

SINAF-3W



Active Parallel Multi-function Filter

Description

SINAF multi-function parallel active filters offer the most complete solution for solving quality-related problems in three-phase industrial, commercial or service installations, caused not only by harmonics but also by the consumption of reactive power (usually of the capacitive type). The functions implemented in all the models are listed below:

- Multi-range voltage (230* - 400 - 480 VAC) and dual frequency (50/60 Hz).
- Reduction of harmonic currents up to the 50th harmonic (2,500 Hz).
- The user can select the harmonic frequencies to be filtered in order to achieve greater filter efficiency.
- Power factor correction. Both inductive and capacitive currents.
- Balancing of phase currents.

If larger filtering capabilities are required, it is possible to connect up to 8 filters in parallel, which can be of different nominal current (filters must be the same model **SINAF-3W** or **SINAF-4W**).

Technical features

Electrical features	Voltage phase-phase	230* - 400 - 440 - 480 Vac ± 15%
	Frequency	50 Hz / 60 Hz (± 4 Hz)
	Connection mode	3 phases (3 or 4 wires system)
Filter specifications	Current harmonic range	From the 2 nd to the 50 th harmonic
	Specific selection of harmonics	From the 3 rd to the 25 th harmonic (only odd harmonics)
	Power factor correction function	Implemented
	Controller technology	DSP (digital signal processor)
	Transient response time	< 1 ms
	Overcurrent protection	Protection by limiting the current to the rated current of the filter
	Communications / Software	RS-485/Modbus / PowerStudio
	Noise level	< 70 dB
	Maximum power consumption	1 kW → 25 A, 1.7 kW → 50 A, 3.5 kW → 100 A, 5.7 kW → 150 A, 6.1 kW → 200 A
	Graphic display	LCD touch screen
Current transformers	Transformer range	From 5/5 A to 5000/5 A
	No. required	2 (only 3-wire) or 3
	Location	Load or Source**
Screen functions	Control option	ON/OFF filter, alarm reset and description of filter status
	Programming functions	Selection of harmonics to be filtered, enabling the balancing function and/or the power factor correction function, current transformer ratio, minimum operating current, control algorithm and number of AFQ units in parallel
	Display of electrical parameters	Values of voltages and currents; active, reactive and apparent power; power factor. Current harmonics and harmonic spectrum tables
Standards	Harmonic limitation	IEC 61000-3-4, IEEE 519-1992
	Electrical design	IEC 60146
	Electrical safety	EN 50178
	Electromagnetic compatibility	EN 55011, IEC EN 50081-2, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 610004-6, IEC 61000-6-2
Environmental conditions	Operating temperature	0 °C...+50 °C
	Humidity	0%...90% (non-condensing)
	Maximum altitude	2,000 m
Features of the enclosures	Assembly	Self-supporting metal cabinet
	Protection degree	IP 21
	Installation	Indoor use

* on request.

** Only individual units, not in parallel.