

Electrical characteristics*		PM5100	PM5300	PM5500		
Type of measurement: True rms on three-phase (3P, 3P + N), zero blind		64 samples per cycle		128 samples per cycle		
Measurement accuracy	IEC 61557-12	PMD/[SD]SS]/K70/0.5		PMD/[SD]SS]/K70/0.2		
	Active Energy	Class 0.5S as per IEC 62053-22		Class 0.2S as per IEC 62053-22		
	Reactive Energy	Class 2S as per IEC62053-24		Class 1S as per IEC62053-24		
	Active Energy	±0.5%		±0.2%		
	Reactive Energy	±2%		±1%		
	Active Power	Class 0.5 as per IEC 61557-12		Class 0.2 as per IEC 61557-12		
	Apparent Power	Class 0.5 as per IEC 61557-12				
	Current, Phase	Class 0.5 as per IEC 61557-12		±0.15%		
	Voltage, L-N	Class 0.5 as per IEC 61557-12		±0.1%		
	Frequency	±0.05%				
MID Directive EN50470-1, EN50470-3		Annex B and Annex D (Optional model references) Class C				
Input-voltage (up to 1.0 MV AC max, with voltage transformer)	Nominal Measured Voltage range	20 V L-N / 35 V L-L to 400 V L-N / 690 V L-L absolute range 35 V L-L to 760 V L-L		20 V L-N / 20 V L-L to 400 V L-N / 690 V L-L absolute range 20 V L-L to 828 V L-L		
	Impedance	5 M Ω				
	F nom	50 or 60 Hz ±5%		50 or 60 Hz ±10%		
Input-current	I nom	1 A or 5 A				
	Measured Amps with over range and Crest Factor	Starting current: 5mA Operating range: 50mA to 8.5A		Starting current: 5mA Operating range: 50 mA to 10 A		
	Withstand	Continuous 20A, 10s/hr 50A, 1s/hr 500A				
	Impedance	< 0.3 mΩ				
	F nom	50 or 60 Hz ±5%		50 or 60 Hz ±10%		
AC control power	Burden	<0.026VA at 8.5A				
	Operating range	100 - 277 V AC L-N / 415 V L-L +/-10% CAT III 300V class per IEC 61010		100-480 V AC ±10% CAT III 600V class per IEC 61010		
	Burden	<5 W, 11 VA at 415V L-L		<5W/16.0 VA at 480V AC		
	Frequency	45 to 65 Hz				
Ride-through time	80 mS typical at 120V AC and maximum burden. 100 mS typical at 230 V AC and maximum burden 100 mS typical at 415 V AC and maximum burden		35 ms typical at 120 V L-N and maximum burden 129 ms typical at 230 V L-N and maximum burden			
DC control power	Operating range	125-250 V DC ±20%				
	Burden	<4 W at 250 V DC		typical 3.1W at 125 V DC, max. 5W		
	Ride-through time	50 mS typical at 125 V DC and maximum burden				
Outputs	Relay	Max output frequency	0.5 Hz maximum (1 second ON / 1 second OFF - minimum times)			
		Switching current	250 V AC at 8.0 Amps, 25 k cycles, resistive 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 kV rms			
	Digital outputs		1	2	2	
		Max load voltage	40 V DC		30 V AC / 60 V DC	
		Max load current	20 mA		125 mA	
		On Resistance	50 Ω max		8 Ω	
		Meter constant	from 1 to 9,999,999 pulses per kWh			
		Pulse width for Digital Output	50% duty cycle			
		Pulse frequency for Digital Output	25 Hz max.			
		Leakage current	0.03 micro Amps		1 micro Amps	
		Isolation	5 kV rms		2.5 kV rms	
		Optical outputs	Pulse width (LED)	200 ms		
			Pulse frequency	50 Hz. max.		2.5 kHz. max
			Meter constant	from 1 to 9,999,999 pulses per kWh		

Electrical characteristics* (cont'd)		PM5100	PM5300	PM5500
Status Inputs	ON Voltage		18.5 to 36 V DC	30 V AC / 60 V DC max
	OFF Voltage		0 to 4 V DC	
	Input Resistance		110 k Ω	100 k Ω
	Maximum Frequency		2 Hz (T ON min = T OFF min = 250 ms)	25 Hz (T ON min = T OFF min = 20 ms)
	Response Time		20 ms	10 ms
	Opto Isolation		5 kV rms	2.5 kV rms
	Whetting output		24 V DC / 8mA max	
	Input Burden		2mA @24V DC	2 mA @ 24 V AC/DC
Mechanical characteristics				
Product weight		380 g	430 g	450 g
IP degree of protection (IEC 60529)		IP52 front display, IP30 meter body		
Dimensions W x H x D [protrusion from cabinet] **		96 x 96 x 72mm (77mm for PM5500) (depth of meter from housing mounting flange) [13mm]		
Mounting position **		Vertical		
Panel thickness		6 mm maximum		
Environmental characteristics				
Operating temperature	Meter	-25 °C to 70 °C		
	Display (Display functions to -25° with reduced performance)	-25 °C to +70 °C		
Storage temp.		-40 °C to +85 °C		
Humidity range		5 to 95 % RH at 50 °C (non-condensing)		
Pollution degree		2		
Altitude		2000 m CAT III / 3000 m CAT II		3000 m max. CAT III
Electromagnetic compatibility***				
Harmonic current emissions		IEC 61000-3-2		
Flicker emissions		IEC 61000-3-3		
Electrostatic discharge		IEC 61000-4-2		
Immunity to radiated fields		IEC 61000-4-3		
Immunity to fast transients		IEC 61000-4-4		
Immunity to surge		IEC 61000-4-5		
Conducted immunity 150kHz to 80MHz		IEC 61000-4-6		
Immunity to magnetic fields		IEC 61000-4-8		
Immunity to voltage dips		IEC 61000-4-11		
Radiated emissions		FCC part 15, EN 55022 Class B		
Conducted emissions		FCC part 15, EN 55022 Class B		

*Electrical Characteristics still under verification at time of printing of the catalogue, may be subject to change.

** PM5563 is DIN mounted

*** Tests are conducted as per IEC 61557-12 (IEC 61326-1), 62052-11 and EN50470

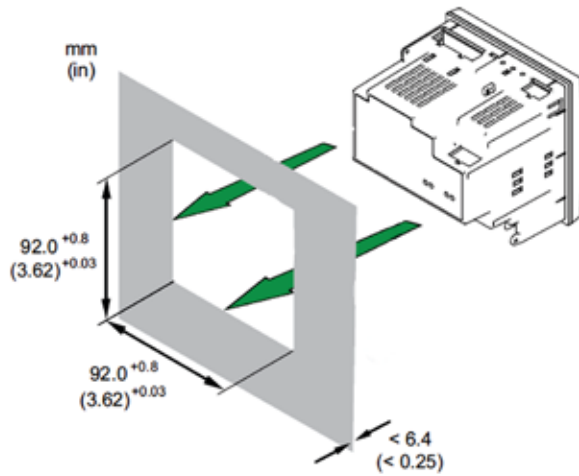
Safety	PM5100	PM5300	PM5500
Europe	CE, as per IEC 61010-1 Ed. 3, IEC 62052-11 & IEC61557-12		
U.S. and Canada	cULus as per UL61010-1 (3rd Edition)		
Measurement category (Voltage and Current inputs)	CAT III up to 400 V L-N / 690 V L-L		
Dielectric	As per IEC/UL 61010-1 Ed.3		
Protective Class	II, Double insulated for user accessible parts		
Communication			
RS 485 port Modbus RTU, Modbus ASCII (7 or 8 bit), JBUS	2-Wire, 9600, 19200 or 38400 baud, Parity - Even, Odd, None, 1 stop bit if parity Odd or Even, 2 stop bits if None; (Optional in PM51x and PM53x)		
Ethernet port: 10/100 Mbps; Modbus TCP/IP		1 Optional	2 (for daisy chain only, one IP address)
Firmware and language file update	Meter firmware update via the communication ports		
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)	Optical, amber LED		
Wavelength	590 to 635 nm		
Maximum pulse rate	2.5 kHz		

Features and Options	PM5100		PM5300				PM5500	
	PM5100	PM5110	PM5310	PM5320	PM5330	PM5340	PM5560	PM5563
Installation								
Fast installation, panel mount with integrated display	■	■	■	■	■	■	■	–
Fast installation, DIN rail mountable	–	–	–	–	–	–	–	■
Accuracy	CI 0.5S	CI 0.5S	CI 0.5S	CI 0.5S	CI 0.5S	CI 0.5S	CI 0.2S	CI 0.2S
Display								
Backlit LCD, multilingual, bar graphs, 6 lines, 4 concurrent values	■	■	■	■	■	■	■	■
Power and energy metering								
3-phase voltage, current, power, demand, energy, frequency, power factor	■	■	■	■	■	■	■	■
Multi-tariff	–	–	4	4	4	4	8	8
Power quality analysis								
THD, thd, TDD	■	■	■	■	■	■	■	■
Harmonics, individual (odd) up to	15th	15th	31st	31st	31st	31st	63rd	63rd
I/Os and relays								
I/Os	1DO	1DO	2DI/2DO	2DI/2DO	2DI/2DO	2DI/2DO	4DI/2DO	4DI/2DO
Relays	0	0	0	0	2	√2	0	0
Alarms and control								
Alarms	33	33	35	35	35	35	52	52
Set point response time, seconds	1	1	1	1	1	1	1	1
Single and multi-condition alarms	–	–	■	■	■	■	■	■
Boolean alarm logic	–	–	–	–	–	–	■	■
Communications								
Serial ports with modbus protocol	–	1	1	–	1	–	1	1
Ethernet port with Modbus TCP protocol	–	–	–	1	–	1	2**	2**
MID ready compliance, EN50470-1/3, Annex B and Annex D Class C		PM5111			PM5331	PM5341	PM5561	

** 2 Ethernet ports for daisy chain, one IP address.

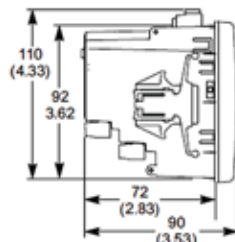
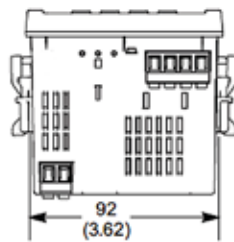
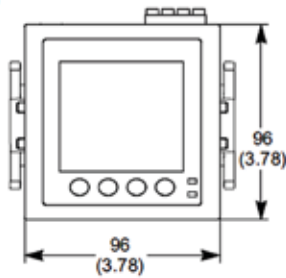
PM5000 Series meter flush mounting*

PB111276

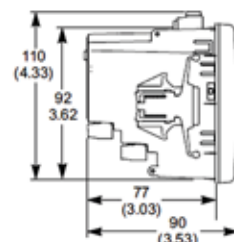


PM5000 Series meter dimensions

PB111279



PM5100 / PM5300

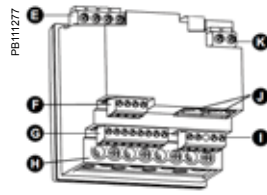


PM5500



PM5000 meter parts

- A Menu selection buttons
- B LED indicators
- C Navigation or menu selections
- D Maintenance and alarm notification area



PM5500

PM5500 meter parts

- E Voltage inputs
- F RS-485 comms
- G Digital inputs
- H Current inputs
- I Digital outputs
- J Ethernet ports
- K Control power



PM5100 / PM5300 meter parts

- E Relay output (PM5300 only)
- F Voltage inputs
- G Control power
- H Current inputs
- I Status inputs/digital outputs
- J Communications port: Ethernet (PM5300 only) or RS-485

** PM5563 is DIN mounted

Please see the *Installation Guide* for accurate and complete information on the installation of this product.