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The new benchmark in low cost, precision metering

PowerLogic PM5000 series

schneider-electric.us/pm5000

"With its accuracy, simplicity, quality, and rich feature set making the PowerLogic PM5000 series meters the industry's performance benchmark for cost management applications, I'd have expected it to cost more."

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More capability than you expected.

Budget-conscious professionals have a new benchmark for metering performance.

The PowerLogic™ PM5000 is meticulously engineered to provide high-end cost management capabilities in a straightforward metering platform. This means it's both cost effective and capable, while being simple to purchase, install, and use. Use it to help maximize operational efficiency, increase network reliability, and improve business performance.

Optimized for energy cost management.

An essential combination of features, such as multiple tariffs and data logging, merges with industry-leading measurement accuracy to match the requirements of energy cost management applications in buildings and industry. Compliant with stringent, international metering standards, the PM5000 series meters remove any uncertainty in billing for energy costs and ensure a high level of performance that noncompliant devices cannot match.

Complies with the most demanding international metering standards.

62053-22 Class 0.5S/Class 0.2S	IEC 62053-23
ANSI C12.20 Class 0.2 (PM5500 models)	IEC 62052-11
	MID, EN50470-1/3 — Annex B & Annex D
IEC 61557-12 PMD/S/K70/0.5 (PM5100 & PM5300 models)	CE as per IEC 61010-1 Ed.3
IEC 61557-12 PMD/S/K70/0.2 (PM5500 models)	cULus as per UL 61010-1 Ed.3
	BTL listed (B-ASC)

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Optimize energy use and costs across your entire organization.

An ideal combination of features

The highly-capable PowerLogic PM5000 series meters offer the best combination of features to match all your energy cost management needs. Designed for use in both energy management systems and building management systems, they provide the measurement capabilities needed to allocate energy usage, perform tenant metering and subbilling, pinpoint energy savings, optimize equipment efficiency and utilization, and perform a basic assessment of the power quality of the electrical network.

Energy cost management

1 Identify consumption to recoup energy costs
- reduce consumption of electricity and water
- subbill tenants and identify process energy use
- identify savings opportunities
- integrate other water, air, gas, electricity, and steam meter data

2 Improve energy supply
- optimize energy procurement
- verify billing

3 Reduce energy bills
- reduce billing penalties and optimize energy procurement
- shed unnecessary loads
- participate in demand response and peak shaving programs

Electrical network management

4 Monitor to increase reliability
- receive fast fault alarms
- identify underperforming electrical assets
- increased productivity, comfort, and safety
- increase reliability and recover from outages faster
- understand root failure causes
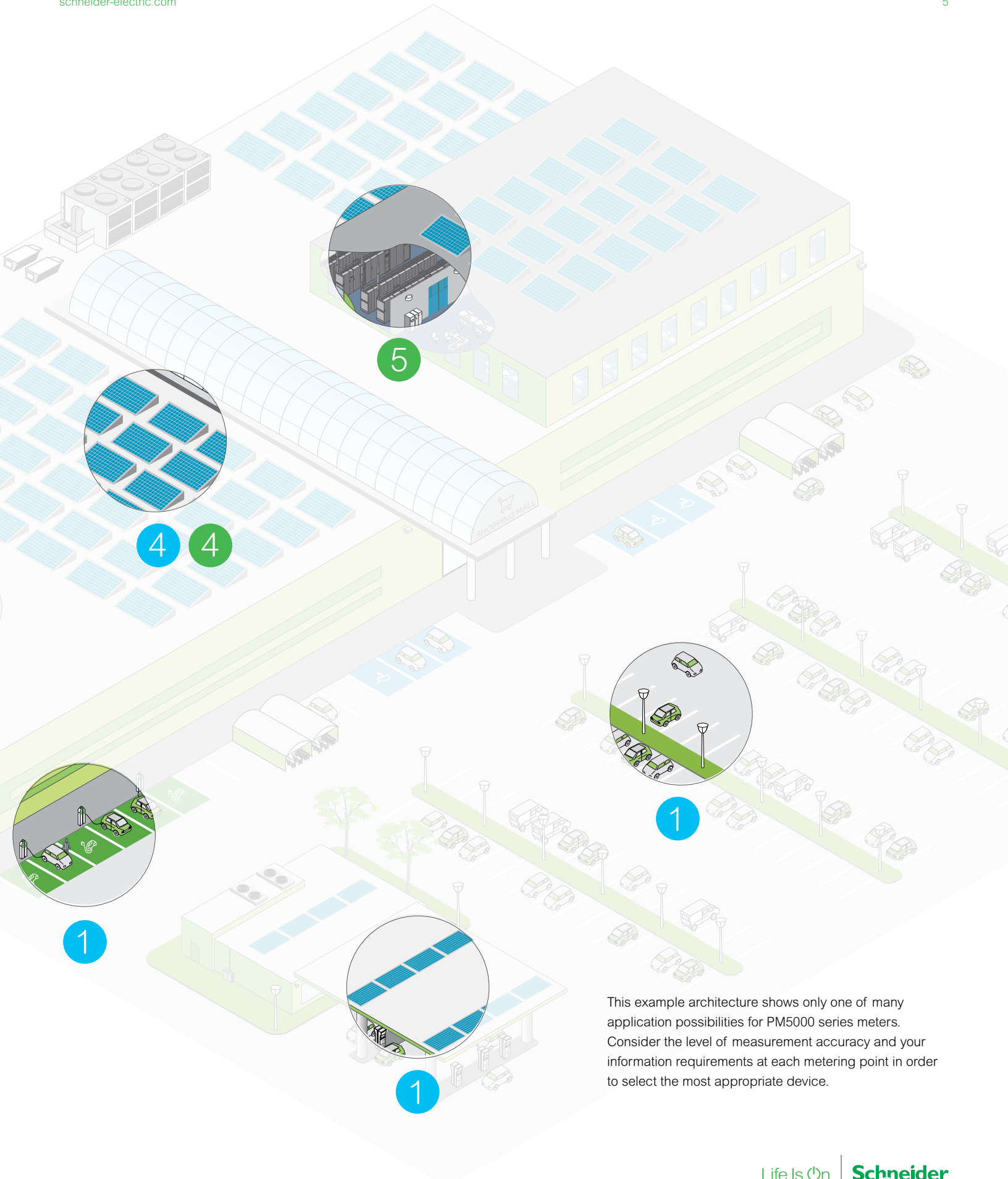- increase maintenance personnel productivity

Asset management

5 Optimize asset usage to boost efficiencies
- assess operational efficiency
- optimize preventive maintenance
- avoid overbuilding
- identify spare network capacity
- detect and mitigate power quality issues to increase equipment life

PM5500

PM5300

PM5100

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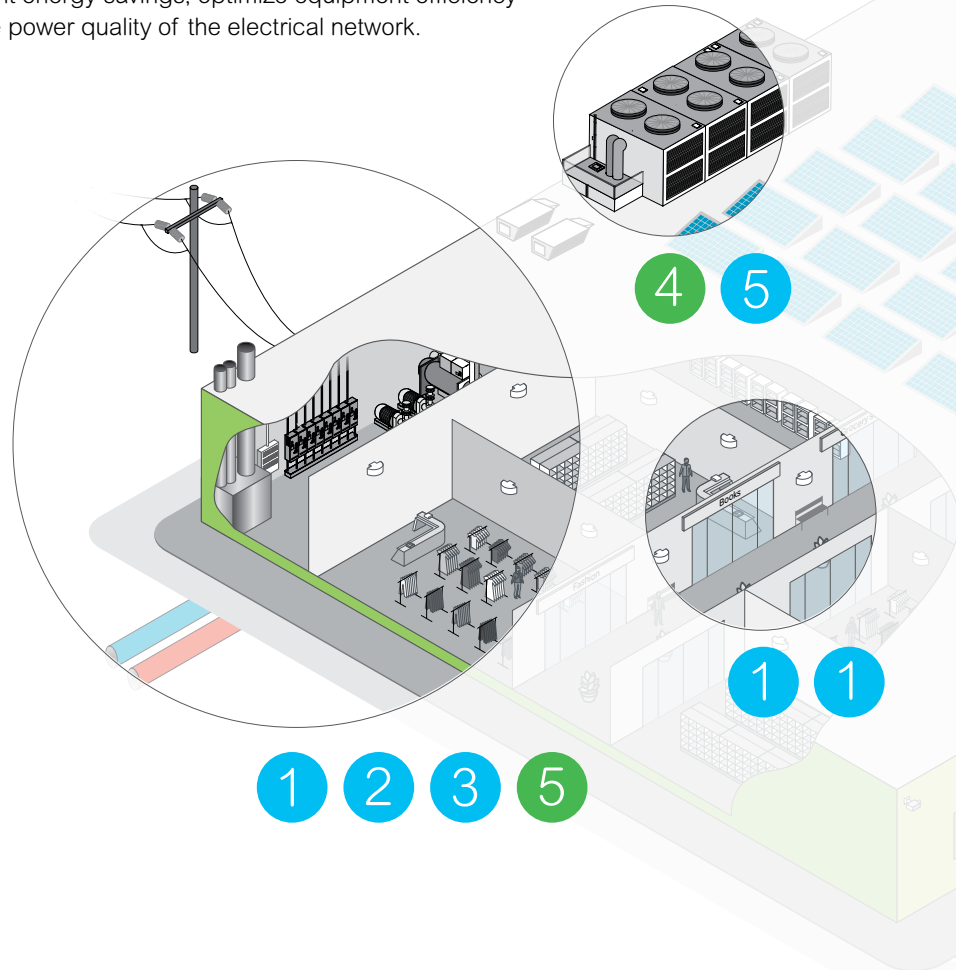
This example architecture shows only one of many application possibilities for PM5000 series meters. Consider the level of measurement accuracy and your information requirements at each metering point in order to select the most appropriate device.

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Key features and capabilities
for improved metering performance

Installation

- easy two-clip mounting in standard DIN 96 x 96 mm cutout
- compact 72 mm depth
- remote display option (PM5563)

Graphical display

- backlit, antiglare display provides easy reading in extreme lighting conditions and viewing angles
- intuitive menu-driven navigation, large characters, icons, and graphics offer easy access to important information in English, Spanish, French, Italian, German, Portuguese, Chinese, and Russian

Onboard web pages (PM5500 models)

- view real-time and logged information using any browser for easy information access without specialized software
- verify communications and easily troubleshoot issues

Battery backed real-time clock

- continues operation during power outages
- time-stamped alarms and events

Alarms

- combination of predefined and configurable alarms with 1s time stamping
- alarm log and date/time-stamped active and historical alarms
- program alarms to trigger digital outputs or mechanical relays (select PM5300 models)

Digital I/O

- monitor alarms, synchronize demand with external pulse, count pulses, calculate consumption from other WAGES meters
- use digital outputs to signal another device or software, or execute automatic actions such as control of basic equipment or alarm annunciation

Harmonics

- THD and individual harmonics to the 15th order for PM5100, 31st order for PM5300, and 63rd for PM5500

Back view

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Front view

Four current inputs (PM5500 models)

- measuring neutral current is essential for avoiding device overload and network outage (calculated values are not accurate at higher harmonics)
- calculate ground current in a 3-phase, 4-wire system to determine all the possible current values

Data logging and internal memory

- PM5500 models: up to 14 selectable parameters with configurable interval and duration (e.g., 6 parameters for 90 days @ 15 minute interval)
- PM5300 models: 2 parameters (kWh and kVAh) with configurable interval and duration for a total of 60 days @ 15 minutes

Extended voltage range

- direct connection up to 690 V L-L can help save panel space by dispensing with transformers for control power or voltage inputs

Multiple tariffs

- multiple tariffs offer the most flexibility with billing structures
- delivered and received real and reactive energy, apparent energy, input metering accumulated values, peak real power demand, peak reactive power demand

Gateway functionality

- Ethernet connectivity to devices through the RS-485 serial port
- use software to talk to devices on a daisy chain out of the host meter

BACnet/IP protocol (PM5500 models)

- simplifies meter integration into new and existing BMS systems
- simultaneous communication via BACnet and Modbus™
- BTL tested and approved

Dual-port Ethernet (PM5500 models)

- daisy chain meters together to minimize both the wiring and the need for external switches or hubs (single IP address per meter)

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Feature selection table

Features and options	PM5110	PM5330	PM5340	PM5560	PM5563
Installation					
Fast panel mount with integrated display	●	●	●	●	—
Fast installation, DIN rail mountable	—	—	—	—	●
Accuracy Class	Cl 0.5S	Cl 0.5S	Cl 0.5S	Cl 0.2S	Cl 0.2S
Display					
Backlit LCD, multilingual, bar graphs, 6 lines, 4 concurrent values	●	●	●	●	—
Remote display (optional)	—	—	—	—	●
Power and energy metering					
Three-phase voltage, current, power, demand, energy, frequency, power factor	●	●	●	●	●
Multitariff	—	4	4	8	8
Power quality analysis					
THD, thd, TDD	●	●	●	●	●
Harmonics, individual (odd) up to	15th	31st	31st	63rd	63rd
I/Os and relays					
I/Os	1DO	2DI/2DO	2DI/2DO	4DI/2DO	4DI/2DO
Relays	0	2	2	0	0
Alarms and control					
Alarms	33	35	35	52	52
Set point response time, seconds	1	1	1	1	1
Single and multicondition alarms	—	●	●	●	●
Boolean alarm logic	—	—	—	●	●
Communications					
Serial ports with Modbus protocol	1	1	—	1	1
Ethernet port with Modbus TCP protocol	—	—	1	2*	2*
Ethernet port with BACnet/IP Protocol*	—	—	—	2**	2**
Ethernet-to-serial gateway	—	—	—	●	●
Onboard Web server with Web pages	—	—	—	●	●

* Ability to simultaneously communicate via modbus TCP/IP and BACnet/IP

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

marketing@cedbayarea.com

CED Bay Area

www.cedbayarea.com

(408) 297-2200

Authorized Partner

Schneider Electric

295 Tech Park Drive
LaVergne, TN 37086
Tel: 615-287-3500

www.schneider-electric.us

April 2016

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