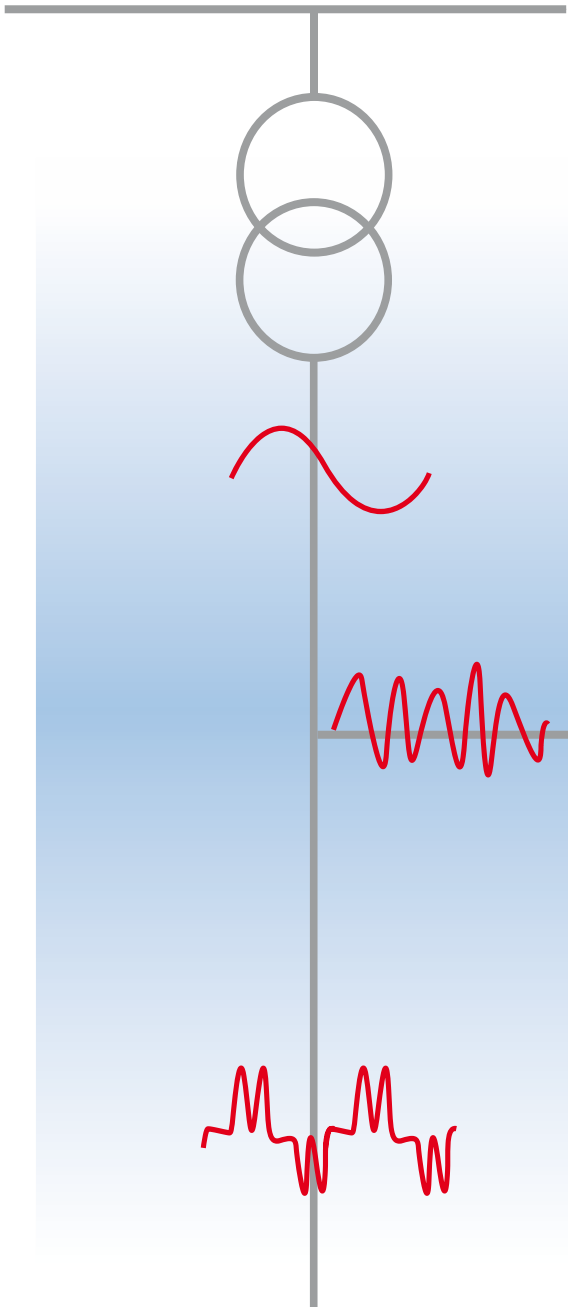


Active Filters OSFM

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Power Quality



It's all about saving your money!

Active Filters OSFM

Active suppression of harmonic currents



// A host of problems...

Through loads that generate harmonics, the quality of the current supply is reduced considerably. Due to harmonics, electronically controlled devices can fail, breakdown or show an "inexplicable malfunction".

- Sporadic upsets and defects in electronic control systems and devices
- Sporadic tripping of circuit breakers for no apparent reason
- Cables - especially transformers and induction motors - get too hot
- Motor power drops
- Power factor correction systems are overloaded
- Harmonic currents flowing into the medium voltage network exceed permissible limits
- The neutral conductor is overloaded

// ... THE solution

If the operation of loads with a high harmonic effect calls for an improvement of the mains quality, FRAKO Active Filters should be applied.

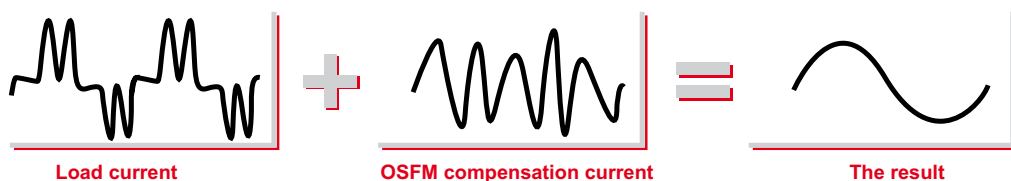
The harmful harmonic effect on the mains current of single loads, load groups or a complete electrical system can be reduced down to an acceptable degree, if not removed totally from the mains.

// Essential operating principle of Active Filters

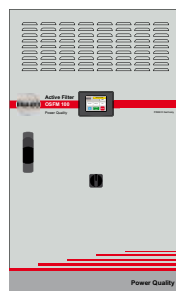
Active Filters are operated in parallel to the loads that generate the harmonics.

The Active Filter supplies all or part of the required harmonic current, so that the current flowing from the supply network (transformer) is less polluted or, in the ideal case, has a sinusoidal waveform completely free from harmonics.

The number, size and location in the circuit of Active Filters depend on the local harmonic spectrum and the specified duties.



CNC machine tool



OSFM Active Filter



Transformer

Active Filters OSFM

HMI - User Interface



// HMI - Human Machine Interface

Nowadays well-engineered functionalities as well as complex handling possibilities characterize many electronic devices. This also applies to Active Filters for active suppression of harmonic currents.

With its Active Filter **OSFM**, **FRAKO** counts on the **Human Machine Interface** technology.

The HMI user interface of the **FRAKO** Active Filter **OSFM** offers a fast and easy access to essential features of the system.

The 3.5" touch-screen-display as well as the graphic user interface with menu navigation allow an easy, fast and efficient operation of the system.

The well-structured menu items are optimally adjusted to the requirements for visualization, navigation and handling of the Active Filter **OSFM**.



Active Filters OSFM



/ OSFM technical data

Type	OSFM 100-400-3	OSFM 100-400-4	OSFM 200-400-3	OSFM 400-400-3
Nominal voltage	400V ± 10%			
Compensating current per phase	100A	100A	200A	400A
Compensating current in neutral conductor	-	300A	-	-
Performance	up to 50th harmonic			
Response time	< 1 ms/1 cycle (selective mode)			
Switching frequency	10kHz			
Operating modes	ALL / ALL but no fn / selective			
HMI (Human machine interface)	3,5" touch-screen, power quality monitoring und reporting functions			
Interfaces	Ethernet / RS 485, ModBus			
Dimensions (W×H×D) (mm)	600 × 1000 × 500	600 × 1000 × 500	600 × 1000 × 500	600 × 2200 × 500
Weight (kg)	85 kg	85 kg	148 kg	300 kg
Cooling media	Air	Air	Air	Air
Power losses	< 3%	< 3%	< 3%	< 3%
Ambient temperature	40°C			
Modularity	Parallel operation up to 7 units			
Noise level	66 dB	66 dB	68 dB	69 dB
Current transformer	Secondary current 5A or 1A, class 0.5 or better			
Ingress protection	IP 21 (IP 34 as an option)			
Operating elevation	1000 m without derating			
Relative humidity	< 95 % non-condensing			
Color	RAL7035			



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