

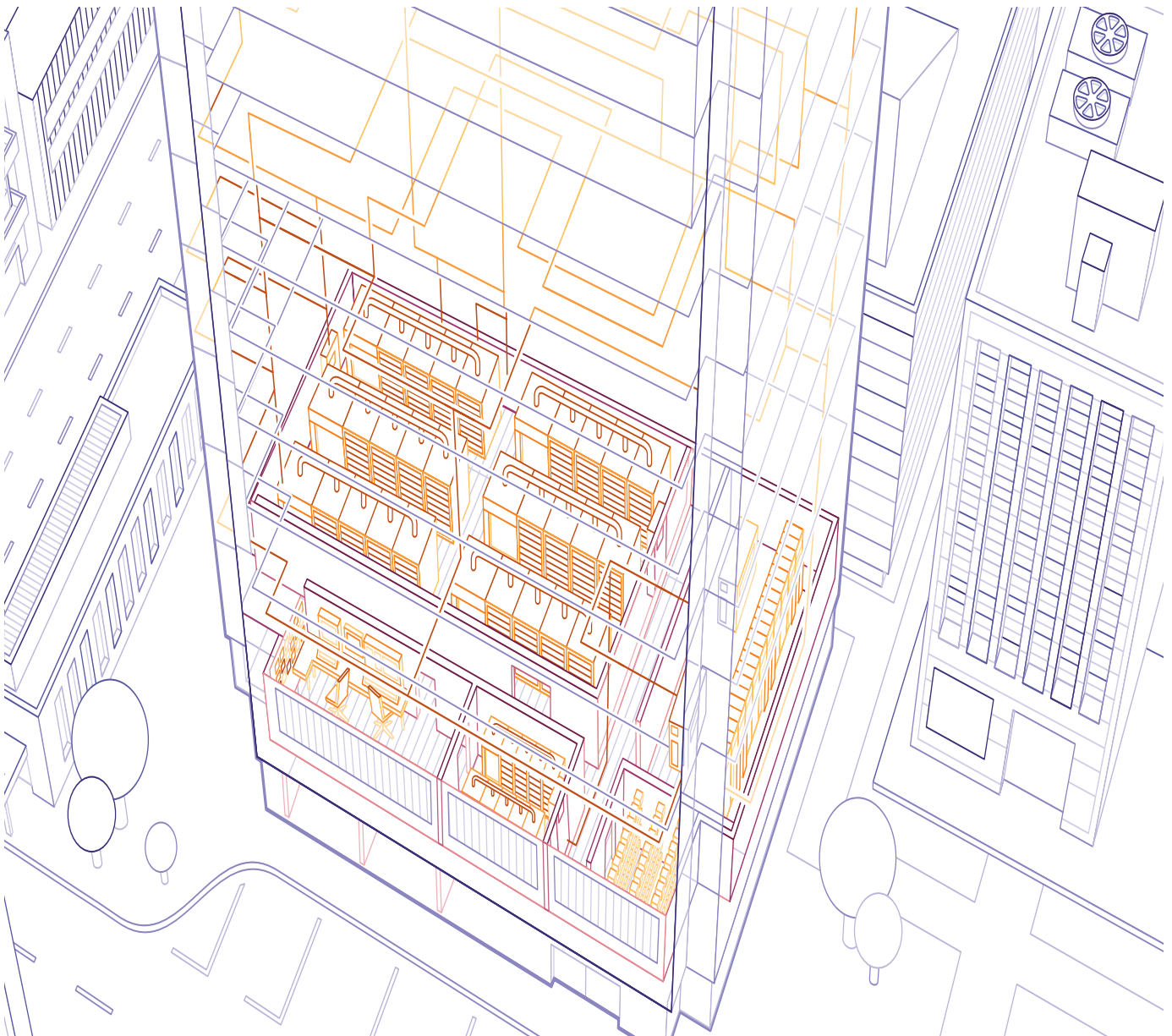
Product Brochure

# ABB Power Quality Solutions PCS80 AVC, 25 kVA to 75 kVA Active Voltage Conditioner

Power and productivity  
for a better world™



# Protecting sensitive industrial and commercial loads from voltage disturbances



# PCS80 AVC, 25 kVA to 75 kVA

The ABB PCS80 AVC is an inverter based system that protects sensitive industrial and commercial loads from voltage disturbances. Providing fast, accurate voltage sag correction as well as continuous voltage regulation and load voltage compensation, the PCS80 AVC has been optimally designed to provide the required equipment immunity from the level of voltage sags expected on AC supply network.

Available in load capacities of 25 kVA - 75 kVA the PCS80 AVC has an operating efficiency exceeding 98%. It offers extremely fast response to three-phase sags down to 50%, and single-phase sags down to 25% on the AC supply network. All PCS80 AVC models provide continuous regulation within -10% of the nominal mains voltage and remove voltage unbalance from the supply.



## User benefits

- Fast (sub-cyclic) response
- Simple user controls
- Rugged overload capability
- Short circuit protected
- Extensive diagnostics
- Fault log and voltage event data logging

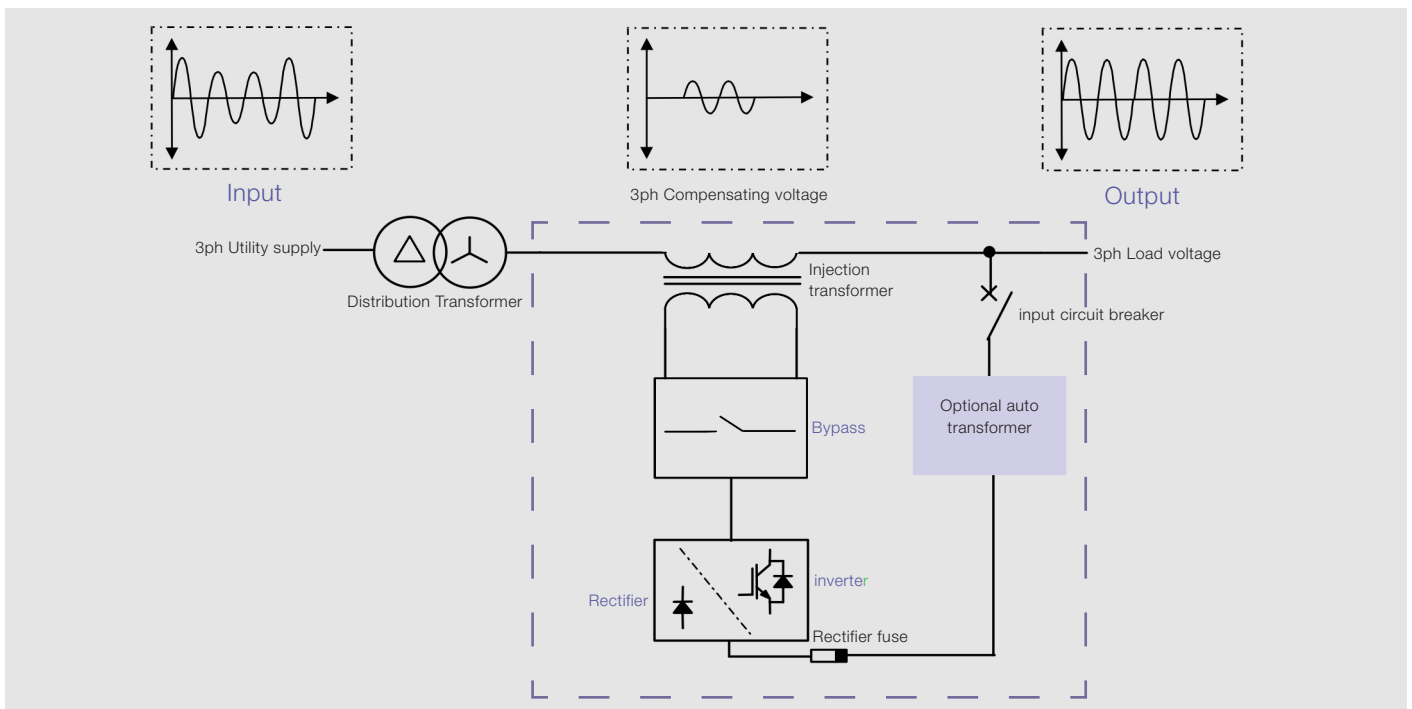
## Features

- Full correction, of three-phase sags down to 70% remaining voltage, and single phase sags down to 55% remaining voltage
- Partial correction, of three-phase sags down to 50%, remaining voltage, and single-phase sags down to 25% remaining voltage
- Continuous regulation
- Unbalanced voltage correction
- User adjustable set point
- Modern IGBT based inverter
- Plain English 4x20 character LCD display
- Fuse clearing ability

## Options

- 600Vac 60Hz supply
- Consult factory for larger PCS80 AVC options

## Single line diagram



## Technical specifications

Input	
Supply voltage 50Hz	380,400,415,440V
Supply voltage 60Hz	208,480,600V
Power system type	TN
Maximum supply voltage	110 % of nominal supply voltage
Minimum supply voltage	50% of nominal (running) 75% of nominal (starting)
Over voltage category	III
Output	
Nominal output voltage	To match nominal supply voltage
Voltage regulation accuracy	+/- 1% typical to +/- 2% max
Sag correction response	Initial correction within 1ms remainder over next 1/2 cycle
Efficiency	>98% ( typically 99%)
Correction	+30% 3-phase back to 100% for 10 sec, +45% single-phase to neutral back to 100% for 30 sec, +10% 3-phase continuous
Voltage regulation	+/- 1%, up to 10% correction +2.5% at 30% correction Voltage set point adjustable
Load	
Capacity	25-75 kVA ( at 480V )
Displacement power factor	0 to 1 leading or lagging
Crest factor	1.63 at 100% of rated load
Overload capability	150% for 30 sec
Injection transformer	
Transformer type	Dry
Insulation	UL class N, 200° C
Finish	Dipped for moisture proofing
Vector group	Diii

Bypass	
Capacity of model rating	100% ( kVA )
Overload capacity	125% for 10 minutes 150% for 1 minute
Transfer time	Inverter to bypass <0.5ms Bypass to inverter <250ms
* The AVC provides continuous correction and only transitions to and from bypass under fault or exceeding the rated overload conditions, or when manually starting and stopping	
Environmental	
Minimum operating temp	0°C, 32°F
Maximum operating temp	40°C, 104°F 50°C, 122°F max with 20% derating
Cooling inverter	Forced ventilation
Cooling transformer	Fan assisted ventilation
Humidity	0 - 95%, non-condensing
Cabinet rating	IP20
Pollution degree rating	2
EMC emissions	CISPR 11 level A
Standards	
Conformance	AS/NZ 2065 level A , AS/NZ S3100 CISPR 11 level A
Quality	ISO 9001
Safety, EMC	Designed to CE mark requirements
Controls	
4 line LCD	Input/output voltage & current displayed
Keyboard	Full parameter control
Voltage set point	Adjustable in 0.1% steps
Standard features	
Run control	Start and stop converter
Clean contacts	Fault, run & overload status

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## Ratings and physical dimensions

Model	30% PCS80 AVC kVA Ratings					Dimensions HWD (mm)
	50Hz		60Hz			
	380V	400V	415V	208V	480V	
1S	20	21	22	25	25	900 x 600 x 700
2S	40	42	43	50	50	
3S	59	63	65	75	75	

Model	40% PCS80 AVC kVA Ratings					Dimensions HWD (mm)
	50Hz		60Hz			
	380V	400V	415V	208V	480V	
2S	26	28	30	33	33	900 x 600 x 700
3S	40	42	43	50	50	

## Contact us

ABB Limited

LV Power converter products

Discrete Automation and Motion

[www.abb.com/powerquality](http://www.abb.com/powerquality)

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