BUYLOG SECTION 18

Power conditioning

Section Updated 10/2025

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PCS100 AVC-40

Active voltage conditioner for sag correction

The PCS100 AVC-40 is an active voltage conditioner. It is a high performance power electronic system designed for industrial and large commercial applications. It responds instantly to power quality events, providing continuous regulation of voltage.

With high power capacity, the PCS100 AVC-40 is the perfect solution for industrial loads using significant power as well as large commercial buildings where continuity of service is paramount. The PCS100 AVC-40 is designed to target voltage sag events while also providing protection against swells. Sag events are the major cause of lost production.

Features

- No energy storage
  - Increased system reliability with minimized maintenance
- Very high efficiency
- Continuous online regulation
- Industrial design
- Small footprint
  - Industry leading power density
- Regenerative load support
- Internal bypass
  - Redundant internal bypass design
- Connectivity
  - Ethernet
  - Modbus TCP
  - Integrated web server
  - E-mail notifications
- Multilingual graphical touch screen interface

PCS100 AVC-40

Technical specification

Utility – Input	
Power range	150 – 3600 kVA
Rated voltage (model specific)	220 V – application range 208 – 220 V 400 V – application range 380 – 415 V 480 V – application range 440 – 480 V
Nominal supply frequency	50 Hz or 60 Hz
Power system	3-wire plus ground input (grounded wye source) + Neutral (4-wire) if required by load.

Load - Output	
Voltage	To match nominal input voltage
Displacement power factor	0 lagging to 0.9 leading
Efficiency	Typically >98%
Sag correction response	Initial < 250 µs, complete < ½ cycle
Voltage regulation accuracy	±1% typical, ±2% maximum
Sag correction accuracy	±4%
Continuous regulation range	±10%
Sag correction capability	40%
Overload capability	150% for 30 seconds, once every 500 seconds
Bypass overload capacity	125% for 10 minutes, 150% for 1 minute, 500% for 1 second, 2000% for 200 ms

Environmental	
Operating temperature range	0° C to 50° C 32° F to 122° F
Noise	<75 dBA @ 2m
Enclosure rating	IP20/NEMA1 (IP21/NEMA2 with optional roof kit)

User interface	
User interface	10.1" color touch panel, multilingual
Touch panel	Full parameter control, system event log, voltage event log
Communication	Ethernet, Modbus TCP, E-mail

Standards and certifications	
Quality	ISO 9001
Marking	CE, C-Tick, UL Listing (UL 508) for 208 V/480V 150 kVA -300 KVA
Safety	IEC62477-1
Electromagnetic compatibility	Emissions: CISPR 11 Class A Group 1 Immunity: IEC 61000-6-2
Performance	IEC 61000-4-34, SEMIF47

PCS100 AVC-40

Model range

220 V Utility voltages

Rated power kVA		Rated input current A[1]	Rated output current A	Fault capacity kA	Losses kW[2]	Efficiency %[2]	Airflow m3/min	Frame size	Type code Place R for right termination side or L for left termination side instead of x
220 V	208 V								
NA	150	473	416	31.5	5.0	96.7	18	1B	PCS100-07-208-0B5-40-UL-x
NA	225	710	625	31.5	6.5	97.2	18	1B	PCS100-07-208-0B75-40-UL-x
NA	300	946	833	31.5	7.1	97.7	18	1B	PCS100-07-208-01B-40-UL-x
450	425	1350	1181	40	9.7	97.9	36	2B	PCS100-07-220-01B5-40-x
600	567	1791	1575	40	11.8	98.1	36	2B	PCS100-07-220-02B-40-x
750	709	2239	1969	50	14.5	98.1	54	3B	PCS100-07-220-02B5-40-x
900	851	2679	2362	50	16.4	98.2	54	3B	PCS100-07-220-03B-40-x
1200	1135	3567	3150	80	20.7	98.3	72	4B	PCS100-07-220-04B-40-x
1500	1418	4450	3937	100	25.2	98.4	90	5B	PCS100-07-220-05B-40-x
1800	1702	5331	4724	100	29.1	98.4	108	6B	PCS100-07-220-06B-40-x

400 V Utility voltages

Rated power kVA		Rated input current A[1]	Rated output current A	Fault capacity kA	Losses kW[2]	Efficiency %[2]	Airflow m3/min	Frame size	Type code Place R for right termination side or L for left termination side instead of x
400, 415 V	380 V								
150	142	253	217	15	4.7	96.9	18	1B	PCS100-07-400-0B5-40-x
225	213	377	325	15	6.1	97.3	18	1B	PCS100-07-400-0B75-40-x
300	285	498	433	15	6.6	97.8	18	1B	PCS100-07-400-01B-40-x
450	427	742	650	31.5	8.9	98.1	36	2B	PCS100-07-400-01B5-40-x
600	570	985	867	31.5	10.8	98.2	36	2B	PCS100-07-400-02B-40-x
750	712	1232	1083	31.5	13.5	98.2	54	3B	PCS100-07-400-02B5-40-x
900	855	1474	1300	31.5	15.2	98.4	54	3B	PCS100-07-400-03B-40-x
1200	1140	1962	1733	40	19.1	98.5	72	4B	PCS100-07-400-04B-40-x
1500	1425	2448	2166	50	23.3	98.5	90	5B	PCS100-07-400-05B-40-x
1800	1710	2932	2599	63	26.8	98.6	108	6B	PCS100-07-400-06B-40-x
2400	2280	3849	3465	65	36.3	98.5	144	8B	PCS100-07-400-08B-40-x
3000	2850	4920	4331	65	47.7	98.4	180	10B	PCS100-07-400-10B-40-x
3600	3420	5774	5197	65	60.3	98.3	216	12B	PCS100-07-400-12B-40-x

480 V Utility voltages

Rated power kVA		Rated input current A[1]	Rated output current A	Fault capacity kA	Losses kW[2]	Efficiency %[2]	Airflow m3/min	Frame size	Type code Place R for right termination side or L for left termination side instead of x
480 V	440 V								
150	[3]	211	180	20	4.7	96.9	18	1B	PCS100-07-480-0B5-40-UL-x
225	[3]	315	271	20	6.1	97.3	18	1B	PCS100-07-480-0B75-40-UL-x
300	[3]	415	361	20	6.6	97.8	18	1B	PCS100-07-480-01B-40-UL-x
450	413	619	542	25	8.9	98.1	36	2B	PCS100-07-480-01B5-40-x
600	550	821	722	25	10.8	98.2	36	2B	PCS100-07-480-02B-40-x
750	688	1026	903	25	13.5	98.2	54	3B	PCS100-07-480-02B5-40-x
900	825	1228	1083	25	15.2	98.4	54	3B	PCS100-07-480-03B-40-x
1200	1100	1635	1444	40	19.1	98.5	72	4B	PCS100-07-480-04B-40-x
1500	1375	2040	1805	40	23.3	98.5	90	5B	PCS100-07-480-05B-40-x
1800	1650	2444	2166	50	26.8	98.6	108	6B	PCS100-07-480-06B-40-x
2400	2200	3290	2887	65	34.1	98.6	144	8B	PCS100-07-480-08B-40-x
3000	2750	4110	3609	65	44.3	98.5	180	10B	PCS100-07-480-10B-40-x
3600	3300	4940	4331	65	55.4	98.5	216	12B	PCS100-07-480-12B-40-x

[1] At 90% utility voltage
[2] Typical value
[3] Consult factory for 440V applications