



Power Line Filter For New Energy Testing

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1. Product Description

Our anechoic chamber filters for new energy testing are designed for EMC applications. These filters deliver excellent EMI suppression, effectively reducing noise in power and signal lines to ensure accurate test results and stable device performance. They meet the demands of testing in complex electromagnetic environments, providing reliable solutions for suppressing electromagnetic noise.

2. Typical Applications

- Photovoltaic Inverter Testing
- Electric Vehicle Charging Equipment Testing
- Wind Power Systems Testing
- Energy Storage Systems Testing
- Automotive Electronics Testing
- New Energy Vehicle (NEV) Testing

3. Product Features

- High Electromagnetic Interference (EMI) Suppression: The filter features low bypass capacitance

and high insertion loss, achieving optimal harmonic current suppression. This ensures accurate electromagnetic compatibility (EMC) testing for new energy devices such as photovoltaic inverters, electric vehicle chargers, and wind power generation systems.

- **Broad Frequency Range:** Effective across a wide frequency range, from low to high frequencies, supporting diverse testing needs for new energy devices in the electromagnetic wave anechoic chamber.
- **Low Insertion Loss:** Offers minimal insertion loss, ensuring that the power and signal supply to the tested devices remains stable and clean for precise measurements.
- **Compliance with EMC Standards:** Meets international and industry standards such as IEC 61000/61851, CISPR12/25, ensuring reliable test results and compliance.

4. Technical Data

Rated Voltage	250VAC/0-2000VDC	Single-phase/DC
	440-690VAC	Three-phase
Rated Frequency	DC/50/60Hz	
Rated Current	Refer to product selection table	Ambient temperature of +40°C
Number of lines	2 or 4	
Insertion Loss, Per MIL-STD-220C	> 100dB	Three-stage filter: 14kHz – 40GHz
DC Resistance	Refer to product selection table	Each Line
Power Dissipation	Refer to product selection table	At Rated Current
Test Voltage	1200/3000 Vdc, 2s	Line/Line
	1200/3000 Vdc, 2s	Line/Ground
Voltage Drop/line	< 1%	Rated Voltage 250/440V@50/60Hz
I Leakage	Refer to product selection table	
Discharge Time to Below 34V	30s	
Climatic Category (EN 60068-1)	25/085/21	-25°C~+85°C 21 days damp heat test

➤ Discharging Resistance Integrated

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

5. Product Selection Table

Type	Rated Current (A)	Rated Voltage (VAC/DC)	Number of lines	$I_{Leakage}$ (A)	DC resistance of each line (mΩ)	Power Dissipation (W)	Dimensional Drawing
GPF271C-16G	16	250/2000	2	0.03	<16	<25	Fig 1
GPF271C-32G	32	250/2000	2	0.03	<16	<25	
GPF271C-63G	63	250/2000	2	0.03	<10	<40	
GPF271C-100G	100	250/2000	2	0.03	<3	<40	Fig 2
GPF271C-150G	150	250/2000	2	0.03	<2	<70	
GPF271C-200G	200	250/2000	2	0.03	<2	<80	
GPF271C-300G	300	250/2000	2	0.03	<1	<80	Fig 3
GPF271C-400G	400	250/2000	2	0.03	<1	<100	Fig 4
GPF271C-500G	500	250/2000	2	0.03	<1	<150	
GPF271C-600G	600	250/2000	2	0.03	<1	<200	
GPF471C-16G	32	440-690VAC	4	0.5	<10	<25	Fig 5
GPF471C-32G	32	440-690VAC	4	0.5	<10	<25	
GPF471C-63G	63	440-690VAC	4	0.5	<10	<50	
GPF471C-100G	100	440-690VAC	4	0.5	<2	<60	
GPF471C-150G	150	440-690VAC	4	0.5	<1	<70	
GPF471C-200G	200	440-690VAC	4	0.5	<1	<90	
GPF471C-300G	300	440-690VAC	4	0.5	<0.1	<250	Fig 6
GPF471C-400G	400	440-690VAC	4	0.5	<0.1	<300	Fig 7
GPF471C-600G	600	440-690VAC	4	0.5	<0.1	<300	

6. Dimensions (mm)

Type	A	B	C	D	E	F	G	H	I	J	K	L	Dim.
GPF271C-16G	650	160	120	200	180	350	100	50	M24	M6	M6	/	Fig 1
GPF271C-32G	650	160	120	200	180	350	100	50	M24	M6	M6	/	
GPF271C-63G	650	160	120	200	180	350	100	50	M33	M6	M6	/	
GPF271C-100G	850	180	140	220	200	275	100	50	M45	M8	M8	/	Fig 2
GPF271C-150G	850	180	140	220	200	275	100	50	M45	M8	M8	/	
GPF271C-200G	850	180	140	220	200	275	100	50	M60	M12	M8	/	
GPF271C-300G	1000	250	200	290	270	240	65	75	2*M45	M12	M12	111	Fig 3
GPF271C-400G	1000	250	200	290	270	240	65	75	2*M60	3*80	M12	111	Fig 4
GPF271C-500G	1000	250	200	290	270	240	65	75	2*M60	3*80	M12	111	
GPF271C-600G	1000	250	200	290	270	240	65	75	2*M60	3*80	M12	111	
GPF471C-16G	700	250	120	290	270	200	100	50	M33	M6	M6	/	Fig 5
GPF471C-32G	700	250	120	290	270	200	100	50	M33	M6	M6	/	
GPF471C-63G	700	250	120	290	270	200	100	50	M45	M6	M6	/	
GPF471C-100G	860	250	140	290	270	280	90	60	M72	M8	M8	/	
GPF471C-150G	860	250	140	290	270	280	90	60	M72	M8	M8	/	

GPF471C-200G	860	250	140	290	270	280	90	60	M72	M12	M8	/	
GPF471C-300G	1100	400	200	450	425	250	85	135	4*M45	M12	M8	100	Fig 6
GPF471C-400G	1100	450	200	500	475	250	85	135	4*M60	3*80	M12	110	Fig 7
GPF471C-600G	1100	450	200	500	475	250	85	135	4*M60	3*80	M12	110	

7. Outline Drawing

Fig 1

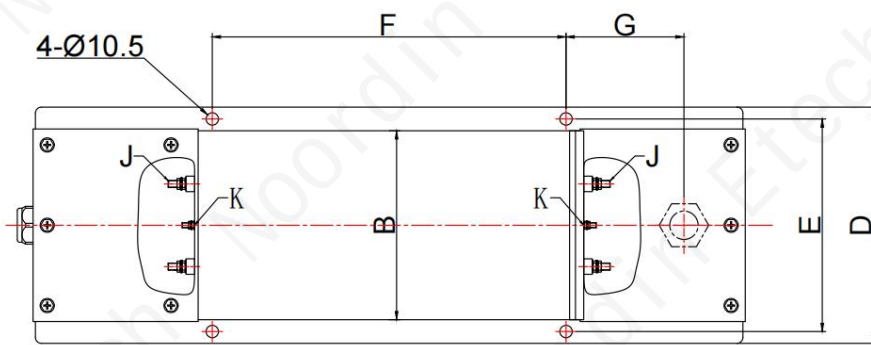
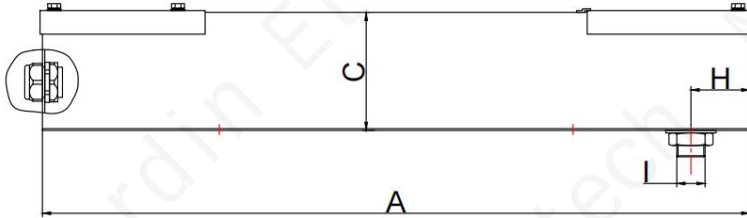


Fig 2

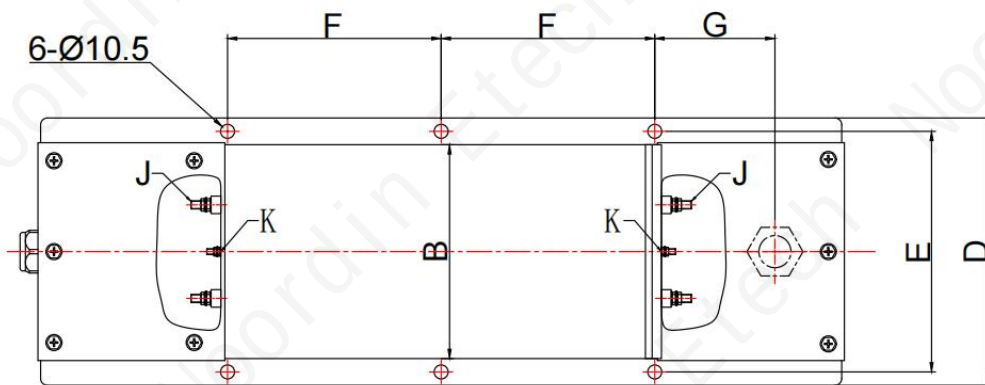
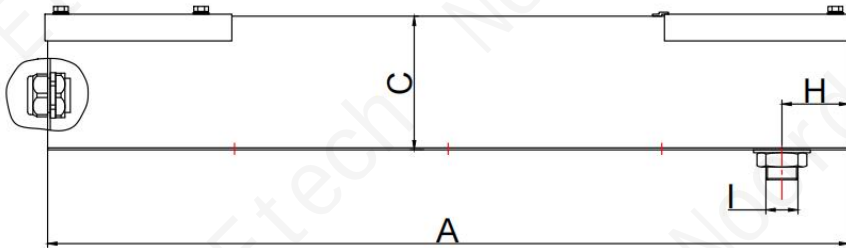


Fig 3

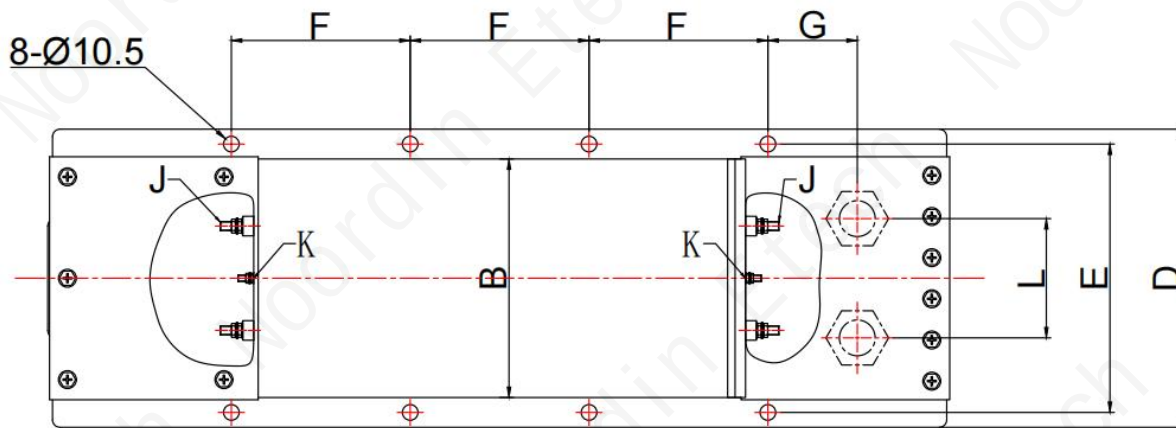
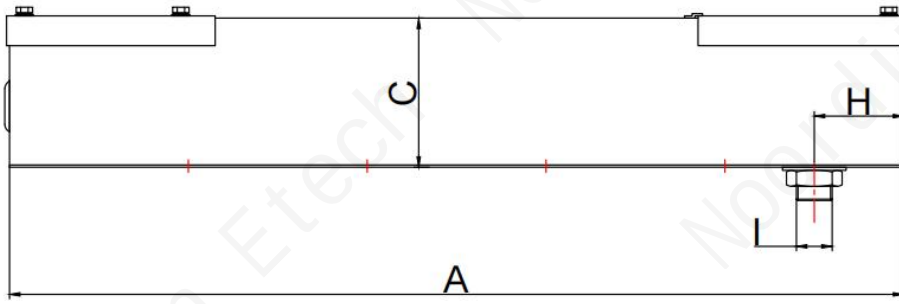


Fig 4

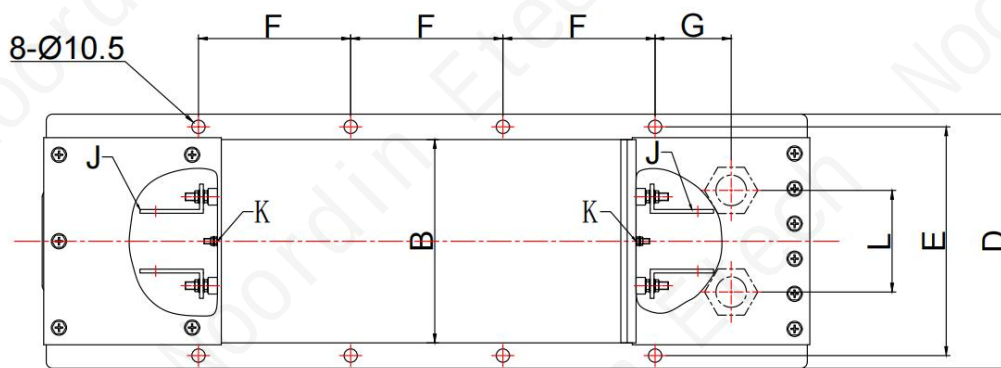
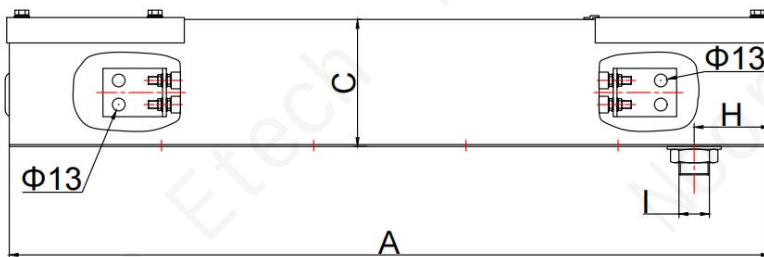


Fig 5

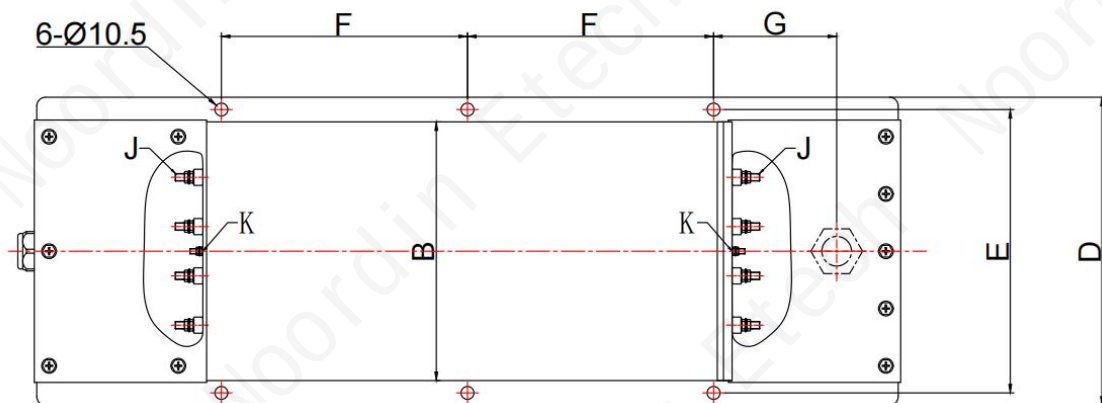
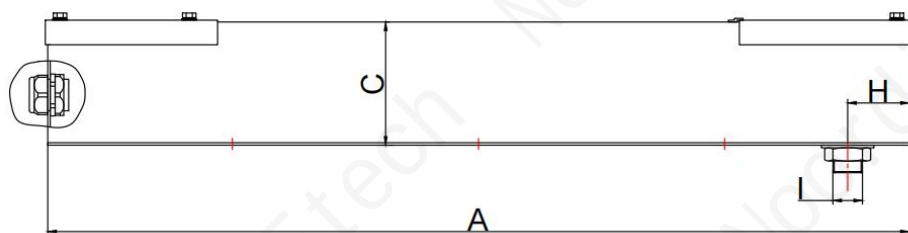


Fig 6

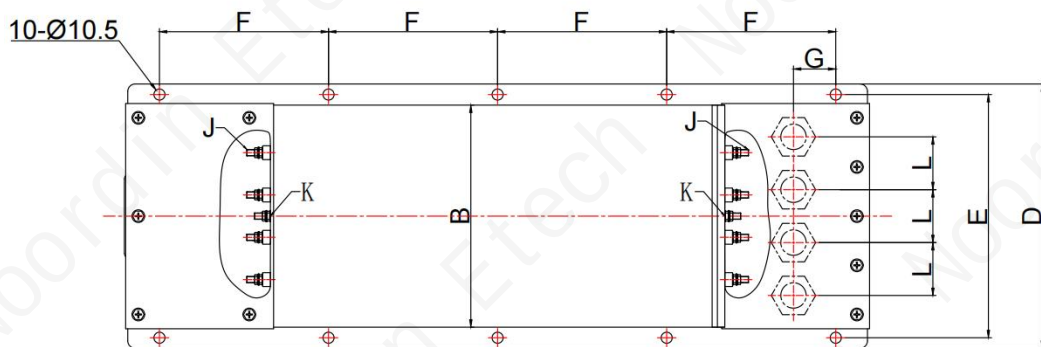
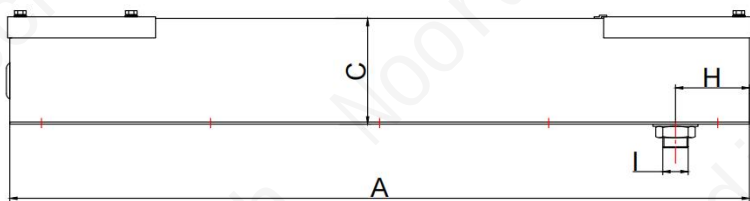
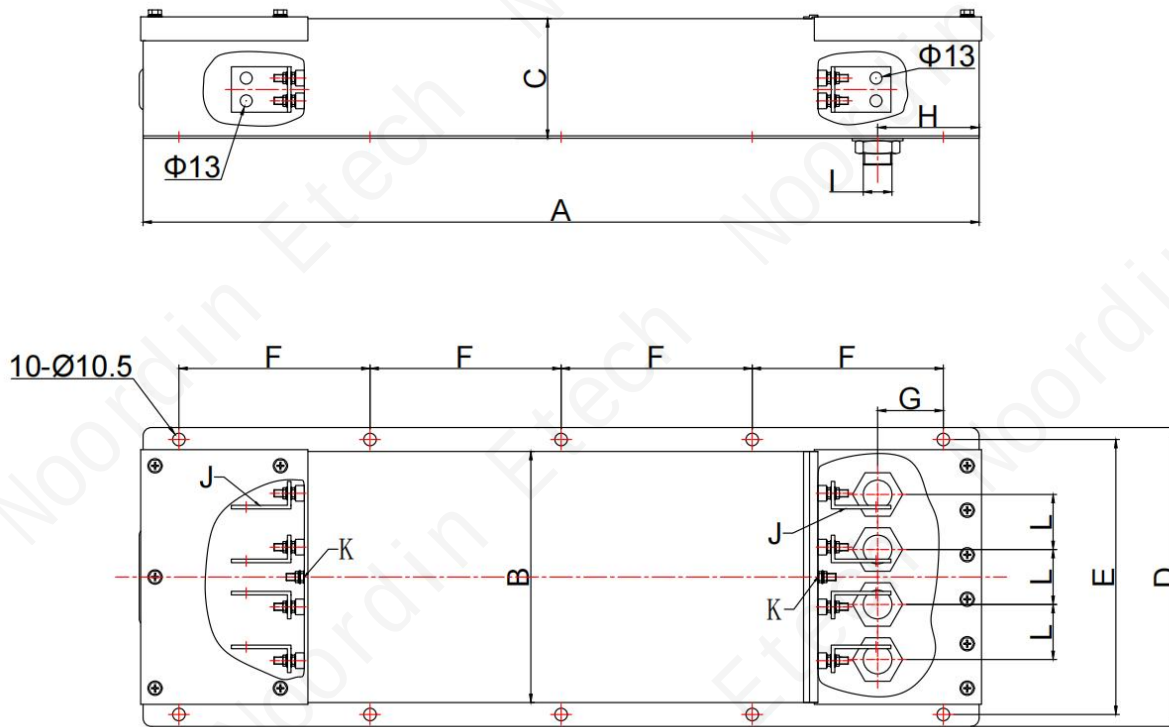
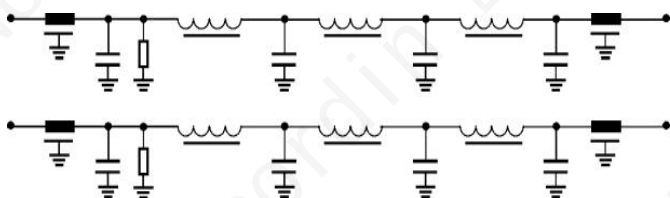


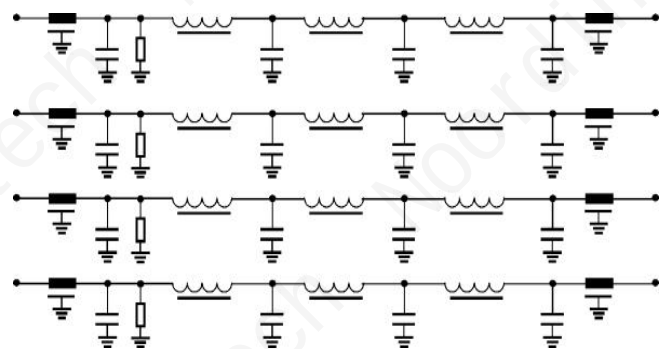
Fig 7



8. Circuit Diagrams



2-line filter

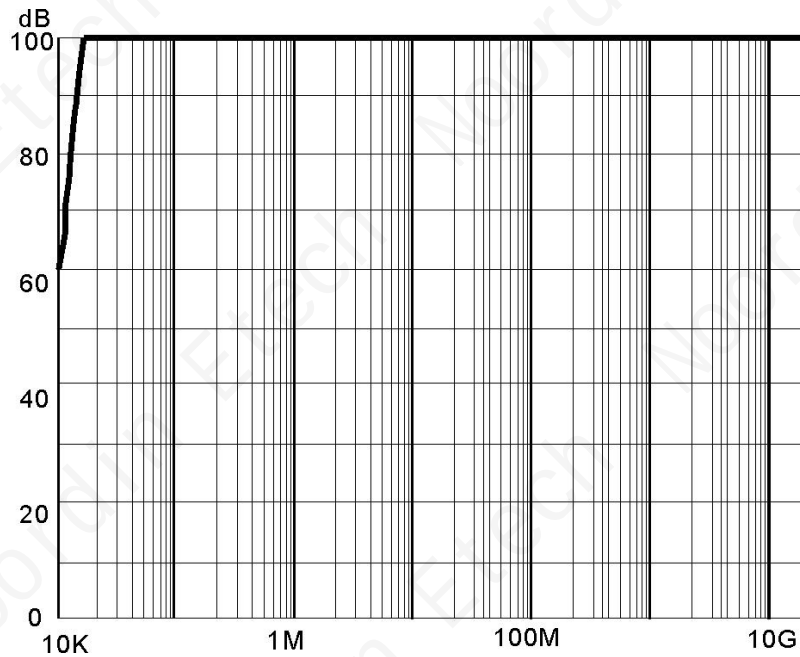


4-line filter

Three-stage power line filter

9. Insertion Loss

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



Three-stage power line filter

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