

Active Filter

AFQw 30 / 60 / 100

Description

The wall-mounted AFQm multilevel active filters are the most complete solution for power quality problems in three-phase industrial, commercial or service installations caused by the presence of harmonics and the consumption of reactive power.



- Filtering capacity of 30 A, 60 A and 100 A
- Small wall-mounted cabinet easy to install thanks to its small dimensions
- Range 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 fiftieth harmonic (2,500 Hz)
- Selection of harmonic frequencies to be filtered for maximum filter effectiveness

Applications

- Installations with a large amount of single-phase and three-phase loads generating harmonics
- Computers
- Lifting equipment
- Telecommunication centres
- Office buildings
- Air-conditioning systems

Technical Data

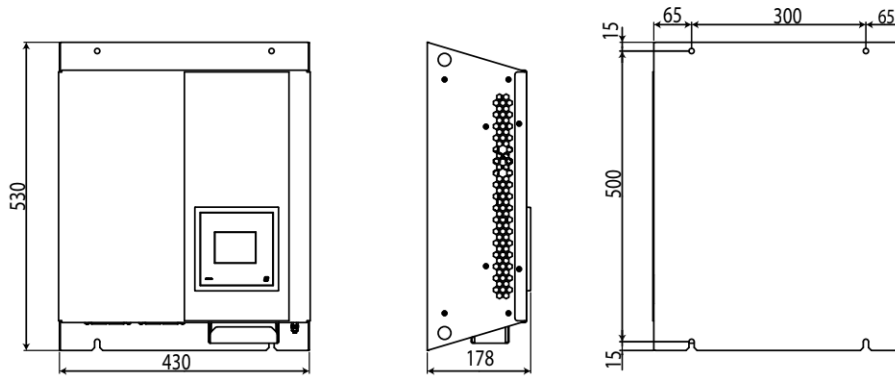
Electrical Parameter	Rated voltage	4 wires (4W) 3P+N: 230...400V phase-phase +/- 10% 3 wires (3W) 3P: 230...480V phase-phase +/- 10%		
	Frequency	50/60Hz +/- 5%		
	Maximum THDv	25%		
Power	Models	30A	60A	100A
	Maximum power 4W (400V)	20700 VA	41400 VA	69000 VA
	Maximum power 3W (480V)	22906 VA	45812 VA	76300 VA
	Average efficiency	>97.2%	>97.2%	>97.2%
	Maximum current (phase)	30 A(rms)	60 A(rms)	100 A(rms)
	Maximum current (neutral) only 4W	90 A(rms)	180 A(rms)	300 A(rms)

Features	Filtering	From the 2nd to the 50th harmonic, selectable Time response < 0.1 ms		
	Phase compensation	Selectable		
	Power factor correction	Selectable from 0.7 inductive to 0.7 capacitive		
	Programming priority	Priority of filtering or balancing / Power factor correction, selectable		
	Models	30A	60A	100A
Parallel installation	<ul style="list-style-type: none"> Up to 100 devices/modules Connection of CTs to the master unit Allows redundancy (system operation in the event of equipment failure) 			
Noise level	<52 dBA	<54 dBA	<60 dBA	
User interface	3.5" colour touch screen Web server and data logger			
RS-485	Modbus RTU, 9600, 1, No parity			
Ethernet	TCP/IP (Modbus TCP)			
Installation	Category	CAT III (300 V)		
	Pollution rating	2		
	Working temperature	-10...+45°C		
	Storage temperature	-20...+55°C		
	Relative humidity	0...95% non-condensing		
	Altitude	3000 m (2000 m without derating)		
	Protection rating	IP20 (or other protection degree upon request)		
	Grid	30A	60A	100A
	M6 Ring terminal	M6 Ring terminal	M8 Ring terminal	
	Maximum ring width 12 mm	Maximum ring width 12 mm	Maximum ring width 23 mm	
	Tightening torque 2.2-2.4 Nm	Tightening torque 2.2-2.4 Nm	Tightening torque 8-10 Nm	
CTs	6-pole connector Maximum cable cross section 2.5 mm ² Tightening torque 0.5...0.6 Nm			
RS-485	3-pole connector Maximum cable cross section 2.5 mm ² Tightening torque 0.5...0.6 Nm			
Ethernet	Tightening torque 0.5...0.6 Nm			
Standards	IEC 62477-1:2012, IEC 55011:2011, IEC 61000-6-2, IEC 61000-6-4:2007, IEC 61439-1:2011			

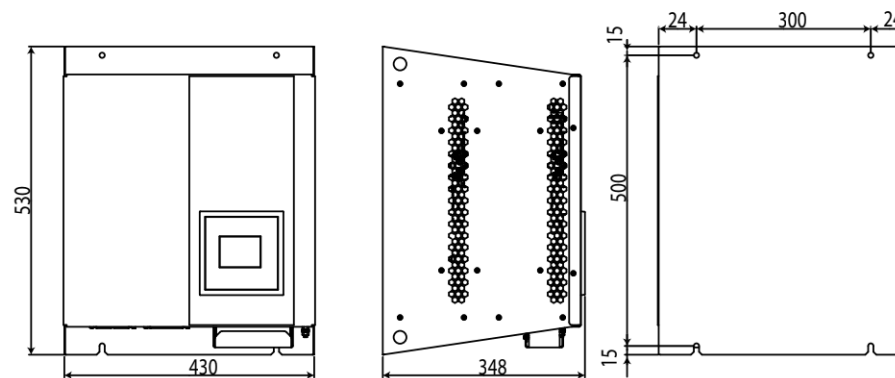
Dimensions

Type	Dimensions (Width x Height x Depth)	Weight (kg)
AFQw-3WF-030M-480	430 x 530 x 178 mm	21
AFQw-3WF-060M-480	430 x 530 x 348 mm	39
AFQw-3WF-100M-480	439 x 745 x 288 mm	56
AFQw-4WF-030M-400	430 x 530 x 178 mm	21
AFQw-4WF-060M-400	430 x 530 x 348 mm	39
AFQw-4WF-100M-400	439 x 745 x 288 mm	56

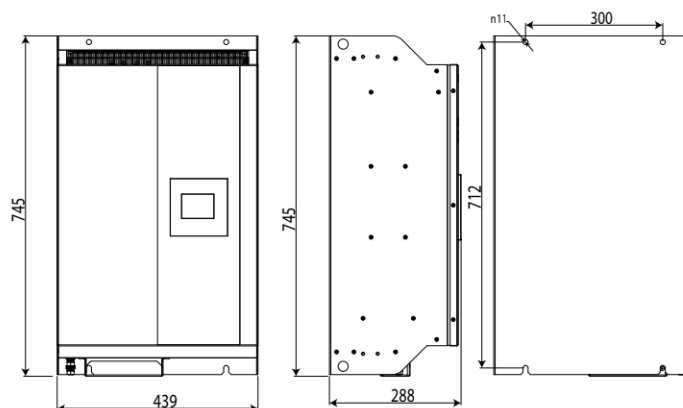
AFQw-xxx-030M



AFQw-xxx-060M



AFQw-xxx-100M



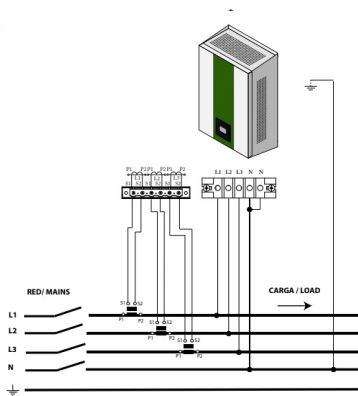
References

Wall-mounted active filters for 3 wires (3W) and 4 wires (4W)

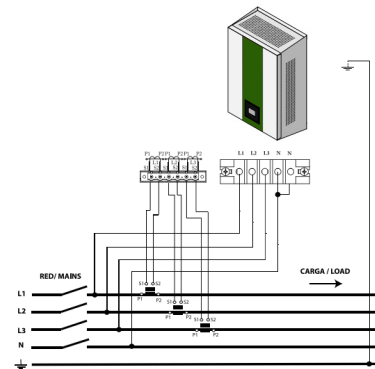
Phase Current	Neutral Current	System	Type	Code
30A	-	3 wires 230V - 480 V	AFQ-3WF-030M-480	APSw-AFQ3-30
60A	-		AFQ-3WF-060M-480	APSw-AFQ3-60
100A	-		AFQ-3WF-100M-480	APSw-AFQ3-100
30A	90A	4 wires 230V - 400 V	AFQ-4WF-030M-400	APSw-AFQ4-30
60A	180A		AFQ-4WF-060M-400	APSw-AFQ4-60
100A	300A		AFQ-4WF-100M-400	APSw-AFQ4-100

All active filters incorporate an EMI filter

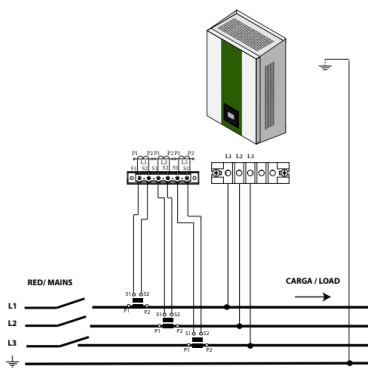
Connections



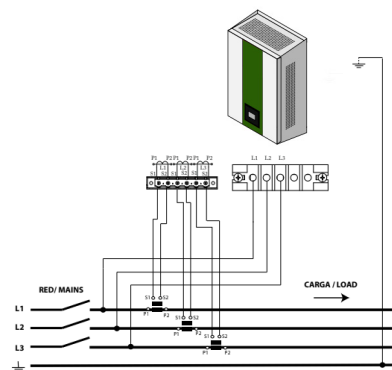
Three-phase measurement with 4 wire power connection and current measurement in mains side.



Three-phase measurement with 4 wire power connection and current measurement in load side.



Three-phase measurement with 3 wire power connection and current measurement in mains side.



Three-phase measurement with 3 wire power connection and current measurement in load side.