four digits per line. This display auto-scales for Kilo, Mega and Giga values. Auto scrolling mode allows for easy reading.

Analog load bar
The color-coded analog load bar indicates the percentage of load through 12 LED segments.

Turbo Key access to information
The Turbo Key gives access to the most commonly viewed parameters or enter setup mode with a single push of the button.

Quick and easy installation
Setup is done through the front panel keys. Quick entry to setup during power up by TURBO key. Direct connection for metering voltage inputs up to 480 Vac L-L.

Color-keyed terminal board labeling
The color-keyed label on the terminal board helps ensure accurate wiring.

Secure settings
Safeguard access to setup parameters with unique password protection. A keypad lock lets you display a user-selected page by default.

Part number

Description	Part#
DM6200 digital meter with basic readings plus an RS485 communication port	**METSEDM6200**

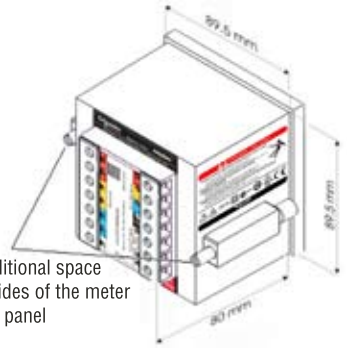
PM1000 series and DM6000 series
Functions and characteristics (cont.)

Electrical characteristics				PM1200	DM6200
Type of measurement			True RMS up to the 15th harmonic 20 samples per cycle at 50 Hz	•	•
Measurement accuracy*	Current and voltage		1.0 % of reading	•	•
	Power	Active	1.0 % of reading	•	
		Reactive	2.0 % of reading	•	
		Apparent	1.0 % of reading	•	
	Frequency		0.1 % of reading	•	•
	Power factor		1.0 % of reading	•	•
	Energy	Active	IEC 62053-21 Class 1	•	
		Reactive	IEC 62053-23 Class 2	•	
		Apparent	1.0 % of reading	•	
* Additional error of 0.05% of full scale, for meter input current below 100 mA				•	•
Data update rate			1 sec	•	•
Input-voltage characteristics	Inputs		V1, V2, V3, Vn	•	•
	Measured voltage		80 - 480 V AC L-L without PTs Up to 999 kV with external PTs	•	•
	Permissible overload		1.10 Un (480 V L-L)	•	•
	Burden		0.2 VA per phase max.	•	•
	Impedance		VLL - 4 Mohms, VLN - 2 Mohms	•	•
	Frequency range		45 - 65 Hz	•	•
Input-current characteristics	CT ratings	Primary	1 A - 99.0 kA	•	•
		Secondary	1 A - 5 A	•	•
	Measurement range		50 mA - 6 A (5 mA is the starting)	•	•
	Permissible overload		10 A continuous	•	•
	Burden		0.2 VA per phase max.	•	•
	Impedance		< 0.1 ohm	•	•
Power supply	AC		44 - 277 V AC at 50 Hz/60 Hz	•	•
	DC		44 - 277 V DC	•	•
	Ride-through time		100 ms at 50V	•	•
	Burden		3 VA max.	•	•

Mechanical characteristics	
Weight	18 oz (shipping), 1 oz (unpacked)
IP degree of protection	Front: IP 51; Back: IP 40
Dimensions	Bezel: 96 x 96 mm; Depth: 80 mm behind bezel; Panel cutout: 92 x 92 mm
Environmental conditions	
Operating temperature	14°F to 140°F
Storage temperature	-13°F to 158°F
Humidity rating	5 to 95 % RH non-condensing
Altitude	6500 ft
Measurement CAT	III
Pollution degree	2
Protection class	2
Electromagnetic compatibility	
Electrostatic discharge	IEC 61000-4-2
Immunity to electromagnetic RF fields	IEC 61000-4-3
Immunity to electrical fast transients	IEC 61000-4-4
Immunity to surge waves	IEC 61000-4-5
Conducted disturbance immunity	IEC 61000-4-6
Damped oscillatory waves immunity	IEC 61000-4-12
Impulse voltage withstand	6kV for 1.2/50 µS per IEC 60060-1
Conducted and radiated emissions	CISPR11 Class A
Safety and standards	
Safety construction	Self extinguishable V0 plastic; UL 508
CE certification IEC 61010	Yes
Complies with Regulation (EC) n° 1907/2006 of Dec 18 2006 named REACH (related to the Registration, Evaluation, Authorization and restrictions applicable to Chemical substances)	
Communication	
RS-485 port	2 terminals only; Baud rate up to 19,200 bps; Protocols: Modbus RTU
Display characteristics	
Integrated LED display	View 3 parameters together on 3-line, 4-digit-per-line display. Auto-scaling capability for Kilo, Mega and Giga values. User-selectable default display page. Password protection for setup parameters
Analog load bar	Color-coded analog indicator provides an option to select the full scale of the load bar based on the sanctioned power limit

PM1000 series and DM6000 series
Functions and characteristics (cont.)

Selection guide		PM1200	DM6200
General			
Use on LV and HV systems		•	•
Current and voltage accuracy		1.0 %	1.0 %
Power accuracy		1.0 %	
Energy accuracy		1.0 %	
Number of samples per cycle		20 at 50 Hz	20 at 50 Hz
Instantaneous rms values			
Current	Per phase & Neutral	•	•
Voltage	Average, Phase to Neutral & Phase to Phase	•	•
Frequency		•	•
Active, apparent power	Total & per phase	•	
Power factor	Average & per phase	•	•
Unbalance	Current, voltage	•	•
Phase angle	Between V & I, Ph1, Ph2, Ph3	•	•
RPM	For generator only, speed calculated on generator voltage output and number of machine poles	•	•
Energy values			
Active, reactive, apparent energy		•	
Demand values			
Current	Present & max.	•	
Active apparent power	Present & max.	•	
Active apparent power settable by user* * Client can select one parameter only: A, KW or KVA		•	
Power quality measurements			
Total harmonic distortion	Current, voltage, per phase	•	
Other measurements			
Run hours	Operating time for load in hours	•	
ON hours	Operating time for meter in hours	•	•
INTR	Number of interruptions	•	•
Display			
LED display		•	•
Communication			
RS-485 port		1	1
Modbus protocol		•	•

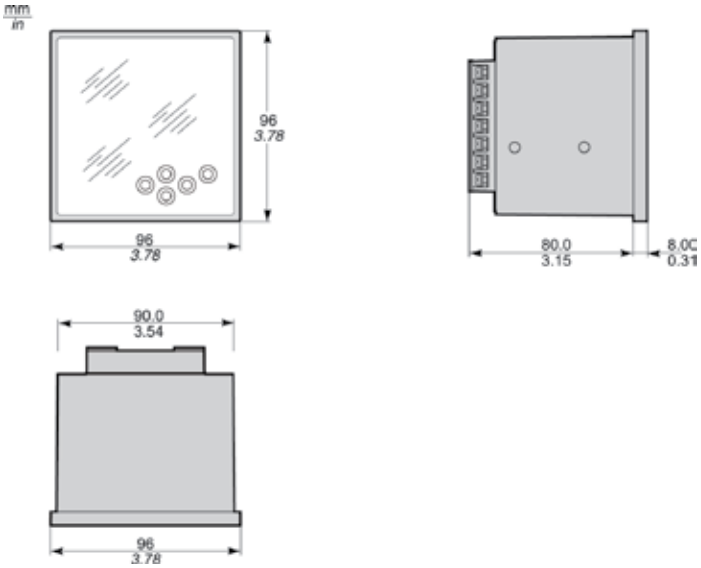


9 mm additional space
on both sides of the meter
inside the panel

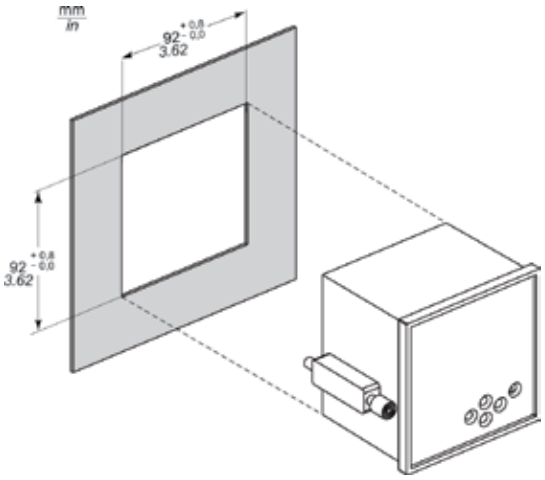
PowerLogic™ PM1000 series power meter dimensions and DM6000 series digital panel meter dimensions

PM1000 series and DM6000 series
Installation and connections

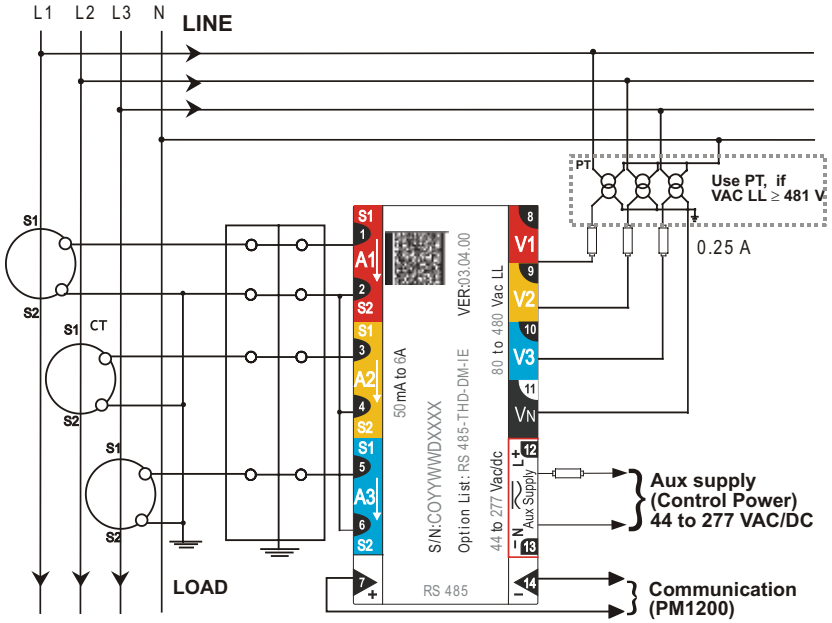
Dimensions



Front-panel mounting



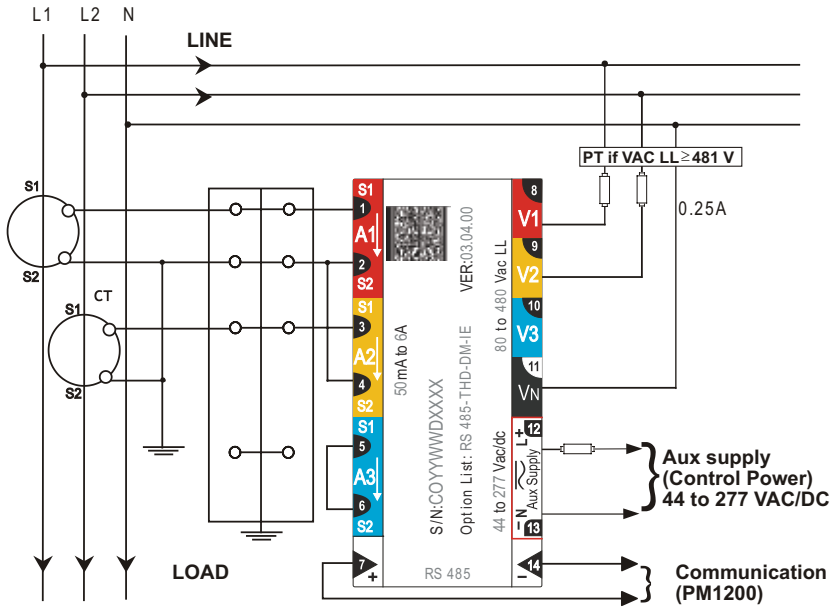
Three phase 4 wire WYE connection with 3 CTs and 3 PTs



Connection representation only. Other types of connection are possible.
Refer to the PM1000 series Quick Start Guide for details.

PM1000 series and DM6000 series
Installation and connections (cont.)

Two phase 3 wire connection with 2 CTs



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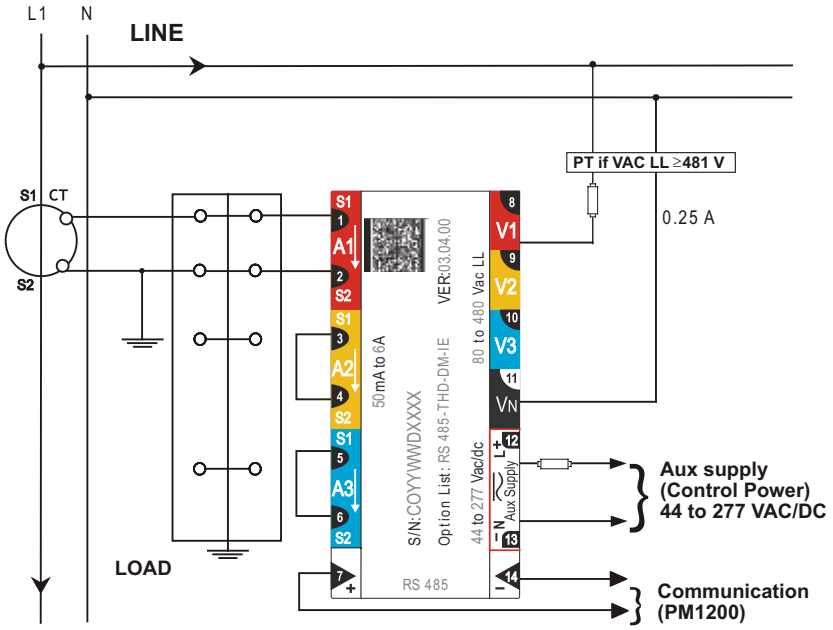
Single phase connection



Connection representation only. Other types of connection are possible.
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