

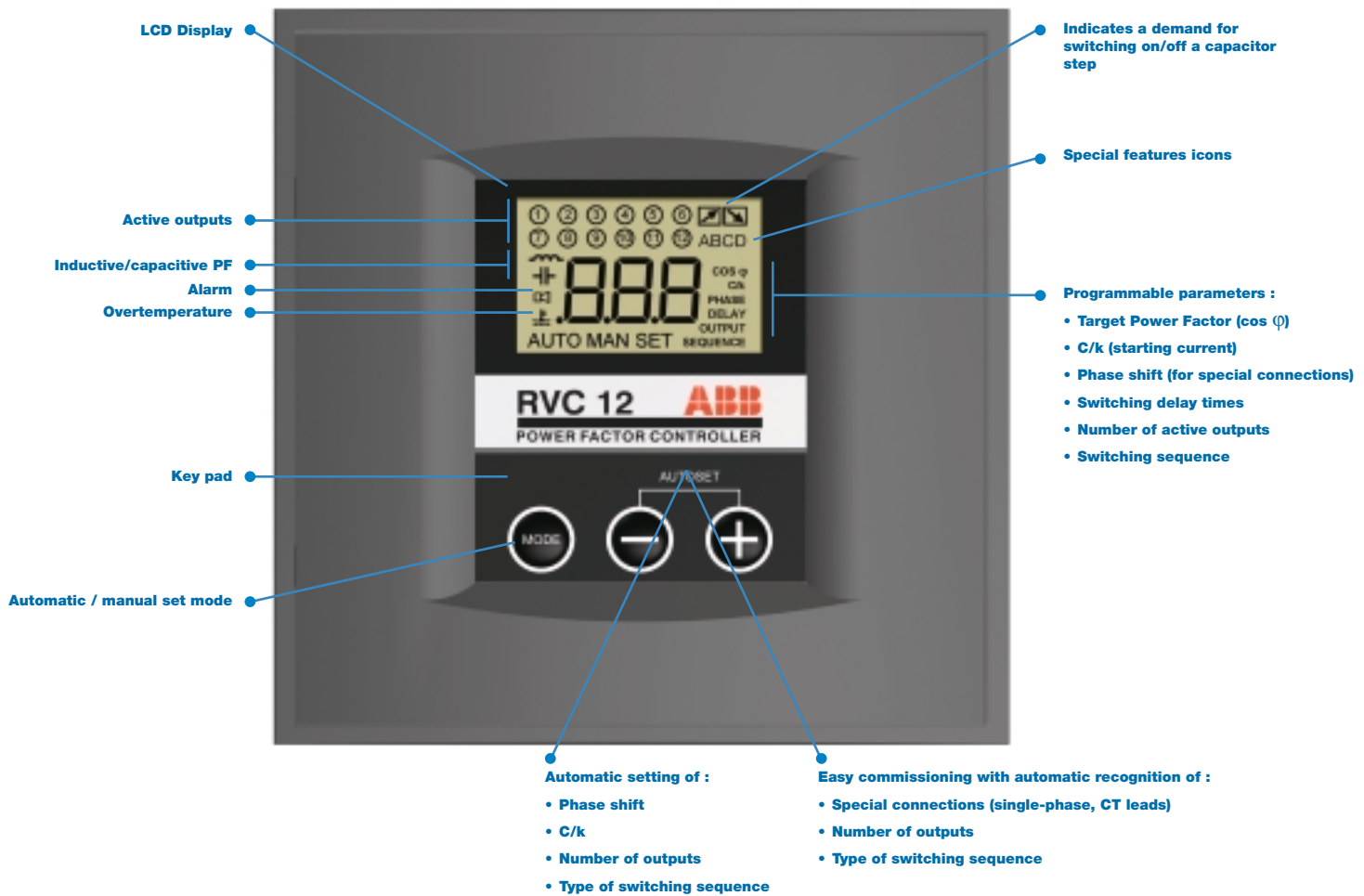
# Power Factor Controller RVC

The user-friendly PF controller



**ABB**

## 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  $\cos \phi$  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  $\cos \phi$  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

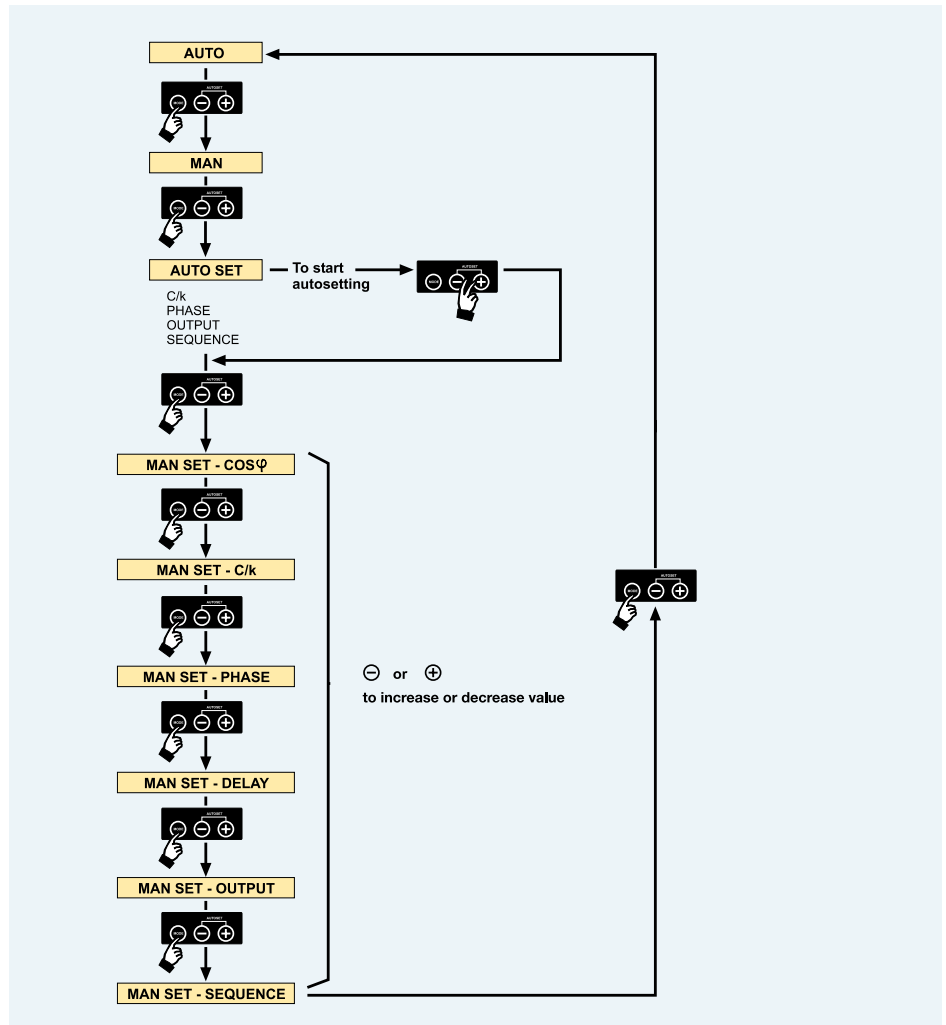


### Setting of the target $\cos \varphi$



## 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).

### 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-6: programmable up to 6 outputs.

RVC-8 (400V only): 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:

1:1:1:1:1:1:1:1:1:1:1:1:1:1:1	1:2:2:2:2:2:2:2:2:2:2:2:2:2:2
1:2:4:4:4:4:4:4:4:4:4:4:4:4:4	1:2:4:8:8:8:8:8:8:8:8:8:8:8:8
1:1:2:2:2:2:2:2:2:2:2:2:2:2:2	1:1:2:4:4:4:4:4:4:4:4:4:4:4:4
1:1:2:4:8:8:8:8:8:8:8:8:8:8:8	1:2:3:3:3:3:3:3:3:3:3:3:3:3:3
1:2:3:6:6:6:6:6:6:6:6:6:6:6:6	1:1:2:3:3:3:3:3:3:3:3:3:3:3:3
1:1:2:3:6:6:6:6:6:6:6:6:6:6:6	

### 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;

- max. continuous current : 5A;

- 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

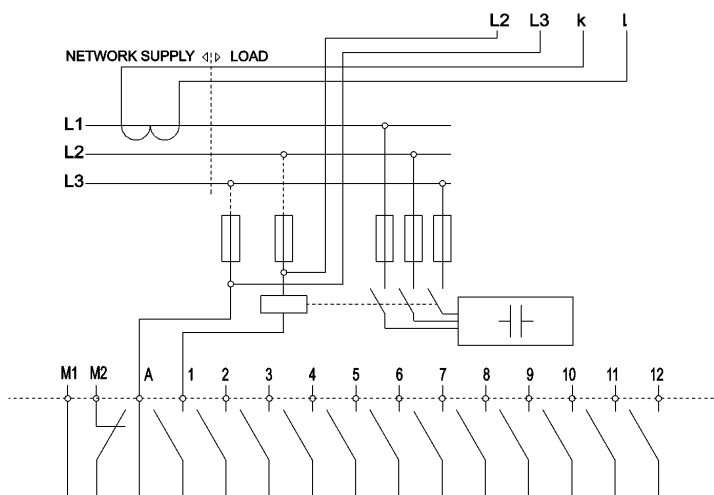
**k, l:** leads of the current transformer

**L2, L3:** 2 of the 3 phases (not monitored by the CT)

**M1, M2:** leads of the normally closed contact

**A:** output relay common source

**1-12:** outputs



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