
Product brochure

# ABB Power Protection solutions PCS100 RPC, 100 kVAr to 2 MVAr Reactive Power Conditioner

Power and productivity
for a better world™

# PCS100 RPC, 100 kVAr to 2 MVAr

## Dynamic power factor correction – low order harmonics, current and voltage imbalances

**Save money on your power bill by reducing power factor penalty charges. The PCS100 RPC offers a true power factor solution correcting both displacement and distortion power factor.**

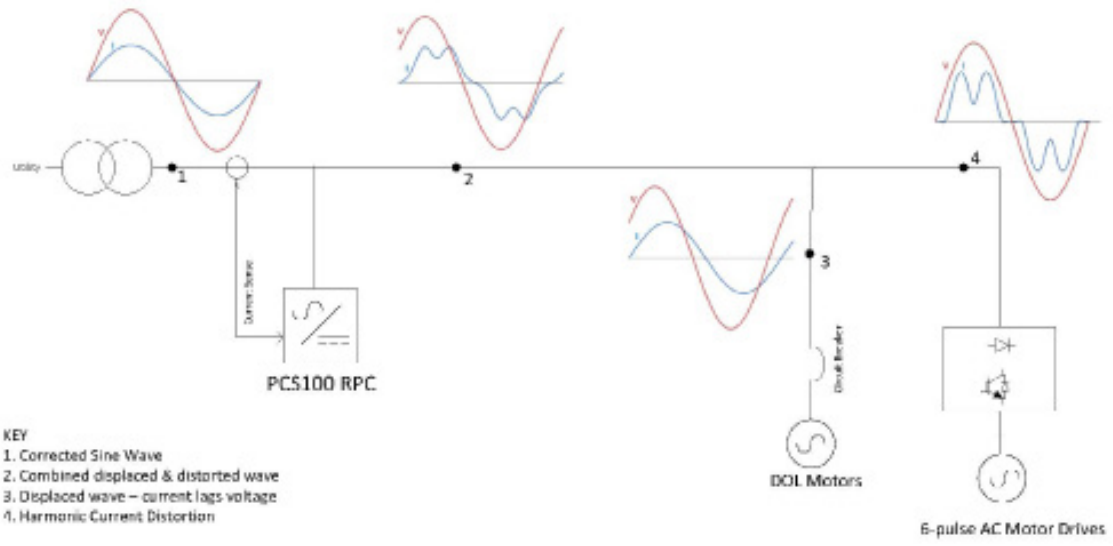
Utilities charge for poor power factor, calculated on true power factor. This is the displacement and distortion power factor combined (reactive and harmonic currents). To reduce penalty charges on your electricity bill both displacement and distortion power factor need resolving. ABB's PCS100 RPC uses high speed IGBT inverter technology to control reactive power flow into the AC network.


**Features**
- Dynamic power factor correction, harmonics and inrush generated sags
- Small footprint
- Modular design providing high reliability and short repair times
- Ratings from 100 kVA to 2000 kVA and voltages 380 Vac to 480 Vac

plus

**Benefits**
- Save money on utility reactive power charges
- True power factor correction (reactive and harmonic)
- Reduced transformer heating and reduced system losses
- Improved factory supply with less voltage variation
- Higher loadings are possible

## Many commercial and industrial applications



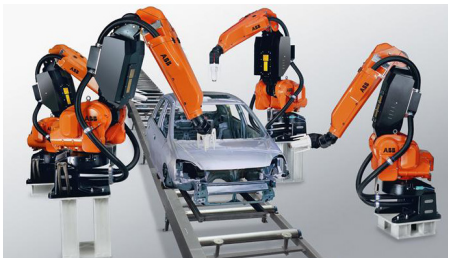

The diagram shows loads with both reactive and harmonic currents. Without a PCS100 RPC installed this current is sourced from the utility. With the PCS100 RPC installed, the waveform is corrected at point 1 (utility).

# PCS100 RPC applications and product details

## Responds instantly to load change events while providing continuous reactive power correction

### Data centers and generator supplies

Secure your data center and generator power supply with the PCS100 RPC. Solve power factor (leading and lagging), low-order harmonics, and imbalance problems to improve efficiency.



### Manufacturing processes

Welders draw fast changing reactive current. The PCS100 RPC can correct this and at the same time reduce voltage variations.

### Dynamic motor loads

Cranes have fast changing loads. The PCS100 RPC can follow the changes and correct the power factor. If drives are used it can also correct low order harmonics.

### Technical specifications

| | |
|---|---|
| Utility connection | |
| Voltage | 380 - 480 V ± 10%<br>(Other voltages via transformer) |
| Power system | 3-Phase |
| Frequency | 50 or 60 Hz |
| Overvoltage category | III |
| Losses | 2.3% at full load |
| Overload and short circuit protection | Current limited output (200%) |
| Ratings | |
| Capacity rating | 100 kVA to 2000 kVAr<br>(other ratings by request) |
| Harmonic correction | 5th + 7th harmonic |
| Imbalance current capability | 25% of nominal current |
| User interface | |
| Type | 8.4” Color LCD touchscreen |
| Communications type | HTML server (monitoring only)<br>Modbus-TCP (monitoring only) |
| Environmental | |
| Operating temperature | 0°C to 50°C (de-rate -2% current per 1°C above 40°C) |
| Noise | 75-85 dBA typical at 1 m |
| Enclosures | |
| Enclosure IP rating | IP20 / NEMA 1 |
| Color | RAL 7035 |
| Enclosure access | Left hand hinged doors with key lock |
| Standards and certifications | |
| IEC62103 electrical equipment for use in power installations | |

### Model types

| Current rating (A) | kVAr @ 400 V | kVAr @ 480 V | Dimensions (mm) (H x W x D ) | Type code |
|---|---|---|---|---|
| 150 | 104 | 125 | 2154 x 409 x 804 | PCS100-25-01-A05 |
| 300 | 208 | 250 | 2154 x 409 x 804 | PCS100-25-02-A05 |
| 450 | 312 | 375 | 2154 x 809 x 804 | PCS100-25-03-A10 |
| 600 | 416 | 500 | 2154 x 809 x 804 | PCS100-25-04-A10 |
| 750 | 520 | 625 | 2154 x 809 x 804 | PCS100-25-05-A10 |
| 900 | 624 | 750 | 2154 x 809 x 804 | PCS100-25-06-A10 |
| 1050 | 728 | 875 | 2154 x 1209 x 804 | PCS100-25-07-A15 |
| 1200 | 832 | 1000 | 2154 x 1209 x 804 | PCS100-25-08-A15 |
| 1350 | 936 | 1125 | 2154 x 1609 x 804 | PCS100-25-09-A20 |
| 1500 | 1040 | 1250 | 2154 x 1609 x 804 | PCS100-25-10-A20 |
| 1650 | 1144 | 1375 | 2154 x 1609 x 804 | PCS100-25-11-A20 |
| 1800 | 1248 | 1500 | 2154 x 1609 x 804 | PCS100-25-12-A20 |
| 1950 | 1352 | 1625 | 2154 x 2009 x 804 | PCS100-25-13-A25 |
| 2100 | 1456 | 1750 | 2154 x 2009 x 804 | PCS100-25-14-A25 |
| 2250 | 1560 | 1875 | 2154 x 2409 x 804 | PCS100-25-15-A30 |
| 2400 | 1664 | 2000 | 2154 x 2409 x 804 | PCS100-25-16-A30 |
| 2550 | 1768 | 2125 | 2154 x 2409 x 804 | PCS100-25-17-A30 |
| 2700 | 1872 | 2250 | 2154 x 2409 x 804 | PCS100-25-18-A30 |

The nominal voltage that the PCS100 RPC will be connected to must be specified at the time of ordering to allow correct configuration at the factory. For further technical information, please refer to ABB’s PCS100 RPC technical catalogue.

# Contact us

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PCS100 RPC product web page

PCS100 RPC video

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