

# Low-voltage Power Factor Correction Equipment



Improves  
power quality and  
network efficiency.



**Iskra**<sup>®</sup>

Iskra Kondenzatorji

## Fixed PFC Banks



### Purpose

- Correction of low-voltage transformers
- Increase the power of already connected correction devices
- Inner mounting with capacitors connected in a delta

### Benefits to customers

- Small space requirement  
500<sub>max</sub> × 200 × 400 mm (w × d × h)
- Wall or floor mounting
- Expandability

Rated power:	10 kvar ... 100kvar
Rated voltage:	400 V, 50 Hz three-phase, other voltages on request
Capacity tolerance:	from 0 % to + 10 %
Overload capacity:	1,0 × U <sub>n</sub> permanent 1,1 × U <sub>n</sub> 8 hours per day 1,3 × I <sub>n</sub> permanent
Temperature range:	from -25 °C to +50 °C
Dielectric losses:	≤ 0,2 W/kvar
Level of protection according to DIN 40050:	IP 32
Level of isolation:	group C according to VDE 0110
Network configuration:	TN
Colour:	RAL 7032
Weight:	5,2 kg ... 26 kg
Complies with standard:	- IEC Publ. 831-1, 831-2 - EN 60831/1-2 - technical regulations for electrical installation in buildings

## Automatic PFC Banks



### Purpose

- Correction of reactive power in distribution centres
- Correction of reactive power industrial and other production plants

### Benefits to customers

- Low losses
- Modular, clear construction
- Customized for your network
- Floor mounting

Power range:	17,5 kvar ... 720 kvar
Rated voltage:	400 V, 50 Hz three-phase
Control voltage:	230 V, 50 Hz
Dynamic strength of collectors:	to 100 kA
Thermic current of short circuit:	to 40 kA
Power tolerance:	from 0 % to +10 %
Allowed overloading:	1,0 × U <sub>n</sub> , permanent 1,1 × U <sub>n</sub> 8 hours per day 1,3 × I <sub>n</sub> permanent
Temperature range:	from -10 °C to +40 °C
Dielectric losses:	≤ 0,2 W/kvar
Insulation level:	group C according to VDE 110
Level of mechanical protection:	IP20
Network configuration:	TN-C or TN-S
Colour:	RAL 7032, or on request
Electric supply through current transformer:	X / 5A
Measured system consumption:	15 VA
Complies with:	- IEC Publ. 831-1, 831-2, 439 - EN 60831/1-2

# Automatic PFC Banks with Harmonics Filters



## Purpose

- Central correction of reactive power in industrial and other plants where higher harmonics are present in the electrical network

## Benefits to customers

- Reduce harmonics
- Customized for your network
- Improves the quality of the electricity

Rated power:	125 kvar ... 720 kvar
Number of stage:	4-12
Rated voltage:	400 V
Rated frequency:	50 Hz
Regulation voltage:	230 V, 50 Hz
Power tolerance:	from 0 % to + 10 %
Allowed overloadings:	1,0 × U <sub>n</sub> , permanent 1,1 × U <sub>n</sub> 8 hours per day 1,3 × I <sub>n</sub> permanent
Resonant frequency:	Fr = 213 Hz (p = 5,5 %) Fr = 189 Hz (p = 7 %), others on request
Temperature range:	from -10 °C to +40 °C
Loading :	X / 5A
Insulation level:	C according to VDE 0110
Mechanical protection level:	IP 20 according to DIN 40050
Colour:	RAL 7032
Dimensions:	to 240 kvar: 800 × 2100 × 600 mm from 240 to 480 kvar - 1600 × 2100 × 600 mm from 480 to 720 kvar - 2400 × 2100 × 600 mm
Protection from HV contact:	TN-S or TN-C
Complies with:	- IEC 831-1 and 2, 439 - regulations about technical standards for low-voltage electrical instalations

# Dynamic Power Factor Correction

## Tuned Filter Equipment Active Filter Systems



## Purpose

- The real PFC in industrial plants which use highly dynamic drive technology

## Benefits to customers

- At each moment optimized cos φ
- Soft switching without transient
- Flicker eliminated

Rated power:	50 kvar ... 600 kvar
Rated voltage:	400 V 690 V, others on request
Rated frequency:	50 Hz, 60 Hz on request
Resonant frequency:	213 Hz (p = 5,5 %) 189 Hz (p = 7 %)
Power tolerance:	from 0 % to +10 %
Allowed overloadings:	1,0 × U <sub>n</sub> , permanent 1,1 × U <sub>n</sub> 8 hours per day 1,3 × I <sub>n</sub> permanent
Temperature range:	from -10 °C to +40 °C
Colour:	RAL 7032
Dimensions(w × d × h):	600 × 300 × 800 mm
Complies to :	IEC 831-1 and 2, 439 EN 60831-1 and 2

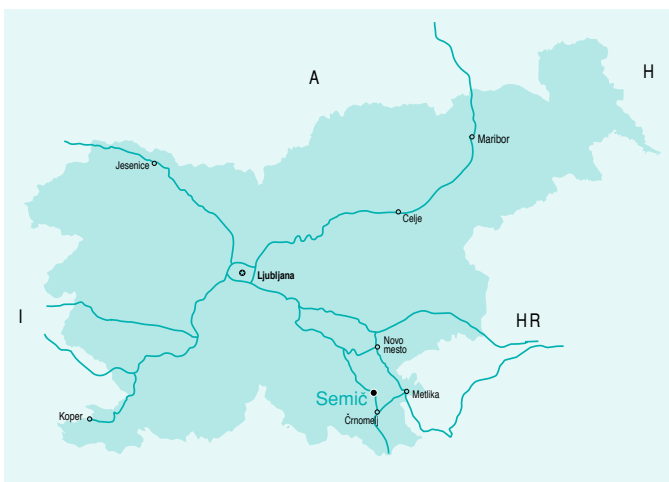
# Electronic Reactive Power Factor Controller



The reactive power controller obeys the network power factor and the desired power factor value adjusted controller by switching on and off capacitor stages of correction devices. In that way it performs its desirable function of reactive power correction.

The controller is a microprocessor type with a digital display of fixed and current values.

Connection	single-phase
Voltage supply	230 V ± 10 %, 50 Hz
Measuring current input	... / 5 A
Regulator consumption	power supply unit 10 VA current unit 2 VA at $I_n=5$ A
Switching capability of output relays	230 VAC, 1000 W
Min. current on the secondary side of current transformer	50 mA
Switching time between stages	8-120 s
Number of stages	6 - KRK4506 12 - KRK4512
Fixing the desired cos φ	0,8 ind. to 0,8 cap.
Fixing the value of the 1 <sup>st</sup> stage	0,5 kvar to 99,5 kvar
Setting of transmission ratio of the current transformer	1-900
Ambient operating temperature	from -10 °C to +50 °C
Dimensions	<ul style="list-style-type: none"> <li>• front plate 144 mm × 144 mm</li> <li>• mounting cutting dim. 38 mm × 138 mm</li> <li>• built-in depth 53 mm</li> </ul>
Weight	1 kg



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