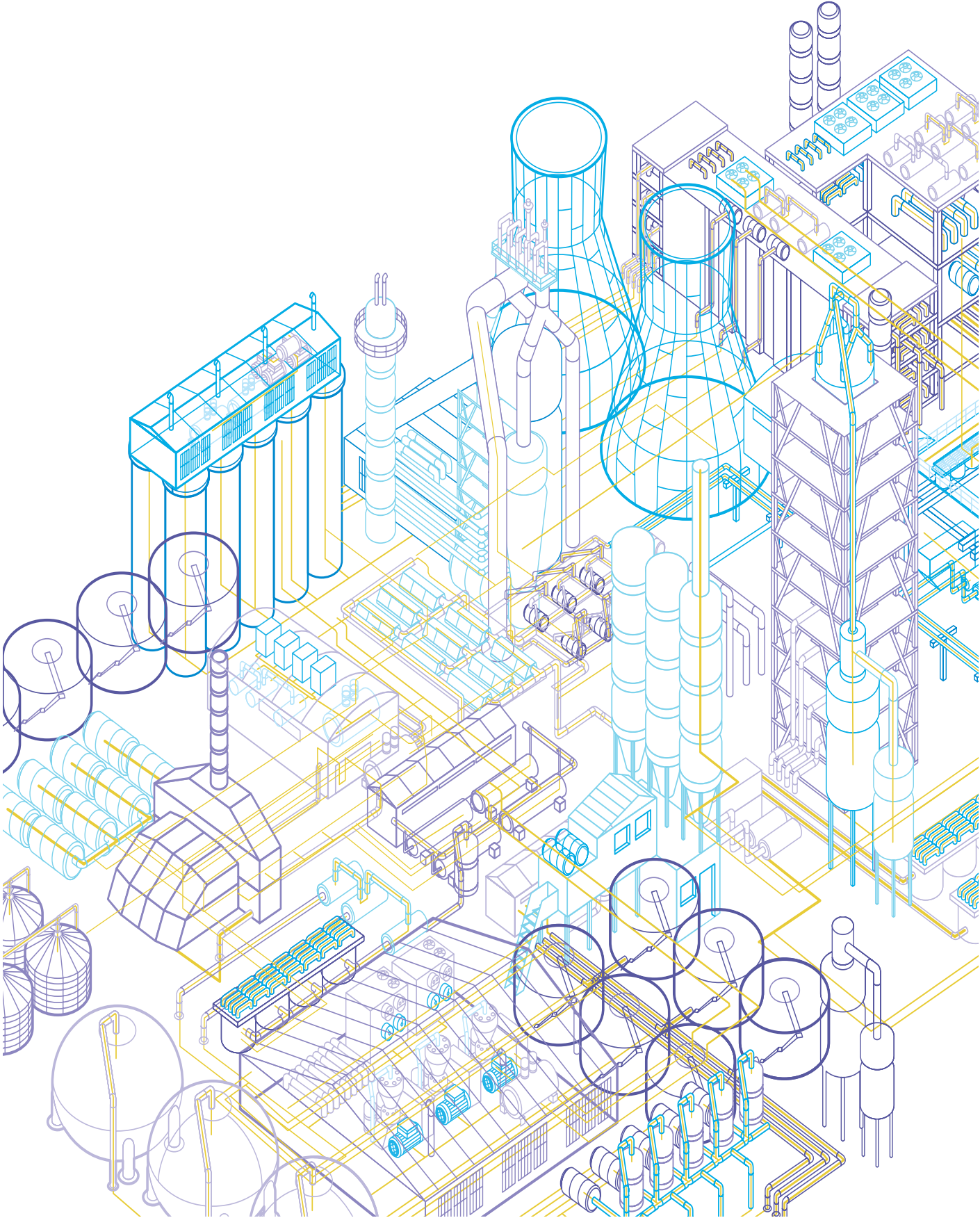


LV Power Converter Products
PCS100 UPS-I, 150kVA to 2400kVA
UPS Industrial

Ideal where very deep sags or short term power outages are a problem



PCS100 UPS - I, 150kVA to 2400kVA

Network voltage sags and surges along with short outages are common and often cause electronics to self protect by switching off. When this occurs in a critical control operation it can cause the complete shutdown of a facility. The results of a shutdown may be considerable - eg: product loss, damaged equipment, and lost production time. The PCS100 UPS-I is an ideal solution where very deep sags or short term power outages are a problem.

The ABB PCS100 UPS-I is a short time rated energy storage system, coupled to an inverter to allow the downstream load to remain operational through short outages and very deep sags of up to 30 seconds duration.

The actual ride through time is dependent on the load and the capacity of the storage system, which can be batteries or super capacitors. The PCS100 UPS-I operates with online performance due to the revolutionary fast utility disconnect. The modular inverter construction and fail safe electromechanical bypass provides exceptional reliability and system availability.



PCS100 UPS-I semiconductor plant protection

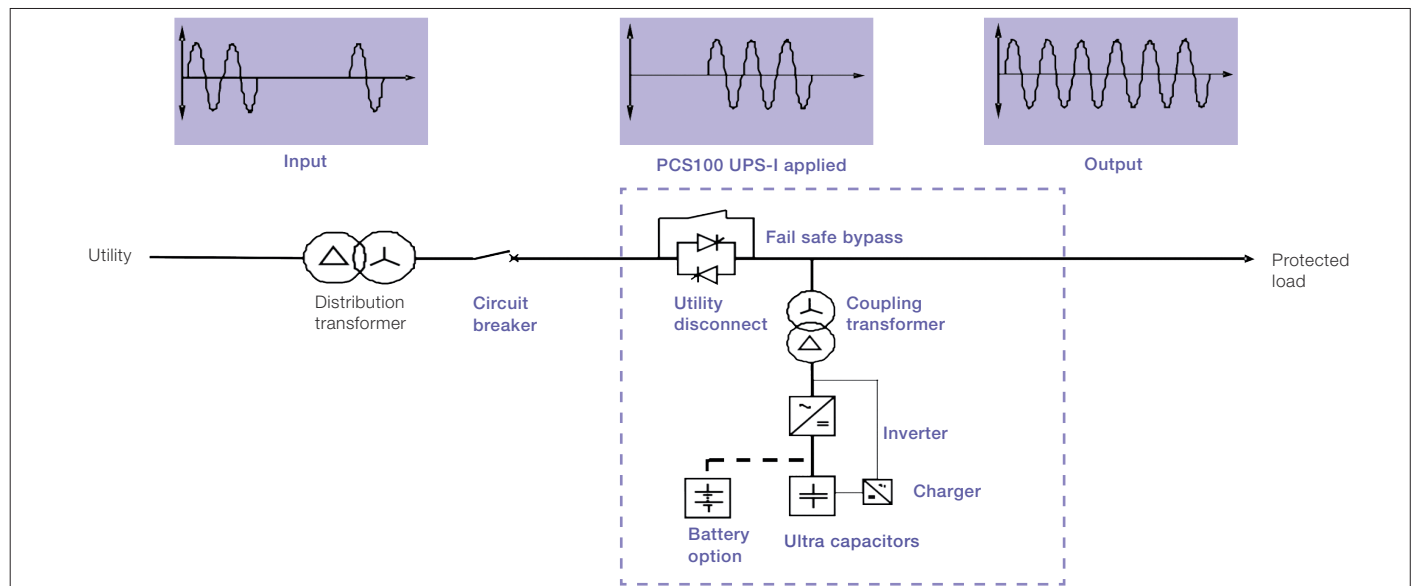
User benefits

- Provides protection against short outages and very deep sags
- Protects against utility recloser events
- Provides back-up during generator start-up following a utility supply failure
- Allows process loads to ride through common power problems increasing yield, reducing product wastage and improving productivity

Features

- Very high efficiency (typically 99%)
- Suited to industrial loads (motors, drives, transformers, tools)
- Modular design providing high reliability and short repair times
- Very high fault capacity compared with standard UPS solutions
- Extensive range of voltages available
- Small footprint design
- Custom storage solutions available
- Maintenance bypass option available for larger models
- Not just another data centre UPS but a product designed for the much more demanding requirements of industrial applications

Single line diagram



Technical specifications

Input	
Supply voltage 50Hz	208V to 480V
Supply voltage 60Hz	208V to 480V
Power system type	TN-S
Over voltage category	III
Fault capacity	Model dependent
Efficiency (208-220V)	> 98%
Efficiency (400-480V)	> 99%
Output	
Rating	150kVA to 2400kVA
Displacement power factor	~0.8 to ~0.9
Utility disconnect	
Upstream series protection	Customer supplied
Parallel bypass	Fail safe
Overload capacity	150% for 30 sec
Fault capacity	2000% for 10 ms
Inverter supply	
Transition disturbance	≤ ¼ cycle
Min output voltage	90% @ end of discharge
Fault capacity	1.5pu

Environmental	
Enclosure IP rating	IP20
Standard colour	RAL 7035
Pollution degree rating	2
Minimum operating temp	0° C, 32° F
Maximum operating temp	40° C, 104° F
Ultra capacitor & battery rec temp	15-25° C, 59-77° F
Humidity	< 95% non-condensing
Energy storage	
DC nominal voltage	750Vdc
Ride through time	Ultra cap / 3 sec @ 0.8 PF (typical)
	Battery / 30 sec @ 0.8 PF (typical)
Interface	
User interface	Graphic display module touch panel
Digital I/O	3 input, 4 outputs
Serial coms	Ethernet & modbus TCP (Monitoring only)
Standards	
Conformance	EN50178
Safety, EMC	Designed to CE mark requirement

2UCD301083-P_g

Physical dimensions

The PCS100 UPS-I consists of 5 sub-assemblies: 1. Fail safe bypass, 2. Utility disconnect, 3. Inverter, 4. Coupling transformer, 5. Energy storage

kVA	Quantity of Cabinets														Storage option	
	480V (without storage)				380/400/415V (without storage)				208/220V (without storage)				Super caps (3s)	Battery (30s)		
	Fail safe bypass	Utility disconnect	Coupling transformer	Inverter	Fail safe bypass	Utility disconnect	Coupling transformer	Inverter	Fail safe bypass	Utility disconnect	Coupling transformer	Inverter				
150	1 x A				1 x A				1 x A				1 x A	1 x A		
300	1 x B				1 x B				1 x B				1 x A	1 x A		
450	1 x A		1 x A		1 x A		1 x A		1 x A	1 x C		1 x A		1 x A	2 x A	
600	1 x A		1 x A		1 x A		1 x A		1 x A	1 x C		1 x A		1 x A	2 x A	
750		1 x B		1 x A	1 x A*	1 x C	1 x A	1 x A	1 x C	1 x C	1 x A	1 x A		2 x A	3 x A	
900	1 x A	1 x C	1 x D	1 x A	1 x A*	1 x C	1 x D	1 x A	1 x C	1 x C	1 x D	1 x A		2 x A	3 x A	
1200	1 x A	1 x C	1 x D	2 x A	1 x C*	1 x C	1 x D	2 x A	1 x C	1 x C	1 x D	2 x A		2 x A	4 x A	
1500	1 x C	1 x C	1 x E	2 x A	1 x C*	1 x C	1 x E	2 x A	1 x C	1 x C	1 x E	2 x A		4 x A	6 x A	
1800	1 x C	1 x C	1 x E	2 x A	1 x C*	1 x C	1 x E	2 x A						4 x A	6 x A	
2400	1 x C	1 x C	1 x E	4 x A	1 x C*	1 x C	1 x E	4 x A						4 x A	8 x A	

* The Fail safe bypass is an option and must be ordered separately.

Cabinet dimensions

Type	W	D	H
A	809mm / 31.9"	804mm / 31.7"	2154mm / 84.8"
B	1209mm / 47.6"	804mm / 31.7"	2154mm / 84.8"
C	1209mm / 47.6"	804mm / 31.7"	2154mm / 84.8"
D	809mm / 31.9"	1204mm / 47.4"	2154mm / 84.8"
E	1609mm / 63.3"	1204mm / 47.4"	2154mm / 84.8"

All specifications are subject to change without prior notice.

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