**Active mains filter for rack mounting 100 A**

suitable for active dynamic compensation of harmonic currents, inductive and capacitive reactive power and balancing of unbalanced loads. Low-feedback and low-loss operation due to 3 level topology and high clock frequency. Easy integration into existing low voltage networks by intelligent resonance detection (Intelligent FFT). Modular system for easy adaptation to changing network and load conditions, compensation of the neutral conductor current in the 4-wire connection and automatic network frequency detection. Degree of compensation of each harmonic freely adjustable, compensation strategy changeable during operation. Adjustable standby mode depending on voltage distortion (THD) and/or unbalance. Automatic restart after power failure.

Line filter based on SIC technology with reduced power dissipation, increased efficiency and low cooling air and weight requirements.

Connection: 3 wires with / without N

Filter rated current: 100 A (RMS)

Modular expandability: up to 8 modules without additional summation current transformer

Rated voltage: 380 to 415V (-40%+10%)

Mains frequency: 45 - 62 Hz

Power dissipation at rated current: <1.5%

Compensation modes individual for each phase:

- Even and odd harmonic currents 1st to 50th harmonics.

- Inductive & capacitive reactive power

- Load balancing

Response time: <50 μs

Settling time: <5 ms

Switching frequency: dynamic adjustment 20 to 35 kHz

Parameterization & operation:

Graphical touch panel 4.3" with backlight, installation in the front of the housing

User interface features:

- Display of filter performance by displaying the mains and load side.

- Visualization of measured values, spectra and waveforms

- Operating times freely adjustable via weekly schedule

- Logbook for operating and alarm messages with time stamp

- Password protected configuration

- Data storage via external, optional universal measuring device

- Languages: German & English

- No additional software required

Communication interfaces:

1x RS485 Modbus RTU

1x on/off switch

1x connection for external display

Measurement: 3-phase measurement of the mains current by means of current transformers

Current transformer: 1.5 x In / 5 A,

accuracy class: 0,5 / 1

input load: <0,5VA

Current transformer position: low voltage, medium voltage (parameterizable)

Current transformer and current transformer disconnector available separately.

Ambient temperature: -10 to +40°C

Derating:>45°C

Humidity: 5% to 95%, non-condensing

Installation altitude: up to 1500 m above sea level without derating

Cooling: focussed air cooling

Cooling air requirement: 810 m³ / h depending on ambient temperature

Design: cabinet module for 19" integration

Cable connection: from behind

Degree of protection: IP 20

Dimensions in mm (WxHxD): 500x190x550

Color scheme: RAL 9004 black

Weight: 39 kg

Approvals:

- CE Conformity

- DNVGL

Optional available accessories:

Interfaces: Ethernet (TCP/IP), Modbus TCP

Potential free I/Os: via external module

Delivery includes:

Installation instructions, operating instructions in German language.

A qualified network analysis is recommended to determine the required filter rated current.

Manufacturer: Janitza electronics GmbH

Type: AHF Pro LCD R 400 V 100 A

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