

Frequency Inverter FR-A 540 EC

Short reference for RFI filter unit type FFR-A540-8A-EF1 to 30A-EF1 and FFR-A540-50A-SF1 to 180A-SF1

Please read the following installation notes carefully to use the filter unit to its option.



CAUTION:

The RFI filter units described in this reference sheet are designed for exclusive use in combination with Mitsubishi inverter type FR-A 540 EC. Their function is to reduce mains conducted RFI noise to comply with the EN 55022 B domestic standard. Practical results may differ from this. Please note, that the appearance and wiring mechanics of the noise filters may differ from the figures shown in this short reference. Safe functioning as well as the grade of the radio frequency protection do not take affect of this.

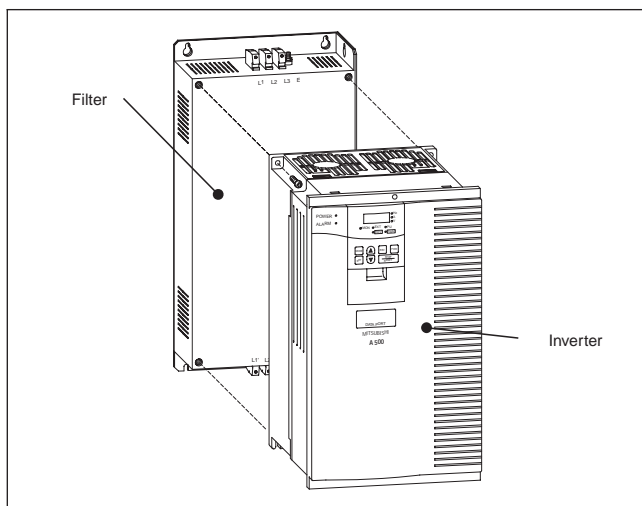
For further details please refer to the Mitsubishi manual for Frequency Inverters and EMC, which contains detailed information about EMC conforming installation.

Mounting

- Check the inverter type. The filter should be used only in combination with FR-A 540 EC inverters described in the table below.

Filter	FR-A 540 EC Frequency inverter – performance category [kW]							
	0.4–1.5	2.2/3.7	5.5/7.5	11/15	18.5/22	30	37	45/55
FFR-A540-8A-EF1	●							
FFR-A540-16A-EF1		●						
FFR-A540-30A-EF1			●					
FFR-A540-50A-SF1				●				
FFR-A540-75A-SF1					●			
FFR-A540-95A-SF1						●		
FFR-A540-120A-SF1							●	
FFR-A540-180A-SF1								●

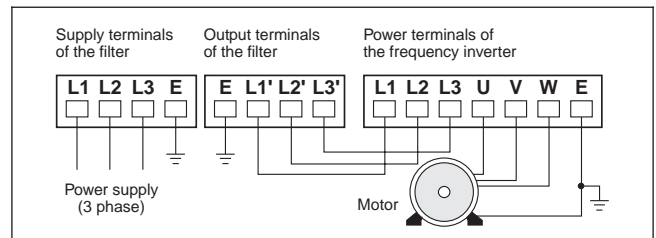
- Fix the inverter to the top panel of the filter and secure it with the screws provided.



To fix the filter-inverter unit on the back of the cabinet use the mounting bolts provided with the filter. For correct filter performance the filter mounting bolts should electrically bond to the cabinet back panel which is connected to earth. If this is not possible, the paint should be removed from the cabinet directly under the filter footprint.

Wiring

For electrical installation follow the wiring procedure shown in the picture below.



All cables must be shielded and earthed at both ends in order to reduce cable radiation. Earth motor, bond to filters.

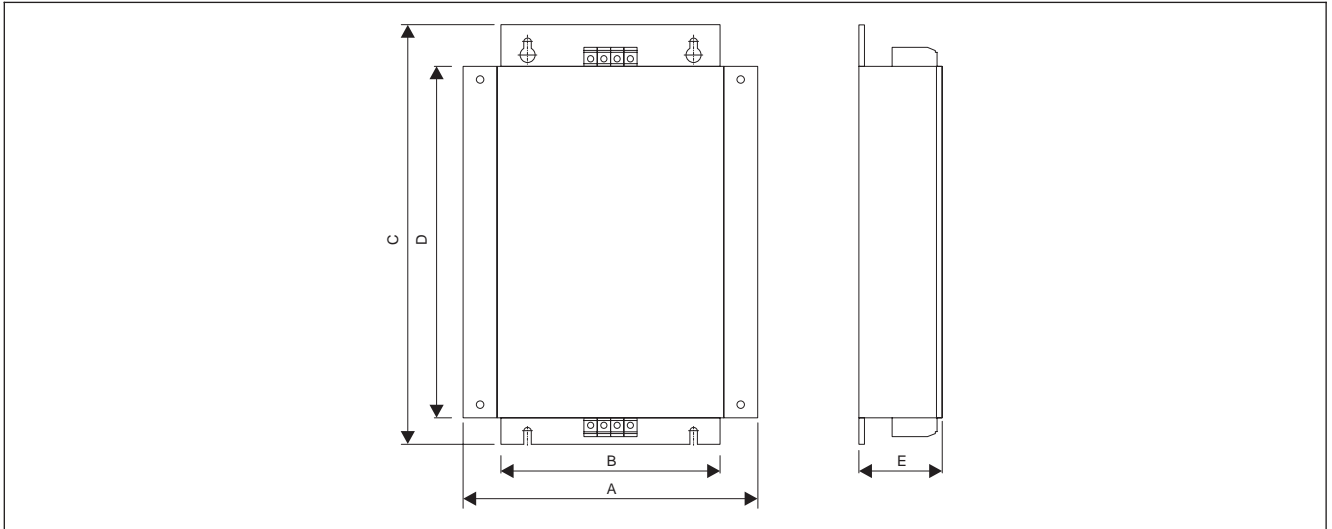
For environmental conditions and mounting position please note the instructions in the operation manual for the frequency inverter FR-A 540 EC.

Specifications

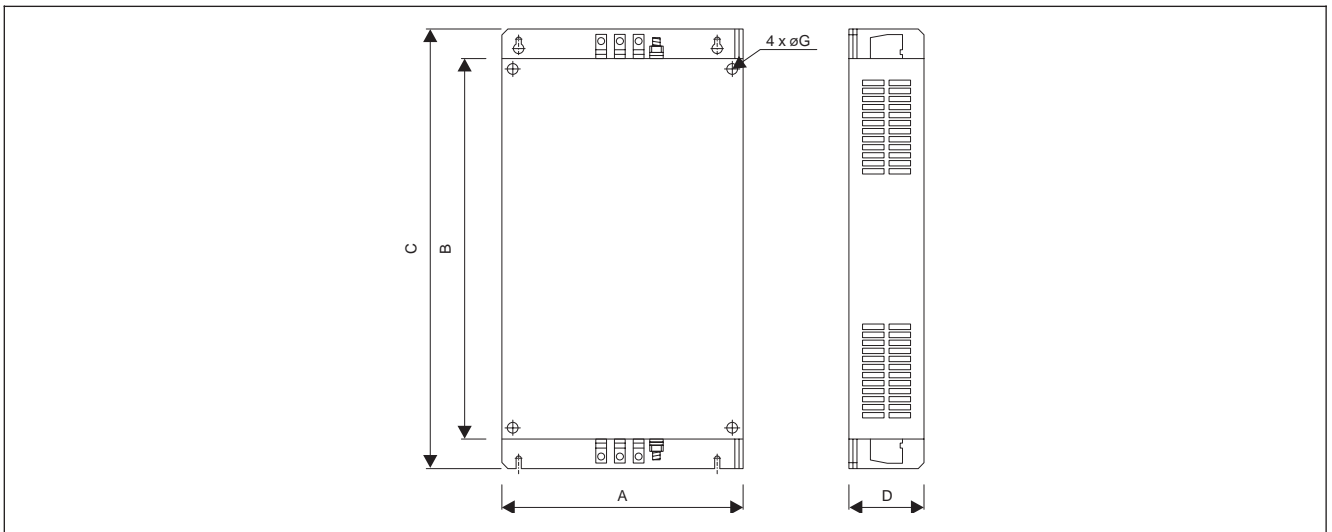
Function: The RFI units described in this short reference are designed to reduce mains conducted RFI emissions to meet the European standard EN 55011 A. Therefore the length of the motor cable should be within 30 m. Practical results may differ from this.

Specifications	Filter	
	FFR-A540- _A-EF1	FFR-A540- _A-SF1
Rated voltage	max. 3~480 V AC	max. 3~480 V AC
Frequency	50 / 60 Hz	50 / 60 Hz
Rated and leakage current	see table on backside	see table on backside
Power loss	see table on backside	see table on backside
Ambient temperature range	-25~100 °C	-25~85 °C
Ambient humidity	90 %	90 %
Vibration	10~200 Hz; 1.8 G	10~200 Hz; 1.8 G

Dimensions



Filter type	Inverter	A	B	C	D	E	Mounting screws	Weight [kg]	Power loss [W]	Leakage current [mA]	Rated current [A]
FFR-A540-8A-EF1	FR-A540E-0.4 k-1.5 k	150	100	315	265	50	4 x M5	2.75	5.5	< 30	8
FFR-A540-16A-EF1	FR-A540E-2.2 k / 3.7 k	150	100	315	265	50	4 x M5	3	11	< 30	16
FFR-A540-30A-EF1	FR-A540E-5.5 k / 7.5 k	220	170	315	265	50	4 x M5	6	28	< 30	30



Filter type	Inverter	A	B	C	D	Mounting screws	Weight [kg]	Power loss [W]	Leakage current [mA]	Rated current [A]
FFR-A540-50A-SF1	FR-A540E-11 k / 15 k	251.5	400	460	80	4 x M10	3.5	25	< 30	50
FFR-A540-75A-SF1	FR-A540E-18.5 k / 22 k	251.5	400	476	80	4 x M10	4.1	34	< 35	75
FFR-A540-95A-SF1	FR-A540E-30 k	340	550	626	90	4 x M10	6.7	36	< 35	95
FFR-A540-120A-SF1	FR-A540E-37 k	450	550	635	120	4 x M12	9.7	34	< 35	120
FFR-A540-180A-SF1	FR-A540E-45 / 55 k	450	550	652	120	4 x M12	10.8	62	< 35	180

Specifications subject to change.

Art. no.: 71063 / 08.98