Power Factor Controller RVC

The user-friendly PF controller
**RVC : The user-friendly PF controller**

**Powerful features**

- Easy commissioning.
- Complete auto set-up (starting current-C/k, number of active outputs, 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.
  - This allows to:
    - control the \( \cos \varphi \) in presence of rapidly varying loads,
    - reduce the number of switching,
    - avoid unnecessary intermediary switchings,
    - increase the lifetime of the capacitors and contactors.
- Suitable for hot environments thanks to max. ambient temperature rating of 70°C.
- Insensitivity to the presence of harmonics.
- Overvoltage and undervoltage protection.
- Alarm: an alarm contact is closed when 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 or the power supply is out of range.
Easy commissioning

The AUTO SET mode allows the RVC commissioning in only 2 simple steps:

Activation of the automatic setting of:
- Phase shift
- C/k
- Number of outputs
- Switching sequence

Easy programming

All parameters are easily accessible for manual setting.
Technical specification

Measuring system:
- micro-processor system for balanced three-phase networks or single-phase networks.

Operating voltage:
- 100V to 120V, 220V to 240V, 380V to 440V depending on type of RVC.

Voltage tolerance:
- +/- 10% on indicated operating voltages.

Frequency range:
- 50 or 60 Hz +/- 5% (automatic adjustment to network frequency).

Current input:
- 5A (RMS).

Voltage tolerance:
- +/- 10% on indicated operating voltages.

Current input impedance:
- <0.1 Ohm.

Consumption:
- 15 VA max.

Output contact rating:
- max. continuous current: 1.5 A;
- max. peak current: 5 A;
- max. voltage: 440 Vac;
- terminal A is rated for a continuous current of 16 A.

Power Factor setting:
- from 0.7 inductive to 0.7 capacitive.

Starting current setting (C/k):
- 0.05 to 1A;
- Automatic measurement of C/k.

Number of outputs:
- RVC-3 (400V only): programmable up to 3 outputs.
- RVC-8: programmable up to 8 outputs.
- RVC-10 (400V only): programmable up to 10 outputs.
- RVC-12: programmable up to 12 outputs.

Switching time between steps:
- programmable from 1s to 999s (independent of reactive load).

Switching sequences:
- 1:1:1:1:1:...:1 1:2:2:2:2:...:2
- 1:2:4:4:4:...:4 1:2:4:8:8:...:8
- 1:1:2:2:2:...:2 1:1:2:4:4:...:4
- 1:2:4:8:8:...:8 1:2:3:3:3:...:3
- 1:2:3:6:6:...:6 1:1:2:3:3:...:3
- 1:1:2:3:6:...:6

Mode of switching:
- the mode of switching for all the programmable switching sequences is integral, direct, circular or linear.

Saving-function:
- all programmed parameters and modes are saved in a non-volatile memory.

Power outage release:
- quick automatic disconnection in less than 20ms (50Hz) in case of power outage or voltage drop.

Power outage reset delay time:
- 40 s.

Alarm contact:
- normally closed contact;
- rated/max. breaking voltage: 250Vac/440Vac.

Overvoltage and undervoltage protection

Autoadaptation to the phase-rotation of the network and the CT-terminals.

Insensitivity to harmonics.

Working with generative and regenerative loads.

LCD contrast automatically compensated with temperature.

Operating temperature:
- -10° C to 70° C.

Storage temperature:
- -30° C to 85° C.

Mounting position:
- vertical panel mounting.

Dimensions:
- 144x144x80 mm (hxwxd).

Weight:
- 0.8 kg (unpacked).

Connector:
- WAGO.

Front plate protection:
- IP40.

Relative humidity:
- maximum 95%, non-condensing.

CE Marked.

Wiring diagram

While all care has been taken to ensure that the information contained in this publication is correct, no responsibility can be accepted for any inaccuracy. We reserve the right to alter or modify the information contained herein at any time in the light of technical or other developments. Technical specifications are valid under normal operating conditions only. We do not accept any responsibility for any misuse of the product and cannot be held liable for indirect or consequential damages.