

POCOM® – POCOS® – POCOL®

Medium Voltage Compensation Systems in Cabinet Design

www.reinhausen.com





Compensation Systems – an investment with long-term benefits

- savings in energy costs
- reduction of losses in transmission and distribution networks
- lower investment costs for power stations, transformers and cables etc.
- improvement of the voltage quality
- stabilization of the public and industrial power supply networks
- reduction of CO₂ emissions

Compensation Systems in Cabinet Design – an advantage for the customer

- modular cabinet design – functionality in the smallest space
- system dimensioning, control, protection and monitoring – solutions from one source
- standardisation plus flexibility – not a contradiction with our systems
- components and modules from well-known manufacturers – reliable and durable
- experts for the manufacture – guarantee for top workmanship
- comprehensive checks and testing before delivery – leaving errors no chance
- plug-and-go systems – less time needed for installation and startup
- detailed product description – operator errors as good as excluded



POCOS® S
automatic controlled system,
6 kV, 2-steps, tuned 189 Hz



POCOM®

POCOS®

POCOL®

a common base

- vacuum contactors and vacuum circuit breakers are used for switched systems
- overcurrent protective relays or HV HRC fuses ensure short-circuit protection
- low-power capacitors are equipped with pressure monitoring devices
- early malfunction detection ensures the monitoring of phase currents or star point unbalance in larger capacitor banks
- inductivities for limiting inrush current are installed in non-tuned systems in order to protect the switchgear devices
- iron-core reactors, either as fixed installations or carriage technology, are used for tuned systems or filter circuit steps
- depending on the power losses, there is either natural ventilation or forced ventilation using temperature-controlled fan modules
- regulator and control modules with different functionalities are used in systems that are switched automatically



POCOM® M
individual motor compensation 6 kV,
tuned 189 Hz



POCOS® M
individual motor compensation 10 kV,
tuned 210 Hz



POCOL® C
6 kV, 3 filter circuits
with high-pass resistors
(filter 5./7./11. harmonics)



Siemens MT

POCOM®

the economical solution for entering medium-voltage compensation

- compensation capacities for small to medium power
- preferred solution for individual motor compensation
- as an automatic control unit with up to 4 compensation steps
- light-weight cabinet system, flexible in height and cubicle depth
- cabinet doors screwed on both sides
- variable cable feeding thanks to flexible floor and roof modules
- integrated control unit in a separate low-voltage connection area
- systems for individual motor compensation are available as assembly sets

POCOM® - Cabinet System

Variants	POCOM® M, S
Operating voltage	4.16 kV / 6 kV / 10 kV
Mains frequency	50 Hz, 60 Hz
Power per step	- 1.5 Mvar (POCOM® M) - 1.0 Mvar (POCOM® S)
Model	non-tuned system tuned system, filter circuit
Degree of protection	IP23, IP40, IP43

POCOS®

universal and flexible solution for the most challenging requirements

- medium power compensation capacities
- preferred solution for automatic control units with up to 6 compensation steps for group compensation
- used for individual motor or fixed step compensation as well as customized system solutions
- sturdy cabinet design with door-locking system
- various assembly combinations, e.g. back-to-back installation
- modules for special applications such as filter circuit step with high pass resistors
- dividing walls between the individual compensation steps
- each compensation module has its own separately accessible low-voltage area
- a multitude of equipment combinations
- available as a system type-tested in compliance with IEC 62271-200:2003-11

POCOS® - Cabinet System

Variants	POCOS® M, S, F, C
Operating voltage	4.16 kV / 6 kV / 10kV 13.8 kV / 20 kV
Mains frequency	50 Hz, 60 Hz
Power per step	- 1.8 Mvar
Model	non-tuned system tuned system, filter circuit
Degree of protection	IP23, IP40, IP43, IP52

POCOL®

high performance with a small footprint

- compensation capacities for medium to high power
- available for the preferred applications of fixed step compensation or filter circuit system
- as an automatic control unit with up to 4 compensation steps
- sturdy cabinet design for fixed installation of components
- modules easy to transport thanks to the special floor component
- open design within the compensation system
- cabinet doors screwed on both sides
- control of the system via a central low voltage compartment or integrated low voltage connection area

POCOL® - Cabinet System

Variants	POCOL® M, S, C
Operating voltage	4.16 kV / 6 kV 10 kV / 13.8 kV / 20 kV
Mains frequency	50 Hz, 60 Hz
Power per step	- 5.0 Mvar
Model	non-tuned system tuned system, filter circuit
Degree of protection	IP00, IP20, IP40



Different conditions demand different cabinet systems:

POCOM®

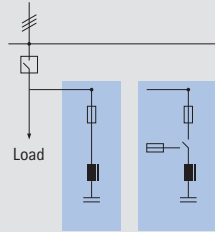
POCOS®

POCOL®

Different cabinet systems lead to different type variants even if the applications are the same

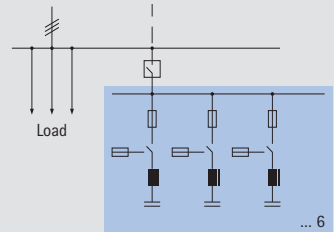
Type M

The system consists of one individual compensation step, all main system components are integrated in cabinet modules, e.g. **POCOM® M**, system for individual motor compensation.



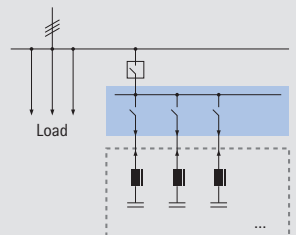
Type S

The system consists of several compensation steps for the same or different powers, all main system components are integrated in cabinet modules, e.g. **POCOS® S**, system for automatic power factor compensation.



Type F

The system consists of cabinet modules in which the switching devices, devices for measurement, protection, control and regulation are integrated. Capacitor banks and reactors are installed outside of the cabinet modules, e.g. **POCOS® F**, multi-step tuned compensation system in the 20 kV range.



Type C

This is a system that was tailor made for a customer, the customized solution can have additional functionalities, e.g. **POCOS® C**, single step compensation system with transformer junction.

