Competent to Serve!

EMC/EMI Filters
Meeting 100dB from 14KHz to 40GHz

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About WEMC

WEMC, full name of Jiangsu WEMC Technology Co., Ltd., is a leading filter specialist in China. Our experts have on over 20 years of experience in the design, development and production of high performance RFI/EMC/Tempest filters.

Our commitment to RFI/EMC/Tempest industry has resulted in a sound comprehensive ranges of filter products available from us. All our manufacturing is done on site and we are approved to ISO 9001:2008 by UKAS Quality Management.

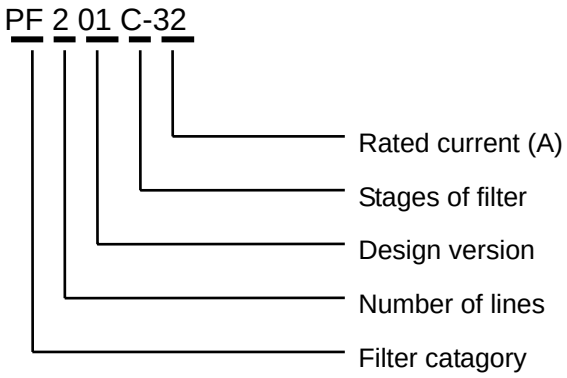
In China, our unrivalled capability and experience enables us to design and build filters to satisfy the exacting requirements of customers. Standard products manufactured by WEMC range from power line filters with full spectrum performance up to 3000 Amps through to telephone, data and control filters as well as power line filter for grounding lines.

We would note that many of the filter ranges available offer 100dB performance from 14KHz. to well above 40GHz. Non-standard requirements can be fulfilled by a custom designed filter and we are available to offer technical support world wide.

WEMC, Competent to Serve:

- ✓ We have the people;
- ✓ We have the knowhow;
- ✓ We have the positive attitude;

1. Product designation and selection



Filter category:

PF=Powerline Filter for shielded room/cabinet

SF=Signal Filter for shielded room/cabinet

Stages of filter:

A=Signal stage filter, 100KHz-40GHz

C=Three stages filter, 14KHz-40GHz

2. Rated Line Voltage for Single phase/Three phase power line filters

Rate voltage V_R for two-line filters	250V	line-line / line-case
Rate voltage V_R for four-line filters	440V	line-line
	250V	line-case
Rated current I_R	See characteristics	referred to +40℃ ambient temperature
Rated frequency f_R	50/60Hz	
Test voltage	1000Vdc/2s	line-line
	1000Vdc/2s	line-case
Voltage drop/phase ΔV	<1V	of V_R at 50Hz and I_R
Leakage current $I_{Leakage}$	See characteristics	at 440V/250V and 50Hz
Climatic category	25/070/21	

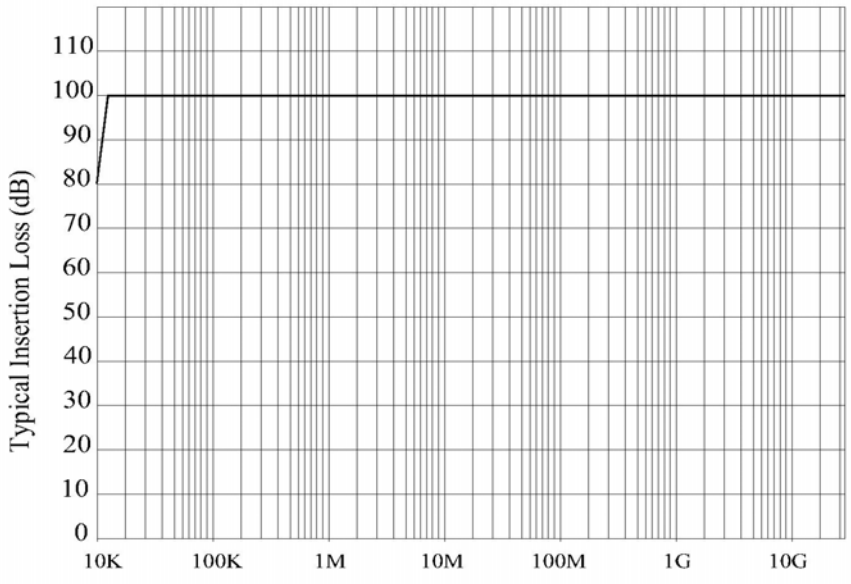
Specific filters available upon request, send an E-mail to: sales@wemctech.com for more information.

3. Type C Power Line Filters for shielded rooms and anechoic chambers (Frequency range of 14KHz-40GHz)

Type	I_R (A)	$I_{Leakage}$ (mA)	Dim. diagram	Insertion loss (dB) per MIL-STD-220A
PF201C-3	2×3	5	1	100dB, 14K-40GHz
PF201C-6	2×6	5		
PF205C-16	2×16	20	2	
PF205C-32	2×32	20		
PF205C-63	2×63	20		
PF201C-100	2×100	20	3	
PF201C-200	2×200	20	3	
PF401C-16	4×16	5	4	
PF401C-32	4×32	5		
PF401C-50	4×50	5		
PF401C-63	4×63	5		
PF401C-100	4×100	5	5	
PF401C-200	4×200	10	5	
PF401C-300	4×300	10		
PF401C-400	4×400	10		

All filters are designed for high performance shielded cabinets, shielded rooms and anechoic chambers, insertion loss is 100dB from 14KHz to 40GHz, leakage current is as low as at mA level, voltage drop is less than 1V.

Typical Insertion Loss Performance Curve

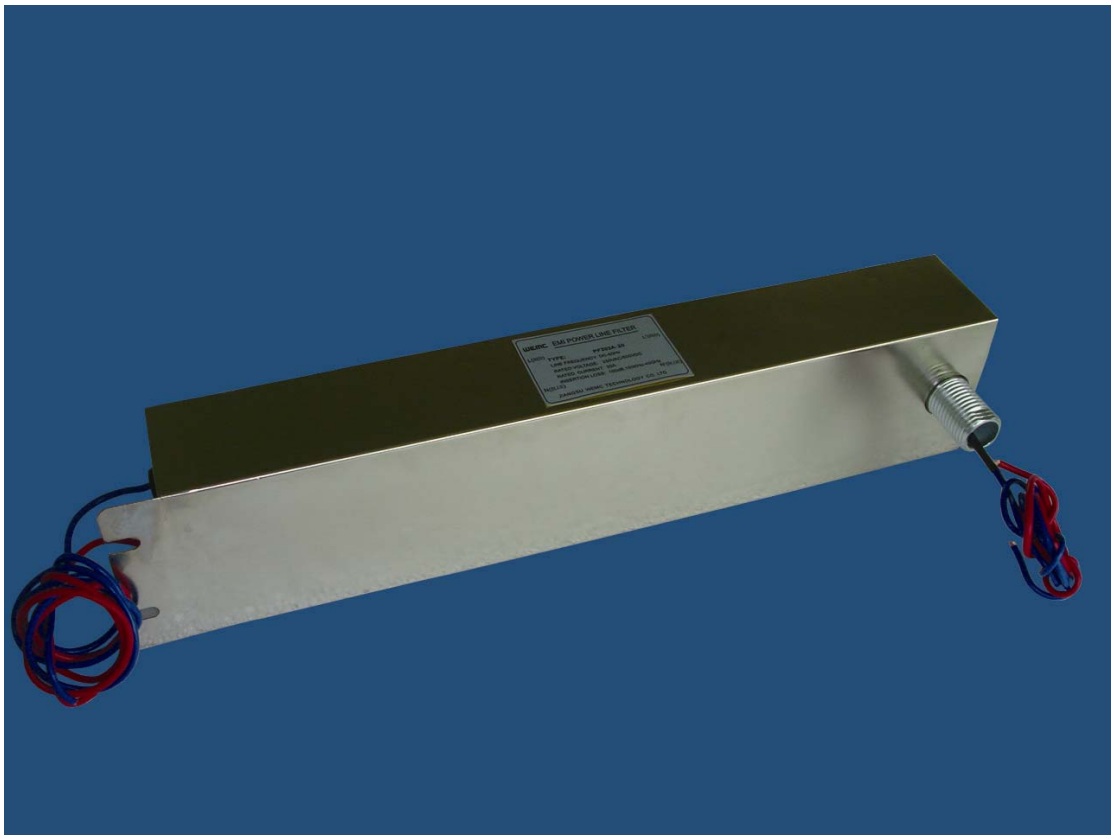


Asymmetric Performance in 50 ohm System
With or Without load

4. Type A Power Line Filters for shielded rooms and anechoic chambers (Frequency range of 100KHz-40GHz)

Type	I_R (A)	$I_{Leakage}$ (mA)	Dim. diagram	Insertion loss (dB) per MIL-STD-220A
PF201A-16	2×16	20	2	100dB, 100K-40GHz
PF201A-32	2×32	20		
PF201A-63	2×63	20		
PF201A-100	2×100	20	3	
PF201A-200	2×200	20	3	
PF401A-16	4×16	5	4	
PF401A-32	4×32	5		
PF401A-63	4×63	5		
PF401A-100	4×100	5	5	
PF401A-200	4×200	10	5	
PF401A-300	4×300	10		

Best cost effective solution for standard performance of shielded cabinets, shielded rooms and anechoic chambers, insertion loss is 100dB from 100KHz to 40GHz, leakage current is as low as also at mA level, voltage drop is less than 1V.



Dimensional diagrams

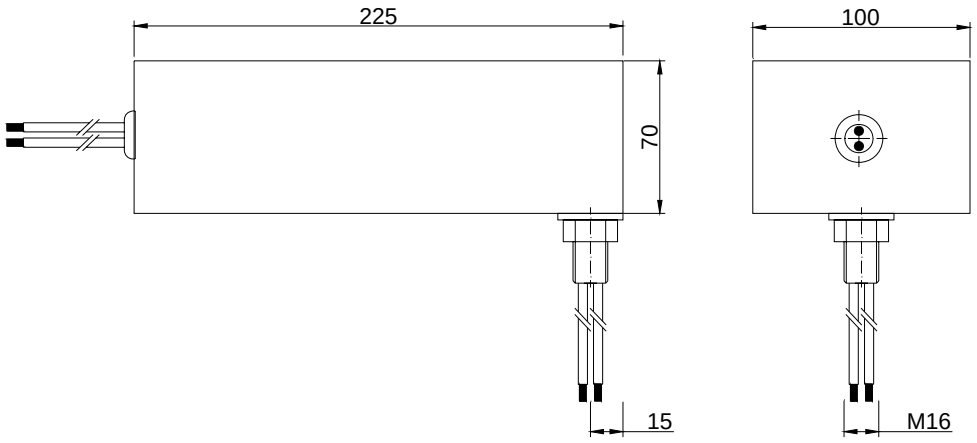


Diagram 1

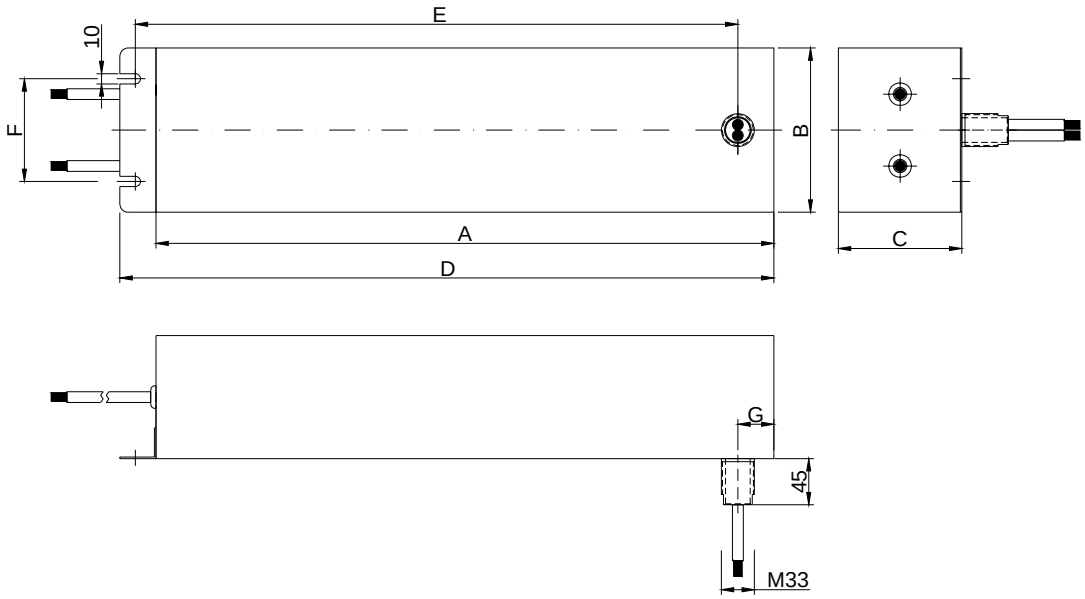


Diagram 2

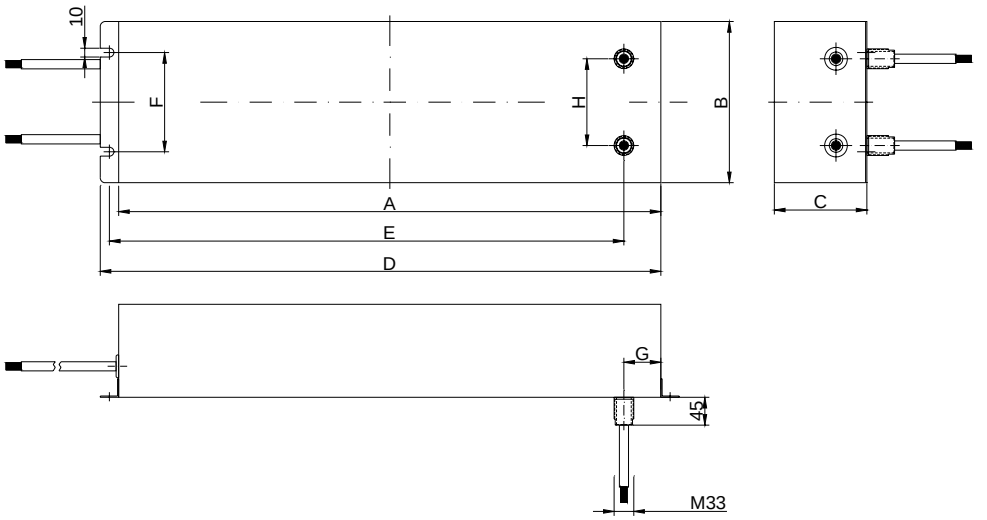


Diagram 3

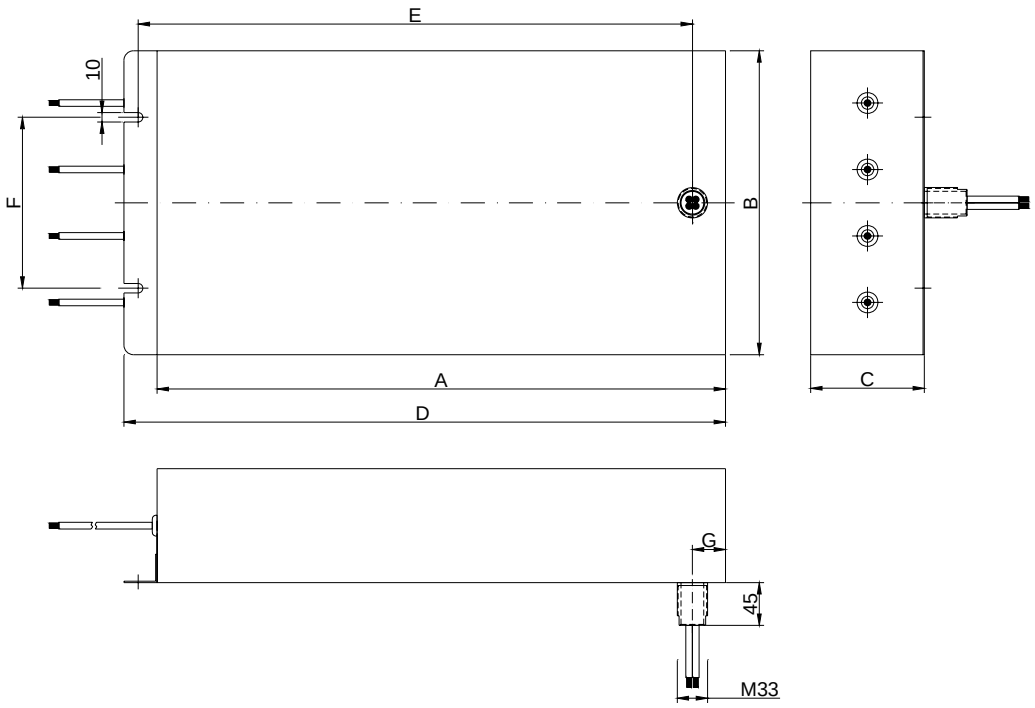


Diagram 4

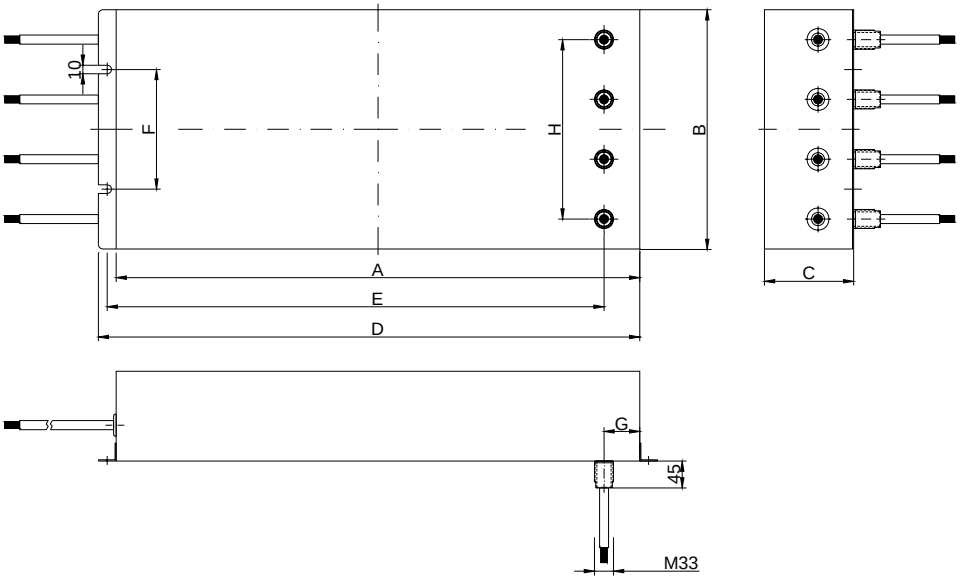


Diagram 5

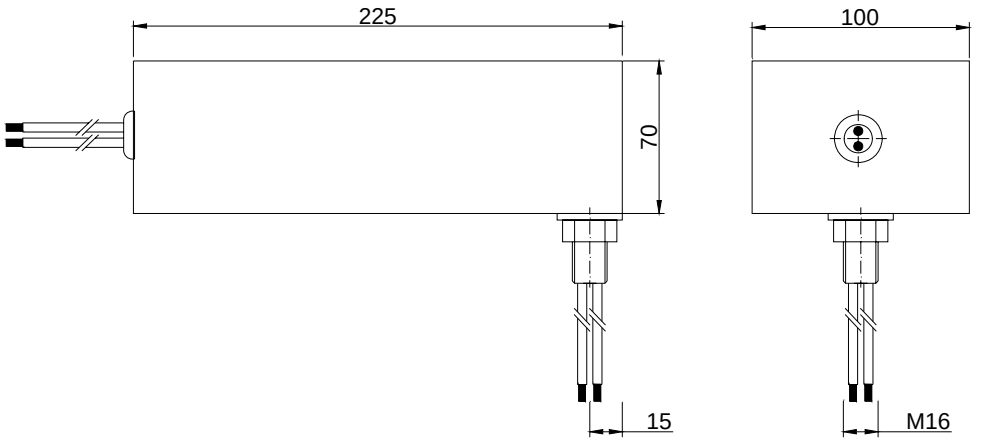
Note: When current is above 300A, the size of conduit screw is M42, input and output ends are bus bar of copper.

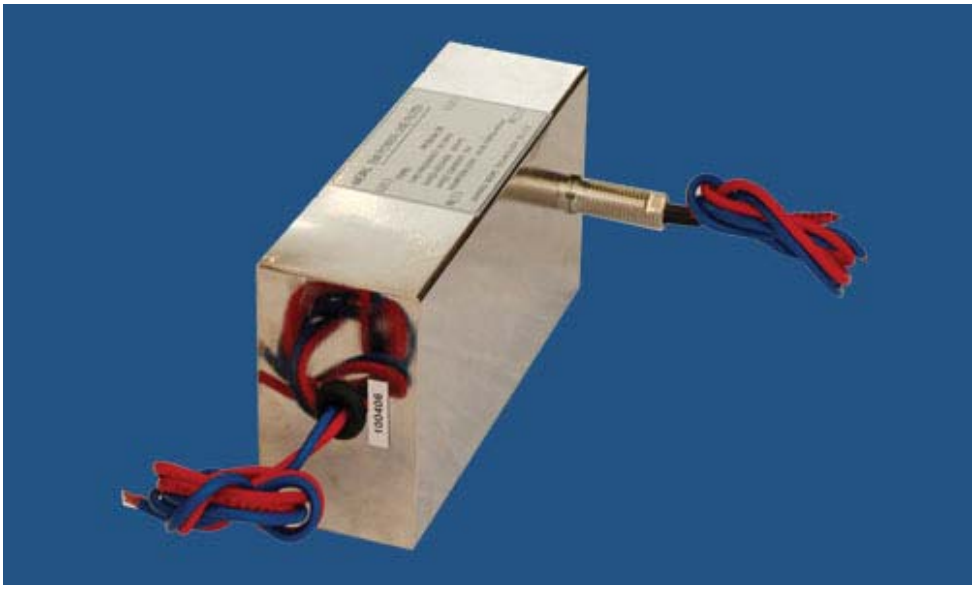
5. Power Line Filters For shielded cabinets

Type	I_R (A)	$I_{Leakage}$ (A)	Insertion loss (dB) per MIL-STD-220A
PF203C-6	2x6	0.7	100dB,14KHz-40GHz
PF203C-16	2x16	0.7	100dB,14KHz-40GHz
PF203B-32	2x32	0.5	100dB,100KHz-40GHz
PF203A-20	2x20	0.03	100dB,150KHz-40GHz

This series of power line filters are specially designed for well grounded shielded cabinet with rated voltage of 250VAC/50Hz. It is compact and in compliance with Class B and C standards for shielded cabinet. PF203A-20 is particularly suitable to be used on MRI rooms.

Dimensional Drawing





6. Power line filters for ground wire

Type	I_R (A)	$I_{Leakage}$ (A)	Insertion loss (dB) per MIL-STD-220A
PF101C-16	1 x 16	Not Applicable	100dB, 14K-40GHz
PF101C-32	1 x 32		
PF101C-63	1 x 63		
PF101C-100	1 x 100		

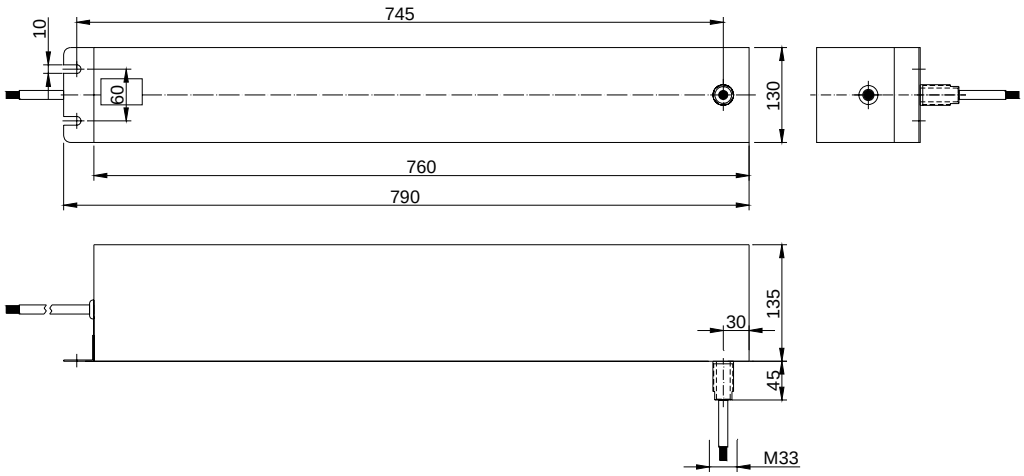
Electrical characteristics:

Rated Voltage: 250VAC, 500VDC

Operating Frequency: 0-60Hz

Voltage drop: Less than 1V @ unity power factor.

Dimensional Drawing



7. Available dimensions (mm)

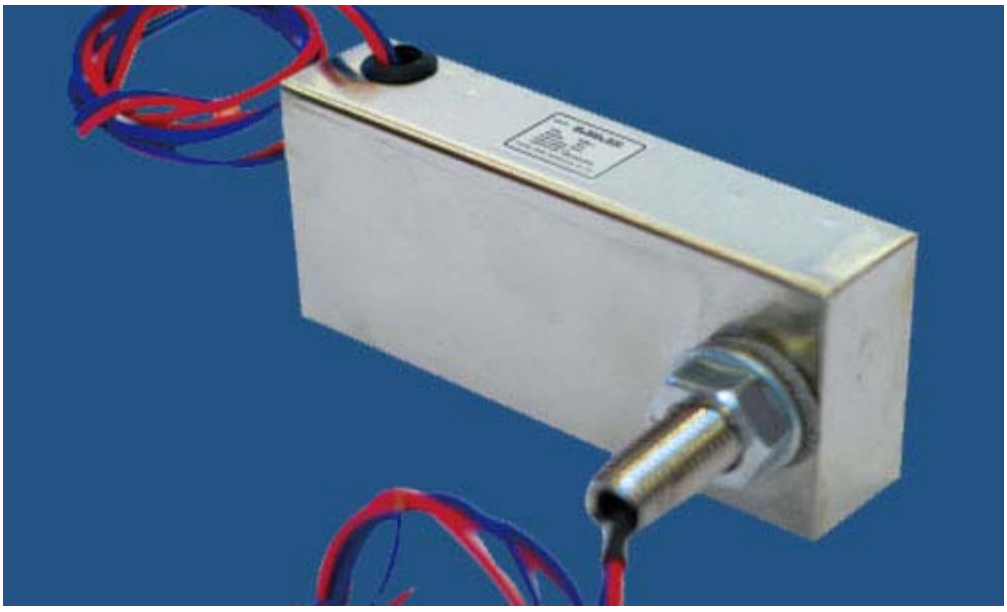
Type	A	B	C	D	E	F	G	H	Dimensional diagram
PF201A-16	380	160	120	410	360	100	30		2
PF201A-32									
PF201A-63									
PF201A-100	540	200	150	570	495	100	60	100	3
PF201A-200									
PF201C-16	770	160	120	805	755	100	35		2
PF201C-32									
PF201C-63									
PF205C-16	550	120	80	585		60	45		2
PF205C-32									
PF205C-63									
PF201C-100	850	200	150	885	808	100	60	100	3
PF201C-200									
PF401A-16	380	240	120	410	360	120	35		4
PF401A-32									
PF401A-63									
PF401A-100	600	320	150	630	555	160	60	210	5
PF401A-200									
PF401A-300									
PF401C-16	880	320	120	915	865	180	35		4
PF401C-32									
PF401C-50									
PF401C-63									
PF401C-100	940	320	150	970	895	160	60	210	5
PF401C-200									
PF401C-300									

8. Signal Filters for shielded cabinets, shielded rooms and anechoic chambers

Type	Rated voltage	Rated current	Lines	Bandpass	Dim. diagram	Typical applications
SF201-0.3	250VDC	0.3A	2	20KHz	1	Telephone, fax and AC/DC switch signal
SF202-10	250VAC	10A	2	100KHz		AC/DC switch signal, air-con, broadcasting and door accessing control
SF103-1	100VDC	1A	1	6MHz	2	Visual system
SF203-1	100VDC	1A	2	6MHz	3	Special telephone, fire alarm, monitoring and door accessing control

This series of signal filters is specially desinged to use for telephone, data communication, control and fire alarm. All filters are in compliance with standards specified by National Military Class C and D shielded room and anechoic chamber.

Note: Please specify number of control line and current volume if control lines are more than 2 or current is bigger than 10A.



For dimensional drawing, please see next page.

Dimensional Drawing

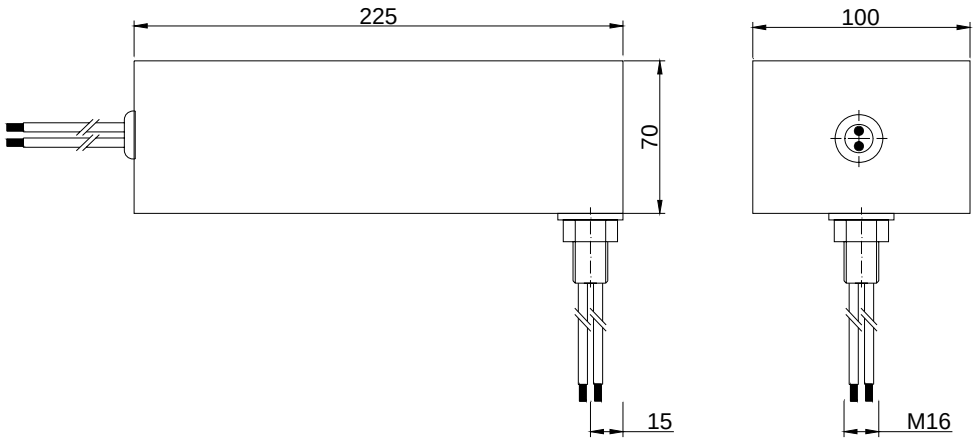


Diagram 1

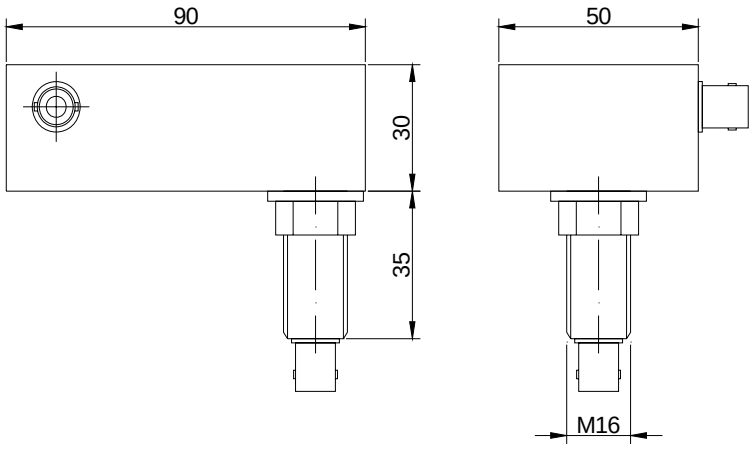


Diagram 2

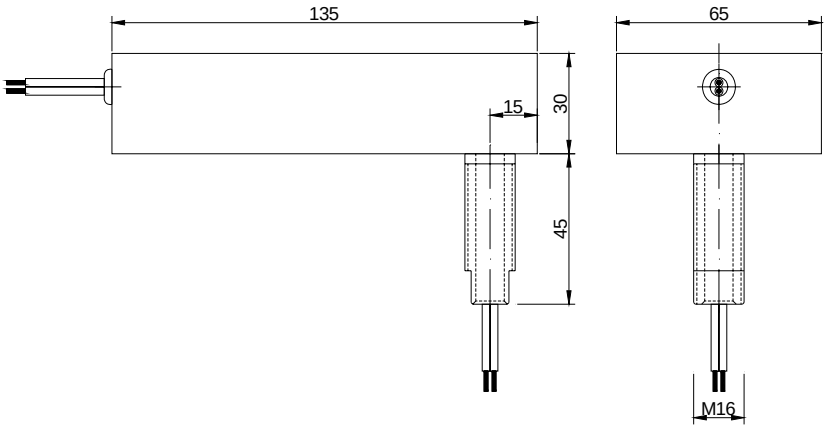


Diagram 3

Type	Lines & Rated Current (A)	Leakage Current (mA)	Rate Voltage	Insertion loss (dB)	Applications	Overall Dimension L×W×H (mm)	Weight (kg)
PF201C-3	2×3	5	(Single Phase) 250VAC/500VDC ※※※※※※※※※※※※ (Three Phase) 440VAC/250VAC	100dB, 14K-40GHz	This type of power line filters (Type C) are high performance filters, could be used for any shielded cabinets, shielded rooms or anechoic chambers as long as their rated currents, overall sizes and performances are applicable to facilities in question.	225×100×70	2.5
PF201C-6	2×6	5				225×100×70	2.5
PF205C-16	2×16	20				585×120×80	6.8
PF205C-32	2×32	20				585×120×80	7.0
PF205C-63	2×63	20				585×120×80	8.5
PF201C-100	2×100	20				885×200×150	23.0
PF201C-200	2×200	20				885×200×150	27.0
PF401C-16	4×16	5				915×320×120	30.0
PF401C-32	4×32	5				915×320×120	40.0
PF401C-63	4×63	5				915×320×120	42.0
PF401C-100	4×100	5				970×320×150	44.0
PF401C-200	4×200	10				970×320×150	48.0
PF401C-300	4×300	10				970×320×150	By Case
PF401C-400	4×400	10				1200×460×200	By Case
PF201A-16	2×16	20	(Single Phase) 250VAC/500VDC ※※※※※※※※※※※※ (Three Phase) 440VAC/250VAC	100dB, 100K-40GHz	This type of power line filters (Type A) are standard performance filters, provide economic solutions to facilities where insertion loss to be considered from around 100KHz.	410×160×120	7.0
PF201A-32	2×32	20				410×160×120	7.0
PF201A-63	2×63	20				410×160×120	8.5
PF201A-100	2×100	20				570×200×150	23.0
PF201A-200	2×200	20				570×200×150	25.0
PF401A-16	4×16	5				410×240×120	19.0
PF401A-32	4×32	5				410×240×120	20.0
PF401A-63	4×63	5				410×240×120	22.0
PF401A-100	4×100	5				630×320×150	24.0
PF401A-200	4×200	10				630×320×150	By Case
PF401A-300	4×300	10				630×320×150	By Case

Type	Lines & Rated Current (A)	Leakage Current (mA)	Rate Voltage	Insertion loss (dB)	Applications	Overall Dimension L×W×H (mm)	Weight (kg)
PF101C-16	1×16	Not applicable	250VAC/500VDC	100dB, 14K-40GHz	This type of filters specially designed for grounding lines.	790×130×135	13.0
PF101C-32	1×32					790×130×135	14.0
PF101C-63	1×63					790×130×135	15.0
PF101C-100	1×100					790×130×135	18.0
PF203C-6	2x6	700	250VAC	100dB,14KHz-40GHz	This type of filters specially designed for well grounded cabinets and MRI rooms.	225×100×70	2.5
PF203C-16	2x16	700		100dB,14KHz-40GHz		225×100×70	2.5
PF203B-32	2x32	500		100dB,100KHz-40GHz		225×100×70	2.5
PF203A-20	2x20	30		100dB,150KHz-40GHz		225×100×70	2.2

Type	Lines	Rated current (A)	Rated voltage	Bandpass	Applications	Overall Dimension L×W×H (mm)	Weight (kg)
SF201-0.3	2	0.3	250VDC	20KHz	Telephone, data, AC/DC switch	225×100×70	1.1
SF202-10	2	10	250VAC	100KHz	AC/DC switch, air conditioner, broadcasting, door accessing	225×100×70	1.4
SF103-1	1	1	100VDC	6MHz	Visual system	90×50×30	0.3
SF203-1	2	1	100VDC	6MHz	Special telephone, fire alarm, monitoring	135×65×30	0.4