

AFQevo

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AFQevo (WS)



AFQevo with EMI filter (WF)

Parallel multifunction active filter

Description

The **AFQevo** parallel multifunction active filter is the most complete solution for solving power quality problems related to industrial, commercial or service installations with presence of harmonics, consumption of reactive power (usually capacitive) and also phase unbalance. The **AFQevo** is meant for wall-mounting thanks to its small size to facilitate its installation.

The features and functions implemented are:

- Filtering capacity of 30 A
- Reduced metallic enclosure for wall assembly. Its compact dimensions make it easy to install.
- Range of filters for installations with 3 wires (3W model) or 4 wires (4W model)
- Multi-range voltage and dual frequency (50/60 Hz).
- Reduction of harmonic currents up to the 50th harmonic (2,500 Hz).
- Selection of harmonic frequencies to be filtered so to reach the filter's highest effectiveness.
- Power factor correction. Both inductive and capacitive currents.
- Phase current balancing. In the 4W model, it helps to reduce consumption in neutral.

If higher filtering capabilities are required, the system can be expanded with up to 100 **AFQevo** connected in parallel (the filters must all be of the same 3 or 4-wire model).

Application

Ideal solution for installations with large amounts of single-phase and three-phase loads that generate harmonics, such as computers, UPSs, lights, lifting units, air-conditioning systems with phase shifters, etc.

Technical features

Electrical features	Rated voltage	4 wires (4W) 3P+N: 230...400V phase-phase +/-10%
		3 wires (3W) 3P:400 -440-480V phase-phase +/- 10%
	Frequency	50/60Hz +/- 5%
Power	THDV max.	25%
	Maximum power consumption	1050 W
	Maximum power	20700 VA
	Maximum current (phase)	30 A (rms)
	Maximum current (neutral)	90 A (rms)
Current measurement	only type AFQe-4W	
	Crest factor (current)	2:1
	Type	4W: 3P+N: 3x transformer .../5A 3W: 3P: 3 ó 2x transformer .../5A Class 1 (Power)
Features	Consumption	Frequency up to 2500Hz 1.5 VA each transformer
	Current harmonic range	From the 2nd to the 50th harmonic, selectable Transient response < 1 ms
	Phase compensation	Selectable
	Power factor correction function	Selectable from 0,8 inductive to 0,8 capacitive
	Programmation priority	Selection of harmonics to be filtered, enabling the balancing function and/ or the power factor correction function

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Features	Parallel installation	Up to 100 devices Connecting CTs to the “master” unit Advanced management algorithm: •Maximize the life of the device (alternating operation of different devices). •Maximizing operating efficiency (only the necessary filters are enabled). •Allow redundancy (system operation in case of failure of equipment).
	User interface	TCT touch colour screen 3,5” Web server + datalogger (2Gb)
	RS-485	Modbus RTU, 9600 B.Stop: 1 Parity No
	Ethernet	TCP/IP (Modbus TCP)
	Installation	Category
	Pollution degree	2
	Working temperature	-10... +45°C
	Storage temperature	-20... +50 °C
	Relative humidity	0...95% non-condensing
	Altitude	2000 m
	Protection degree	IP20
Connection	Mains / Ground	M6 Ring terminal. Maximum ring width 12 mm (mains), 16 mm (ground). Coupling torque 2.2-2.4 Nm
	CTs	6-pole connector. Maximum conductor cross-section 2.5mm ² Coupling torque 0.5-0.6 Nm
	RS-485	3-pole connector. Maximum conductor cross-section 2.5mm ² Coupling torque 0.5-0.6 Nm
	Ethernet	RJ45
	Dimensions	Weight
	Noise level	65 dBA
Standards	IEC 62477-1, IEC 55011, IEC 61000-6-2, IEC 61000-6-4, IEC 61439-1	

References

Active filters for 3 wires (3W) and 4 wires (4W)

Phase current	Neutral current	Crest current	EMI Filter	Type	Code
30 A	-	60 A	•	AFQe-3WS-030M-480	R7LM7B
30 A	-	60 A	•	AFQe-3WF-030M-480	R7LM73
30 A	90 A	60 A	•	AFQe-4WS-030M-400	R7QM0B
30 A	90 A	60 A	•	AFQe-4WF-030M-400	R7QM03



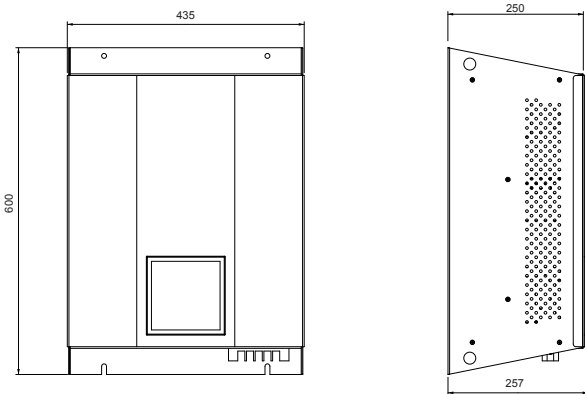
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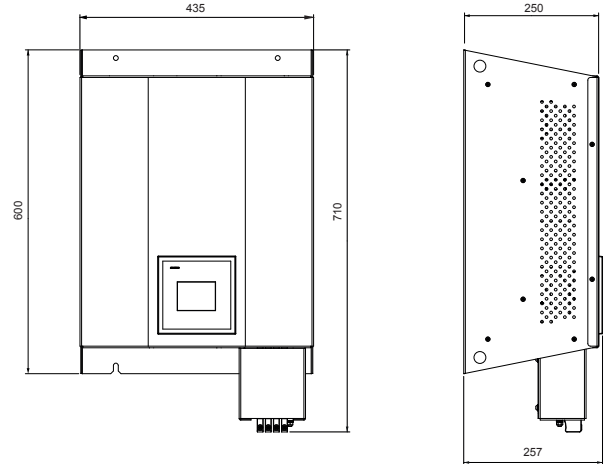
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Dimensions

Type	Dimensions (Width x High x Depth)	Weight (kg)
AFQe-3WS-030M-480	435 x 600 x 257 mm	31
AFQe-3WF-030M-480	435 x 710 x 257 mm	32
AFQe-4WS-030M-400	435 x 600 x 257 mm	31
AFQe-4WF-030M-400	435 x 710 x 257 mm	32



AFQevo (WS)



AFQevo con filtro EMI (WF)

Connections

4 wires three phase connection with **network side** current measurement

4 wires three phase connection with **load side** current measurement

