Metering facilities for incoming and outgoing circuits

The PowerLogic PM5000 series power meter offers all the measurement capabilities required to monitor an electrical installation in a single 96 x 96 mm unit extending only 72 mm behind the mounting surface. With its large display, you can monitor all three phases and neutral at the same time. The anti-glare display features large 11 mm high characters and powerful backlighting for easy reading even in extreme lighting conditions and viewing angles.

The PowerLogic PM5000 series meters are available in 12 versions:
- PM5100, basic metering with up to 15th individual harmonic measurement and one pulse output for energy metering
- PM5110, same function as PM5100, plus RS485 port for Modbus communication
- PM5111, same function as PM5110, plus MID certified
- PM5310, basic metering with up to 31st individual harmonic measurement, 256KB data logging, two digital inputs, two digital output and one RS485 port for Modbus communication
- PM5320, basic metering with up to 31st individual harmonic measurement, 256KB data logging, two digital inputs, two digital output and one Ethernet port for Modbus TCP/IP communication
- PM5330, same function as PM5310, plus two relay outputs
- PM5331, same function as PM5330, plus MID certified
- PM5340, same function as PM5320, plus two relay outputs
- PM5341, same function as PM5340, plus MID certified
- PM5560, basic metering with up to 63rd individual harmonic measurement, 1.1MB data logging, four digital inputs, two digital outputs, one RS485 port for Modbus and two Ethernet port for Modbus TCP/IP communications, embedded webpages
- PM5561, same function as PM5560, plus MID certified
- PM5563, same function as PM5560, but DIN rail mounted without display

Applications

Sub billing/tenant metering
Cost allocation
Basic Power Quality monitoring
Min/Max monitoring with timestamp
Programmed alarming
WAGES monitoring

Characteristics

Requires only 72 mm behind mounting surface
The Power Meter Series 5000 can be mounted on switchboard doors to maximise free space for electrical devices.

Large back lit display with integrated bar charts
Displays 4 measurements at a time for fast readings.

Intuitive use
Easy navigation using context-sensitive menus.

Power and current demand, THD ,TDD, individual harmonics and min/max reading in basic version
A high-performance solution for trouble-free monitoring of your electrical installation.

Active energy IEC 62053-22 class 0.5S (PM5100 and PM5300 models) and class 0.2S (PM5500 models)
Suitable for cost-allocation applications.

Legal billing compliance
Meets EN50470-1/3-Class C that specifies requirements for billing applications.

Performance measuring and monitoring devices
Meet IEC 61557-12 PMD/S/K55/0.5 (PM5100 and PM5300 models) and IEC61557-12 PMD/S/K55/0.2 (PM5500 model) that specifies requirements for combined **P**erformance **M**easuring and monitoring **D**evices (PMD)

Innovative Power Meter
RS 485 communications, alarming and digital I/O in a single Power Meter (PM5310).

Power meter inputs

The NSX moulded case circuit breakers up to 630A have current transformer modules that fit directly on to the load terminals of the breaker. As well as the current transformer coils they also have self protected voltage connections off each phase. This eliminates the need to have additional overcurrent protection on these circuits. The meter is wired direct from this CT module without the need for any intermediate devices.

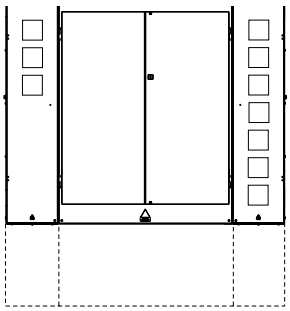
Panelboard configurations

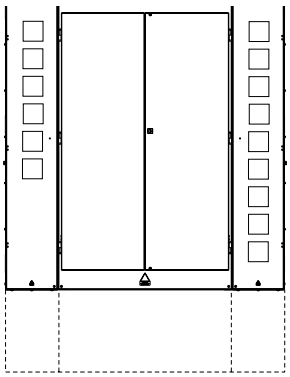
250A Powerboard
There are two versions of this equipment, basic or with the facility to have metering. The meter versions allow metering to be added to any 3 or 4 pole MCCB fitted in the board. All components are easily fitted; there are no extension boxes to fit or apertures to cut. The meters are positioned behind the overall lockable door preventing unauthorised access to the meters. MG25C2M has 4 apertures, MG25C4M has 5.

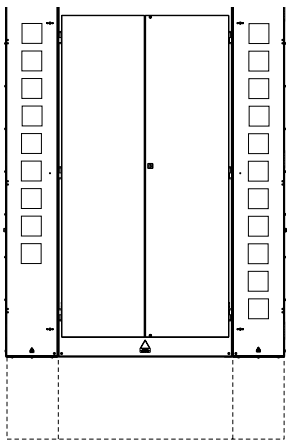
Note: the meters and CT modules must be ordered separately. The wiring looms to link the CT modules to the meters are included with the panelboards.

Metering options are not available for the 250A panelboard. It is recommended that a MG6Pxx board is used with a 250A incomer.

Metering facilities for incoming and outgoing circuits







Ordering references

250A powerboard with metering facility	
13 SP positions	**MG25C2M**
17 SP positions	**MG25C4M**

250A Panelboard
Incoming/Outgoing metering
The metering extension box allows for metering for the incoming and outgoing devices to be metered. The kit comes complete with a fuse holder and wiring looms to provide power to the meters. The meters and CT modules are ordered separately.

630 & 800A Panelboards
Incoming metering
This is easily added to a board when it is first being installed. The kit comprises an extension box that houses the meter and, when fitted to the same end of the board as the incomer, provides additional space for the main incoming cables. All components including the meter, CTs and wiring is included in the kit. The meter is fully set up for the CT ratio and the voltage configuration.

Outgoing circuit metering
Metering can be fitted to some or all of the three phase outgoing circuits on 630A & 800A boards whether the boards are fitted with incoming metering or not.

The arrangement consists of side extension boxes that house the meters and also provide additional cabling space. Meters and current transformers are ordered separately to meet the needs of the installation. The necessary cable looms are included wi th the steelwork. The meters are mounted on hinged doors. The box also contains the auxiliary busbar that provides the 240V control supply for the meters. The left hand extensions have sufficient meter positions for half the number of outgoing ways. The right hand extensions have positions for half the number of outgoing ways plus three additional positions. These extra positions may be used for additional metering or mounting surge arresters, control fuses etc. The lower two positions have a transparent window and DIN rail. This can be removed if not required.
Note: the meters, CT modules and surge arresters must be ordered separately

Incoming and outgoing metering for boards up to 630A
(This arrangement is not applicable for boards fitted with MGPINC direct connections). When both incoming and outgoing metering is required there is a very cost effective solution by incorporating the incoming metering into the right hand side extension box. Components required are:
- Standard extension box MG6CEX to provide the required cable spreading space
- Current transformer module to fit on line side of incoming breaker.
- PM750MG meter.
- Two MGPC2025 corner units, optional

The meter should be cabled to the CT module according to the diagram supplied. (loom not supplied). The auxiliary supply to the meter should be taken from one phase and neutral and must be suitably fused.
Note. A warning notice should be placed in the board as the voltage connections are taken off the live side of the main breaker.

MG2C* 250A board

Incoming metering kit	250A	**MG6CEXM**

MG6Cxx 630A board

Incoming metering kit	400A	**MG64M**
	630A	**MG66M**

MG8Cxx 800A board

Incoming metering kit	800A	**MG88M**
	MG88MX - less meter	

630A & 800A outgoing metering side extension boxes

6 way board	Left hand side (*)	3 meter positions	**MGPCM6L**
	Right hand side (*)	7 meter positions	**MGPCM6R**
12 way board	Left hand side (*)	6 meter positions	**MGPCM12L**
	Right hand side (*)	9 meter positions	**MGPCM12R**
18 way board	Left hand side (*)	9 meter positions	**MGPCM18L**
	Right hand side (*)	11 meter positions	**MGPCM18R**

(*) When the board is inverted for top entry main cables these side extensions fit on the other side of the board.

Accessories

Cable loom	**MGPCML**
Meter blanks	**03908**

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Technical Section 11
Dimensions Section 12