

Application Note # 5003

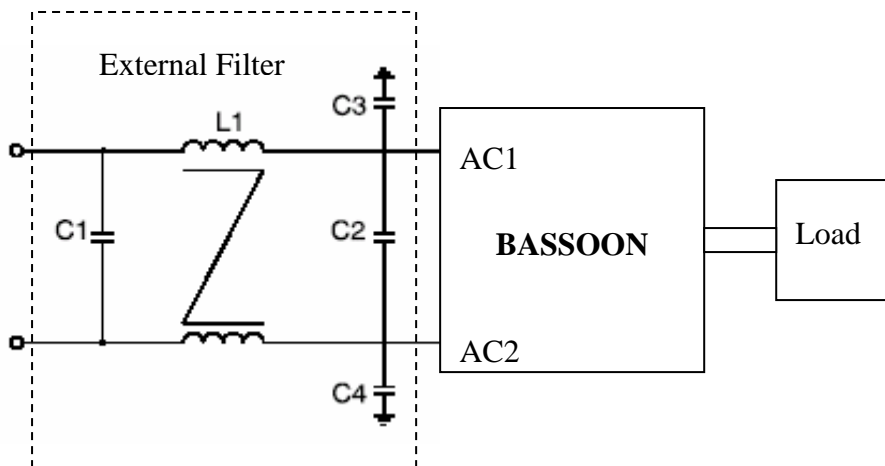
EMC Filtering of the BASSOON Servo Drive

Elmo Motion Control uses a proprietary *FASSTechnolgy* to control the power conversion of its drives. Our unique Fast And Soft Switching Technology significantly reduces the EMI typically created by PWM drives. In most of the applications with Elmo drives no additional external means (such as filters) are required to meet the EMC requirements.

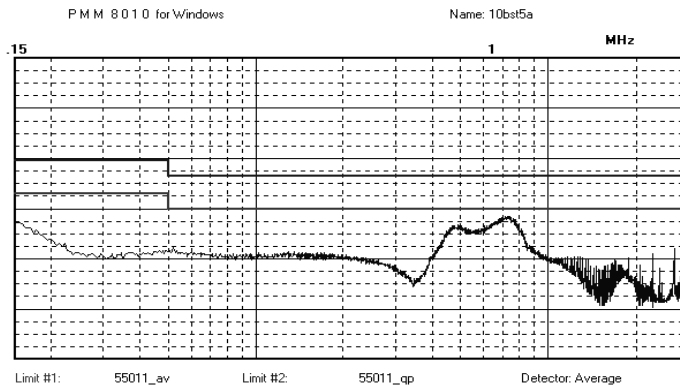
The BASSOON, being a very compact, extremely high density “Direct to the Main” servo drive, is a “bit” more sensitive to the application environment, such as wiring, grounding, etc. In most applications the BASSOON meets the EMC requirements. However, in some extreme cases, when the drive is exposed to “tough” environmental conditions, an external filter is recommended.

Below is a typical filter design that can be used in conjunction with the BASSOON servo drive in applications requiring EMC filtering. Any first order filter which includes a common mode choke and differential capacitors should work.

Typical EMC Filter



Test Results With a Filter in “Extreme” Condition

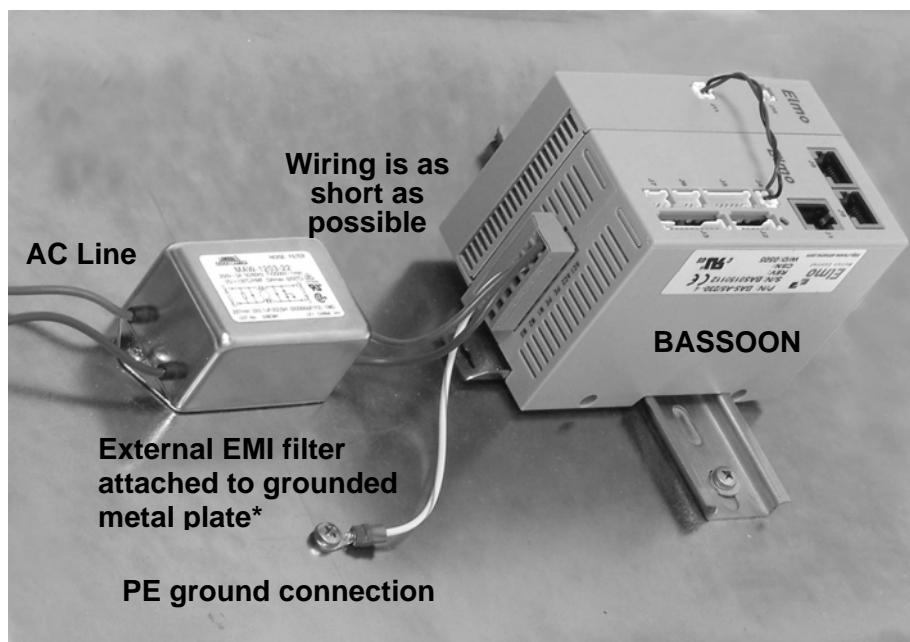


BASSOON 5/230 Conducted noise test results

Notes:

1. In this experiment the BASSOON was at full load driving a 1KW motor.
2. The BASSOON meets both EN55022 CLASS A and CLASS B.
3. The filter in this experiment was a Lambda MAW-1203-22*.

BASSOON Servo Drive Wiring Recommendation:
(To Reduce the Conducted Emission on the AC Line)



* Elmo can provide the filter upon request.