

POWER PLANT CONTROLLER

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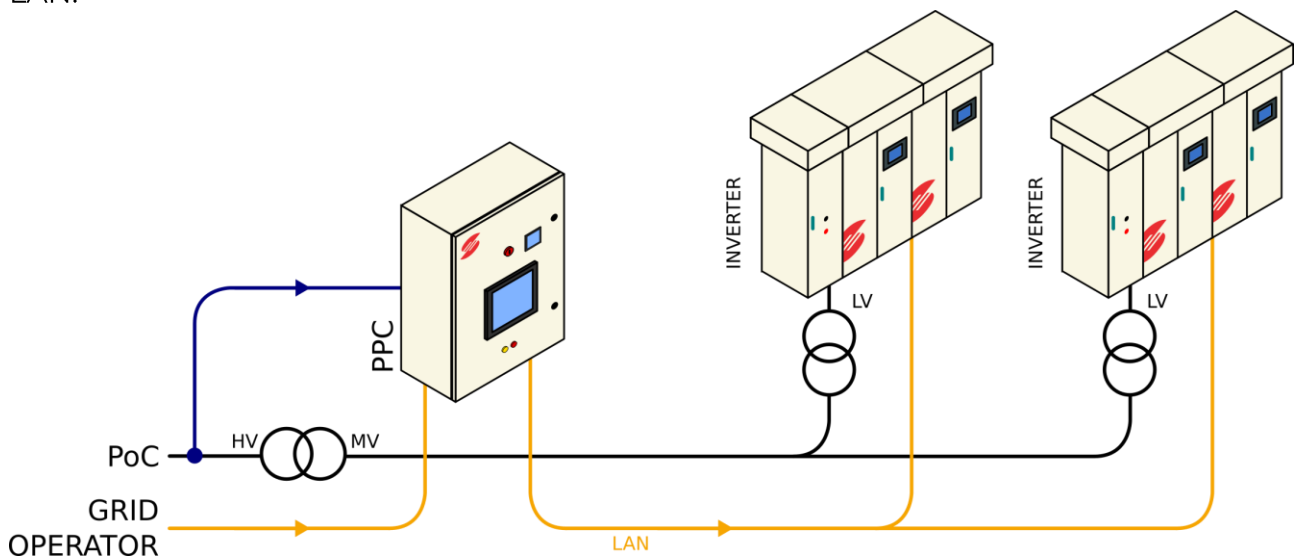
PRODUCT DESCRIPTION

Designed for utility-scale power plants, Santerno Power Plant Controller is the reference solution for easy and trouble-free integration of the power plant into the distribution grid.

Thanks to its intrinsic flexibility, Santerno Power Plant Controller can be configured for most of the protocols used by the grid operators to issue setpoints and control active and reactive energy produced by the power plant.

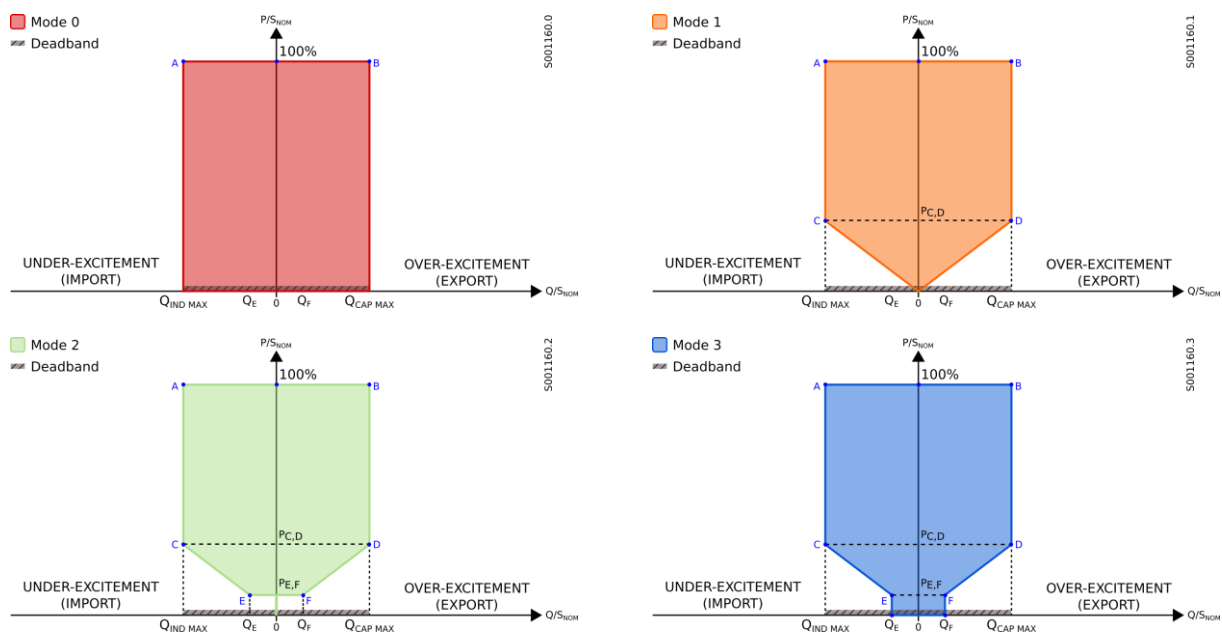
Installation requires an external power supply, current and voltage sensors at the point of connection (or, optionally, an external Ethernet-enabled power meter) and an Ethernet connection to the plant LAN.

Point of connection is then monitored and the observed variables of choice regulated based on the grid operator setpoints by issuing commands to the inverters via the plant LAN.



Main features	
Control modes	P/Q active and reactive power P/cos ϕ active power and cos ϕ P/V active power and voltage P(f) over-frequency active power curtailment
Control loop execution time	1 s
Operating area	4 modes 1% minimum active power deadband
Further features	Stop controller
Control unit	Linux embedded PC
Internal power meter	Class 0.5S (kWh) according to EN62053-22 Class C (kWh) according to EN50470- Class 2 (kVARh) according to EN62053-2

External power meter	Ethernet-enabled, Modbus TCP power meters
Touchscreen display	12.1" 1024 x 768
Front panel circuit breaker	Yes
Front panel power indicator	Yes
Front panel alarm indicator	Yes, user-programmable
Digital inputs	1 for external stop controller 7 general purpose
Digital outputs	1 for front panel alarm indicator 7 general purpose
Web interface	Yes
Communication protocol	Modbus TCP

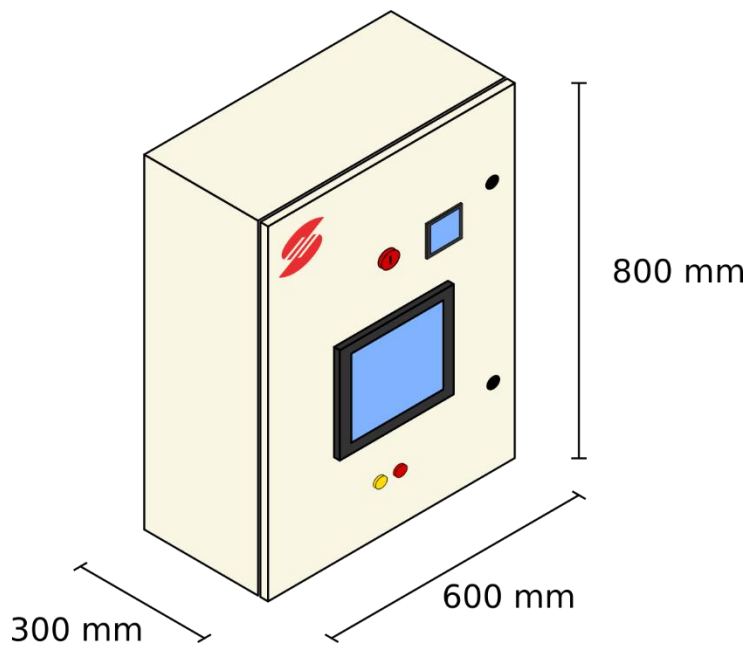


Electrical specifications

Power supply	120 – 230 V _{AC} ±15% (100-264 V _{AC})
Power consumption	120 W
Power supply circuit breaker	Yes
Networking – Ports	4 10/100 Ethernet RJ 45
Metering – Accuracy	Class 0.5S (kWh) according to EN62053-22 Class C (kWh) according to EN50470- Class 2 (kvarh) according to EN62053-2
Metering – Voltage inputs	3 P + N (4 terminals)
Metering – Voltage inputs rating	400 V _{LN} (160-480 V _{LN} max) 690 V _{LL} (277-830 V _{LL} max)
Metering – Current inputs	3 (6 terminals)

Metering – Current inputs rating	5 A (6 A max)
I/O – Digital inputs	8
I/O – Digital inputs rating	30 V _{DC} (ON = 10 to 30 V _{DC})
I/O – Outputs	8 (SPDT)
I/O – Outputs rating	3 A / 250 V _{AC} 3 A / 30 V _{DC} resistive load 0.8 / 250 V _{AC} 1.5 A / 30 V _{DC} inductive load
I/O – Outputs switching power	1000 VA 150 W resistive load 500 VA 150 W inductive load
I/O – Outputs switching current	5 A

Global specifications		
Operating temperature	-20 °C	50 °C
Operating humidity	0%	95%
Installation	Indoor, 1400 m a.s.l. max, wall-mounted	
Ingress Protection	IP44	
Cooling	Natural ventilation	
Dimensions	800 x 600 x 300 mm	
Weight	54 kg	





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