



# Power Factor Controller RVC

Accurate control and monitoring of capacitor banks

# Power Factor controller RVC

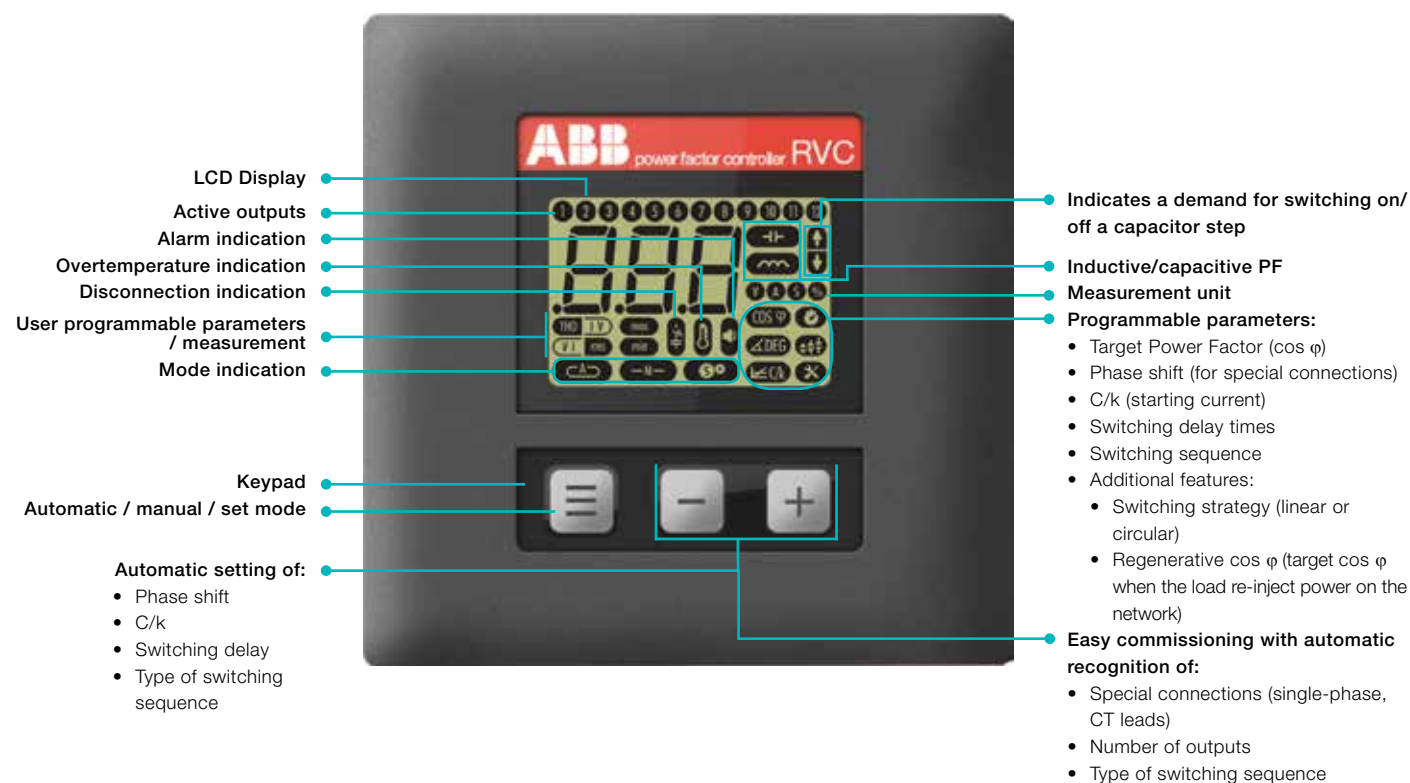
RVC has become synonymous with automatic capacitor bank controller in many markets worldwide thanks to its distinct design, ease of use, reliability and versatile functions.

Thanks to the user interface upgrade with graphical icons, it is possible to commission the RVC without a manual. A slimmer casing requires less space in the capacitor bank panel.

The RVC is an easy-to-install, easy to use, smarter power factor controller and an ideal companion of your automatic capacitor banks.

## Powerful features

- Common range for a broad network voltages from 100V to 440V.
- Measurement and display of key parameters like voltage, current, power factor, THDV and THDI.
- Fully programmable switching sequence.
- 1A or 5A current input.
- Easy commissioning.
- Complete auto set-up (starting current-C/k, type of switching sequence, phase shift, special connections).
- Easy to use thanks to a user-friendly interface and ease of access to parameters for manual setting.
- Highly efficient switching strategy combining integral, direct and circular switching thereby allowing:
  - to control the  $\cos \varphi$  in presence of rapidly varying loads,
  - to reduce the number of switching,
  - to avoid unnecessary intermediary switchings,
  - to increase the lifetime of the capacitors and contactors.
- Suitable for hot environments due to maximum ambient temperature rating of 70°C.
- Not affected by harmonics.
- Overvoltage / undervoltage protection and protections against harmonic distortion (THDV).
- Alarm : an alarm contact is opened when any of these conditions are reached:
  - the target  $\cos \varphi$  is not reached within 6 minutes after all outputs have been switched on,
  - the internal temperature of the RVC rises above 85°C,
  - overvoltage / undervoltage limits are reached,
  - the power supply is out of range,
  - the THDV exceeds the limits.



# Technical specifications

<b>Measuring system</b>	Micro-processor system for balanced three-phase networks or single-phase networks.
<b>Operating voltage</b>	100V to 440V.
<b>Voltage tolerance</b>	+/- 10% on indicated operating voltages.
<b>Frequency range</b>	50 or 60 Hz +/- 5% (automatic adjustment to network frequency).
<b>Measuring circuit terminals (L2, L3 and k, l)</b>	CAT III rated.
<b>Current input</b>	1A or 5A (RMS).
<b>Current input impedance</b>	<0.1 Ohm (recommended CT class 1.0, 10 VA min).
<b>Consumption of the controller</b>	8 VA max.
<b>Output contact rating</b>	max. continuous current: 1.5A; max. peak current: 5 A; max. voltage: 440Vac; terminal A is rated for a continuous current of 16A.
<b>Alarm contact</b>	normally open contact; max. continuous current: 5 A; rated/max. breaking voltage: 250Vac/440 Vac.
<b>Power Factor setting</b>	From 0.7 inductive to 0.7 capacitive.
<b>Starting current setting (C/k)</b>	0.01 to 3A. automatic measurement of C/k.
<b>Number of outputs</b>	RVC-3: programmable up to 3 outputs - RVC-6: programmable up to 6 outputs RVC-8: programmable up to 8 outputs - RVC-10: programmable up to 10 outputs RVC-12: programmable up to 12 outputs
<b>Switching time between steps</b>	Programmable from 1s to 999s (independent of reactive load).
<b>Switching sequences</b>	User defined.
<b>Mode of switching</b>	The mode of switching for all the programmable switching sequences is integral, direct, circular or linear.
<b>Saving-function</b>	All programmed parameters and modes are saved in a non-volatile memory.
<b>Power outage release</b>	Quick automatic disconnection in less than 20ms (50Hz) in case of power outage or voltage drop.
<b>Power outage reset delay time</b>	40 s.
<b>Operating temperature</b>	-10° C to 70° C.
<b>Storage temperature</b>	-30° C to 85° C.
<b>Mounting position</b>	Vertical panel mounting.
<b>Dimensions</b>	144x144x43 mm (hxwxh).
<b>Cut-out dimensions</b>	138x138 mm (hxw).
<b>Weight</b>	0.4 kg (unpacked).
<b>Connector</b>	Spring clamp terminal block.
<b>Front plate protection</b>	IP43.
<b>Relative humidity</b>	Maximum 95%, non-condensing.
<b>Article numbers for ordering</b>	RVC-3: 2GCA294983A0050 RVC-6: 2GCA294984A0050 RVC-8: 2GCA294985A0050 RVC-10: 2GCA294986A0050 RVC-12: 2GCA294987A0050
<b>Other features</b>	Overvoltage and undervoltage protection. Autoadaptation to the phase-rotation of the network and the CT-terminals. Not affected by harmonics. Working with generative and regenerative loads. LCD contrast automatically compensated with temperature.
<b>Standards</b>	CE marked.

# Contact us

**s.a. ABB n.v.**

**Power Quality Products**

Allée Centrale 10

Z.I. Jumet

B-6040 Charleroi (Jumet), Belgium

Phone: +32 (0) 71 250 811

Fax: +32 (0) 71 344 007

E-Mail: [power.quality@be.abb.com](mailto:power.quality@be.abb.com)

<http://new.abb.com/high-voltage/capacitors/lv>

Note: We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase order, the agreed particulars shall prevail. ABB does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve the rights of this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents in whole or in parts is forbidden without ABB's prior written consent.