
PCS100 UPS-I Technical Specification for 900 kVA 208 V System



Industries in developed countries, even modern power networks, are not immune to voltage problems.

Facilities are continually faced with the need to maximize the productivity of their operations and it is essential to have clean continuous power to avoid any major losses.

1. Introduction

This document provides technical specification for 2UCP120111 PCS100-12-208/50-06-R-EC03+FS4 (Tender number 2UCD220249-T). This system utilize a dedicated transformer at 208 V therefore can support 900 kVA of load at 208 V.

2. Technical data

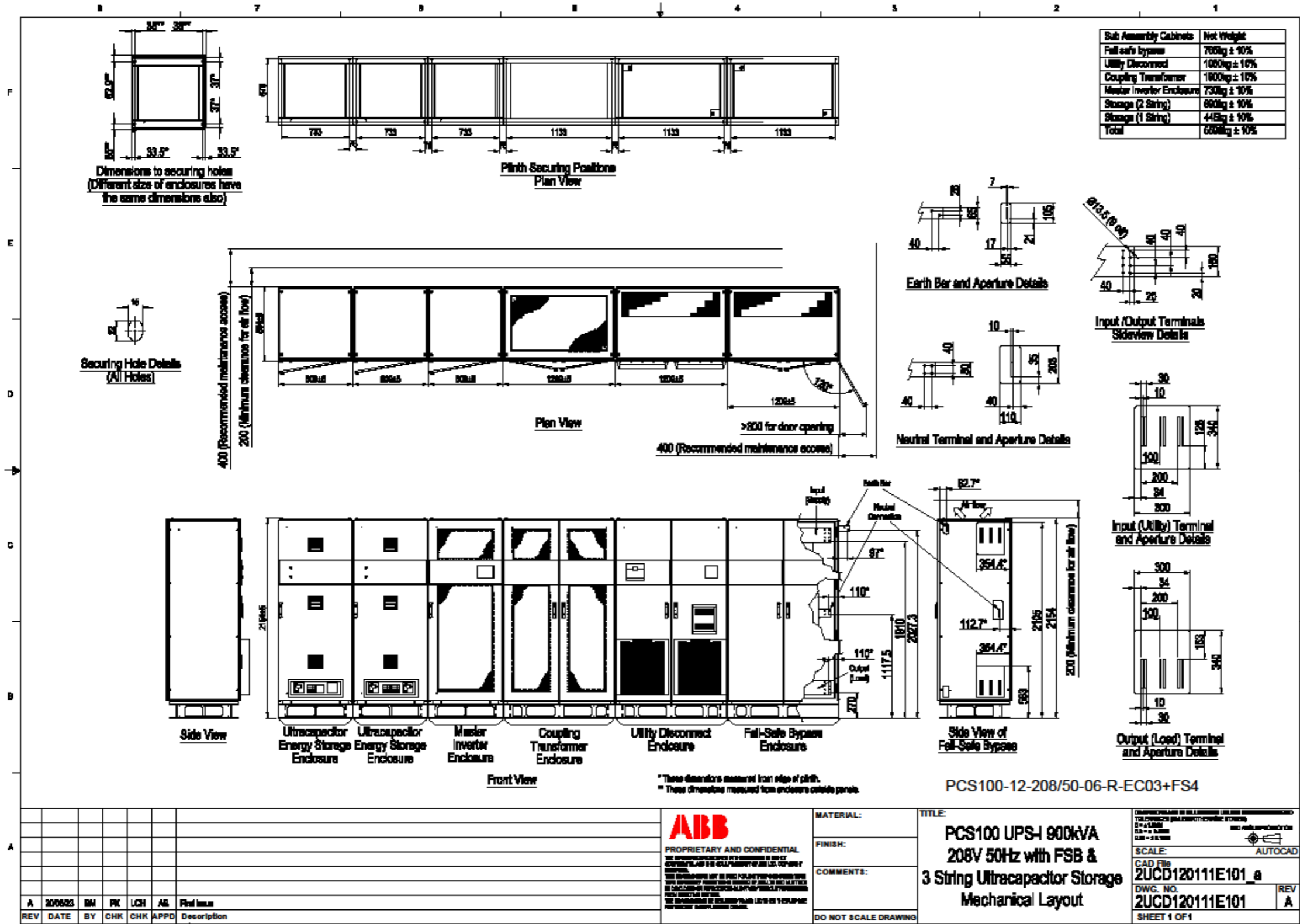
Utility - Input	
Rated voltage	208 V
Voltage tolerance	± 10%
Nominal supply frequency	50 or 60 Hz
Frequency tolerance	± 5 Hz
Maximum continuous voltage	110%
Power system	3 phase + Neutral (4-Wire) Centre ground referenced (TN-S)
Overvoltage category	III
Fault capacity / Withstand period	65 kA / 120 ms
Efficiency	98.6%
Overload capacity	120% for 60 s
	150% for 30 s
	200% for 10 s
	300% for 5 s
	once every 10 minutes
Load - Output	
Rated power	900 kVA
Displacement power factor of connected load	0.5 lagging to 0.9 leading
Crest factor	2.0
Maximum allowed motor load	25% of rated kVA
Overload capacity - inverter	110% for 30 s
Inverter Supply	
Transfer time	≤ 1.8 ms (typical)
Voltage settling time	≤ 5 ms (typical)
Minimum output voltage	> 95% at end of discharge
Voltage distortion	< 2.5% THDv for linear loads
Voltage unbalance (negative / positive sequence)	< 3% for 100% unbalanced loads
Fault capacity (short circuit)	120% of rated current
Fail-Safe Bypass	
Type	Integrated normally closed contactors
Overload capacity	150% for 500 s
	200% for 300 s
	300% for 120 s
	500% for 30 s
	once every 30 minutes
Closing time	20 ms
Cooling	Convection

Coupling Transformer	
Capacity rating	990 kVA for 30 s
Type	Dry
UL insulation class	N (200 °C)
Design Temperature	Temperature rise 60 °C for short-term full load operation
Typical impedance	8%
Energy Storage - Ultracapacitors	
System DC nominal voltage	750 V _{DC}
Discharging voltage range	750 V _{DC} to 554 V _{DC}
Overload capacity	100%
Rated power	900 kW
Autonomy period	2 s
Operating temperature	15 to 25 °C recommended
Design life	15 years at 25 °C
Cycle life	> 500,000
Recharge time	< 45 s
Event Recording	
Measurement method	Line to line
Sample time	125 μs
Resolution of time stamp in event log	10 ms
Measurement type	Half-cycle RMS according to IEC 61000-4-30
Environmental	
Operating temperature range	0 °C to 40 °C
Operating altitude	< 1000 m without derating
Capacity derating with altitude	1% every 100 m above 1000 m 2000 m maximum
Cooling	Forced ventilation
Transformer cooling	Natural convection
Humidity	< 95%, non-condensing
Pollution degree rating	2
Noise	< 75dBA @ 2 m
Enclosure	
Enclosure rating	IP20 / NEMA 1
Material	Electro-galvanized steel
Panel thickness	
Side and rear	1.5 mm
Door	2 mm
Finish	Standard epoxy-polyester powder coating textured finish
Color	RAL7035
Enclosure access	Hinged doors with key lock
User Interface	
User interface	8.4" color touch panel, multilingual
Touch panel	Full parameter control, system event log, voltage event log
Control inputs	Start / Stop / Reset digital inputs
Control outputs	Run, warning and fault relays
Communication	Ethernet Modbus TCP
Standards and Certifications	
Quality	ISO 9001
Environmental	ISO 14001
Marking	CE
Safety	IEC 62040-1

Electromagnetic compatibility	IEC 62040-2, Category C3
Performance	IEC 62040-3, VFD SX 211 \leq 450 kVA

3. Mechanical drawing

900 kVA PCS100 UPS-I at 208 V



4. Additional documents

Document Number	Document Name
2UCD120000E001	PCS100 UPS-I User Manual
2UCD120000E002	PCS100 UPS-I Technical Catalogue
2UCD120000E004	PCS100 UPS-I Installation Manual
2UCD120000E413	PCS100 UPS-I Commissioning Check List 2200 4200A