

CSS – OD

Battery Cabinet 102.4 kWh / Battery Inverter 50 kW

CSS-OU-20 / PCS050

Preliminary Datasheet⁽¹⁾



Energy Storage Solution for Commercial and Industrial Sites

Easy Installation and Deployment

- / Pre-assembled and factory-tested cabinet for quick setup
- / Compact cabinet that can be installed indoors or outdoors
- / Customize your AC-Coupled sites with up to 2 batteries per inverter, and scale with up to 20 inverters per site

Optimized Storage Savings

- / Powered by the SolarEdge ONE optimization system that constantly manages site energy production, storage and consumption
- / Supports multiple optimization modes such as: self-consumption, peak shaving, and tariff optimization*
- / Supports microgrid applications**

Built-in Safety and Resilience

- / Integrated fire detection and double fire suppression mechanism
- / Built-in safeguards: earth fault, leakage fault, and integrated DC & AC surge protection
- / Reverse polarity protection
- / Dual-string design for higher resiliency
- / Multi-sensor security: flood, door, and heat sensors

Single Trusted Vendor

- / One system for PV and storage from a single vendor
- / One source for warranty, support, and training
- / 10-year warranty protection

* Tariff optimization – coming soon.

** Microgrid functionality requires the separately purchased SolarEdge Commercial Backup Interface. Available in select countries only.

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Battery Cabinet 102.4 kWh

CSS-OU-20

Preliminary Specifications⁽¹⁾

BATTERY CABINET 102.4 kWh	CSS-OU-20	Units
TECHNICAL SPECIFICATIONS		
Cell Chemistry	LFP	
Total Battery Capacity	102.4	kWh
Usable Battery Capacity	92.16	kWh
Battery Module Total Capacity	5.12	kWh
Number of Modules ⁽²⁾	10 + 10	
Maximum C-Rate (charge / discharge)	0.5	C-rate
Operating Voltage	448 – 565	Vdc
AC Auxiliary Input ⁽³⁾	230 / 50	Vac / Hz
MECHANICAL SPECIFICATIONS		
Battery Cabinet Dimensions (W x D x H)	1100 x 1100 x 2380	mm
Battery Cabinet Weight	1433	kg
IP Protection	IP54	
Corrosion Protection	C4	
Cooling Method	Built-in HVAC	
STANDARD COMPLIANCE		
Safety	IEC 62619	
Ingress Protection	IEC 60529	
Transportation	UN 38.3	
Emissions	IEC 61000-6-2, IEC 61000-6-4	
ENVIRONMENTAL SPECIFICATIONS		
Operating Temperature ⁽⁴⁾	(-)20 – (+)45	°C
Operating Humidity	5 – 95 (non-condensing)	%
Maximum Operating Altitude	3000	m
WARRANTY⁽⁵⁾		
System	10 years	
Performance	6000 cycles or 10 years up to 70% SoH	

(1) Specifications and information presented in this preliminary datasheet are subject to extended validation and change. This preliminary datasheet specifies features but cannot promise to deliver any specific characteristics. No warranty, implied or explicit, is given regarding delivery, accuracy, fitness or performance. SolarEdge reserves the right to modify its technical information and product specifications at any time without notice.

(2) Structured in two clusters providing 1 + 1 redundancy topology.

(3) Required for HVAC.

(4) Power derating may apply in the range of -20 to -10 °C.

(5) For warranty details, conditions and exclusions, please refer to the SolarEdge Limited Product Warranty.

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Battery Inverter 50 kW

PCS050

Preliminary Specifications⁽¹⁾

BATTERY INVERTER 50 kW ⁽⁶⁾	PCS050	Units
AC SPECIFICATIONS (ON GRID / BACK UP⁽⁷⁾)		
Rated AC Active Power Output	50	kW
Maximum AC Apparent Output Power	55	kVA
Maximum Continuous Output Current (per phase)	80	Aac
Maximum Inverter Efficiency	97.5%	
AC Output Voltage – Line to Line / Line to Neutral (Nominal)	400 / 230	Vac
AC Output Voltage – Line to Line / Line to Neutral (Range) ⁽⁷⁾	340 – 440	Vac
AC Frequency	50 / 60 ± 5	Hz
AC Output Line Connections ⁽⁹⁾	3W + PE / 4W + PE	
Total Harmonic Distortion	< 3	%
Power Factor Range	-1 to 1	
Overall System Transition Time	< 20	mS
DC SPECIFICATIONS		
Maximum DC Input Power	55	kW
Maximum DC Current	55 x 2	Adc
Number of DC Input Interfaces	2	
Maximum Paralleled Battery Cabinets on Battery Inverter	2	
SAFETY FEATURES		
Reverse Polarity Protection	Yes	
Grid Monitoring	Yes	
Earth Fault Protection	Yes	
Earth Leakage Protection	Yes	
DC Surge Protection	Type II integrated	
AC Surge Protection	Type III integrated	
COMMUNICATION		
Communication Ports	RS-485 / CAN	
MECHANICAL SPECIFICATIONS		
Inverter Dimensions (W x D x H)	650 x 715 x 325	mm
Inverter Weight	75	kg
IP Protection	IP65	
Cooling Method	Air Cooling	
STANDARD COMPLIANCE		
Safety	IEC 62109-1, IEC 62109-2	
Emissions	IEC 61000-6-4, IEC 61000-3-11, EN/IEC 61000-3, CISPR 11	
Grid Connection	NRS 097-2-1:2017 Edition 2.1, NRS 097-2-1:2023 Edition 3, CEI-016, CEI-021, VDE AR-N-4105, VDE AR-N-4110, IEC/EN 50549-1/2, AS/NZS 4777.2, G99	
ENVIRONMENTAL SPECIFICATIONS		
Operating Temperature	(-)20 – (+)45	°C
Operating Humidity	5 – 95 (non-condensing)	%
Maximum Operating Altitude	3000	m
WARRANTY⁽¹⁰⁾		
System	10 years	

(6) It is required to have an AC coupled SolarEdge PV system in the site.

(7) Backup is available with complementary SolarEdge Commercial Backup Interface in selected countries only. For more details, please contact your SolarEdge sales representative.

(8) This range is applicable only to on-grid mode. During backup, the output voltage is 400V.

(9) Compatible both with Delta/WYE grid types. When connected in backup topology with SolarEdge Commercial Backup Interface, only 3W + PE are used.

(10) For warranty details, conditions and exclusions, please refer to the SolarEdge Limited Product Warranty.