

Power Plant Controller

For Solar, Storage & Hybrid Plants.
Maximum Flexibility.
Modular and Programmable.
O&M diagnosis.



Power Plant Controller

PPC PRO



MECHANICAL DATA	Material	Steel
	Installation	Wall or floor mounted ^[4]
	Cable entry	Bottom in & out
	Maintenance	Front Access Required
	Cooling	Forced Ventilation
	Weight ^[1]	85 kg / 188 lbs
	Dimensions (H x W x D) ^[1]	1000 x 845 x 300 (mm) / 40 x 33.27 x 12 (inches)
ELECTRICAL DATA	Maximum consumption	230 W
	AC Voltage input	230 Vac (IEC) [$\pm 10\%$], 120 Vac (UL) [$\pm 10\%$]
	DC Voltage input	120 - 290 Vdc
	Frequency input	50/60 Hz
COMMUNICATIONS	Compatible inverters	HEM, HEMK, PCSM, PCSK, Freemaq Statcom
	Communication protocols	Modbus TCP/ ADS for inverter control ^[2]
	Communication Switch	8 RJ45 Ports + 2 optional monomode or multimode FO transceivers
ENVIRONMENTAL CONDITIONS	Temperature range	From -25 °C to +50 °C
	Humidity	From 5% to 95 % non-condensing
	Protection degree	IP54 / NEMA 12
	Pollution degree	PD3
	Maximum altitude	4000 m / 13123 ft
	Impact Protection	IK10
STANDARDS	Marking	CE
	Standards	UL 6200 / IEC 61010-1 / UL 3141
FUNCTIONALITIES ^[3]	General	The PPC is the specific solution for photovoltaic (PV) plants. Its main function is to ensure that the plant accurately follows grid commands, complies with regulatory requirements, and maximizes energy production.
	Active power control	It measures and controls the active power (P) delivered by the plant in real time. It ensures compliance with grid codes, including P(f), ramps, and power limits.
	Reactive power control	It measures and controls the reactive power (Q) delivered by the plant in real time. It ensures compliance with grid codes, including reactive power control, power factor control, voltage control, Q(V) curve, Q(P) curve, ramp rate, statcom control, SQD.
	Diagnosis functions	Warning / fault messages real-time data monitoring, plant phasor operation diagrams. O&M Diagnostic.
	Others	It manages multiple solar inverters, distributing commands in an optimal and stable manner. Internal measurement and compatibility with power analyzers, P/Q plant limitations, hot standby redundancy, controlled plant start, individual inverter control, line drop compensation, security process when plant failures occur.
OTHERS	Web server	For local and remote monitoring / control
	Customizable solution	Flexible solution based on a powerful modular and programmable controller

NOTES

- [1] Weight and dimensions may vary depending on the specific project.
 [2] Consult with Power Electronics for further information.
 [3] Consult Power Electronics for functionalities and availability.
 [4] If floor installation is required, an optional plinth must be added.

Power Plant Controller

BPC PRO



MECHANICAL DATA	Material	Steel
	Installation	Wall or floor mounted ^[4]
	Cable entry	Bottom in & out
	Maintenance	Front Access Required
	Cooling	Forced Ventilation
	Weight ^[1]	85 kg / 188 lbs
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	Communication protocols	Modbus TCP/ ADS for inverter control ^[2]
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	Protection degree	IP54 / NEMA 12
	Pollution degree	PD3
	Maximum altitude	4000 m / 13123 ft
	Impact Protection	IK10
STANDARDS	Marking	CE
	Standards	UL 6200 / IEC 61010-1 / UL 3141
FUNCTIONALITIES ^[3]	General	The BPC manages battery-based energy storage (BESS) plants. Battery plants require more dynamic control strategies, as they can both generate and absorb energy. Control charge and discharge cycles to obtain the longest possible battery life. Grid Following operation mode.
	Active power control	It measures and controls the active power (P) delivered by the plant in real time. Advanced capabilities include closed-loop control and generation ramping. It manages the State of Charge (SOC), load balancing, and safety limits. It allows the execution of auxiliary services such as primary and secondary frequency regulation. Negative and positive active power setpoints.
	Reactive power control	It measures and controls the reactive power (Q) delivered by the plant in real time. It ensures compliance with grid codes, including reactive power control, power factor control, voltage control, Q(V) curve, Q(P) curve, ramp rate, statcom control, SQD.
	Diagnosis functions	Warning / fault messages real-time data monitoring, plant phasor operation diagrams. O&M Diagnostic.
	Others	It manages multiple storage inverters, distributing commands in an optimal and stable manner. Internal measurement and compatibility with power analyzers, P/Q plant limitations, hot standby redundancy, controlled plant start, individual inverter control, line drop compensation, security process when plant failures occur. It coordinates multiple PCS to ensure a fast and stable response.
	OTHERS	Web server
Customizable solution		Flexible solution based on a powerful modular and programmable controller

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Power Plant Controller

HPC PRO



MECHANICAL DATA	Material	Steel
	Installation	Wall or floor mounted ^[4]
	Cable entry	Bottom in & out
	Maintenance	Front Access Required
	Cooling	Forced Ventilation
	Weight ^[1]	85 kg / 188 lbs
	Dimensions (H x W x D) ^[1]	1000 x 845 x 300 (mm) / 40 x 33.27 x 12 (inches)
ELECTRICAL DATA	Maximum consumption	230 W
	AC Voltage input	230 Vac (IEC) [$\pm 10\%$], 120 Vac (UL) [$\pm 10\%$]
	DC Voltage input	120 - 290 Vdc
	Frequency input	50/60 Hz
COMMUNICATIONS	Compatible inverters	HEM, HEMK, PCSM, PCSK, Freemaq Statcom
	Communication protocols	Modbus TCP/ ADS for inverter control ^[2]
	Communication Switch	8 RJ45 Ports + 2 optional monomode or multimode FO transceivers
ENVIRONMENTAL CONDITIONS	Temperature range	From -25 °C to +50 °C
	Humidity	From 5% to 95 % non-condensing
	Protection degree	IP54 / NEMA 12
	Pollution degree	PD3
	Maximum altitude	4000 m / 13123 ft
	Impact Protection	IK10
STANDARDS	Marking	CE
	Standards	UL 6200 / IEC 61010-1 / UL 3141
FUNCTIONALITIES ^[3]	General	It simultaneously coordinates photovoltaic generation and storage capacity. It can operate with a single power setpoint at the POI or with separate setpoints for PV and BESS. It dynamically adjusts the contribution of each technology according to grid or customer needs. Grid Following mode.
	Active power control	It measures and controls the active power (P) delivered by the plant in real time. Advanced capabilities include closed-loop control and generation ramping. It manages the State of Charge (SOC), load balancing, and safety limits. It allows the execution of auxiliary services such as primary and secondary frequency regulation. Negative and positive active power setpoints.
	Reactive power control	It measures and controls the reactive power (Q) delivered by the plant in real time. It ensures compliance with grid codes, including reactive power control, power factor control, voltage control, Q(V) curve, Q(P) curve, ramp rate, statcom control, SQD.
	Diagnosis functions	Warning / fault messages real-time data monitoring, plant phasor operation diagrams. O&M Diagnostic.
	Others	It manages multiple inverters, distributing commands in an optimal and stable manner. Internal measurement and compatibility with power analyzers, P/Q plant limitations, hot standby redundancy, controlled plant start, individual inverter control, line drop compensation, security process when plant failures occur.
OTHERS	Web server	For local and remote monitoring / control
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Power Plant Controller

BPC PRO VISMA



MECHANICAL DATA	Material	Steel
	Installation	Wall or floor mounted ^[4]
	Cable entry	Bottom in & out
	Maintenance	Front Access Required
	Cooling	Forced Ventilation
	Weight ^[1]	85 kg / 188 lbs
	Dimensions (H x W x D) ^[1]	1000 x 845 x 300 (mm) / 40 x 33.27 x 12 (inches)
ELECTRICAL DATA	Maximum consumption	230 W
	AC Voltage input	230 Vac (IEC) [$\pm 10\%$], 120 Vac (UL) [$\pm 10\%$]
	DC Voltage input	120 - 290 Vdc
	Frequency input	50/60 Hz
COMMUNICATIONS	Compatible inverters	HEM, HEMK, PCSM, PCSK, Freemaq Statcom
	Communication protocols	Modbus TCP/ ADS for inverter control ^[2]
	Communication Switch	8 RJ45 Ports + 2 optional monomode or multimode FO transceivers
ENVIRONMENTAL CONDITIONS	Temperature range	From -25 °C to +50 °C
	Humidity	From 5% to 95 % non-condensing
	Protection degree	IP54 / NEMA 12
	Pollution degree	PD3
	Maximum altitude	4000 m / 13123 ft
	Impact Protection	IK10
STANDARDS	Marking	CE
	Standards	UL 6200 / IEC 61010-1 / UL 3141
FUNCTIONALITIES ^[3]	General	The BPC manages battery-based energy storage (BESS) plants. Battery plants require more dynamic control strategies, as they can both generate and absorb energy. Control charge and discharge cycles to obtain the longest possible battery life. Grid Forming mode (follow V and f references). Blackstart and grid synchronization capabilities.
	Active power control	It measures and controls the active power (P) delivered by the plant in real time. Advanced capabilities include closed-loop control and generation ramping. It manages the State of Charge (SOC), load balancing, and safety limits. It allows the execution of auxiliary services such as primary and secondary frequency regulation. Negative and positive active power setpoints.
	Reactive power control	It measures and controls the reactive power (Q) delivered by the plant in real time. It ensures compliance with grid codes, including reactive power control, power factor control, voltage control, Q(V) curve, Q(P) curve, ramp rate, statcom control, SQD.
	Diagnosis functions	Warning / fault messages real-time data monitoring, plant phasor operation diagrams. O&M Diagnostic.
	Others	It manages multiple storage inverters, distributing commands in an optimal and stable manner. Internal measurement and compatibility with power analyzers, P/Q plant limitations, hot standby redundancy, controlled plant start, individual inverter control, line drop compensation, security process when plant failures occur. It coordinates multiple PCS to ensure a fast and stable response.
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Power Plant Controller

HPC PRO VISMA



MECHANICAL DATA	Material	Steel
	Installation	Wall or floor mounted ^[4]
	Cable entry	Bottom in & out
	Maintenance	Front Access Required
	Cooling	Forced Ventilation
	Weight ^[1]	85 kg / 188 lbs
	Dimensions (H x W x D) ^[1]	1000 x 845 x 300 (mm) / 40 x 33.27 x 12 (inches)
ELECTRICAL DATA	Maximum consumption	230 W
	AC Voltage input	230 Vac (IEC) [$\pm 10\%$], 120 Vac (UL) [$\pm 10\%$]
	DC Voltage input	120 - 290 Vdc
	Frequency input	50/60 Hz
COMMUNICATIONS	Compatible inverters	HEM, HEMK, PCSM, PCSK, Freemaq Statcom
	Communication protocols	Modbus TCP/ ADS for inverter control ^[2]
	Communication Switch	8 RJ45 Ports + 2 optional monomode or multimode FO transceivers
ENVIRONMENTAL CONDITIONS	Temperature range	From -25 °C to +50 °C
	Humidity	From 5% to 95 % non-condensing
	Protection degree	IP54 / NEMA 12
	Pollution degree	PD3
	Maximum altitude	4000 m / 13123 ft
	Impact Protection	IK10
STANDARDS	Marking	CE
	Standards	UL 6200 / IEC 61010-1 / UL 3141
FUNCTIONALITIES ^[3]	General	It simultaneously coordinates photovoltaic generation and storage capacity. It can operate with a single power setpoint at the POI or with separate setpoints for PV and BESS. It dynamically adjusts the contribution of each technology according to grid or customer needs. Grid Forming mode (follow V and f references). Blackstart and grid synchronization capabilities.
	Active power control	It measures and controls the active power (P) delivered by the plant in real time. Advanced capabilities include closed-loop control and generation ramping. It manages the State of Charge (SOC), load balancing, and safety limits. It allows the execution of auxiliary services such as primary and secondary frequency regulation. Negative and positive active power setpoints.
	Reactive power control	It measures and controls the reactive power (Q) delivered by the plant in real time. It ensures compliance with grid codes, including reactive power control, power factor control, voltage control, Q(V) curve, Q(P) curve, ramp rate, statcom control, SQD.
	Diagnosis functions	Warning / fault messages real-time data monitoring, plant phasor operation diagrams. O&M Diagnostic.
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Power Plant Controller

SCPC PRO



MECHANICAL DATA	Material	Steel
	Installation	Wall or floor mounted ^[4]
	Cable entry	Bottom in & out
	Maintenance	Front Access Required
	Cooling	Forced Ventilation
	Weight ^[1]	85 kg / 188 lbs
	Dimensions (H x W x D) ^[1]	1000 x 845 x 300 (mm) / 40 x 33.27 x 12 (inches)
ELECTRICAL DATA	Maximum consumption	230 W
	AC Voltage input	230 Vac (IEC) [$\pm 10\%$], 120 Vac (UL) [$\pm 10\%$]
	DC Voltage input	120 - 290 Vdc
	Frequency input	50/60 Hz
COMMUNICATIONS	Compatible inverters	HEM, HEMK, PCSM, PCSK, Freemaq Statcom
	Communication protocols	Modbus TCP/ ADS for inverter control ^[2]
	Communication Switch	8 RJ45 Ports + 2 optional monomode or multimode FO transceivers
ENVIRONMENTAL CONDITIONS	Temperature range	From -25 °C to +50 °C
	Humidity	From 5% to 95 % non-condensing
	Protection degree	IP54 / NEMA 12
	Pollution degree	PD3
	Maximum altitude	4000 m / 13123 ft
	Impact Protection	IK10
STANDARDS	Marking	CE
	Standards	UL 6200 / IEC 61010-1 / UL 3141
FUNCTIONALITIES ^[3]	General	The SCPC PRO is a plant controller model specifically designed for photovoltaic self-consumption systems. It is a variant of the PPC PRO equipped with specialized software to ensure that the energy generated is used within the installation without being fed back into the grid.
	Active power control	It measures and controls the active power (P) delivered by the plant in real time to ensure that the generated energy is used on-site without being fed back into the grid. It improves operational stability in the face of rapid changes in consumption. Advanced capabilities include closed-loop control and generation ramping.
	Reactive power control	It measures and controls the reactive power (Q) delivered by the plant in real time to ensure that the generated energy is used on-site without being fed back into the grid.
	Diagnosis functions	Warning / fault messages real-time data monitoring, plant phasor operation diagrams. O&M Diagnostic.
	Others	Internal measurement and compatibility with power analyzers, P/Q plant limitations, hot standby redundancy, controlled plant start, individual inverter control, line drop compensation, security process when plant failures occur.
OTHERS	Web server	For local and remote monitoring / control
	Customizable solution	Flexible solution based on a powerful modular and programmable controller

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