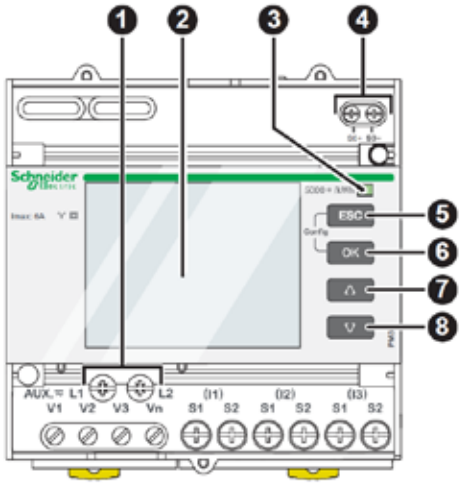
Power Meter Series PM3200
Functions and characteristics

PB108433

Power Meter Series PM3200

PB108435

Power Meter Series PM3255



Front of meter parts
1 Control power
2 Display with white backlit
3 Flashing yellow meter indicator (to check accuracy)
4 Pulse output for remote transfer (PM3210)
5 ESC Cancellation
6 OK Confirmation
7 Up
8 Down

This PowerLogic Power meter offers basic to advanced measurement capabilities. With compact size and DIN rail mounting, the PM3200 allows mains and feeders monitoring in small electrical cabinets. Combined with current transformers and voltage transformers, these meters can monitor 2-, 3- and 4-wire systems. The graphic display has intuitive navigation to easily access important parameters.

Four versions are available offering basic to advanced applications:
- ■ PM3200
  - □ Electrical parameters I, In, U, V, PQS, E, PF, Hz
  - □ Power/current demand
  - □ Min/max.
- ■ PM3210
  - □ Electrical parameters I, In, U, V, PQS, E, PF, Hz, THD
  - □ Power/current demand, peak demand
  - □ Min/max.
  - □ 5 timestamped alarms
  - □ kWh pulse output
- ■ PM3250
  - □ Electrical parameters I, In, U, V, PQS, E, PF, Hz, THD
  - □ Power/current demand, peak demand
  - □ Min/max.
  - □ 5 timestamped alarms
  - □ LED to indicate communications
  - □ RS485 port for Modbus communication
- ■ PM3255
  - □ Electrical parameters I, In, U, V, PQS, E, PF, Hz, THD
  - □ Power/current demand and peak demand
  - □ Flexible power and energy data logging
  - □ Min/max. and 15 timestamped alarms
  - □ LED to indicate communications
  - □ Up to 4 tariffs management
  - □ 2 digital inputs, 2 digital outputs
  - □ Memory for load profile (demand 10mn to 60mn)
  - □ RS485 port for Modbus communication

- ■ Innovative design makes the meters smart and simple:
- ■ Easy to install for panel builders
- ■ Easy to commission for contractors and installers
- ■ Easy to operate for end users

Applications

Cost management applications
- ■ Bill checking
- ■ Sub-billing, including WAGES view
- ■ Cost allocation, including WAGES view

Network management applications
- ■ Panel instrumentation
- ■ Up to 15 onboard timestamped alarms to monitor events
- ■ Easy integration with PLC system by input/output interface

Market segments
- ■ Buildings
- ■ Industry
- ■ Data centres and networks
- ■ Infrastructure (airports, road tunnels, telecom)

Part numbers

Meter model and description	Performance	Part no.
PM3200 basic power meter	Basic power meter	**METSEPM3200**
PM3210 power meter with pulse output	Power, current, THD, peak demand	**METSEPM3210**
PM3250 power meter with RS485 port	Power, current, THD, peak demand	**METSEPM3250**
PM3255 power meter plus 2 digital inputs, 2 digital outputs with RS485 port	Power, current, THD, peak demand, memory for load profile	**METSEPM3255**

Power Meter Series PM3200
Functions and characteristics (cont.)

Function guide		PM3200 Range			
		PM3200	PM3210	PM3250	PM3255
Performance standard					
IEC61557-12 PMD/Sx/K55/0.5		■	■	■	■
General					
Use on LV and HV systems		■	■	■	■
Number of samples per cycle		32	32	32	32
CT input 1A/5A		■	■	■	■
VT input		■	■	■	■
Multi-tariff		4	4	4	4
Multi-lingual backlit display		■	■	■	■
Instantaneous rms values					
Current, voltage	Per phase and average	■	■	■	■
Active, reactive, apparent power	Total and per phase	■	■	■	■
Power factor	Total and per phase	■	■	■	■
Energy values					
Active, reactive and apparent energy; import and export		■	■	■	■
Demand value					
Current, power (active, reactive, apparent) demand; present		■	■	■	■
Current, power (active, reactive, apparent) demand; peak			■	■	■
Power quality measurements					
THD Current and voltage			■	■	■
Data recording					
Min/max of the instantaneous values		■	■	■	■
Power demand logs					■
Energy consumption log (day, week, month)					■
Alarms with time stamping			5	5	15
Digital inputs/digital outputs			0/1		2/2
Communication					
RS-485 port				■	■
Modbus protocol				■	■

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Power Meter Series PM3210

Connectivity advantages	
Programmable digital input	External tariff control signal (4 tariffs) Remote Reset partial counter External status like breaker status Collect WAGES pulses
Programmable digital output	Alarm (PM3255) kWh pulses
Graphic LCD display	Backlit graphic display allows smart navigation in relevant information and in multi languages
Communication	Modbus RS485 with screw terminals allows connection to a daisy chain

Power Meter Series PM3200
Functions and characteristics (cont.)

Specifications	PM3200 Range
Type of measurement	True rms up to the 15th harmonic on three-phase (3P,3P+N) and single-phase AC systems. 32 samples per cycle
Measurement accuracy	
Current with x/5A CTs	0.3% from 0.5A to 6A
Current with x/1A CTs	0.5% from 0.1A to 1.2A
Voltage	0.3% from 50V to 330V (Ph-N), from 80V to 570V (Ph-Ph)
Power factor	±0.005 from 0.5A to 6A with x/5A CTs; from 0.1A to 1.2A with x/1A CTs and from 0.5L to 0.8C
Active/Apparent Power with x/5A CTs	Class 0.5
Active/Apparent Power with x/1A CTs	Class 1
Reactive power	Class 2
Frequency	0.05% from 45 to 65Hz
Active energy with x/5A CTs	IEC62053-22 Class 0.5s
Active energy with x/1A CTs	IEC62053-21 Class 1
Reactive energy	IEC62053-23 Class 2
Data update rate	
Update rate	1s
Input-voltage characteristics	
Measured voltage	50V to 330V AC (direct / VT secondary Ph-N) 80V to 570V AC (direct / VT secondary Ph-Ph) up to 1MV AC (with external VT)
Frequency range	45Hz to 65Hz
Input-current characteristics	
CT primary	Adjustable from 1A to 32767A
CT secondary	1A or 5A
Measurement input range with x/5A CTs	0.05A to 6A
Measurement input range with x/1A CTs	0.02A to 1.2A
Permissible overload	10A continuous, 20A for 10s/hour
Control Power	
AC	100/173 to 277/480V AC (+/-20%), 3W/5VA; 45Hz to 65Hz
DC	100 to 300V DC, 3W
Input	
Digital inputs (PM3255)	11 to 40V DC, 24V DC nominal, <=4mA maximum burden, 3.5kVrms insulation
Output	
Digital output (PM3210)	Optocoupler, polarity sensitive, 5 to 30V, 15mA max, 3.5kVrms insulation
Digital outputs (PM3255)	Solid state relay, polarity insensitive, 5 to 40V, 50mA max, 50Ω max, 3.5kVrms insulation

Power Meter Series PM3200
Functions and characteristics (cont.)

Specifications (continued)	PM3200 Range
Mechanical characteristics	
Weight	0.26kg
IP degree of protection (IEC60529)	IP40 front panel, IP20 meter body
Dimension	90 x 95 x 70mm
Environmental conditions	
Operating temperature	-25 °C to +55 °C
Storage temperature	-40 °C to +85 °C
Humidity rating	5 to 95% RH at 50°C (non-condensing)
Pullution degree	2
Metering category	III, for distribution systems up to 277/480VAC
Dielectric withstand	As per IEC61010-1, Doubled insulated front panel display
Altitude	3000m max
Electromagnetic compatibility	
Electrostatic discharge	Level IV (IEC61000-4-2)
Immunity to radiated fields	Level III (IEC61000-4-3)
Immunity to fast transients	Level IV (IEC61000-4-4)
Immunity to surge	Level IV (IEC61000-4-5)
Conducted immunity	Level III (IEC61000-4-6)
Immunity to power frequency magnetic fields	0.5mT (IEC61000-4-8)
Conducted and radiated emissions	Class B (EN55022)
Safety	
	CE as per IEC61010-1 (1)
Communication	
RS485 port	Half duplex, from 9600 up to 38400 bauds, Modbus RTU (double insulation)
Display characteristics	
Dimensions (VA)	43mm x 34.6mm
Display resolution	128 x 96 dots
Standard compliance	
	IEC61557-12, EN61557-12 IEC61010-1, UL61010-1 IEC62052-11, IEC62053-21, IEC62053-22, IEC62053-23 EN50470-1, EN50470-3

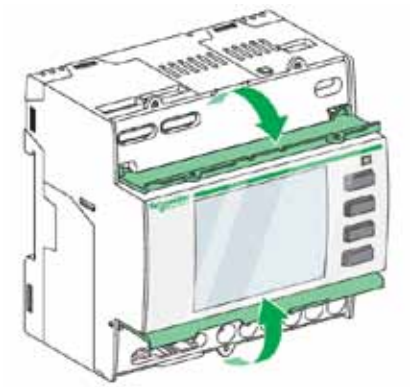
(1) Protected throughout by double insulation

Power Meter Series PM3250

Multi-tariff capability
The PM3200 range allows arrangement of kWh consumption in four different registers. This can be controlled by:
- Digital Inputs. Signal can be provided by PLC or utilities
- Internal clock programmable by HMI
- Through communication

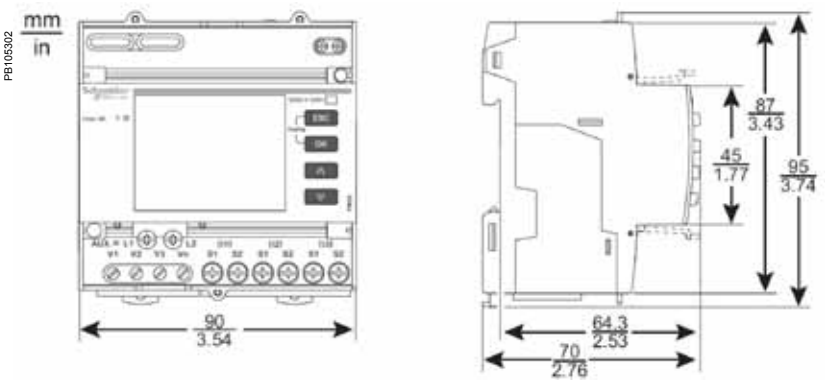
This function allows users to:
- Make tenant metering for dual source applications to differentiate backup source or utility source
- Understand well the consumption during working time and non working time, and between working days and weekends
- Follow up feeders consumption in line with utility tariff rates

Power Meter Series PM3200
Dimensions and connection

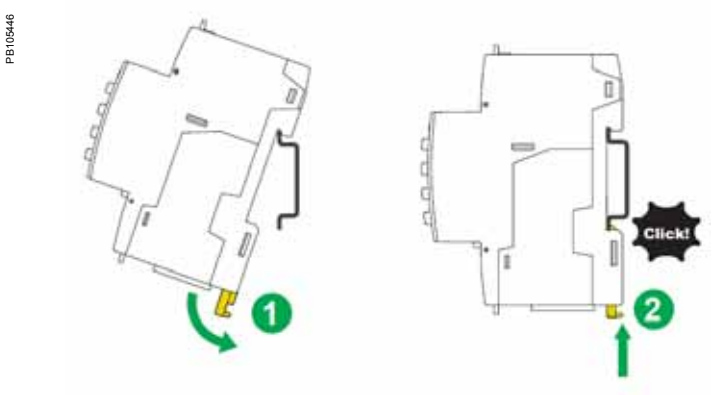


PM3200 top and lower flaps

PM3200 series dimensions



PM3200 series easy installation



PM5350
Functions and characteristics

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PowerLogic PM5350.

The PowerLogic PM5350 power meter offers all the measurement capabilities required to monitor an electrical installation in a single 96 x 96 mm unit extending only 44 mm behind the mounting surface.

With its large display, all three phases and neutral can be monitored simultaneously. The bright, anti-glare display features large characters and powerful backlighting for easy reading even in extreme lighting conditions and viewing angles. The meter menus are understood by all, with the availability of three languages (English, Chinese, Spanish) included standard in the PM5350.

Its compact size and high performance make the PowerLogic PM5350 suitable for many applications.

Applications
Panel instrumentation.
Cost allocation or energy management.
Electrical installation remote monitoring.
Alarming with under/over, digital status, control power failure, 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 44mm depth connectable up to 480 VL-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 on the meter face help the user confirm normal operation (heartbeat/communications indicator LED: green and other LED orange, customizable either for alarms or energy pulse outputs).

Easy circuit breaker monitoring and control
The PM5350 provides two relay outputs (high performance) with capability to command most of the circuit breaker coils directly. In addition, monitored switches can be wired directly to the meter 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 PM5350 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.

Load management
Peak demands with time stamping are provided. Predicted demand values can be used in basic load shedding applications.

Alarming with time stamping
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
Load timer setpoint adjustable to monitor and advise maintenance requirements.

Performance Standard Meets IEC 61557-12 PMD/S/K70/0.5.

Part numbers

PowerLogic PM5350 meters	
PowerLogic PM5350	METSEPM5350

PM5350
Functions and characteristics (cont.)

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		■	
Energy values			**Stored in non-volatile memory**
Accumulated Active, Reactive and Apparent Energy		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	■
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,VLN, VLL	
TDD, thd (Total Demand Distortion)		■	
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 RS485 serial port (DLF3000 via the Schneider Electric website: www.schneider-electric.com)		■	

PM5350
Functions and characteristics (cont.)

PE86292

Front screen view of PM5350.

Electrical characteristics

Type of measurement			True rms up to the 15th harmonic on three-phase (3P, 3P + N) 32 samples per cycle, zero blind
Measurement accuracy	Current, Phase (1)		±0.30%
	Voltage, L-N (1)		±0.30%
	Power Factor (1)		±0.005
	Power, Phase		IEC 61557-12 Class 0.5; For 5 A nominal CT (for 1 A nominal CT when I > 0.15A) ±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)
	Frequency (1)		±0.05%
	Real Energy		IEC 62053-22 Class 0.5S; IEC 61557-12 Class 0.5; For 5 A nominal CT (for 1 A nominal CT when I > 0.15A) ±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
	Reactive Energy		IEC 62053-23 Class 3, IEC 61557-12 Class 2 For 5 A nominal CT (for 1 A nominal CT when I > 0.15A) ±2.0% from 0.25 A to 9.0 A at SIN φ = 1 ±2.5% from 0.50 A to 9.0 A at SIN φ = 0.5 (ind or cap)
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
	Permanent overload		700 Vac L-L, 404 Vac L-N
	Impedance		10 M ωω
	Frequency range		45 to 70 Hz
Input-current	CT ratings	Primary	Adjustable 1 A to 32767 A
		Secondary	1A, 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		4.1 VA / 1.5 W typical, 6.7 VA / 2.7 W max at 120 V AC 6.3 VA / 2.0 W typical, 8.6 VA / 2.9 W max at 230 V AC 9.6 VA / 3.5 W maximum at 265 V AC
	Frequency		45 to 65 Hz
	Ride-through time		100 mS typical at 120 V AC and maximum burden 400 mS typical at 230 V AC and maximum burden
DC control power	Operating range		100 to 300 V DC
	Burden		1.4 W typical, 2.6 W maximum at 125 V DC 1.8 W typical, 2.7 W maximum at 250 V DC 3.2 W maximum at 300 V DC
	Ride-through time		50 mS typical at 125 V DC and maximum burden
Real time clock	Ride-through time		30 seconds
Digital output	Number/Type		2 - Mechanical Relays
	Output frequency		0.5 Hz maximum (1 second ON / 1 second OFF - minimum times)
	Switching Current		250 V AC at 2.0 Amps, 200 k cycles, resistive 250 V AC at 8.0 Amps, 25 k cycles, resistive 250 V AC at 2.0 Amps, 100 k cycles, COSΦ=0.4 250 V AC at 6.0 Amps, 25 k cycles, COSΦ=0.4 30 V DC at 2.0 Amps, 75 k cycles, resistive 30 V DC at 5.0 Amps, 12.5 k cycles, resistive
	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.

PM5350
Functions and characteristics (cont.)

Mechanical characteristics		
Weight		250 g
IP degree of protection (IEC 60529)		IP51 front display, IP30 meter body
Dimensions	W x H x D	96 x 96 x 44 mm (depth of meter from housing mounting flange) 96 x 96 x 13 mm (protrusion of meter from housing flange)
Mounting position		Vertical
Panel thickness		6.35 mm maximum
Environmental characteristics		
Operating temperature	Meter	-25 °C to 70 °C
	Display	-20 °C to +70 °C (Display functions to -25°C with reduced performance)
Storage temp.	Meter + display	-40 °C to +85 °C
Humidity rating		5 to 95 % RH at 50 °C (non-condensing)
Pollution degree		2
Altitude		3000 m max.
Electromagnetic compatibility		
Electrostatic discharge		IEC 61000-4-2(1)
Immunity to radiated fields		IEC 61000-4-3(1)
Immunity to fast transients		IEC 61000-4-4(1)
Immunity to impulse waves		IEC 61000-4-5(1)
Conducted immunity		IEC 61000-4-6(1)
Immunity to magnetic fields		IEC 61000-4-8(1)
Immunity to voltage dips		IEC 61000-4-11(1)
Radiated emissions		FCC part 15 class A, EN 55011 Class A
Conducted emissions		FCC part 15 class A, EN 55011 Class A
Harmonics		IEC 61000-3-2(1)
Flicker emissions		IEC 61000-3-3(1)
Safety		
Europe		CE, as per IEC 61010-1
U.S. and Canada		cULus as per UL61010-1, IEC 61010-1 (3rd Edition)
Measurement category (Voltage and current inputs)		Per IEC 61010-1: CAT III, 277 V L-N / 480 V L-L nominal; CAT II 400 V L-N / 690 V L-L nominal Per UL 61010-1 and CSA C22.2 No. 61010-1: CAT III, 300 V L-L
Overvoltage Category (Control power)		CAT III
Dielectric		As per IEC 61010-1 Double insulated front panel display
Protective Class		II
Communication		
RS 485 port		2-Wire, 9600,19200 or 38400 baud, Parity - Even, Odd, None, 1 stop bit if parity Odd or Even, 2 stop bits if None; Modbus RTU, Modbus ASCII (7 or 8 bit), JBUS
Firmware and language file update		Update via comunication port using DLF3000 software
Isolation		2.5 kVrms, double insulated
Human machine interface		
Display type		Monochrome Graphics LCD
Resolution		128 x 128
Backlight		White LED
Viewable area (W x H)		67 x 62.5 mm
Keypad		4-button
Indicator Heartbeat / Comm activity		Green LED
Energy pulse output / Active alarm indication (configurable)		
Type		Optical, amber LED
Wavelength		590 to 635 nm
Maximum pulse rate		2.5 kHz

(1) As per IEC 61557-12

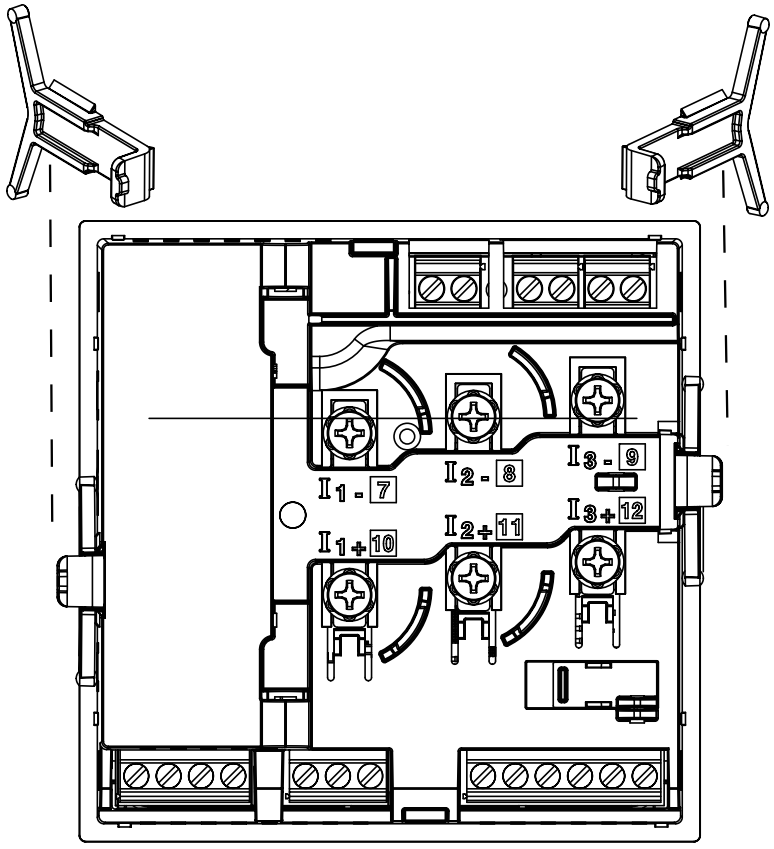
PM5350 Power Meter
Dimensions and connection

Rear of meter - open

PE86279

Rear view retainers - installation

PE86274



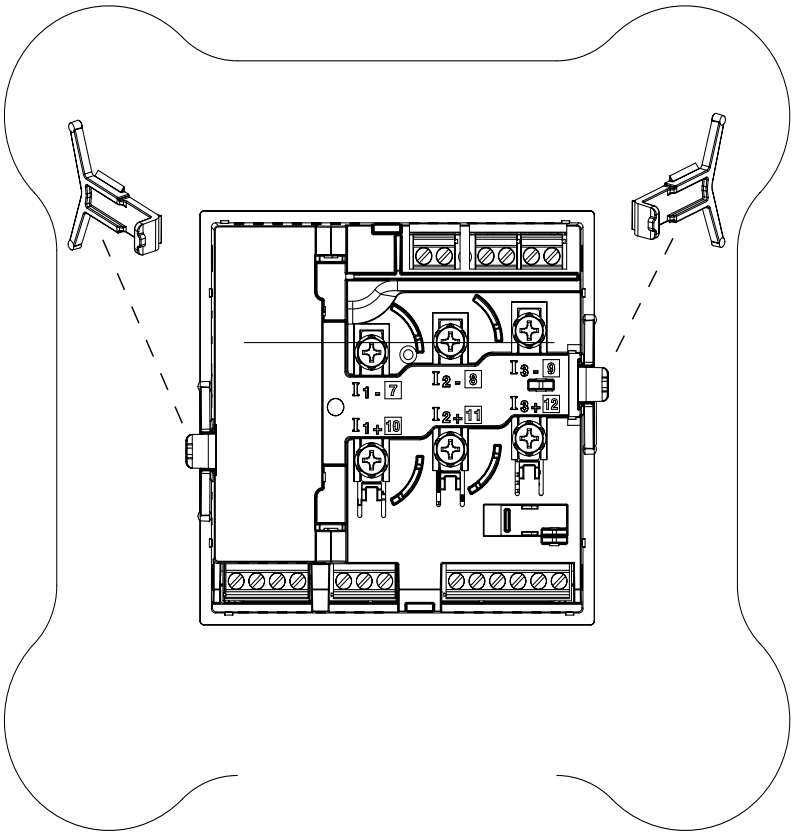
For detailed installation instructions see the product's Installation guide.

PM5350 Power Meter
Dimensions and connection (cont.)

PE86323

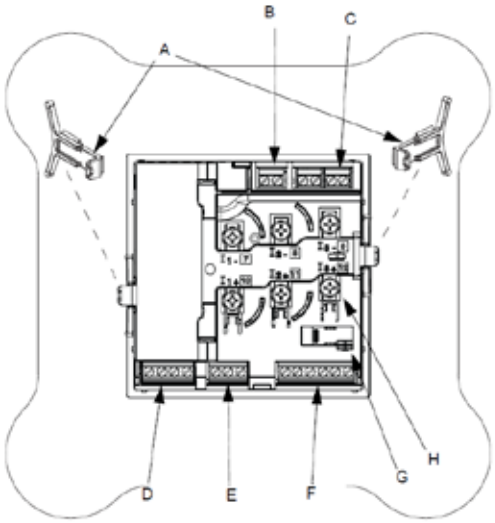
Rear view retainers - users

PE86275



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

PE86324



PM5350 meter parts

A Retainer clips.
B Control power supply connector.
C Voltage inputs.
D Digital outputs.
E Rs485 port (COM1).
F Digital outputs.
G Optical revenue switch.
H Current inputs.

PM5350IB / PM5350PB
Functions and characteristics

PE86278

PowerLogic PM5350IB

The PM5350IB and PM5350PB are compact multi-circuit power meters specially designed to monitor Busway power distribution systems. They provide consumption and alarm data by circuit, for up to three single phase circuits. It can also be installed in different electrical configurations, monitoring 1, 2 and 3 phase circuits. Ideal solution for cost management and sub-billing in datacenters.

With its large display, all individual circuits can be monitored simultaneously. The bright, anti-glare display features large characters and powerful backlighting for easy reading even in extreme lighting conditions and viewing angles.

Main characteristics

Easy to install
Mounts using two clips, no tools required. Ultra compact meter with 44mm depth connectable up to 480 V L-L without voltage transformers. See specification table for voltage inputs details.

Easy to operate
Intuitive navigation with self-guided, language selectable menus, six lines, four concurrent values.

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 and sub-billing.*

Circuit breaker monitoring
Four digital inputs provide an easy way to monitor status, alarm and report on circuit breaker trips.

Multi-level alarming
Five different alarm levels (high, high-high, low, low-low, tripped) optimized network management and downtime prevention.

Performance Standard Meets IEC 61557-12 PMD/S/K70/0.5.

Part Numbers

PowerLogic PM5350IB/PB meters	
PowerLogic PM5350IB	METSEPM5350IB
PowerLogic PM5350PB	METSEPM5350PB

PM5350IB / PM5350PB
Functions and characteristics (cont.)

General		5350IB	5350PB
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		■	
Energy Total and per circuit			
Accumulated Active, Reactive and Apparent Energy*	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	■	
Peak demand with timestamping*		■	
Power quality			
THD, thd (Total Harmonic Distortion) TDD, thd (Total Demand Distortion)		I,VLN, VLL ■	
Data recording Total and per circuit			
Min/max of instantaneous values, plus circuit 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 RS485 serial port (DLF3000 via the Schneider Electric website: www.schneider-electric.com)		■	

**Stored in non-volatile memory*

PM5350IB / PM5350PB
Functions and characteristics (cont.)

PE86292

Front screen view of PM5350.

Electrical characteristics			5350IB	5350PB
Type of measurement			True rms up to the 15th harmonic 32 samples per cycle, zero blind	
Measurement accuracy	Current, Circuit (1)		±0.30%	
	Voltage, L-N (1)		±0.30%	
	Power Factor (1)		±0.005	
	Power, Circuit		IEC 61557-12 Class 0.5; For 5 A nominal CT (for 1 A nominal CT when I > 0.15A) ±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)	
	Frequency (1)		±0.05%	
	Real Energy		IEC 62053-22 Class 0.5S; IEC 61557-12 Class 0.5; For 5 A nominal CT (for 1 A nominal CT when I > 0.15A) ±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	
	Reactive Energy		IEC 62053-23 Class 3, IEC 61557-12 Class 2 For 5 A nominal CT (for 1 A nominal CT when I > 0.15A) ±2.0% from 0.25 A to 9.0 A at SIN φ = 1 ±2.5% from 0.50 A to 9.0 A at SIN φ = 0.5 (ind or cap)	
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		UL: 20 to 300 V AC L-L IEC: 20 to 690V V AC L-L; 20 to 400 V AC L-N	UL: 20 to 480 V AC L-L IEC: 20 to 690 V V AC L-L; 20 to 277 V AC L-N
	Permanent overload		700 V AC L-L, 404 Vac L-N	
	Impedance		10 M Ω	
	Frequency range		45 to 70 Hz	
Input-current	CT ratings	Primary	Adjustable 1 A to 32767 A	
		Secondary	1A, 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 - 277 V AC	
	Burden		4.1 VA / 1.5 W typical, 6.7 VA / 2.7 W max at 120 V AC 6.3 VA / 2.0 W typical, 8.6 VA / 2.9 W max at 230 V AC 9.6 VA / 3.5 W maximum at 265 V AC	
	Frequency		45 to 65 Hz	
	Ride-through time		100 mS typical at 120 V AC and maximum burden 400 mS typical at 230 V AC and maximum burden	
DC control power	Operating range		100 to 300 V DC	
	Burden		1.4 W typical, 2.6 W maximum at 125 V DC 1.8 W typical, 2.7 W maximum at 250 V DC 3.2 W maximum at 300 V DC	
	Ride-through time		50 mS typical at 125 V DC and maximum burden	
Real time clock	Ride-through time		30 seconds	
Digital output	Number/Type		2 - Mechanical Relays	
	Output frequency		0.5 Hz maximum (1 second ON / 1 second OFF - minimum times)	
	Switching Current		250 V AC at 2.0 Amps, 200 k cycles, resistive 250 V AC at 8.0 Amps, 25 k cycles, resistive 250 V AC at 2.0 Amps, 100 k cycles, COSΦ=0.4 250 V AC at 6.0 Amps, 25 k cycles, COSΦ=0.4 30 V DC at 2.0 Amps, 75 k cycles, resistive 30 V DC at 5.0 Amps, 12.5 k cycles, resistive	
	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.

PM5350IB / PM5350PB
Functions and characteristics (cont.)

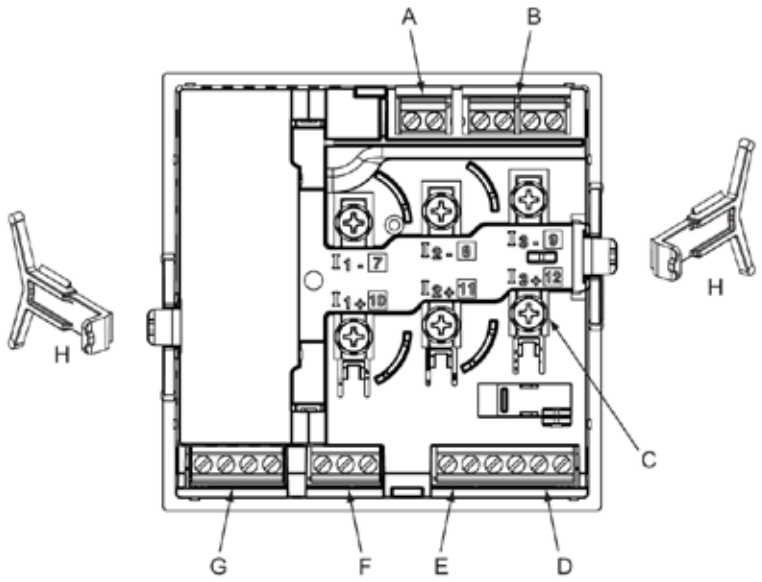
Mechanical characteristics		5350IB	5350PB
Weight		250 g	
IP degree of protection (IEC 60529)		IP51 front display, IP30 meter body	
Dimensions	W x H x D	96 x 96 x 44 mm (depth of meter from housing mounting flange) 96 x 96 x 13 mm (protrusion of meter from housing flange)	
Mounting position		Vertical	
Panel thickness		6.35 mm maximum	
Environmental characteristics (for indoor use only)			
Operating temperature	Meter	-25 °C to 70 °C	
	Display	-20 °C to +70 °C (Display functions to -25°C with reduced performance)	
Storage temp.	Meter + display	-40 °C to +85 °C	
Humidity rating		5 to 95 % RH at 50 °C (non-condensing)	
Pollution degree		2	
Altitude		3000 m max.	
Electromagnetic compatibility (for indoor use only)			
Electrostatic discharge		IEC 61000-4-2(2)	
Immunity to radiated fields		IEC 61000-4-3(2)	
Immunity to fast transients		IEC 61000-4-4(2)	
Immunity to impulse waves		IEC 61000-4-5(2)	
Conducted immunity		IEC 61000-4-6(2)	
Immunity to magnetic fields		IEC 61000-4-8(2)	
Immunity to voltage dips		IEC 61000-4-11(2)	
Radiated emissions		FCC part 15 class A, EN 55011 Class A	
Conducted emissions		FCC part 15 class A, EN 55011 Class A	
Harmonics		IEC 61000-3-2(2)	
Flicker emissions		IEC 61000-3-3(2)	
Safety			
Europe		CE, as per IEC 61010-1	
U.S. and Canada		cULus as per UL61010-1, IEC 61010-1 (2nd Edition)	
Measurement category (Voltage and current inputs)		UL: 20 to 300 V AC L-L, CATIII IEC: 20 to 480V V AC L-L; 20 to 277 V AC L-N, CATIII 20 to 690V V AC L-L; 20 to 400 V AC L-N, CATII	UL: 20 to 480 V AC L-L (3rd Edition), CATIII IEC: 20 to 480V V AC L-L; 20 to 277 V AC L-N, CATIII 20 to 690V V AC L-L; 20 to 400 V AC L-N, CATII
Overvoltage Category (Control power)		CAT III	
Dielectric		As per IEC 61010-1 Double insulated front panel display	
Protective Class		II	
Communication			
RS 485 port		2-Wire, 9600,19200 or 38400 baud, Parity - Even, Odd, None, 1 stop bit if parity Odd or Even, 2 stop bits if None; Modbus RTU, Modbus ASCII (7 or 8 bit), JBUS	
Firmware and language file update		Update via comunication port using DLF3000 software	
Isolation		2.5 kVrms, double insulated	
Human machine interface			
Display type		Monochrome Graphics LCD	
Resolution		128 x 128	
Backlight		White LED	
Viewable area (W x H)		67 x 62.5 mm	
Keypad		4-button	
Indicator Heartbeat / Comm activity		Green LED	
Energy pulse output / Active alarm indication (configurable)			
Type		Optical, amber LED	
Wavelength		590 to 635 nm	
Maximum pulse rate		2.5 kHz	

(1) V L-L is limited to 700 V AC

PM5350 Power Meter
Dimensions and connection

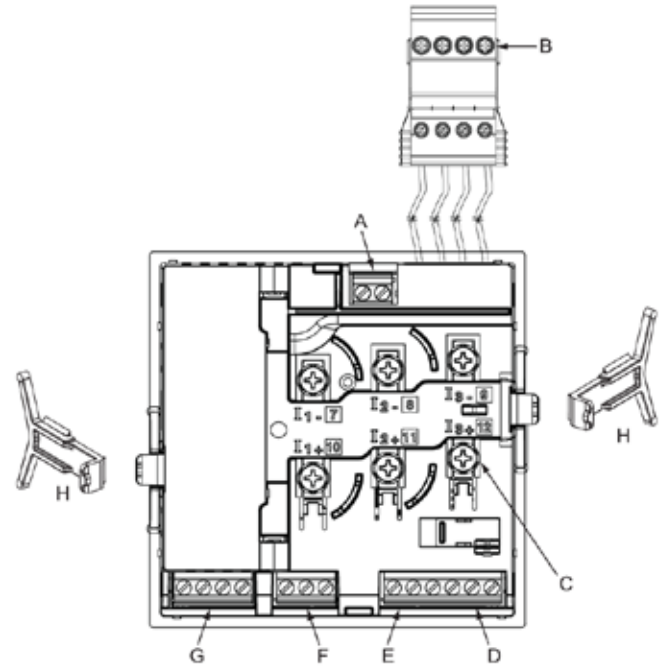
Parts of PM5350IB and PM5350PB (rear panel door removed)

PB113626



PM5350IB

PB113626



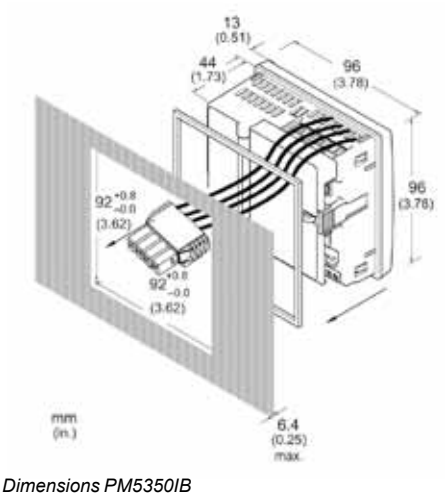
PM5350PB

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

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

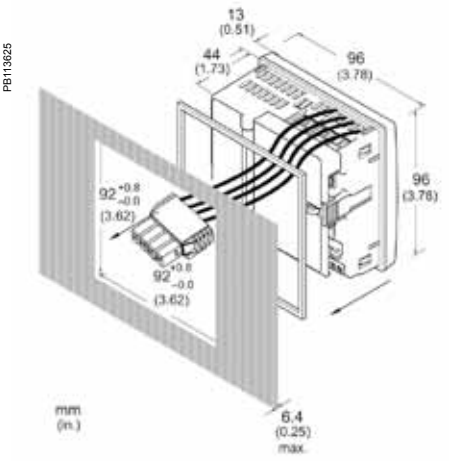
PM5350IB / PM5350PB
Dimensions and connection (cont.)

PB113624



Dimensions PM5350IB

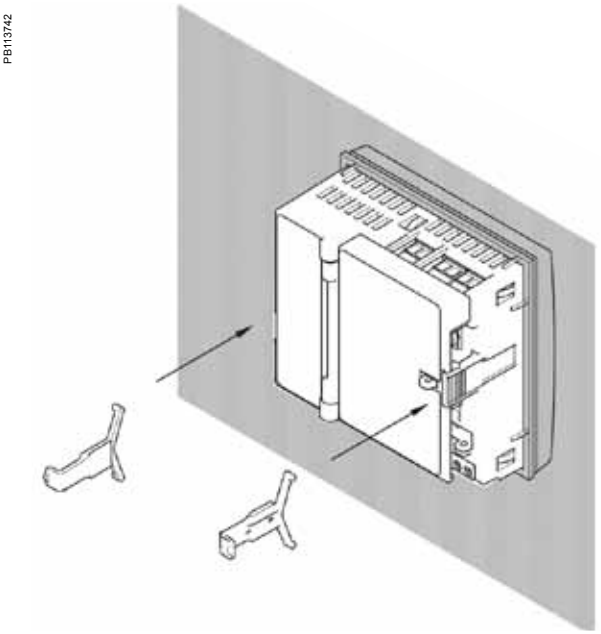
PB113625



Dimensions PM5350PB

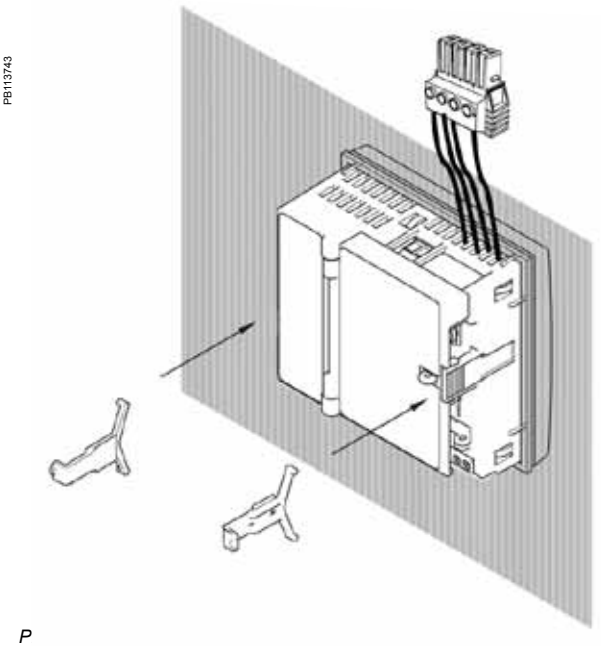
Installation

PB113742



PM5350IB

PB113743



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