ENERDOOR
Engineered by Finmotor

EMI-RFI Filters and Packaging Equipment

EMI-RFI Filters

Applications

- Packaging
- Pharmaceutical
- Food packaging
- Paper packaging

Benefits

- Increased productivity
- Decreased maintenance costs
- Customer satisfaction

Features

- 5-Year warranty
- Excellent attenuation
- Low leakage current
- Cost effective

Introduction

This white paper discusses a recent Enerdoor success story using an EMI-RFI filter in conjunction with packaging equipment that uses VFDs and servo drives in order to control the various motors in the system.

Today, packaging equipment is used in many markets, including: Food & Beverage, Pharmaceutical, Cosmetics, Microelectronics and Chemicals.

All electric or electronic devices have connections that are potential sources for electromagnetic or radio frequency interference (EMI-RFI). Both are known as electrical noise which may cause disturbance and unexpected issues to occur in normal operations, also known as “Ghost” problems. Audible noise or leaking water are examples of problems that a person can hear or see. “Electrical noise,” however, is the type of problem that can only be solved after careful analysis, using very expensive instruments.

Packaging equipment manufacturers are often challenged to achieve CE Certification, due to the fact that the drives emit high frequency noise that often causes malfunctions with sensors, encoders, HMI screens and e-stops within the system, as well as within other nearby machines.

The Challenge

Just prior to exhibiting in a major industry trade show, a manufacturer of packaging equipment designed a new machine to be sold worldwide.
The design team needed to reduce the footprint of the previous design, which included eliminating space dedicated for an EMI filter. The electrical specifications required the filter to be rated for ambient temperature 50°C.

The Solution

The manufacturer requested an on-site, pre-compliance test with Enerdoor's mobile laboratory, as the original configuration was not in compliance with IEC Standards.

Working in conjunction with the customer and our local Rep and Distributor partners, Enerdoor engineers performed the conducted emission test using a standard EMI-RFI filter solution that Enerdoor brought on site.

Enerdoor brings a wide variety of EMI-RFI filter models to each test site, in order to ensure that our guarantee of “You pass before we leave the facility,” is fulfilled. Enerdoor installed the standard EMI filter at the customer’s facility, and their packaging machine immediately passed the emissions test at their local Compliance house.

The Result

The manufacturer’s decision to take advantage of the Enerdoor mobile laboratory for pre-compliance testing before moving to the final Compliance test saved both time and more importantly, money. The potential compliance failure of the machine would compromise the project deadline and the introduction to the market during the upcoming worldwide exhibition.

This example of teamwork allowed the customer to bring a product to the global market faster, while being in complete compliance and at a reduced total cost. Enerdoor is committed to providing the highest level of customer support possible and bringing value to our customers.

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