HDPM6000
Technical Data Sheet

The PowerLogic™ HDPM6000 sets a new standard for Power Quality Meters as both a standalone three-phase PQM and the foundation for an entire suite of devices: HDPM6000R, HDPM6000S, and HDPM6000B

The HDPM6000 is both a standalone 3-phase power quality meter (PQM) and the hub for Schneider Electric's branch circuit accessory modules (HDPM6000R, HDPM6000S, HDPM6000B). It monitors loads up to 4000 A with utility grade system accuracy, delivers a complete range of power quality metrics (vTHD, iTHD), the ambient temperature and humidity via add-on sensor and provides waveform capture functionality without the need for additional proprietary software. The HDPM6000 can also maintain multiple, concurrent sessions with EPMS, DCIM or BMS applications via the Modbus, SNMP and BACnet IP protocols. Dual Ethernet ports allow multiple HDPM6000 head units to be daisy-chained in a single run.

Thanks to open protocols, the HDPM6000 is easily integrated into any data center or building management information system. Gateways or additional hardware are not required and the platform offers most standard forms of data connectivity.

The on-board environmental communications port enables one-wire sensor to detect abnormal temperature and humidity conditions.

Applications

Ideal for large building applications such as data centers, industrial facilities, infrastructure and other similar environments.

Market solutions

Markets that benefit from a solution with PowerLogic HDPM6000 include:

- Data centers
- Industrial facilities
- Healthcare facilities
- Manufacturing

Benefits

- Modular platform approach provides scalability and minimizes integration costs, start up time and operational expenses.
- Provides power quality metrics down to the branch circuit allowing users to effectively monitor circuit loads, manage power consumption, allocate energy costs and maximize uptime across their facilities.
- Makes energy and power quality data immediately actionable and relevant to operational and sustainability goals

Competitive advantages

- Asset management
  - Identify increased harmonics in the rack servers to detect a potential disruption
  - Total Harmonics Distortion
  - Waveform capture
- Display and web page visualization
  - Optional touchscreen display accesses meter data
  - User-friendly web interface allows configuration of branch circuits and commissioning of meter system
- Data logging and software monitoring
  - Data logging and on-board memory storage
  - EcoStruxure™ PME and Power Operation integration
- Busway solution
  - Modular, distributed architecture meets data center requirements in an all-in-one solution

Power management solutions

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

HDPM6000

Measurements

- Accumulated Real Energy (kWh) per phase and total of all phases
- Accumulated Reactive Energy (kVARh) per phase and totals for all phases
- Accumulated Apparent Energy (kVAh) per phase and total of all phases
- Real (kW), Reactive (kVAR) and Apparent (kVA) Power Demand, per phase and total of all phases
- Instantaneous Real (kW), Reactive (kVAR) and Apparent Power (kVA), by phase and in total
- Current (amps) per phase and total of all phases
- Phase-to-phase voltage per phase and average of all phase pairs
- Phase-to-neutral voltage per phase and average of all phases
- Power factor per phase and average of all phases
- Frequency
- Voltage and current waveform capture
- Voltage and current harmonics
- Voltage and Current THD
- Total Demand Distortion (TDD)
- Voltage and current imbalance

Features guide

Web interface	For configuration and live data access
Supported protocols	Modbus TCP/IP, SNMP, BACnet IP
Data storage	Min. 8 GB SD card to store log data and waveform captures provided
Alarms	On-board user-configurable alarms and alerts
Power quality analytics	Waveform capture, voltage and current THD, voltage and current imbalance, TDD

Technical specifications

Electrical Characteristics	
Measurement voltage	Per UL 61010-1: up to 277 VAC L-N / 480 VAC L-L
	Per IEC 61010-1: up to 277 VAC L-N / 480 VAC L-L
	Single phase 2-wire plus ground, 3-wire plus ground or 4-wire plus ground
Specified accuracy range	108 VAC L-N / 187 VAC L-L to 332 VAC L-N / 576 VAC L-L
Maximum continuous overvoltage at voltage measurement inputs	580 VAC L-L
Input frequencies	50 / 60 Hz
24 VDC power supplies input voltage	100 to 240 VAC or 264 to 575 VAC to 24 VDC output
Measurement category	III
CT support	20 to 4000 A with internal burdened resister and 250 mV signal (no shorting blocks required)
CT options	Solid-core or split-core type current transformers with a maximum voltage of 480 V.
Supported protocols	
Maximum number of concurrent Modbus TCP connections	10

Technical specifications (cont.)

Measurement Accuracy

The HDPM6000 Head Unit Real Energy (kWh) meets the accuracy limits of ANSI C12.20 Class 0.5 and IEC 62053-22 Class 0.5S according to the following tests:

Measurement type	IEC 62053-22 2016 Class 0.5S	ANSI C12.20-2010 Class 0.5
Variation of Current	✓	NA
Equality of Circuits	✓	✓
Variation of Voltage	✓	✓
Variation of Frequency	✓	✓
Variation of Ambient Temperature	✓	✓
Load Performance	NA	✓
Variation of PF	NA	✓

Environmental Characteristics

Operating temperature	-20 to 60 °C (-68 to 140 °F)
Storage temperature	-40 to 85 °C (-40 to 185 °F)
Relative humidity	5 to 90% non-condensing
Maximum operating altitude	2,000 m (6,562 ft.)
Non-operating altitude	15,000 m (49,213 ft.)
Noise level	< 65 dba at six ft. (72 in.) from the HDPM6000
Mounting location	Not suitable for wet locations. For indoor use only.
Pollution degree	2

Standards

Description	General Standard	Reference Standard
Radiated emissions	IEC/EN 61326-1 :2020 (Industrial Electromagnetic Environment)	CISPR 11: Conducted emissions, AC port inc A1
Conducted emissions, AC port		
Conducted emissions, telecom port		
Radiated RF immunity		IEC/EN 61000-4-3
Fast transient bursts		IEC/EN 61000-4-4*
Surge		IEC/EN 61000-4-5
Conducted immunity		IEC/EN 61000-4-6
Power frequency magnetic field		IEC/EN 61000-4-8
Voltage dips and interruptions		IEC/EN 61000-4-11

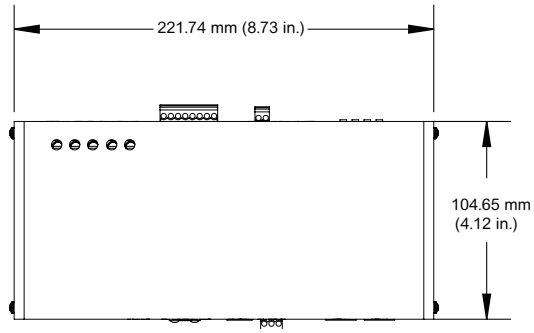
**The device may experience measurement accuracy deviation. Contact Schneider Electric technical support for more information.*

Waveform Capture Specifications

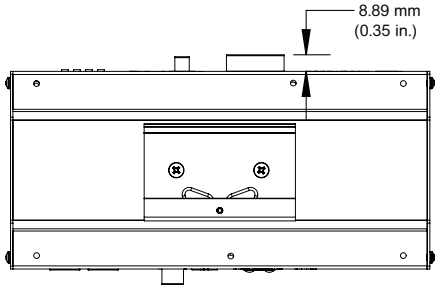
Modules	Frequency (Hz)	Number of samples per cycle	Number of cycles per current and voltage waveform	Portion of waveform capture that is pre-event
HDPM6000,HDPM6000R, HDPM6000S, HDPM6000S24	50	160	12.8	2/3
	60	133.3	15.3	2/3
HDPM6000B	50	160	6.4	½
	60	133.3	7.6	½

Dimensions

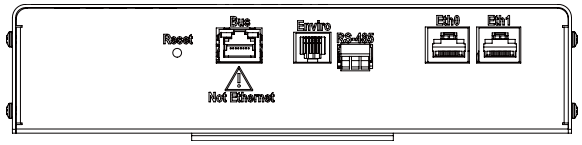
Top view



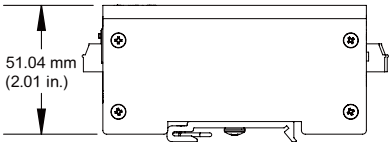
Bottom view



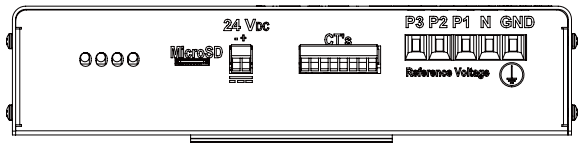
Left view



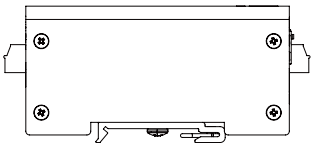
Front view



Right view



Back view



Note: Dimensions shown are within ±3.175 mm (±0.125 in.).

Commercial References

Model	Description
HDPM6000 Head Unit	
METSEHDPM6S480VC	HDPM 50 / 60 Hz up to 480 v
HDPM6000R Retrofit Modules	
METSEHDPM6R24	HDPMR 24 Ckt Module
METSEHDPM6R24WF	HDPMR 24 Ckt Module WFC
METSEHDPM6R42	HDPMR 42 Ckt Module
METSEHDPM6R42WF	HDPMR 42 Ckt Module WFC
METSEHDPM6R84	HDPMR 84 Ckt Module
METSEHDPM6R84WF	HDPMR 84 Ckt Module WFC
HDPM6000S Strip Modules	
METSEHDPM6S42	HDPM Strip Left and Right Set for 42 Ckts
METSEHDPM6S42W	HDPM Strip Left and Right Set for 42 Ckts WFC
METSEHDPM6S21R	HDPM Strip Right 21 Ckt
METSEHDPM6S21WF	HDPM Strip Right 21 Ckt WFC
METSEHDPM6S21L	HDPM Strip Left 21 Ckt
METSEHDPM6S21WH	HDPM Strip Left 21 Ckt WFC
HDPM6000B Busway Modules	
METSEHDPM6BT4	HDPM 4 Ckt Busway Module with Busway Tap Box mount
METSEHDPM6BT8	HDPM 8 Ckt Busway Module with Busway Tap Box mount
METSEHDPM6BT8DIN	HDPM 8 Ckt Busway Module with DIN mount
HDPM6000 Temperature and Humidity Sensors	
METSEHDPMTEMP08B	HDPM Temperature Sensor with 8ft Blue Cable
METSEHDPMTEMP08Y	HDPM Temperature Sensor with 8ft Yellow Cable
METSEHDPMTEMP12B	HDPM Temperature Sensor with 12ft Blue Cable
METSEHDPMTEMP12Y	HDPM Temperature Sensor with12ft Yellow Cable
METSEHDPMTEMP25B	HDPM Temperature Sensor with 25ft Blue Cable
METSEHDPMTEMP25Y	HDPM Temperature Sensor with 25ft Yellow Cable
METSEHDPMTEMPHM25B	HDPM Temperature and Humidity Sensor with 25ft Blue Cable
METSEHDPMTEMPHM25Y	HDPM Temperature and Humidity Sensor with 25ft Yellow Cable
METSEHDPMTEMPHM06B	HDPM Temperature and Humidity Sensor with 6ft Blue Cable
METSEHDPMTEMPHM06Y	HDPM Temperature and Humidity Sensor with 6ft Yellow Cable
HDPM6000 I/O Module	
METSEHDPM6IO	HDPM I/O Module
METSEHDPM6DI	Expanded Input Module 2.0, 24 Channel
HDPM6000 CT's	Refer to HDPM6000 CT manual for full list
HMI Displays	
METSEHDPM6HMI4	HDPM 4.3" Color Touchscreen HMI Display
METSEHDPM6HMI7	HDPM 7" Color Touchscreen HMI Display
Power Supplies	
METSEHDPM6PSV240*	HDPM PS 24 VDC 60 watt
METSEHDPM6PSV500*	HDPM PS 24 VDC 90 watt

**Phoenix Contact power supply.*

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