

Servo Drives MR-J2S

Short reference for RFI filter unit type MF-2F230-007.230, MF-3F480-010.230, MF-3F480-025.230 and MF-3F230-050.230

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



CAUTION:

The RFI filter units described in this short reference are designed for exclusively use in combination with Mitsubishi Servo drives MR-J2S. Its function is to reduce mains conducted RFI noise to comply with the EN 61800-3 standard. Practical results may differ from this.

For further details please refer to the Mitsubishi manual for servo drives and EMC, which contains detailed information about EMC conform installation.

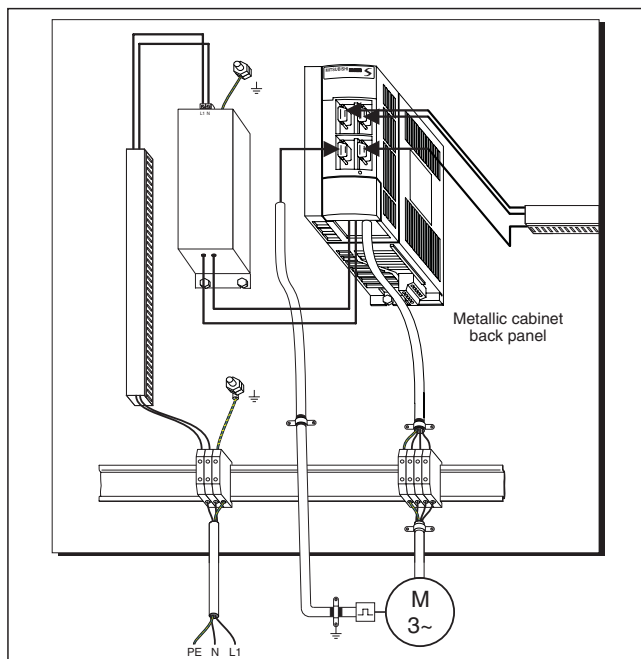
Before Mounting

Check the servo drive type. The filter should only be used with servo amplifier type MR-J2S. A single phase connection is possible up to 750W. The filter should be used only in combination with servo amplifiers described in the table below.

Servo amplifier	Filter
MR-J2S-10A/B/CL to MR-J2S-70A/B/CL	MF-2F230-007.230
MR-J2S-100A/B/CL	MF-3F480-010.230
MR-J2S-60A4/B4 to MR-J2S-200A4/B4	
MR-J2S-200A/B/CL and MR-J2S-350A/B/CL	MF-3F480-025.230
MR-J2S-350A4/B4 to MR-J2S-700A4/B4	
MR-J2S-500A/B/CL and MR-J2S-700A/B/CL	MF-3F230-050.230

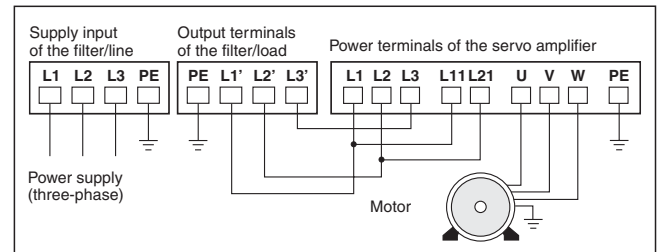
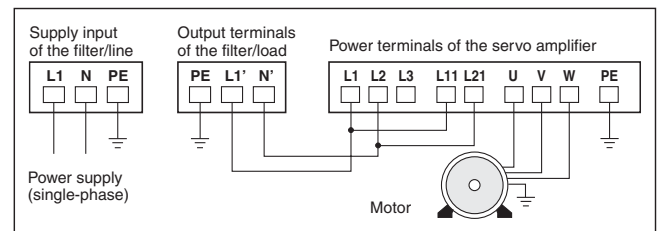
Mounting

The filters and the servo amplifier are mounted side by side on the back of the cabinet. 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. A single phase power supply may be used with the servo amplifiers MR-J2S-10A/B/CL to MR-J2S-70A/B/CL.



All cables must be shielded and earthed at both ends in order to reduce cable radiation. Earth motor, bond to filters. Position and environment of the filter unit should be the same as for the servo amplifier, as specified in the MR-J2S instruction manual.

If the earth leakage current is higher than 3.5mA the EMC-filter must have a fixed connection (acc. EN 50178).

For environmental conditions and mounting position please note the instructions in the operation manual for the servo drive MR-J2S.

When connecting a 200V servo amplifier MR-J2S-100A/B/CL to the filter MF-3F480-10.230, remove the factory mounted connector and use the delivered wire end ferrules.

Specifications

Function: The RFI units described in this short referenc are the European standard EN 61800-3. Practical results may dif-
designed to reduce mains conducted RFI emissions to meet fer from this.

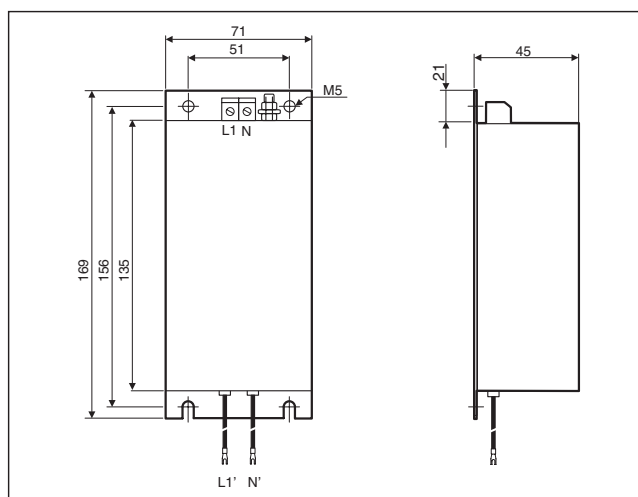
Performance specifications	Filter type			
	MF-2F230-007.230	MF-3F480-010.230	MF-3F480-025.230	MF-3F230-050.230
Rated voltage	1~ 230V AC / +10%	3~ 480/230V AC / +10%		3~ 230V AC / +10%
Frequency	50 / 60Hz			
Rated current	7A	10A	25A	50A
Leakage current (only filter)	< 9mA	< 3.5mA ^① / < 165mA ^②	< 3.6mA ^① / < 165mA ^②	< 0.65mA ^① / < 72mA ^②
Power loss	11W	16W	33W	31W
Ambient temperature	Max. +50°C			
Max. motor cable length	First Environment (unrestricted distribution) up to 20m / first Environment (restricted distribution) and second environment up to 20m			
Gewicht	1kg	2.1kg	2.5kg	3kg

① At normal operation: voltage difference between 2 phases < 3%

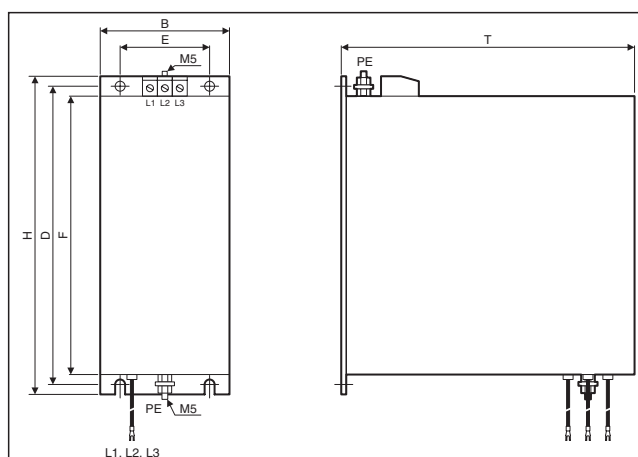
② At fault occurrence: 2 dead phases (worst case)

Dimensions

Filter type MF-2F230-007.230



Filter type MF-3F480-010.230, MF-3F480-025.230 and MF-3F230-050.230



Filter type	H	B	T	D	E	F
MF-3F480-010.230	168	45	135	156	36	140
MF-3F480-025.230	168	75	195	156	60	140
MF-3F230-050.230	250	75	200	235	45	222

Specifications subject to change without notice

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