

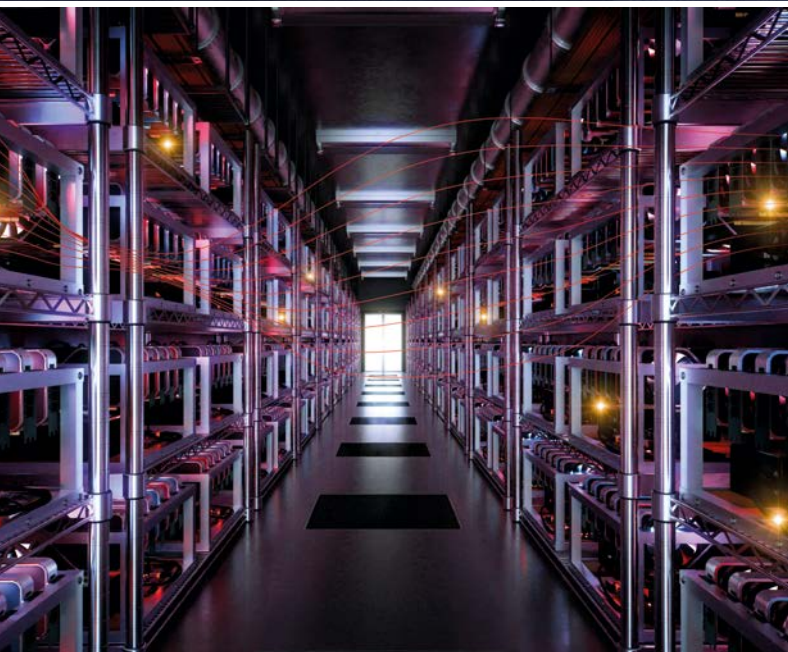
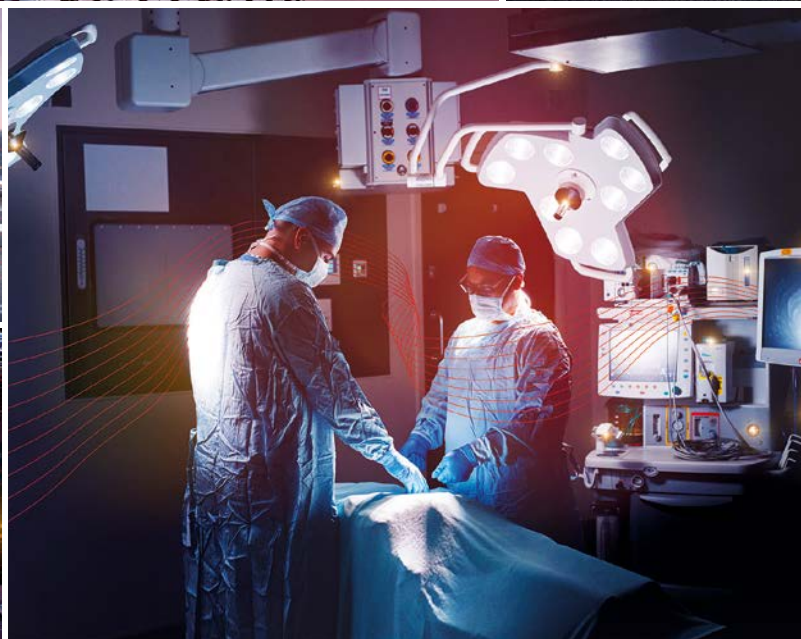
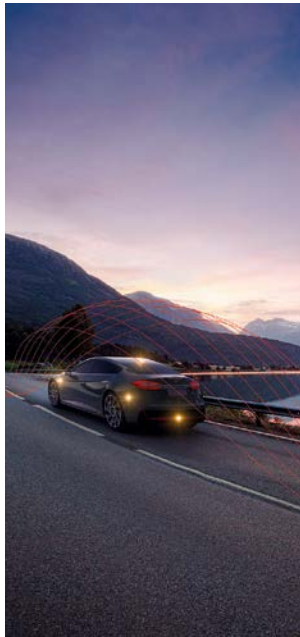
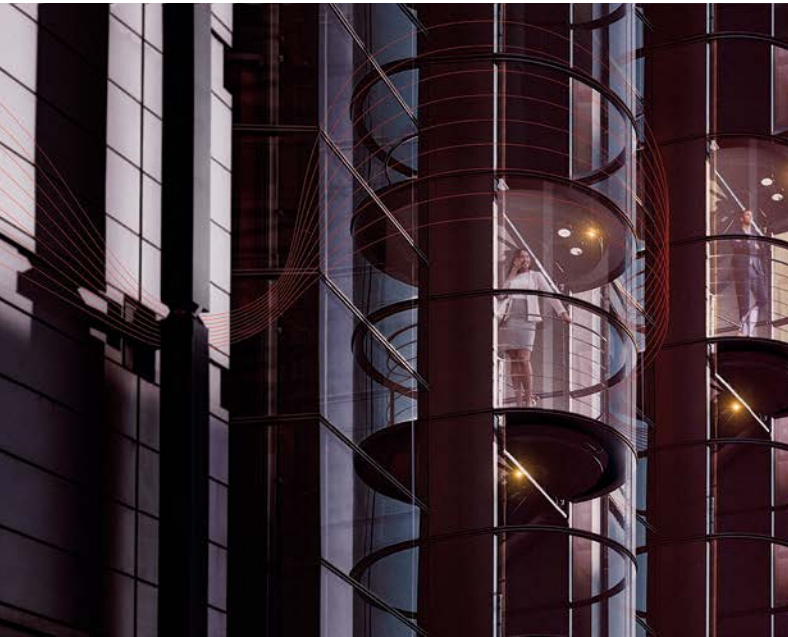
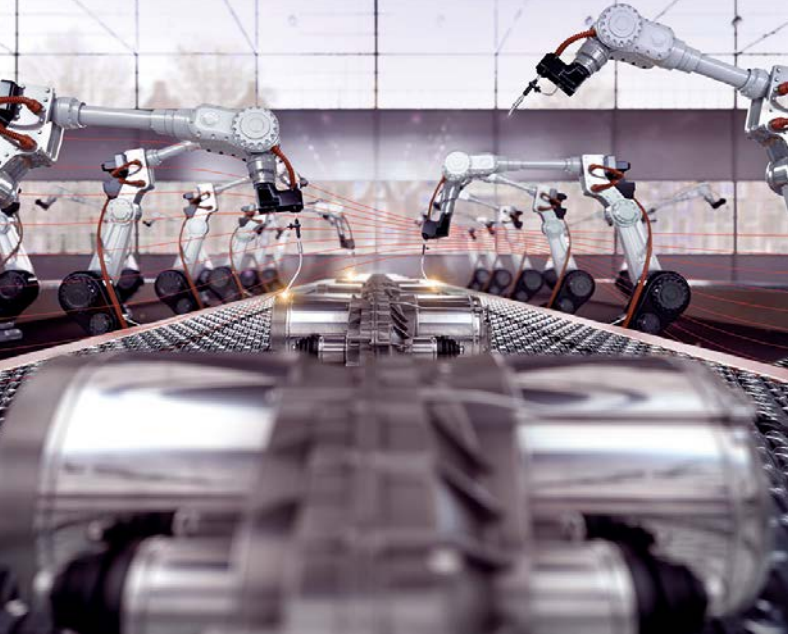
SHORT FORM CATALOG

EMC/EMI & Power Quality Filters and Components



Table of Contents

About Us	5
Industries	6
Product Selection EMC/EMI	10
Product Selection PQ	11
DC Filters	12
Single-Phase Filters	13
3-Phase Filters	14
3-Phase with Neutral Line Filters	15
IEC Inlet Filters and Power Entry Modules	16
EMC/EMI Chokes	17
PCB Filters	18
Feedthrough Components	19
Power Cords with Locking Systems	20
Active Harmonic Filters	21
Passive Harmonic Filters	22
Output Filters and 3-Phase Load Reactors	23
3-Phase Line Reactors and LCL Filters	24



About Us

The Schaffner Story

Schaffner plays a vital role in building a sustainable future in the new era of electrification. Headquartered in Switzerland and with subsidiaries around the world, Schaffner is a global leader in electromagnetic solutions that ensure the efficient and reliable operation of electronic systems. The Schaffner Group are experts in EMC filter solutions, harmonic filters, electromagnetic components and electromagnetic solutions. Our passionate and knowledgeable employees empower our customers to develop reliable electronic devices and systems that meet compliance standards and deliver increased energy efficiency.

This is how we deliver...

MORE POWER TO YOU.

Industries



Machinery & Robotics
Motor Drive, Machinery, Factory Automation, Robotics



Building Technology
HVAC, Elevator, Lighting, Heat Pump



Energy Management
Renewable Energy, EV-Charging, Energy Storage, Smart Infrastructure, Power Supply, UPS, Oil & Gas



Medical
Medical Equipment, Laboratory Equipment



Data & Communication
Datacenter, Networks

DC Filters



FN2200	■		■		
FN2210, FN2211	■		■		
FN2210HV, FN2211HV	■		■		
FN2220, FN2230, FN2240			■		

Single-Phase Filters



FN2010			■	■	
FN2020			■	■	
FN2030			■	■	
FN2060		■	■	■	
FN2070, FN2071	■	■	■	■	
FN2080	■	■	■	■	
FN2090, FN2091	■	■	■	■	
FN2410, FN2412	■	■	■		
FN2415	■				
FN2450	■	■	■	■	
FN2500, FN2520	■	■	■		
FN2560		■			
FN2580		■			
FN332			■	■	
FN343			■		
FN350	■				
FN352Z, FN353Z		■	■		■
FN700Z			■	■	■
LIS140C-1E		■	■		

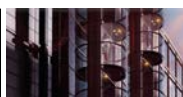
3-Phase Filters



FN3025, FN3026	■		■	■	
FN3030, FN3040 NEW	■	■	■	■	
FN3100	■		■		
FN3120H	■		■		
FN3258	■	■	■		
FN3268	■	■	■	■	
FN3270, FN3271	■	■	■		
FN3287, FN3288	■	■	■	■	
FN3310, FN3311	■	■	■		
FN3310HV, FN3311HV	■	■	■		
FN3359	■		■		
FN3840	■	■			
FN351H	■	■			



Machinery & Robotics
Motor Drive, Machinery, Factory Automation, Robotics



Building Technology
HVAC, Elevator, Lighting, Heat Pump



Energy Management
Renewable Energy, EV-Charging, Energy Storage, Smart Infrastructure, Power Supply, UPS, Oil & Gas



Medical
Medical Equipment, Laboratory Equipment



Data & Communication
Datacenter, Networks

3-Phase Filters with Neutral



FN3256H	■	■	■	■	
FN3280H	■	■	■		
FN354			■	■	
FN355			■	■	

IEC Inlet Filters and Power Entry Modules



FN2640, FN2660			■		■
FN9222			■	■	
FN9222E			■	■	
FN9226			■	■	
FN9233			■	■	
FN9233E			■	■	
FN9244			■	■	
FN9244E			■	■	
FN9246			■	■	
FN9255			■	■	
FN9255E			■	■	
FN9260			■	■	
FN9262			■	■	
FN9264			■	■	
FN9266			■	■	
FN9274				■	
FN9280			■	■	
FN9280E			■	■	
FN9290, FN9299			■	■	
FN261			■	■	
FN280			■	■	
FN370, FN372, FN378, FN379			■	■	
FN380			■	■	
FN390, FN1390			■	■	
Power Cords with EMC-Filter IF13		■	■		■

EMC/EMI Chokes



ED Common Mode Chokes		■			
EV/EH Common Mode Chokes		■	■	■	■
RC Common Mode Chokes	■	■	■	■	■
RI Saturation Chokes	■	■			
RN Common Mode Chokes	■	■	■	■	■
RS Differential Mode Chokes		■	■	■	■
RT Common Mode Chokes NEW	■	■	■	■	■
RR1000 NEW	■	■	■	■	■
RV Common Mode Chokes NEW		■	■		

Industries



Machinery & Robotics
Motor Drive, Machinery, Factory Automation, Robotics



Building Technology
HVAC, Elevator, Lighting, Heat Pump



Energy Management
Renewable Energy, EV-Charging, Energy Storage, Smart Infrastructure, Power Supply, UPS, Oil & Gas



Medical
Medical Equipment, Laboratory Equipment



Data & Communication
Datacenter, Networks

PCB Filters



FN402			■	■	■
FN405			■	■	■
FN406		■	■	■	■
FN409		■	■		■
FN410		■	■		■

Feedthrough Capacitors & Filters



FN7510, FN7511, FN7512, FN7513, FN7514				■	■
FN7560, FN7561, FN7562, FN7563					■
FN7611, FN7612				■	■
FN7660, FN7661					■

Accessories



IL13, 13 P, 19 Power Cords with Locking System		■	■	■	■
IL13P Angled IEC Lock C13		■	■	■	■
IL13P Rewireable IEC Locking Connector		■	■	■	■
IL13P Rewireable Angled Locking Connector		■	■	■	■



Machinery & Robotics
Motor Drive, Machinery, Factory Automation, Robotics



Building Technology
HVAC, Elevator, Lighting, Heat Pump



Energy Management
Renewable Energy, EV-Charging, Energy Storage, Smart Infrastructure, Power Supply, UPS, Oil & Gas



Medical
Medical Equipment, Laboratory Equipment



Data & Communication
Datacenter, Networks

Active Harmonic Filters



FN3530, FN3531, FN3540, FN3541	■	■	■	■	■
FN3532, FN3542	■	■	■	■	■
FN3545	■	■	■	■	■
SYNC300A, SYNC300X	■	■	■	■	■

Passive Harmonic Filters



FN3440, FN3442, FN3450, FN3452	■	■			
FN3441, FN3443, FN3451, FN3453	■	■			
FN3446, FN3458 NEW	■	■			
FN3470, FN3472, FN3480, FN3482	■	■			
FN3471, FN3473, FN3481, FN3483	■	■			
FN3416LV, FN3418LV	■	■			

Output Filters



FN5060, FN5060HV	■	■			
FN5420 NEW , FN5040HV	■				
FN530	■				

Reactors



RWK3044, RWK3062	■	■	■		
RWK305, RWK5420 NEW	■	■	■		

LCL Filters



FN6840	■		■		
--------	---	--	---	--	--

Product Selection EMC/EMI

EMC/EMI Filters & Components									
Single-Phase Filters					DC Filters	3-Phase Filters			
PCB Filters	Feedthrough Components	Chassis Mount Filters			DC Filters	3-Phase Filters		3-Phase Filters with Neutral	
≤10 A FN402 FN405 FN406 FN409 FN410 Page 18	≤250 A Capacitors FN7510 FN7511 FN7512 FN7513 FN7514 FN7560 FN7561 FN7562 FN7563 Filters FN7611 FN7612 FN7660 FN7661 Page 19	≤100 A Standard Performance FN2010 FN2020 FN2410 FN2412 FN2450 FN332 FN350 Page 13	≤36 A High Performance FN2030 FN2060 FN2070 FN2071 FN2080 FN2415 FN2500 FN343 Page 13	≤32 A Very High Performance FN2090 FN2091 FN2520 FN2560 FN2580 FN352Z FN353Z FN700Z Page 13	25 A–2300 A FN2200 FN2211 FN2210 FN2211HV FN2210HV EV-Charging Application FN2230 FN2231 FN2220 FN2221 FN2240 FN2241 Page 12	≤300 A FN3025 FN3026 FN3030 FN3040 FN3100 FN3120H FN3258 FN3287 FN3288 FN3268 Page 14	25 A–2300 A FN3270 FN3271 FN3310 FN3311 FN3310HV FN3311HV FN3359 Page 14	3 A–30 A FN354 FN355 Page 15	8 A–600 A FN3256H FN3280H Page 15

IEC Inlet Filters/Power Entry Modules PEM			
IEC Inlet Filters	PEM with Fuse or Switch	PEM with Fuse and Switch or Voltage Selector	Power Cords with Filters
≤20 A FN2640 FN2660 FN9222 FN9222E FN9226 FN9233 FN9233E FN9244 FN9244E FN9246 FN9255 FN9255E FN9274 Page 16	≤10 A FN9260 FN9262 FN9264 FN9266 FN261 Page 16	≤10 A FN1390 FN9280 FN9280E FN9290 FN9299 FN280 FN370 FN372 FN378 FN379 FN380 FN390 Page 16	≤10 A IF13 Page 16

EMC/EMI Chokes				
Saturation Chokes	Differential Mode Chokes	Common Mode Chokes		
≤25 A RI Series Page 17	≤4 A RS Series Page 17	Single-Phase 0.2 A–10 A ED Series EV/EH Series RC Series RN Series RS Series 6 A–63 A RT Series RV Series Page 17	3-Phase 6 A–63 A RT Series Page 17	3-Phase with Neutral 6 A–50 A RV Series Page 17







Product Selection PQ

Harmonic Filters		
Mitigation Requirement		
Active FN3530 FN3531 FN3540 FN3541 FN3532 FN3542 FN3545	Passive ≤250 kW FN3440 FN3441 FN3442 FN3443 FN3450 FN3451 FN3452 FN3453 FN3446 FN3458 FN3416LV FN3418LV	Passive ≥250 kW FN3470 FN3471 FN3472 FN3473 FN3480 FN3481 FN3482 FN3483
Page 21	Page 22	Page 22

3-Phase Reactors and LCL Filters			Output Filters	
Line Side		Load Side	Voltage Shape	
Line Reactors 4% ≤1000 A RWK3044 RWK3062	LCL Filters 50 A FN6840	Load Reactors 0.8% ≤1000 A RWK305 6% ≤1000 A RWK5420	dv/dt Filters ≤1200 A FN5060 FN5060HV	Sine Wave Filters ≤1320 A FN5040HV FN5420 FN530
Page 24	Page 24	Page 23	Page 23	Page 23

DC Filters

DC filters are specifically optimized for applications with DC supply like EV charging, DC grids, energy storage and PV installations.

		Rated Current [A]				Attenuation Performance				Features			
		25	150	250	600	1000	2300	1-stage filter circuit	2-stage filter circuit	Low frequency attenuation	High frequency attenuation		
		standard		high		very high							
	FN2200	1200 VDC	25		2300			■	■	■			
	FN2210 FN2211	1000 VDC	250		2300			■	■	■			
	FN2210HV FN2211HV	1500 VDC	250		2300			■	■	■			
	FN2220 FN2221	1000 VDC	150	600				■	■	■			
	FN2230 FN2231	500 VDC	150	600				■	■	■			
	FN2240 FN2241	1000 VDC	150	600				■	■	■			

Single-Phase Filters

















Single-phase filters for chassis or DIN-rail mounting are key for EMC compliance of low to medium power industrial applications. A broad selection of electrical and mechanical features allows a specific choice and deployment for countless applications.



Family	Max. Voltage	Rated Current [A]			Features							
		standard	high	very high	Choice of connectors	Low frequency attenuation	High frequency attenuation	Earth line choke	Overvoltage protection	TEMPEST protection	DIN Rail Mounting	Multiple terminal choice
FN2010	250 VAC/VDC	1	60									
FN2020	250 VAC/VDC	1	60									
FN2030	250 VAC/VDC	1	30									
FN2060	250 VAC/VDC	1	30									
FN2070 FN2071	250 VAC/VDC	1	36									
FN2080	250 VAC/VDC	1	16									
FN2090 FN2091	250 VAC/VDC	1	30									
FN2410 FN2410H	250 VAC 520 VAC	8	100									
FN2412 FN2412H	250 VAC 520 VAC	8	45									
FN2415	250 VAC	6	20									
FN2450	250 VAC	6	20									
FN2500	277 VAC 400 VDC	10	32									
FN2520	277 VAC 400 VDC	10	32									
FN2560	300 VAC 300 VDC	1	8									
FN2580	350 VAC	1	8									
FN332	250 VAC	1	10									
FN343	250 VAC	1	10									
FN350	250 VAC	8	55									
FN352Z FN353Z	250 VAC	6	10									
FN700Z	250 VAC	6	20									
LIS140C-1E	230 VAC	1	40									





3-Phase Filters

EMC/EMI filter solutions for industrial applications like motor drives, machine tools and robotics. Furthermore, these types of filters are also suitable for renewable energy, energy storage, EV-charging stations, and a vast array of other 3-phase power electronics. Many types are available in low leakage current versions and are ideal for HVAC applications such as heat pumps.

			Rated Current [A]				Features								
			7	50	180	250	380	2500	Multi-stage filter circuit	Safety connector blocks	Low leakage current	Versions for IT networks	Busbar connection	Optional protective covers	DIN-rail mounting option
Family	Max. Voltage		standard		high	very high									
	FN3025	520 VAC	10	50					■	■					
	FN3026	520 VAC	10	50					■	■				■	
	FN3030 FN3040	530/300 VAC	10	30					■	■				■	
	FN3100	520 VAC		35		300			■						
	FN3120	520 VAC		25		230			■						
	FN3258H	520 VAC	7		180				■						
	FN3268	520 VAC	7		180				■	■					
	FN3270 FN3271	520 VAC	10			1000			■			■	■		
	FN3287	530 VAC	10		230				■	■					
	FN3288 FN3288IT	530 VAC	10		230				■	■	■				
	FN3288HV FN3288HVIT	760 VAC	10		230				■	■	■				
	FN3310 FN3311	520 VAC				250	2300				■	■	■		
	FN3310HV FN3311HV	760 VAC				250	2300				■	■	■		
	FN3359 FN3359HV	520 VAC 760 VAC			150		2500		■		■	■	■		
	FN3840	530 VAC		25		380			■			■			
	FN351H	520 VAC	8		180				■						

3-Phase with Neutral Line Filters

3-phase with neutral line filters are a compact solution for interference suppression on the mains input of cabinets and control units of equipment, ranging from industrial applications like machine tools to sensitive medical installations. These installations typically involve several and often insufficiently filtered frequency inverters and SMPS, causing current imbalance and significant interference problems. As individual elements they may be interference suppressed already. The conjunction of several switching components in the same cabinet and a non EMC conscious cabling will increase the demand for an additional EMC/EMI filter on the mains input of the whole installation. Many times this is the only way to get the CE mark for the cabinet in accordance with the EMC directive.

			Rated Current [A]		Features						
Family	Max. Voltage		standard	high	very high	1-stage filter circuit	2-stage filter circuit	Safety connector blocks	Optional screw bolt terminals	Faston connection	Very low leakage current
	FN3256	3× 520/300 VAC	8	160		■		■			
	FN3280	3× 520/300 VAC	8	600			■	■			
	FN354	3× 440/250 VAC	4	25				■		■	
	FN355	3× 440/250 VAC	3	30		■				■	■

IEC Inlet Filters and Power Entry Modules

A powerful and compact combination of IEC connector, EMC/EMI filter, fuses, switch and voltage selector in one package.












Family	Max. Voltage	Rated Current [A]			Fuse(s)	Switch (2-pole)	Voltage selector	Snap-in version	Extra wide mounting	Earth line choke	PCB mounting	Multiple terminal choice	Features	
		standard	high	very high										
FN9222	250 VAC	1	20											
FN9222E	250 VAC	1	15											
FN9226	250 VAC	1	10											
FN9233	250 VAC	1	15											
FN9233E	250 VAC	1	15											
FN9244	250 VAC	1	15											
FN9244E	250 VAC	1	15											
FN9246	250 VAC	1	20											
FN9255	250 VAC	2	20											
FN9255E	250 VAC	2	15											
FN9260 FN261	250 VAC	1	10											
FN9262 FN9266	250 VAC	1	10											
FN9264	250 VAC	1	10											
FN9274	250 VAC	1	15											
FN9280	250 VAC	1	10											
FN9280E	250 VAC	1	10											
FN9290 FN9299	250 VAC	1	10											
FN2640	250 VAC		10	20										
FN2660	250 VAC		10	20										
FN280, FN281, FN282, FN283 FN284, FN285, FN286	250 VAC	1	10											
FN370, FN372, FN378, FN379	250 VAC		2	6										
FN380, FN382, FN385B FN388, FN389	250 VAC		2	6										
FN390 (6 A) FN1390 (10 A)	250 VAC	1	10											
IF13	250 VAC			10										

EMC/EMI Chokes

An extensive selection of discrete EMC/EMI chokes with various inductance and current ratings allows optimized circuitry for EMC compliance to be designed easily and economically.






Features

Family	Max. Voltage	Rated Current [A]							Inductance Value [mH] up to							Features							
		0.2	0.7	3	6	16	50	64	0	20	40	60	80	100	Common mode choke	DC application	Single phase	3-phase	3-phase with neutral	Differential mode choke	Saturation choke	High differential mode inductance	
 ED series	300 VAC	0.2		2						40					■		■						■
 EV/EH series	250 VAC	0.3		5									90	■		■							
 RC series	250 VAC 1000 VDC	0.25	0.7											■	■	■							
 RI series	250 VAC		1.5									25					■					■	
 RN series	300 VAC 300 VDC	0.3				10								■	■	■							
 RS series	250 VAC	0.3			4												■				■		
 NEW RT series	600 VAC 425 VDC						6						63	■	■	■	■						
 NEW RV series	530 VAC 1000 VDC							16				50		■	■	■		■					
 NEW RR1000	The stackable common mode chokes are typically applied over cable bundles and need no further electrical connection.																						

PCB Filters










Very compact EMI suppression components can directly be mounted on printed circuit boards of low-power office, medical, telecom and IT equipment, DC/DC converters and power supplies etc. Ideal low cost solution for manufacturers who already planned for EMC compliance throughout the equipment design process.







Family	Max. Voltage	Rated Current [A]		Attenuation Performance				Features					
		0.5	3	standard	high	very high	For DC applications	With metal case	Low profile	Small footprint			
 FN402	250 VAC	0.5	6.5										
 FN405	250 VAC	0.5	10										
 FN406	250 VAC	0.5	8.4										
 FN409	75 VDC	3	13										
 FN410	250 VAC	0.5	6										

Feedthrough Components

Interference suppression up into the GHz range for high-tech applications such as IT, telecom, server and networking equipment.




		Rated Current [A]						Capacitance [nF]						Features					
		0	10	50	63	100	200	2.2	100	220	470	1000	4700	AC capacitors	DC capacitors	AC filters	DC filters	Y2 capacitor class	Y4 capacitor class
Feedthrough Capacitors	Max. Voltage																		
	FN7510 300 VAC 250 VAC (UL)	2.2	47	10	100									■				■	
	FN7511 300 VAC 250 VAC (UL)	4.7	220	10	200									■				■	
	FN7512 300 VAC 250 VAC (UL)	33	100	16	63									■				■	
	FN7513 300 VAC 250 VAC (UL)		100	16										■				■	
	FN7514 300 VAC 250 VAC (UL)		100	32										■				■	
	FN7560 130 VDC 130 VAC	10	100	10	200									■	■				■
	FN7561 130 VDC 130 VAC	47	470	63	200									■	■				■
	FN7562 130 VDC 130 VAC		100	16	200									■	■				■
	FN7563 130 VDC 130 VAC		470	16	200									■	■				■

		Rated Current [A]						Attenuation Performance						Features					
		0	10	50	63	100	200	standard	high	very high	AC capacitors	DC capacitors	AC filters	DC filters	Y2 capacitor class	Y4 capacitor class			
Feedthrough Filters	Max. Voltage																		
	FN7611 300 VAC 250 VAC (UL)		10	63												■		■	
	FN7612 300 VAC 250 VAC (UL)		10	63												■		■	
	FN7660 130 VDC 130 VAC		10	200												■	■		■
	FN7661 130 VDC 130 VAC		10	200												■	■		■

Power Cords with Locking Systems






Guarding against accidental disconnection of all electrical appliances with an IEC inlet, no exchange or modification of the IEC inlet or IEC inlet filter is needed. An easy retrofit for all electronic equipment and devices is possible.



Family	Max. Voltage	Standard Length * On Request								Features							
		6 ft	2 m	3 m	9 ft	12 ft	5 m	10 m	C14 line side plug IEC C14 male, straight	C20 line side plug IEC C20 male, straight	EU1 line side plug CEE7/VII right angled	US1 line side plug NEMA5-15 straight	US2 line side plug NEMA5-15 straight hospital grade	UK1 line side plug BS1363, right angled, fused 5 A	CH1 line side plug SEV1011 straight	JP1 line side plug JIS8303 straight	
 IL13	250 VAC	■	■	×	■	■	×	×	■		■	■	■	■	■	■	
 IL19	250 VAC		■							■	■	■		■			
 IL13P	250 VAC	Rewireable Connectors with Locking System															

Active Harmonic Filters

Active harmonic filters are suitable for mixed load installations and applications with dynamic load. Commonly used as a central solution at Point of Common Coupling (PCC). Ecosine Active Sync harmonic filters provide a reliable solution for harmonic mitigation, power factor correction and load balancing in real time. The modular concept offers highest flexibility for customization, redundancy, retrofitting and combination with passive harmonic mitigation components.

			Rated Mitigation Current [A]								Features											
Family	NEW	Nom. Voltage*	60	120	180	240	300	600	900	1200	For 50 Hz grids	For 60 Hz grids	For 6 pulse diode rectifiers without L _{dc}	For 6 pulse diode rectifiers with L _{dc}	For 6-pulse SCR rectifiers	THDI <5%	Power factor correction	Load balancing	3-phase/3-wire	3-phase/4-wire		
 FN3530 FN3531		200–480 VAC	60 A								■	■	■	■	■	■	■	■	■			
 FN3540 FN3541		200–415 VAC	60 A								■	■	■	■	■	■	■	■			■	
 FN3532 High speed Bus		200–480 VAC	120 A								■	■	■	■	■	■	■	■	■			
 FN3542 High speed Bus		200–415 VAC	120 A								■	■	■	■	■	■	■	■			■	
 FN3545		200–480/415 VAC	60	1200 A**																		■

* New: Nom. Voltage range starting from 200 VAC
** Up to 1200 A by combining multiple cabinets

Passive Harmonic Filters

Passive harmonic filters help to obtain compliance with international standards like e.g. IEEE 519-1992 or EN 61000-3-12, and with local utility codes. They reduce 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 passive harmonic filters are the industry standard for 6-pulse rectifiers and non-regenerative motor drives to achieve the often specified level of THDi <5%.










Features



Family	Nom. Voltage	Rated Power [kW/HP]		For 50 Hz grids	For 60 Hz grids	For 6 pulse diode rectifiers without L _{dc}	For 6 pulse diode rectifiers with L _{dc}	For 6-pulse SCR rectifiers	Full performance THDi <5%	Economy THDi 5-15%	3-phase/3-wire
		0	100								
FN3440	380-415 VAC	1.1	250 kW								
FN3441	380-415 VAC	1.1	250 kW								
FN3442	380-415 VAC	1.2	240 HP								
FN3443	380-415 VAC	1.2	240 HP								
FN3450	440-500 VAC	1.1	315 kW								
FN3451	440-500 VAC	1.1	315 kW								
FN3452	440-480 VAC	1.5	300 HP								
FN3453	440-480 VAC	1.5	300 HP								
FN3470	380-415 VAC		250	500 kW							
FN3471	380-415 VAC		250	500 kW							
FN3472	380-415 VAC		280	480 HP							
FN3473	380-415 VAC		280	480 HP							
FN3480	440-480 VAC		315	560 kW							
FN3481	440-480 VAC		315	560 kW							
FN3482	440-480 VAC		350	600 HP							
FN3483	440-480 VAC		350	600 HP							
NEW FN3446	380-500 VAC	4	200 kW								
NEW FN3458	380-480 VAC	5	300 HP								
FN3416LV	200-240 VAC	2.5	90kW								
FN3418LV	200-240 VAC	2.5	125HP								




Output Filters and 3-Phase Load Reactors

Schaffner offers a wide range of Power Quality motor protection devices. Improving the system reliability, availability and functionality to avoid expensive downtimes of installations, manufacturing plants, machinery and other applications caused by premature motor damage. Dv/dt reactors reduce the voltage rise induced by the pulse wide modulation generated by the variable frequency drive, dv/dt filters reduce the voltage rise even further and the voltage peaks at the motor terminals. Sine wave filters are differential mode low-pass filters providing a sinusoidal phase-to-phase output voltage and allow the use of cables up to 2'000 m long, eliminate the bearing currents and reduce acoustic noises.

			Rated Current [A]					Motor Frequency [Hz]										Features											
Family	Nom. Voltage		0	200	400	600	800	1000	1200	0	50	60	100	120	200	Maximum cable length [m]	dv/dt reduction	Overvoltage reduction	Motor temperature reduction	Acoustic motor noise reduction	Sym. sinusoidal output signal	Asym. sinusoidal output signal	Elimination of bearing damage	Replaces cable shields	Connection to DC link required	Improves overall EMC	Reduces equipment downtime		
  FN5420	480 VAC	2.3	1000 A							2000	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
 FN5040HV	690 VAC	13	1320 A							2000	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
 FN530	500 VAC	0 16 A								1000	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
 FN5060	500 VAC	12	1100 A							500	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
 FN5060HV	690 VAC	30	1100 A							500	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
  RWK5420	480 VAC	2.3	1000 A							100	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
 RWK305	500 VAC	0	1100 A							30	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

3-Phase Line Reactors and LCL Filters

Line side harmonic mitigation solutions for industrial applications like motor drives and active front end/active infeed converters. 3-phase line reactors offer a first stage of mitigation with possibility to combine with other filtering solutions like an active harmonic filter. LCL filters protect the grid from disturbances induced during energy regeneration from the active front end.

			Features										
Family	Nom. Voltage	Rated Mitigation Current [A]	For 50 Hz grids	For 60 Hz grids	For 6-pulse diode rectifiers	For 6-pulse SCR rectifiers	For Active Front End	Less commutation notches	Inrush current limitation	Harmonics reduction	Reduces the current and voltage ripples	4% impedance	2% impedance
 RWK3044	380–480 VAC	2 1000	■	■	■	■		■	■	■		■	
 RWK3062	500–690 VAC	1.5 870	■	■	■	■		■	■	■			■
 FN6840	380–480 VAC	50	■	■			■	■	■	■	■		

Headquarters, Global Innovation and Development

Switzerland

Schaffner Group
Industrie Nord
Nordstrasse 11 e
4542 Luterbach
P + 41 32 681 66 26
info@schaffner.com

Sales and Application Centers

China

Schaffner EMC Ltd. Shanghai
T20 - 3 C No 565 Chuangye Road
Pudong district 201201
P + 86 21 38 139 500
cschina@schaffner.com

Finland

Schaffner Oy
Lohjanharjuntie 1109
08500 Lohja
P + 358 50 468 72 84
finlandsales@schaffner.com

France

Schaffner EMC S.A.S.
16 - 20 Rue Louis Rameau
95875 Bezons
P + 33 1 34 34 30 60
francesales@schaffner.com

Germany

Schaffner Deutschland GmbH
Schoemperlenstrasse 12 B
76185 Karlsruhe
P + 49 721 56 910
germanysales@schaffner.com

India

Schaffner India Pvt. Ltd
Regus World Trade Centre
WtC 22nd Floor Unit No 2238
Brigade Gateway Campus 26 / 1
Dr. Rajkumar Road
Malleshwaram (W)
560055 Bangalore
P + 91 80 679 35 355
indiasales@schaffner.com

Italy

Schaffner EMC S.r.l.
Via Ticino 30
20900 Monza (MB)
P + 39 039 21 41 070
italysales@schaffner.com

Japan

Schaffner EMC K.K.
Taiju - Seimei Sangenjaya Bldg.
1 - 32 - 12 Kamiyama Setagaya-ku
154 - 0011 Tokyo
P + 81 3 57 12 36 50
japansales@schaffner.com

Singapore

Schaffner EMC Pte Ltd.
05 - 09 Kg Ubi
Ind. Estate 408705
P + 65 63 77 32 83
singapore@schaffner.com

Spain

Schaffner EMC España
Calle Caléndula 93 Miniparc III
Edificio El Soto de Moraleja
Alcobendas 28109 Madrid
P + 34 917 912 900
spainsales@schaffner.com

Sweden

Schaffner EMC AB
Östermalmstorg 1
114 42 Stockholm
P + 46 8 50 50 2425
swedensales@schaffner.com

Switzerland

Schaffner EMV AG
Industrie Nord
Nordstrasse 11 e
4542 Luterbach
P + 41 32 681 66 88
P + 41 32 681 66 26
switzerlandsales@schaffner.com

Taiwan

Schaffner EMV Ltd.
20 Floor - 2 No 97 Section 1
XinTai 5th Road
22175 XiZhi District
New Taipei City 22175
P + 886 2 2697 55 00
taiwansales@schaffner.com

Thailand

Schaffner EMC Co. Ltd.
Northern Region Industrial
Estate 67 Moo 4 Tambon
Ban Klang Amphur Muang
P.O. Box 14 51000 Lamphun
P + 66 53 58 11 04
thailandsales@schaffner.com

United Kingdom

Schaffner Ltd.
Suite 1 Oakmede Place
Terrace Road
Binfield
Berkshire
RG42 4JF
P +44 118 977 00 70
uksales@schaffner.com

USA

Schaffner EMC Inc.
52 Mayfield Avenue
Edison New Jersey
P + 1 732 225 95 33
usasales@schaffner.com

To find your local partner within Schaffner's global network, please visit [schaffner.com](https://www.schaffner.com).

Information provided in this document about products and services available from Schaffner group companies ("Schaffner") is intended for information purposes only and does not constitute an offer for purchase or sale or a recommendation or advice. The content of this document has been carefully prepared and reviewed and all reasonable efforts have been made to ensure the accuracy of the information. However, Schaffner makes no warranties whatsoever, explicitly or implied, about the accuracy and assumes no liability whatsoever for any errors or inaccuracies of this document and the consequences thereof. Schaffner accepts no responsibility or liability for any losses or damages of any kind arising out of the use of this document or any related information. Furthermore, Schaffner cannot be held responsible for any errors or unexpected unfulfillment of shipments. Schaffner reserves the right to make changes to information, products, published specifications, and any other functions described at any time and without notice. Product suitability for any area of application must ultimately be determined by the customer. In all cases, products must never be operated outside their published specifications. Schaffner does not warrant, represent, or guarantee the availability of any or all published products. The latest publications, product specifications, as well as the current Schaffner general terms and conditions and data protection policy all apply; these documents and the complete legal disclaimer can be downloaded from the Schaffner website. In order to improve readability, the masculine form is generally used for people and personal nouns referred to in this document. All references to persons apply equally to all genders. The abbreviated language form has only editorial reasons and does not imply any valuation.

All intellectual property rights, such as trademarks, tradenames, designs, and copyrights, are reserved and are exclusively owned by Schaffner Holding AG.

This document may exist also in other languages. The English version is valid and binding.

This disclaimer shall be governed by substantive Swiss law and resulting disputes shall be settled by the courts at the place of business of Schaffner Holding AG.

© 2023 Schaffner Holding AG

Schaffner Group

Nordstrasse 11e
4542 Luterbach
Switzerland
P + 41 32 681 66 26
info@schaffner.com

[schaffner.com](https://www.schaffner.com)

schaffner
MORE POWER TO YOU