



Smart Power™ M5

5kW Multimode PV Power Conversion System

The Smart Power M5 photovoltaic power conversion system from Beacon Power is a newly engineered system designed specifically for grid-connect photovoltaic applications with battery backup. It offers high-efficiency multimode electronics and true uninterruptible power supply (UPS) capability in one integrated package.



The **Smart Power M5** is your best choice for reliable, efficient solar power conversion. Its unique hardware and software architecture enables safe, continuous operation, even in the event of grid outage. With the **Smart Power M5**

your solar panels continue to provide you with power – other inverters need to be reset – making it a truly uninterruptible power source.

The **Smart Power M5** comes as a fully integrated, single-box solution in an outdoor-rated enclosure housing the inverter, the battery charge-controller, and all necessary switchgear and ground fault protection. A single field-reprogrammable microcontroller provides complete system control. With simplified

programming and data retrieval, flexible operating modes, and intelligent user and wiring interfaces, the **Smart Power M5** is easy to install, set up, and operate.

M5 Features

- Highly accurate Maximum Power Point Tracking
- Patented anti-islanding technology
- RS485 serial communications link
- Front panel LED status display
- Integrated, outdoor-rated single-box solution
- Optional data monitor and PC interface



Smart Power M5 Power Conversion System

Electrical

Continuous power rating @ 40°C	5000 VA
PV open circuit voltage	120 VDC (max.)
PV input power	6000 W (max.)
PV operating range	48 - 120 VDC (nominal)
MPPT control range	50 - 85 VDC
DC input battery voltage	48 VDC (nominal)
DC input battery voltage range	44 - 60 VDC
Continuous charging rate	100 A (maximum, no-load)
Battery type	VRLA
Battery temp sensor	Included; 15' lead
AC output voltage	120 VAC (nominal)
AC output voltage range	106 - 132 VAC
Frequency	60 Hz (nominal)
Total harmonic distortion	Less than 3%
Efficiency	93% at 50% power output 90% at 5000 VA

General

Operating temperature range	-40 to +40°C; non-condensing
Environmental rating	Outdoor
Enclosure	Type 3R – rainproof/ sprinkler-proof
Mounting attitude	Vertical wall mount only
Certifications	UL 1741, CSA, FCC Class B- Part 15, IEEE 929, NEC 960
Warranty	5-year (limited)
Communications	RJ-11; RS485; proprietary serial protocol
Monitoring system	PC 200 software (optional)

Physical

Unit weight	120 lbs. (54.5 kg.)
Shipping weight	144.5 lbs. (65.5 kg.)
Unit dimensions	42"H x 16"W x 10"D (107cm H x 41cm W x 26cm D)
Shipping dimensions	47"H x 23"W x 17"D (119cm H x 58cm W x 43cm D)

Additional System Components

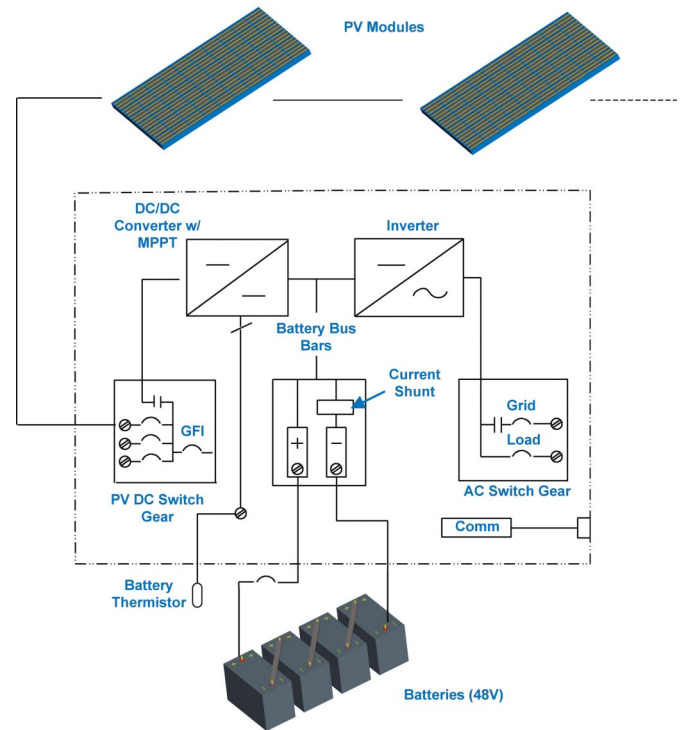
Battery breaker	Required (not included)
Battery box	Required (not included)
String combiner	Required (not included)
Autoformer for 240 VAC output	Optional

About Beacon Power

Beacon Power Corporation was established in 1997. We design, develop and deliver sustainable energy storage and power conversion solutions that provide reliable electric power for the renewable energy, telecom-communications, distributed generation and UPS markets.

Beacon Power Corporation
234 Ballardvale Street
Wilmington, MA 01887 USA

Tel: 1-888-938-9112 1-978-694-9121
Fax: 1-978-694-9127
info@beaconpower.com



The **Smart Power M5** is a truly integrated photovoltaic solution. The inverter, charge-controller, switchgear and ground fault protection are housed in one unit for ease of installation and operation.



www.beaconpower.com