

OEM Equipment Using VFDs

EMI-RFI Filters

Applications

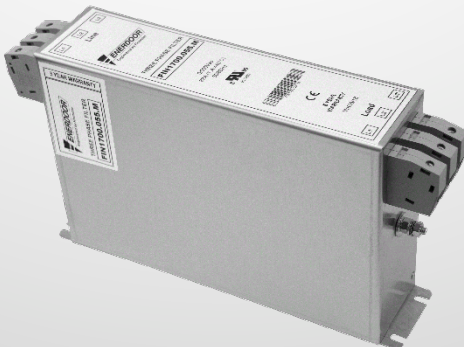
- OEM Equipment using VFDs or servo drives
- System integrators

Features

- One filter per machine instead of one filter per drive
- Low leakage current to avoid GFI interruption
- 5-Year warranty

Benefits

- Protects the entire machine instead of only the drive
- Helps pass international regulatory Standards



Introduction

This white paper discusses Enerdoor's approach when customers need to select an EMI-RFI filter in conjunction with single or multiple variable frequency drives (VFDs) and servo drives.

Following the VFD and servo-drive specs is not always sufficient to guarantee a system complies with the CE Certification and IEC Standards. This is because less strict Standards are set for individual components than systems as a whole. Often times, if a system is not meeting the correct Standard, installing an Enerdoor EMI-RFI filter will not only solve the issue, it often exceeds expectations.

The Challenge

It can be challenging for OEMs, system integrators and distributors to find the proper EMI-RFI filter to use inside a cabinet that has multiple VFDs or servo drives.

Drive manufacturers often recommend installing a single EMI-RFI filter for each individual drive. This results in increased costs, more space being used inside the cabinet, and a higher leakage current.

The Solution

Enerdoor's goal is to propose one filter per machine instead of one filter per drive. Using a single filter per machine instead of one per drive offers the following advantages:

Technical Benefits: Low leakage current; protects the entire machine instead of only the drive.

Economical Benefits: Using only one filter costs less, requires less mechanical space, reduces potential quality issues due to faulty wiring and accelerates installation time.

The Result

Enerdoor has been manufacturing EMI-RFI filters since 1992. Our unique combination of being an EMI-RFI filter manufacturer and decades of experience with Enerdoor EMC mobile laboratories has allowed us to comprise a list of filters compatible with the major variable frequency drive and servo drive manufacturers of the world.

All filters listed below have been tested in systems utilising single or multiple VFDs. If a drive manufacturer is not listed, please contact GD Rectifiers or Enerdoor for the appropriate solution.

Solutions – EMI Filters

Filters vs Drive Manufacturers

Manufacturer	Enerdoor Filter Recommendation Single Drive	Enerdoor Filter Recommendation Multiple Drive	Manufacturer	Enerdoor Filter Recommendation Single Drive	Enerdoor Filter Recommendation Multiple Drive
ABB	FIN538S1	FIN1700	Kollmorgen	FIN1700EG	FIN1700EG
AMC	FIN3755	FIN1900	Lenze	FIN3755	FIN1700E
Applied Motion	FIN1700E	FIN1700E	LSIS	FIN3755	FIN1900
Bosch Rexroth	FIN538S1	FIN1500	Minarik	FIN3755	FIN538S1
Control Techniques/Nidec	FIN538S1	FIN1700	Mitsubishi	FIN3755	FIN538S1
Copley	FIN3755	FIN1700E	Omron	FIN3755	FIN1700E
Danfoss/Vacon	FIN538S1	FIN1500	Panasonic	FIN3755	FIN1700
Delta	FIN3755	FIN1700E	Parker	FIN3755	FIN1700E
Eaton	FIN538S1	FIN1500	Rockwell	FIN538S1	FIN1500
GE/Fuji	FIN3755	FIN1700	Schneider	FIN1700E	FIN538S1
GE Fanuc	FIN538S1	FIN1500	SEW	FIN538S1	FIN1900
Hitachi	FIN1700E	FIN1900	Siemens	FIN1700E	FIN1500
Infranor	FIN3755	FIN1500	TECO/ Westinghouse	FIN538S1	FIN1900
KB	FIN3755	FIN1900	WEG	FIN538S1	FIN1500
			Yaskawa	FIN3755	FIN1500