

Power Line Filter For Shielded Room



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1. Product Description

Our power line filter for shielded rooms is expertly engineered to deliver a stable and reliable power supply while minimizing electromagnetic interference (EMI) in sensitive environments. By effectively suppressing noise and disturbances, it ensures optimal performance in shielded rooms and other critical areas where electromagnetic compatibility (EMC) is paramount. This filter safeguards the integrity of sensitive equipment and supports precise testing and seamless operation within shielded facilities.

2. Typical Applications

- Anechoic chamber
- Shielded room
- Electronic shelter
- Shielded cabinet

3. Product Features

- Ultra-High EMI Suppression: In the range of 14kHz – 40GHz, insertion loss > 100dB.
- Integrated design for ultra-high current, with a maximum current capacity of up to 2500A.
- Certain products feature a stainless-steel metal shell, offering an aesthetically pleasing appearance, high mechanical strength, and excellent corrosion resistance.

- Compliance with EMC Standards: Meets international and industry standards such as CISPR 16/25, IEC 61000-4-3, and MIL-STD-461, ensuring reliable test results and compliance.

4. Technical Data

Single-phase / Three-phase Four-wire power line filter

Rated Voltage (Single phase)	250VAC	Single-phase
Rated Voltage (3-phase)	250/440VAC	Three-phase
Rated Current	see characteristics	referred to +40°C ambient temperature
Rated Frequency	50/60Hz	
Shielding Efficiency	>100dB	Single-stage filter: 150kHz – 18GHz Three-stage filter: 14KHz-18GHz
Test Voltage	1000Vdc/2s	line-line
	1000Vdc/2s	line-case
Voltage Drop/Phase ΔV	<1%	of VR at 50Hz and IR
Climatic Category	25/070/21	

➤ Discharging Resistance Integrated

A discharge resistor is integrated into the filter to safely dissipate stored capacitance after power is turned off.

➤ Conventional single-stage filter (Up to 40GHz)

Type	Rated Current (A)	I _{Leakage} (A)	Dimension	Shielding Efficiency
GPF231A-16	2×16	0.2	Fig 1	100dB, 150K-18GHz
GPF231A-32	2×32			
GPF231A-63	2×63			
GPF231A-100	2×100	0.5		
GPF431A-16	4×16	0.2	Fig 2	
GPF431A-32	4×32			
GPF431A-63	4×63			
GPF431A-100	4×100	0.5		
GPF431A-200	4×200			
GPF431A-250	4×250	0.5		

➤ High-performance Three-stage filter (Up to 40GHz)

Type	Rated Current (A)	I _{Leakage} (A)	Dimension	Shielding Efficiency
GPF205C-5	2X5	0.1	Fig 6	100dB, 14K-40GHz
GPF231C-16	2×16	0.5	Fig 1	
GPF231C-32	2×32			
GPF231C-50	2×50			
GPF231C-63	2×63			
GPF231C-100	2×100			
GPF231C-200	2×200	1		
GPF431C-16	4×16	0.5	Fig 2	
GPF431C-32	4×32			
GPF431C-50	4×50			
GPF431C-63	4×63			
GPF431C-100	4×100			
GPF431C-200	4×200	1		
GPF431C-250	4×250			
GPF431C-300	4×300			
GPF431C-400	4×400	1	Fig 3	
GPF431C-600	4×600		Fig 4	
GPF431C-800	4×800		Fig 5	
GPF431C-1000	4×1000			

5. Dimensions (mm)

Type	A	B	C	D	E	F	G	H	I	J	K	Dim.
GPF231A-16	400	160	100	430	415	100	35	M24	M6	/	/	Fig 1
GPF231A-32												
GPF231A-63												
GPF231A-100	450	160	140	480	465	100	50	M45	M8	/	/	
GPF205C-6	200	80	40	/	/	/	22	M16	/	/	/	Fig 6
GPF231C-16	550	160	100	580	565	100	35	M24	M6	/	/	Fig 1
GPF231C-32												
GPF231C-50	650	160	120	680	665	100	50	M33	M6	/	/	
GPF231C-63												
GPF231C-100	800	180	140	830	815	120	50	M45	M8	/	/	
GPF231C-200									M12	/	/	
GPF431A-16	400	250	100	430	415	100	50	M33	M6	/	/	Fig 2
GPF431A-32												
GPF431A-63												
GPF431A-100	600	250	140	630	615	100	60	M45	M8	/	/	
GPF431A-200								M60	M12			
GPF431C-16	650	250	120	680	665	100	50	M33	M6	/	/	
GPF431C-32												
GPF431C-50												
GPF431C-63												
GPF431C-100	800	250	140	830	815	100	50	M45	M8	/	/	
GPF431C-200							60	M60	M12	/	/	
GPF431C-250												
GPF431C-300	930	400	200	960	945	170	60	M45	M12	4*25	100	Fig 3
GPF431C-400	965	400	200	995	980	170	60	M45	3*80	6*25	100	Fig 4
GPF431C-600										8*25		
GPF431C-800	965	450	230	995	980	185	60	M60	3*12 5	8*40	106	Fig 5
GPF431C-1000												

Fig 1

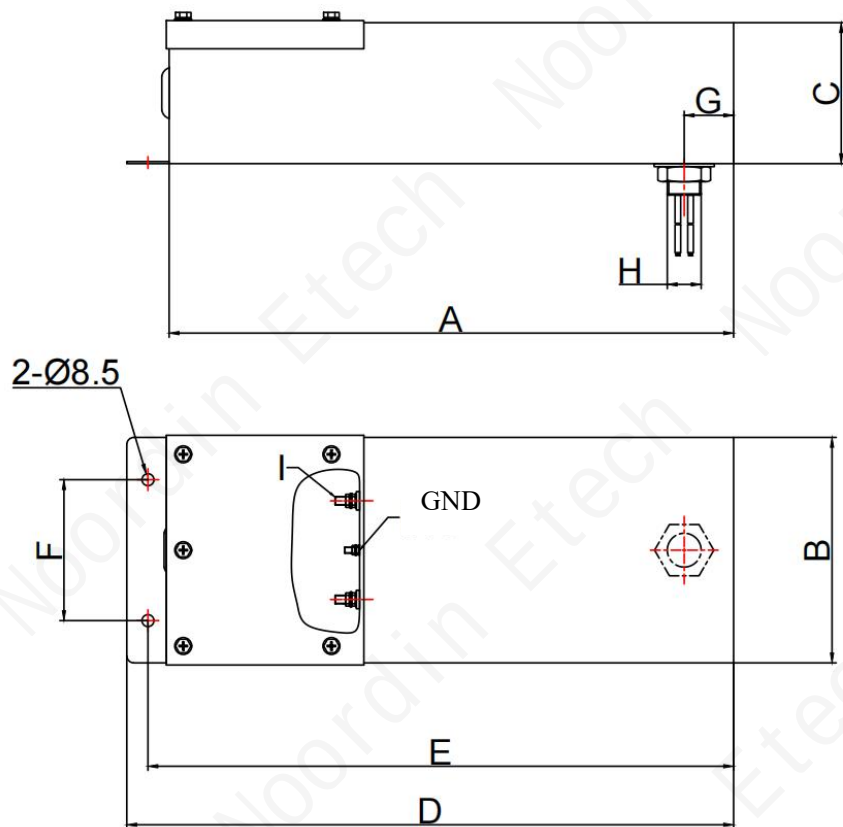


Fig 2

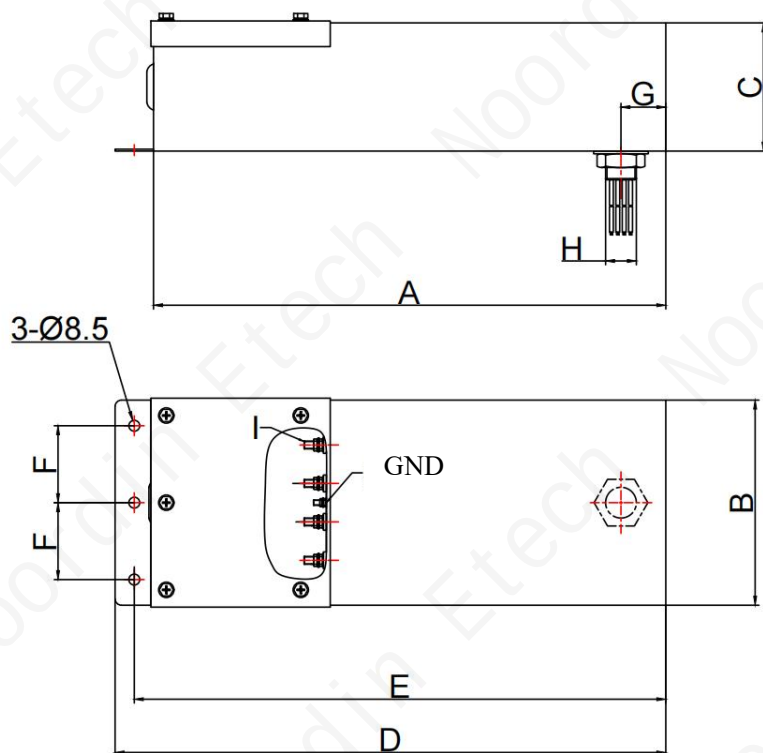


Fig 3

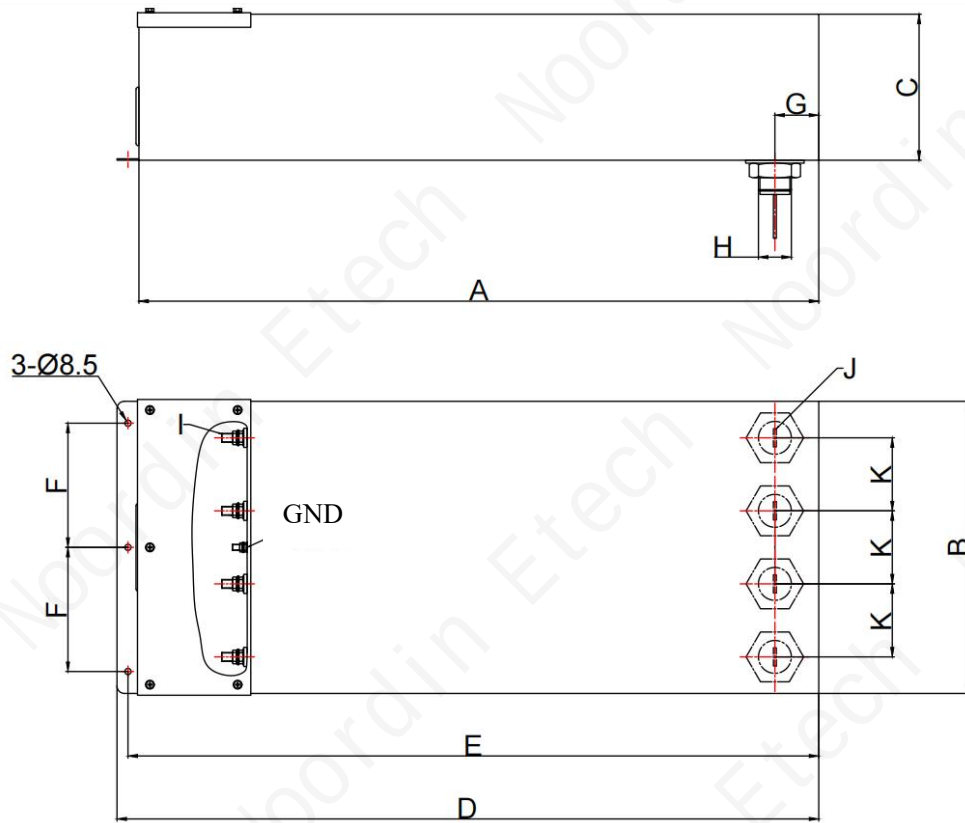


Fig 4

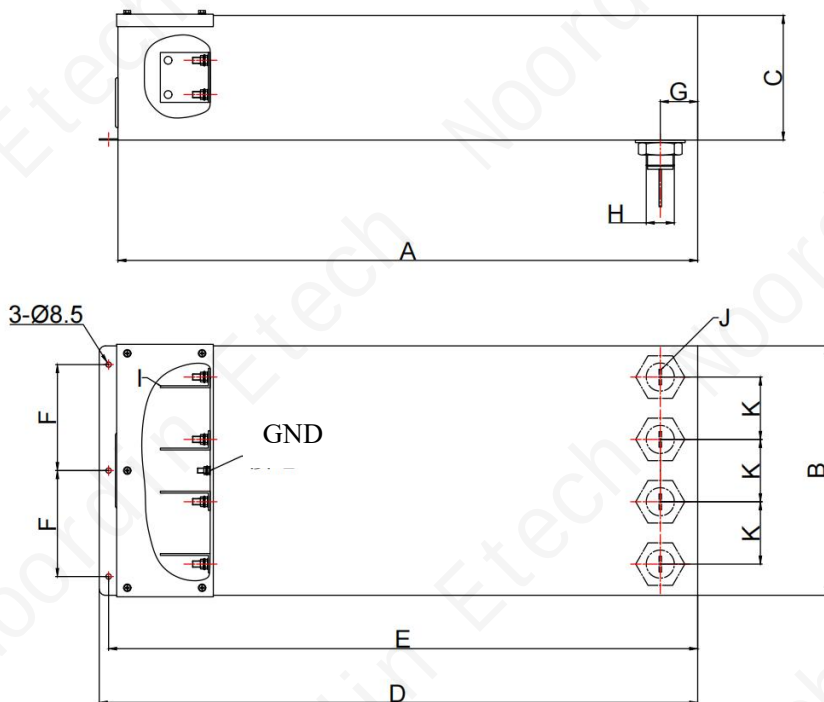


Fig 5

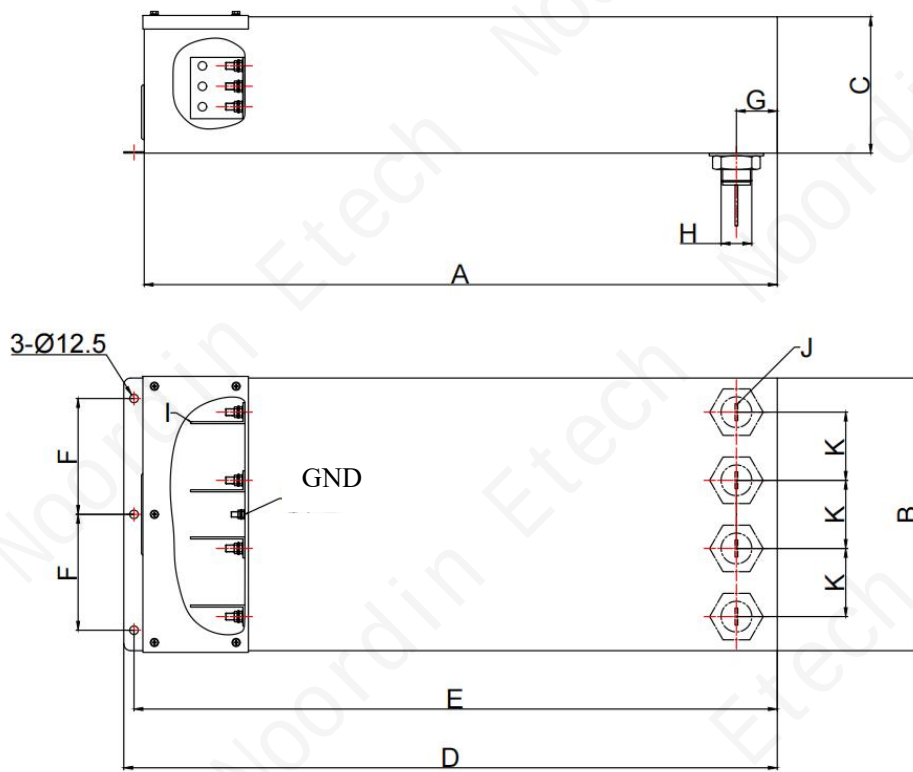
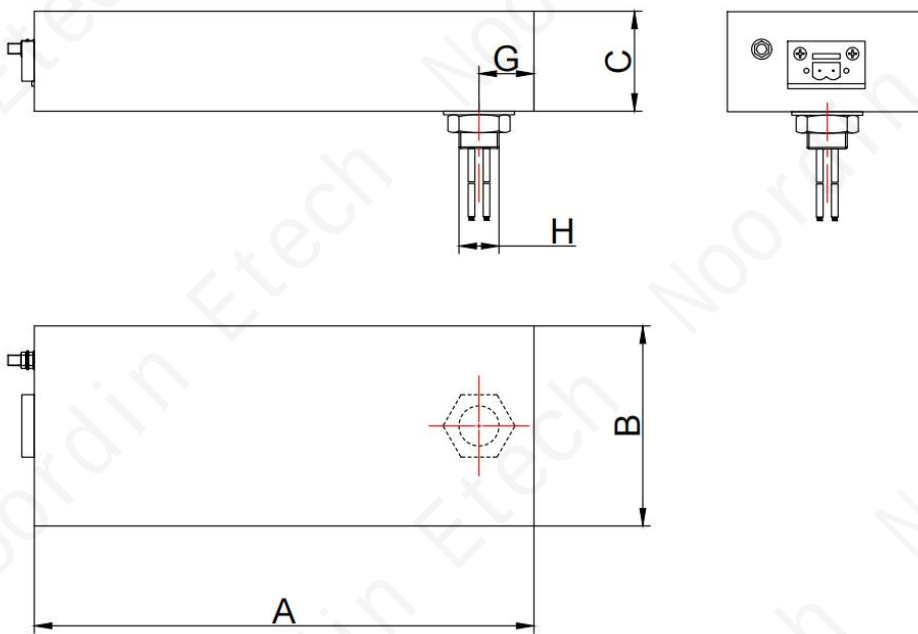


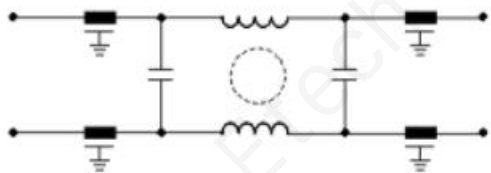
Fig 6



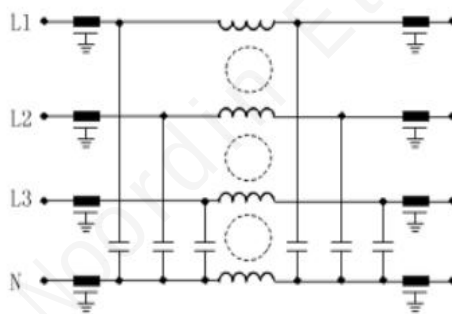
Note: For currents exceeding 250A, the input and output terminals are equipped with copper bus bars.

6. Circuit Diagrams

Standard single-stage filter

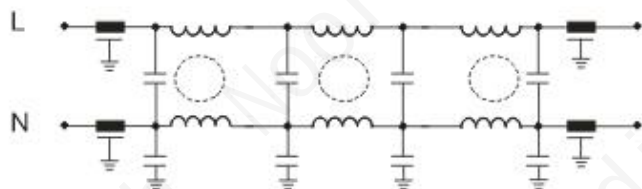


Single-phase

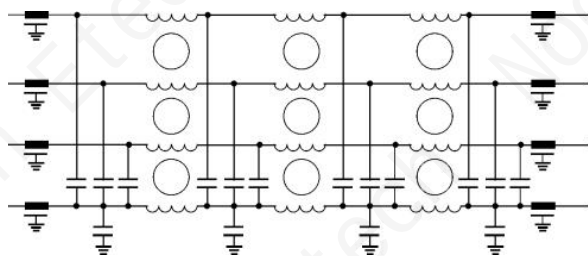


Three-phase

High-performance Three-stage filter



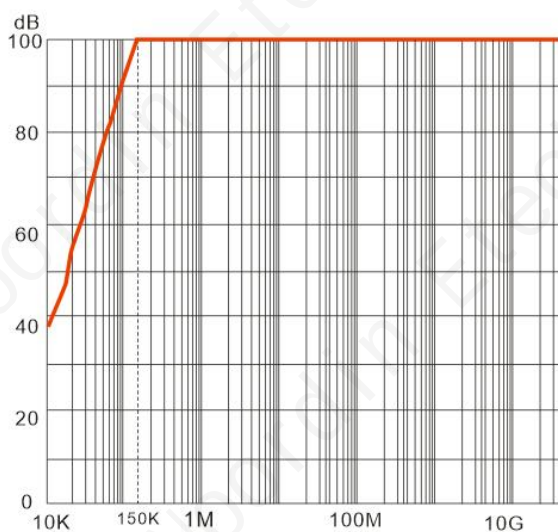
Single-phase



Three-phase

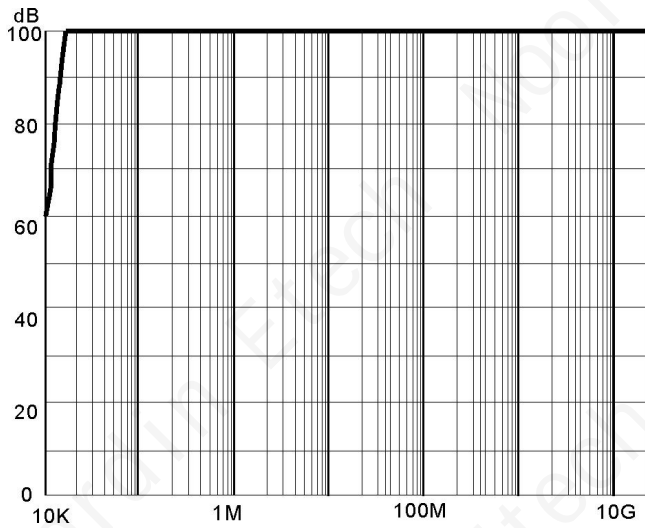
7. Shielding Efficiency

Frequency of 150kHz-40GHz, Insertion loss over 100dB



Single-stage power line filter

Frequency of 14kHz-40GHz, Insertion loss over 100dB



Three-stage power line filter

Contact Us

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