PM5350 series

The PowerLogic PM5350 series power meters are the new benchmark in affordable, precision metering.

The PowerLogic PM5350, PM5350IB, PM5350PB, and PM5350P power meters offer all the measurement capabilities required to monitor an electrical installation in a space-efficient, single 96 x 96 mm unit with small depth. DNC certifies for marine applications.

Applications

- Panel instrumentation.
- Cost allocation or energy management
- Electrical installation remote monitoring
- Sophisticated alarming
- Circuit beaker monitoring and control

PB117510

METSEPM5350P

The solution for

Markets that can benefit from a solution that includes PowerLogic PM5350 series meters:

- Buildings
- Industry
- Healthcare
- Data Centre and networks
- Infrastructure

Benefits

System integrators' benefit

- Ease of integration
- Ease of setup
- Cost effectiveness

Panel builders' benefit

- Ease of installation
- Cost effectiveness
- Aesthetically pleasing
- Simplified ordering

End users' benefit

- Ease of use
- Precision metering & sub-billing
- Billing flexibility
- Comprehensive, consistent and superior performance

Competitive advantages

- Easy to install and operate
- Easy for circuit breaker monitoring and control
- Power quality analysis
- Load management combined with alarm and timestamping
- High performance and accuracy
- Multi-tariff capabilities
- Individual harmonics up to 31st

Power management solutions

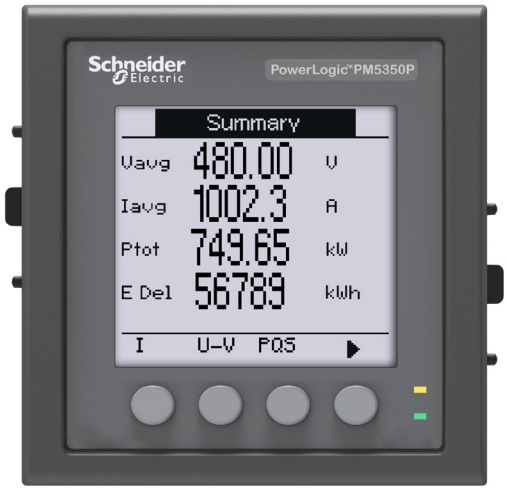
Schneider Electric provides innovative power management solutions to increase your energy efficiency and cost savings, maximise electrical network reliability and availability, and optimise electrical asset performance.

Conformity of standards

- IEC 62053-22
- IEC 61557-12
- IEC 62053-23
- IEC/UL 61010-1
- IEC 61326-1
- UL 61010-1
- IEC 61000-3-3
- FCC part 15 Class A
- DNV GL certified

PM5350 series

PB117511



Front display of PowerLogic PM5350P front display

PB117512

Rear view of PowerLogic PM5350P

Commercial reference number	Description
METSEPM5350	RS-485 Modbus, THD, 4DI, 2Relay
METSEPM5350IB	RS-485, 4DI/2Relay, Multi-level alarm, UL480V, 4DI/2Relay
METSEPM5350PB	RS-485, 4DI/2Relay, Multi-level alarm, UL300V, 4DI/2Relay
METSEPM5350P	RS-485 Modbus, THD, 31st Individual harmonics, Multi-tariff, 4DI/2Relay

The PowerLogic PM5350 series power meter soffer electrical installation measurement capabilities in a single 96 x 96 mm unit. Three-phases and neutral can be monitored simultaneously using a bright, anti-glare display with large characters and backlighting. Menus are intuitive and the meter supports English, Chinese, Hebrew, and Spanish languages. Its compact size and high performance make the PowerLogic PM5350 sereis is suitable for many applications.

- Applications
  - Panel instrumentation.
  - Cost allocation or energy management.
  - Electrical installation remote monitoring.
  - Alarming with under/over, digital status, control power interruption, meter reset, self diagnostic issue.
  - Circuit Breaker monitoring and control with relay outputs and whetted digital inputs.
- Main characteristics
  - Easy to install
    - Mounts using two clips, no tools required. Ultra compact meter with 44 mm depth connectable up to 480 V L-L without voltage transformers for installations compliant with category III, as per IEC 61010-1. See specification table for UL voltage limits.
  - Easy to operate
    - Intuitive navigation with self-guided, language selectable menus, six lines, four concurrent values. Two LEDs help confirm normal operation.
  - Easy circuit breaker monitoring and control
    - Two relay outputs (high performance) to command most circuit breaker coils directly. Monitored switches can be wired directly without external power supply.
  - System status at a glance
    - Bright, anti-glare, backlit display plus two LEDs; orange for energy pulse or alarm and green for heartbeat/communications indication.
  - IEC 62053-22 class 0.5S accuracy for active energy
    - Accurate energy measurement for cost allocation.
  - Power Quality analysis
    - The PM5350P offers THD and TDD measurements as standard. Total Demand Distortion is based on a point of common coupling (PCC), which is a common point that each user receives power from the power source. The TDD compares the contribution of harmonics versus the maximum demand load. In addition, it has individual harmonics (odd) measurement up to 31st harmonics. These types of power quality parameters help to identify the source of harmonics that can harm transformers, capacitors, generators, motors and electronic equipment.
- Load management
  - Peak demands with Timestamping are provided. Predicted demand values can be used in basic load shedding applications.
    Alarming with timestamping
  - Over 30 alarm conditions, such as under/over conditions, digital input changes, and phase unbalance inform you of events. A time-stamped log maintains a record of the last 40 alarm events.
  - Load timer setpoint adjustable to monitor and advise maintenance requirements.
  - Performance Standard Meets IEC 61557-12 PMD/Sx/K70/0.5.

PM5350 series

Feature guide		PM5350P	PM5350	PM5350IB	PM5350PB
General					
Use on LV and MV systems			■		
Basic metering with THD and min/max readings			■		
Instantaneous rms values					
Current	Total, Phases and neutral		■		
Voltage	Total, Ph-Ph and Ph-N		■		
Frequency			■		
Real, reactive, and apparent power	Total and per phase		Signed		
True Power Factor	Total and per phase		Signed, Four Quadrant		
Displacement PF	Total and per phase		Signed, Four Quadrant		
Unbalanced I, VL-N, VL-L			■		
Accumulated Active, Reactive and Apparent Energy Stored in non-volatile memory		Received/Delivered; Net and absolute;			
Demand values					
Current average	Present, Last, Predicted, Peak, & Peak Date Time		■		
Active power	Present, Last, Predicted, Peak, & Peak Date Time		■		
Reactive power	Present, Last, Predicted, Peak, & Peak Date Time		■		
Apparent power	Present, Last, Predicted, Peak, & Peak Date Time		■		
Multi-tariff		16 tariffs			
Peak demand with timestamping D/T for current & powers			■		
Demand calculation	Sliding, fixed and rolling block, thermal		■		
Synchronization of the measurement window			■		
Other measurements					
I/O timer			■		
Operating timer			■		
Active load timer			■		
Alarm counters			■		
Power quality measurements					
THD, thd (Total Harmonic Distortion)			I, V L-N, V L-L		
TDD, thd (Total Demand Distortion)			■		
Harmonics Individual (Odd)		31st			
Data recording					
Min/max of instantaneous values, plus phase identification			■		
Alarms with 1s timestamping			Standard 29; Unary 4; Digital 4		
Alarms stored in non-volatile memory			40 events		
Inputs/Outputs					
Digital inputs			4 (DI1, DI2, DI3, DI4)		
Digital outputs			2 relay outputs (DO1, DO2)		
Display					
White backlit LCD display, 6 lines, 4 concurrent values			■		
IEC or IEEE visualization mode			■		
Communication					
Modbus RTU, Modbus ASCII, Jbus Protocol			■		
Firmware update via RS-485 serial port (DLF3000 via the Schneider Electric website: www.se.com)			■		

PM5350 series

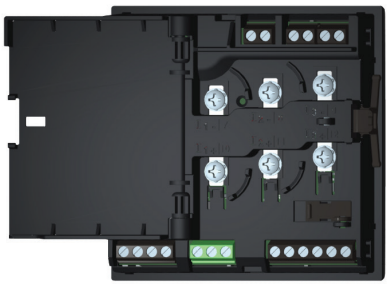
Electrical characteristics			PM5350	PM5350P	PM5350PB/IB
Type of measurement		True rms measurement in 1P, 2P, 3P network, supports 13 wiring schemes. 32 samples per cycle, zero blind	■	31st	■
Measurement accuracy	Current, Phase(1)	±0.30 %	■	0.2% (Avg A)	■
	Voltage, L-N (1)	±0.30 %	■	0.2% (Avg A)	■
	Power Factor (1)	±0.005	■		
	Power, Phase(2)	IEC 61557-12 Class 0.5; For 5 A nominal CT	■		
	Frequency (1)	±0.05 %	■		
	Real Energy(3)	IEC 62053-22 Class 0.5S IEC 61557-12 Class 0.5	■		
	Reactive Energy(4)	IEC 62053-23 Class 2 IEC 61557-12 Class 2	■		
Data update rate		1 second nominal (50/60 cycles)	■		
Input-voltage	VT primary	1.0 MV AC max, starting voltage depends on VT ratio	■		
	U nom	277 V L-N	■		
	Measured voltage with overrange & Crest Factor	IEC: 20 to 480 V AC L-L; 20 to 277 V AC L-N, CAT III IEC: 20 to 690 V AC L-L; 20 to 400 V AC L-N, CAT II UL: 20 to 300 V AC L-L, CAT III	■		■ and UL: 20 to 480 V AC L-L
	Permanent overload	700 V AC L-L, 404 V AC L-N	■		
	Impedance	10 MΩ	■		
	Burden	0.2 VA at 240 V AC L-N	■		
	Frequency range	45 to 70 Hz	■	45 to 65 Hz	■
Input-current	CT ratings Secondary	1 A, 5 A nominal	■		
	Measured voltage with overrange & crest factor	5 mA to 9 A	■		
	Withstand	Continuous 20 A,10 sec/hr 50 A,1 sec/hr 500 A	■		
	Impedance	< 0.3 mΩ	■		
	Frequency range	45 to 70 Hz	■		
	Burden	< 0.024 VA at 9 A	■		
AC control power	Operating range	85 - 265 V AC	■		
	Burden	At 120 V AC, 4.1 VA/ 1.5 W typical At 230 V AC, 6.3 VA/ 2.0 W typical At 265 V AC, 9.6 VA/ 3.5 W typical	6.7 VA / 2.7 W 8.6 VA / 2.9 W 11.9 VA / 3.5 W	7 VA / 4 W 9 VA / 5 W 11.9 VA / 5 W	6.7 VA / 2.7 W 8.6 VA / 2.9 W 11.9 VA / 3.5 W
	Frequency	45 to 65 Hz	■		
	Ride-through time	Typical at 120 V AC and with maximum burden Typical at 230 V AC and with maximum burden	100 mS 400 mS	40 mS 250 mS	100 mS 400 mS
DC control power	Operating range	100 to 300 V DC	■		
	Burden	Typical/ Maximum at 125 V DC Typical/ Maximum at 250 V DC Typical Maximum at 300 V DC	1.4 W / 2.6 W 1.8 W / 2.7 W 3.8 W max	4 W max 5 W max 5 W max	1.4 W / 2.6 W 1.8 W / 2.7 W 3.8 W max
	Ride-through time	Typical at 125 V DC and with maximum burden	50 mS	30 mS	50 mS
Real time clock	Battery backup	30 seconds ride-through	■	3 years backup without control power	■
Digital output	Number/Type	2 - Mechanical Relays	■		
	Output frequency	0.5 Hz maximum (1 second ON / 1 second OFF - minimum times)	■		
	Switching Current	30 V DC, 5 A 250 V AC, 8 A Cos φ = 1 250 V AC, 6 A Cos φ = 0.4	■		
	Isolation	2.5 kVrms	■		
Status Digital Inputs	Voltage ratings	ON 18.5 to 36 V DC, OFF 0 to 4 V DC	■		
	Input Resistance	110 k Ω	■		
	Maximum Frequency	2 Hz (T ON min = T OFF min = 250 ms)	■		
	Response Time	10 ms	■		
	Isolation	2.5 kVrms	■		
Whetting output	Nominal voltage	24 V DC	■		
	Allowable load	4 mA	■		
	Isolation	2.5 kVrms	■		

(1) Measurements taken from 45 Hz to 65 Hz, 0.5 A to 9 A, 57 V to 347 V & 0.5 ind to 0.5 cap power factor with a sinusoidal wave.
(2) Active power: ±0.5 % from 0.25 A to 9.0 A at Cos φ = 1, ±0.6 % from 0.50 A to 9.0 A at Cos φ = 0.5 (ind or cap)
(3) Real/active Energy: ±0.5 % from 0.25 A to 9.0 A at Cos φ = 1, ±0.6 % from 0.50 A to 9.0 A at Cos φ = 0.5 (ind or cap) IEC 61557-12 Class 0.5
(4) Reactive energy: ±2.0 % from 0.25 A to 9.0 A at Sin φ = 1±2.5 % from 0

PM5350 / PM5350P series

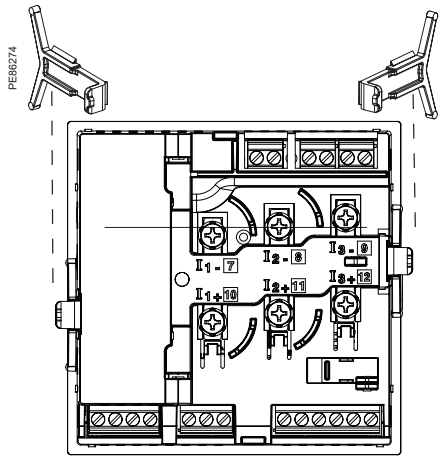
Rear of meter - open

PE86279

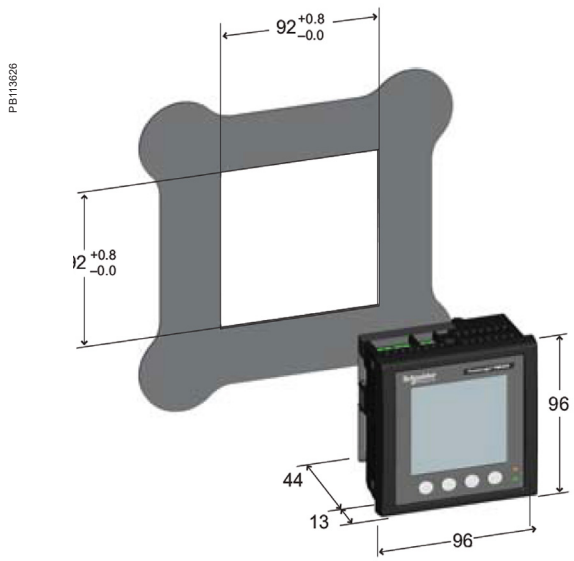


Rear view retainers - installation

PE86274

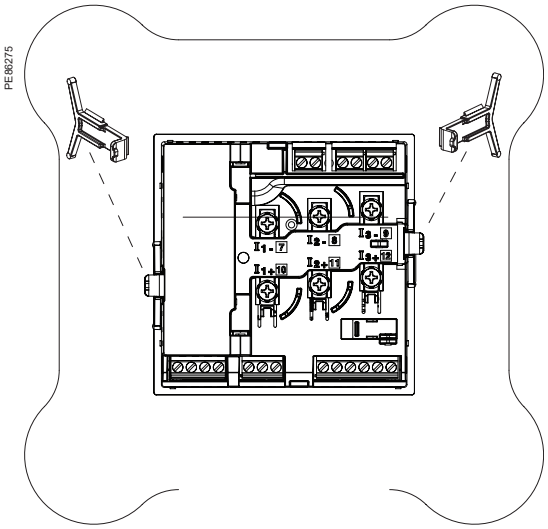


PB113626



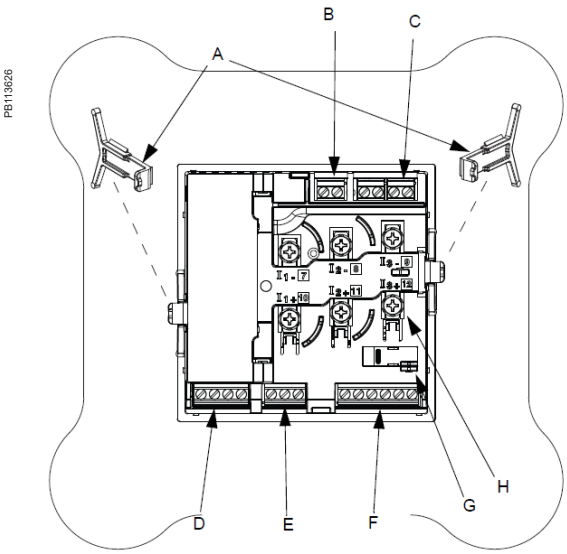
Rear view retainers - users

PE86275



For detailed installation instructions see the product's Installation Guide.

PB113626

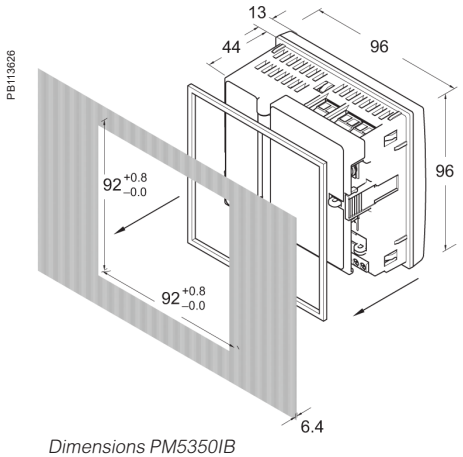


PM5350 / PM5350P meter parts

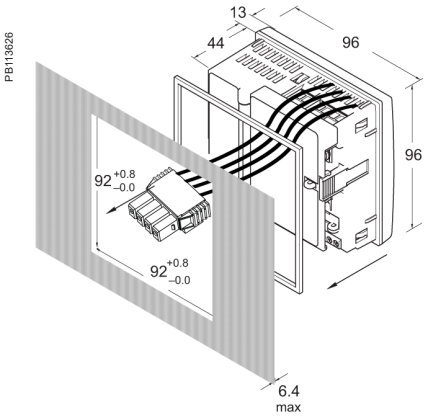
A Retainer clips.
B Control power supply connector.
C Voltage inputs.
D Digital outputs.
E RS-485 port (COM1).
F Digital input.
G Optical revenue switch.
H Current inputs.

For detailed installation instructions see the product's Installation Guide.

PM5350IB/PB series

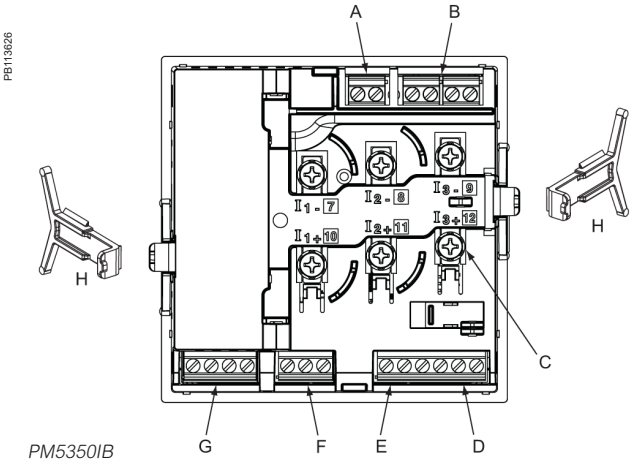


Dimensions PM5350IB

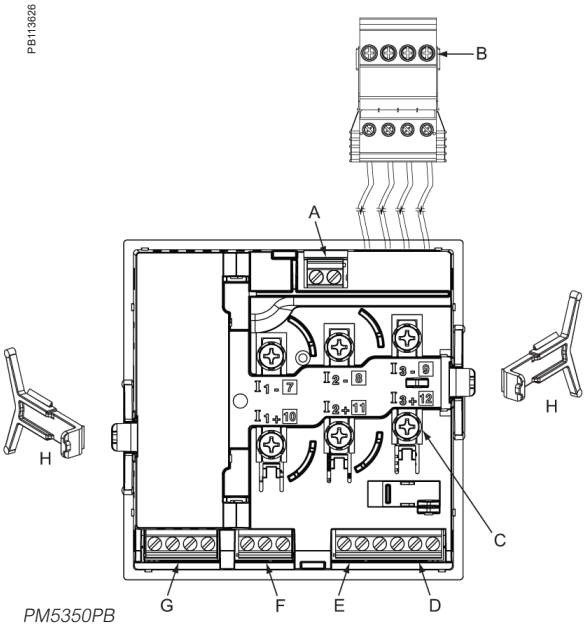


Dimensions PM5350PB

Parts of PM5350IB and PM5350PB (rear panel door removed)

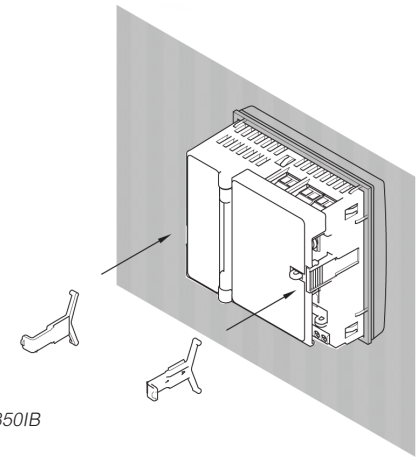


PM5350IB

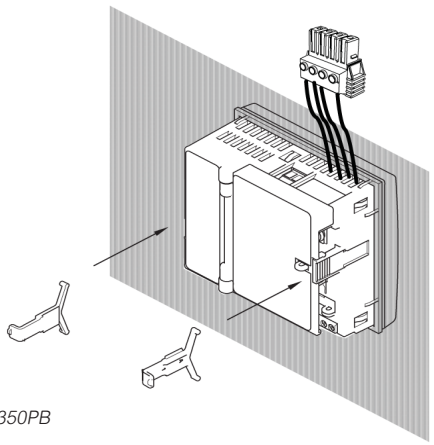


PM5350PB

A Control power
B Voltage inputs
C Current inputs
D Digital inputs
E Whetting voltage source (for digital inputs)
F RS-485 communications
G Digital outputs
H Retainer clips



PM5350IB



PM5350PB

For detailed installation instructions see the product's Installation Guide.