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PowerLogic power-monitoring units

DM6000 series digital panel meters

Technical data sheet

2010



DM6000 series

Functions and characteristics

PE66238



DM6000 series digital panel meter.

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 centres and genset panels.

The PowerLogic DM6000 series power meter is available in two different versions to better fit specific applications:

DM6000, basic version;

DM6200, basic version plus an RS485 port for Modbus communication.

Applications

- Power monitoring operations.
- Equipment monitoring.
- Preventative maintenance.

Main characteristics

Easy to read display

The bright, alphanumeric 15mm high LED display provides 3 lines for measurement values with 4 digits per line. This display auto-scales for Kilo, Mega and Giga values. Auto scrolling mode allows for easy reading.

Analogue load bar

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

Turbo Key access to information

The Turbo Key button lets you access to the most commonly viewed parameters or enter set up 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 480Vac L-L.

Color-coded terminal board labeling

The color-coded 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.

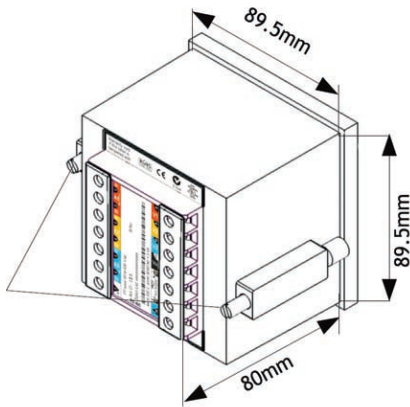
Part numbers

| Description | Schneider Electric |
|-----------------------------------------------------------|--------------------|
| DM6000 power meter with basic readings; no communications | METSEDM6000 |
| Same as DM6000 plus an RS485 communication port | METSEDM6200 |

DM6000 series

Functions and characteristics (cont.)

PE66239



PowerLogic DM6000 series digital panel meter dimensions.

| Selection guide | | DM6000 | DM6200 |
|---------------------------------|-----------------------------------------------------------------------------------------------|--------|--------|
| General | | | |
| Use on LV and HV systems | | ■ | ■ |
| Current and voltage accuracy | | 1.0 % | 1.0 % |
| Number of samples per cycle | | 31 | 31 |
| Instantaneous rms values | | | |
| Current | Per phase & Neutral | ■ | ■ |
| Voltage | Average Phase to Neutral & Phase to Phase | ■ | ■ |
| Frequency | | ■ | ■ |
| 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. | ■ | ■ |
| Other measurements | | | |
| ON hours | Operating time for meter in hours | ■ | ■ |
| INTR | Number of interruptions | ■ | ■ |
| Display | | | |
| LED display | | ■ | ■ |
| Communication | | | |
| RS-485 port | | - | 1 |
| Modbus protocol | | - | ■ |

DM6000 series

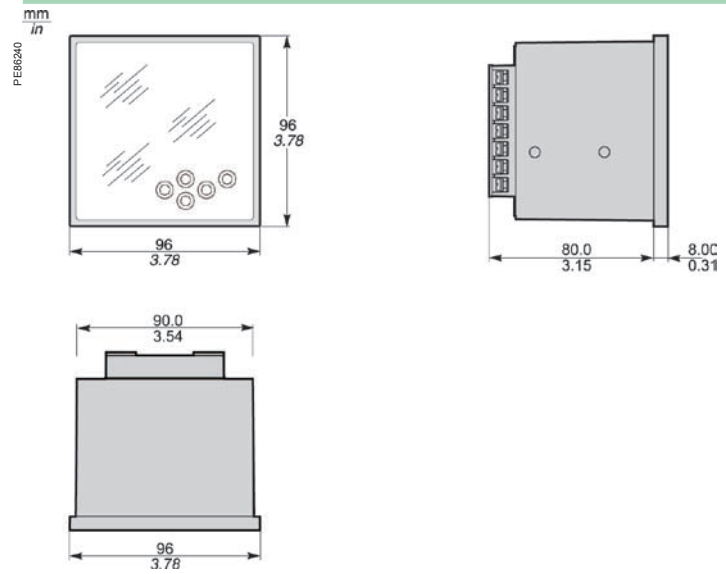
Functions and characteristics (cont.)

| Electrical characteristics | | | |
|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|---------------|
| Type of measurement | True RMS up to the 15th harmonic 31 samples per cycle | | |
| Measurement accuracy* | Current and voltage | 1.0 % of reading | |
| | Frequency | 0.1 % of reading | |
| | Power factor | 1.0 % of reading | |
| * Additional error of 0.05% of full scale, for meter input current below 100mA | | | |
| Data update rate | 1 second | | |
| 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. | |
| 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 | 0.500 kg (shipping), 0.400 kg (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 | -10°C to +60°C | | |
| Storage temperature | -25°C to +70°C | | |
| Humidity rating | 5 to 95 % RH non-condensing | | |
| Altitude | 2000 m | | |
| Measurement CAT | III | | |
| Pollution degree | 2 | | |
| Protection class | 2 | | |
| RoHS compliant | ■ | | |
| 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 | CISPR22 | | |
| Safety and standards | | | |
| Safety construction | Self extinguishable V0 plastic; UL 508 | | |
| CE certification | IEC61010 | | |
| 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 digits per line display. Auto-scaling capability for Kilo, Mega, and Giga values. User-selectable default display page. Password protection for setup parameters. | | |
| Analogue load bar | Color-coded analog indicator provides an option to select the full scale of the load bar based on the sanctioned power limit | | |

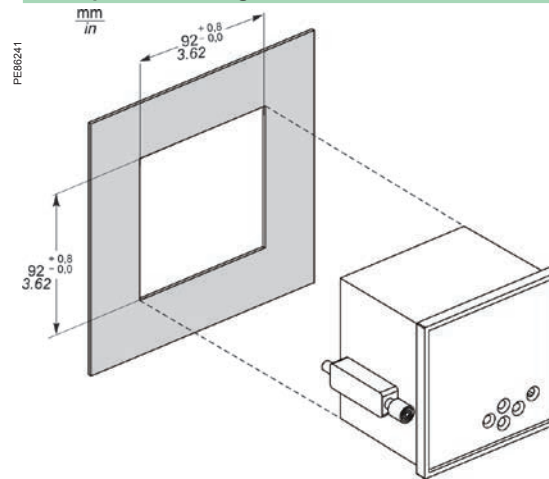
DM6000 series

Installation and connections

DM6000 series meter dimensions

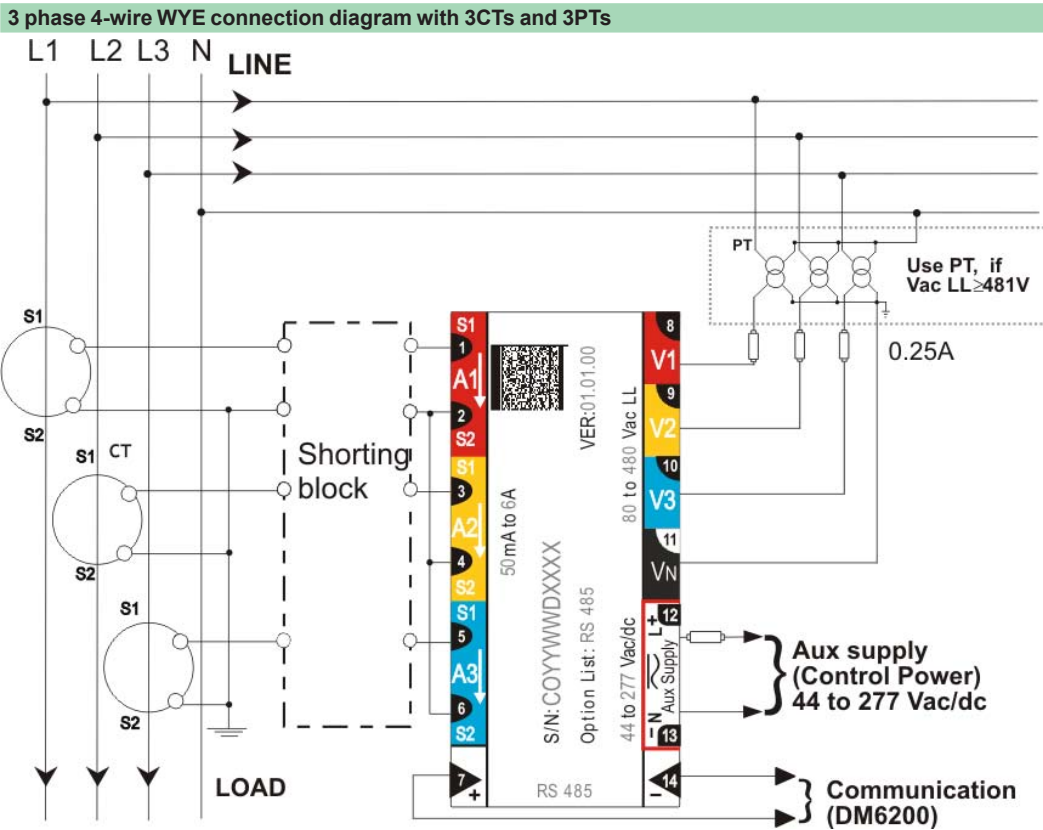


Front-panel mounting

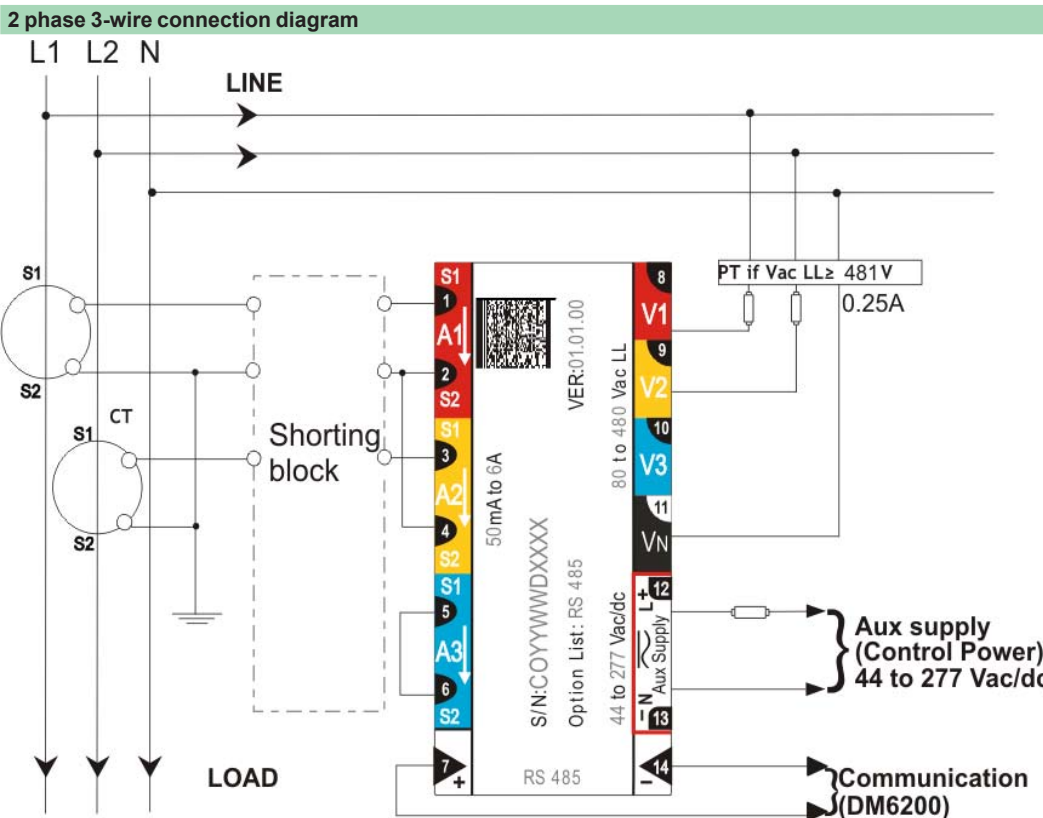


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Installation and connections

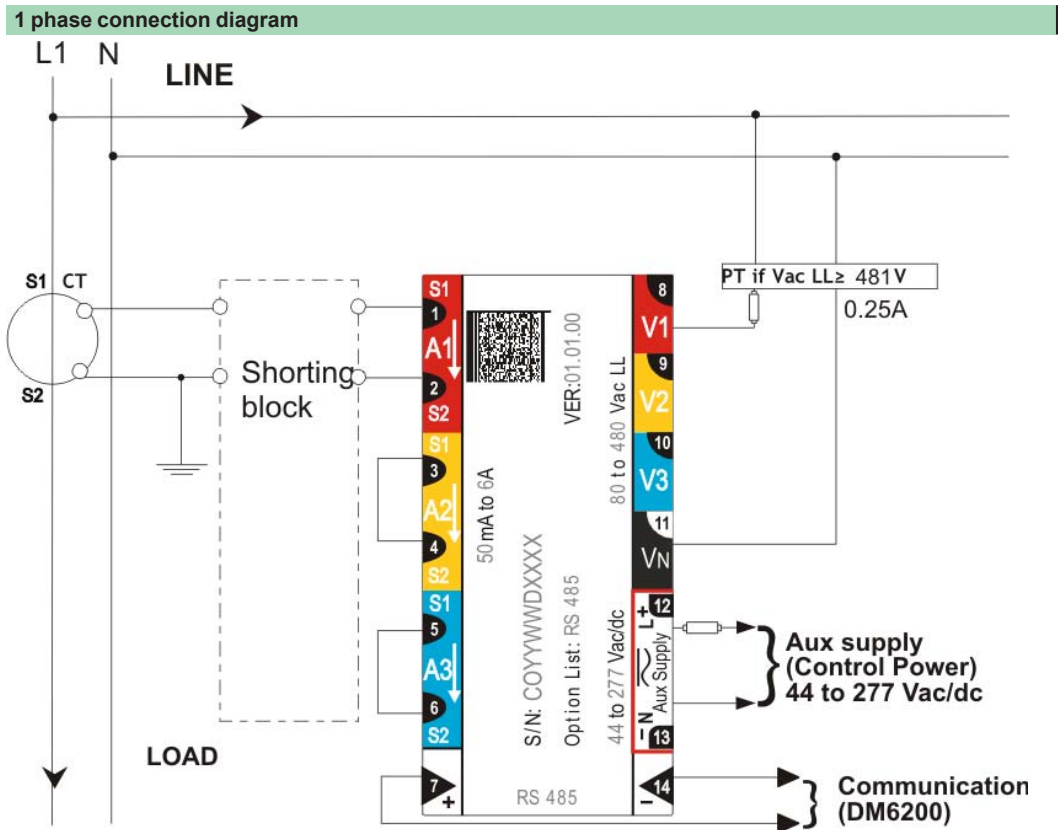


Connection representation only. Other types of connection are possible. Refer to the DM6000 series installation guide for details.



DM6000 series

Installation and connections



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