

# FT400 series ACTIVE FILTER UNIT



## For active compensation of harmonic currents and reactive power

There is increasing number of electrical equipment with non linear voltage-current characteristics connected to network. Harmonic currents produced by them cause harmonic voltages in network impedances, which add to the fundamental system voltage resulting in voltage distortion.

This voltage distortion is experienced by all electrical equipment connected to the network leading to higher thermal loading of motors, transformers, capacitors, switchgear and cabling. Some of the electrical equipment develops more audible noise when supplied with distorted voltage. Sensitive electronic protection, control and ripple control systems are likely not to operate properly when supplied with distorted voltage.

The most effective way to eliminate harmonics is **MaxSine**, ACTIVE FILTER.



### TECHNICAL DATA - FT400 series

● Rated Voltage / Phase	208 @ 600 Volts
● Rated Current	60, 100 and 400 A.
● Rated Frequency	50Hz or 60Hz
● Phase	3 phases 3 wires 3 Phases 4 wires
● Harmonic Filtration / Frequency	3th up to 25th
● Harmonic Controller	Maxine NC12
● Insulation level	5 kV
● Continuous over-voltage	110 %
● Continuous over-current	135 %
● Mounting type	Floor mounting
● Enclosure type	Indoor
● Temperature class	-40 °C to 55 °C
○ Average 24h :	+ 45 °C
● Color	ASA 61 (light grey)
● Construction Standard	UL, CSA

## MAXSINE IS INDEPENDENT OF

- ✓ the curve form of the current to be compensated
- ✓ the dynamics of the current changes
- ✓ the phase of the current (inductive/capacitive)
- ✓ the direction of the current (generator/load)
- ✓ the phase of the load (symmetrical/asymmetrical)
- ✓ the quality of the mains voltage
- ✓ the network impedance

FT400 series

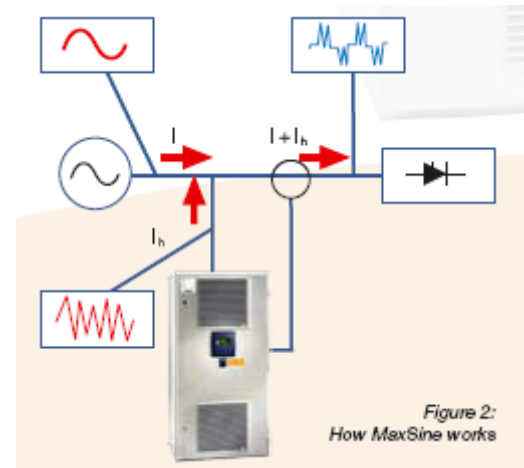


Figure 2:  
How MaxSine works

MaxSine	Rated output	Line current	Neutral current	Weight	Width	Depth	Height
	at 400V (kVA)	L1,L2,L3 (A)	N (A)				
Type				(kg)	(mm)	(mm)	(mm)
MaxSine 50A-3L	35	50	-	150	600	600	1200
MaxSine 100A-3L	70	100	-	240	600	500	1800
MaxSine 400A-3L	280	400	-	870	1200	800	2100
MaxSine 60A-4Lx2	40	60	120	325	600	500	1800
MaxSine 100A-4Lx1	70	100	100	350	800	500	2000

Larger power levels are possible by using parallel connection of MaxSine.  
Also other types are available on request.

## TECHNICAL DATA:

Main voltage:	3 x 400 V +10% -20% (deviations from mains voltage on request)
Frequency:	50/60 Hz ± 2%
Current hysteresis:	approx. 10% of the RMS-value of rated current
Overload capability:	1.2 x IRMS (dynamically)
Switching frequency:	10 kHz (average)
Potential free output contacts:	2 pcs (run / alarm), 2A/250Vac
Response time:	< 1ms, ultra fast mode 20 ms (50Hz), fast mode
CT ratio:	100-3000 / 1 A, class 0,5 requested
Power dissipation:	< 3% of the rated power of the device
Noise level:	< 60 dB*
Environmental temperature:	0° - 40°C
Temperature of storage:	-25 ... +55°C (VDE 0160)
Temperature of transport:	-25 ... +70°C (VDE 0160)
Elevation of installation:	< 1000 m above sea level (in case of deviation please contact your supplier)
Atmospheric humidity:	0-85% (no dew)
Cabinet:	2 mm sheet iron, RAL 7035
Degree of protection:	IP41
EMC:	EN 61000-6-2 / EN 50081-2
Communication:	Modbus, RS 485

\* Value is related to 100A without fans and to fundamental reactive current only

In line with our policy of on-going product development we reserve the right to alter specifications.