

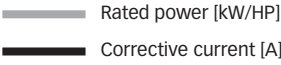










**Active and passive harmonic filters.** Harmonic filters help to obtain compliance with international standards like e.g. IEEE 519-1992 or EN 61000-5-12, and with local utility codes. They reduce the electrical and thermal stress upon the electrical infrastructure, eliminate the risk of harmonics-related reliability problems, and support long-term energy efficiency and cost savings. ECOsine™ advanced passive filters are the industry standard for 6-pulse rectifiers and non-regenerative motor drives to achieve the often specified level of <5% THID. ECOsine™ Active harmonic filters provide latest generation digital technology. With a response time of less than 300µs an efficient harmonics mitigation, power factor correction, and load balancing is achieved in real time.

Approvals				Features										Typical applications									
 																							
Filter family	Nom. voltage	0	100	200	300	400	500	For 50Hz grids	For 60Hz grids	THID <5%	Power factor correction	Load balancing	3-phase / 3-wire	3-phase / 4-wire	For 6-pulse diode rectifiers	For 6-pulse SCR rectifiers	AC Motor drives	DC Motor drives	Welding machines	HVAC installations	Building power distribution	Semiconductor industry	Water / wastewater treatment
FN 3410 	380 - 500VAC	4					400kW	■		■			■		■		■			■			■
FN 3410 HV 	690VAC	7.5				250kW		■		■			■		■		■			■			■
FN 3411 	380 - 500VAC	4					400kW	■					■		■		■						■
FN 3411 HV 	690VAC	7.5				250kW		■					■		■		■						■
FN 3412 	380 - 480VAC	5					500HP	■		■			■		■		■			■			■
FN 3413 	380 - 480VAC	5					500HP	■					■		■		■			■			■
FN 3420 (active) 	380 - 480VAC	30					300	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
FN 3430 (active) 	380 - 415VAC	30					300	■	■	■	■	■	■	■	■	■					■	■	

Note: filters FNxx11xx and FNxx13xx are available on request.  
 Note: power ratings marked with hatchings are in preparation.