



Recommended Filtering for Auxiliary +5V Logic Power of the Ultra3000™ Digital Servo Drives

Catalog Numbers:

2098-DSD-005	2098-DSD-010	2098-DSD-020
2098-DSD-005X	2098-DSD-010X	2098-DSD-020X
2098-DSD-005-DN	2098-DSD-010-DN	2098-DSD-020-DN
2098-DSD-005X-DN	2098-DSD-010X-DN	2098-DSD-020X-DN
2098-DSD-005-SE	2098-DSD-010-SE	2098-DSD-020-SE

Use this document in conjunction with the *Ultra3000 Digital Servo Drives Installation Manual* (2098-IN003x-EN-P).

Explanation of Condition

The 500W, 1kW, and 2kW models of the 230V Ultra3000 Family support powering of drive logic with an external +5V power supply, independent of the main AC supply. Certain installations utilizing this feature may report erroneous IPM faults. In such instances, the display flashes an E..0..5 error code.

The following combination of installation features is generally associated with the occurrence of this problem on the drives listed above:

- Use of the auxiliary +5V logic power supply feature.
- Motor power cables longer than 15 m (50 ft).
- Inadequate or non-existent AC input line filtering.

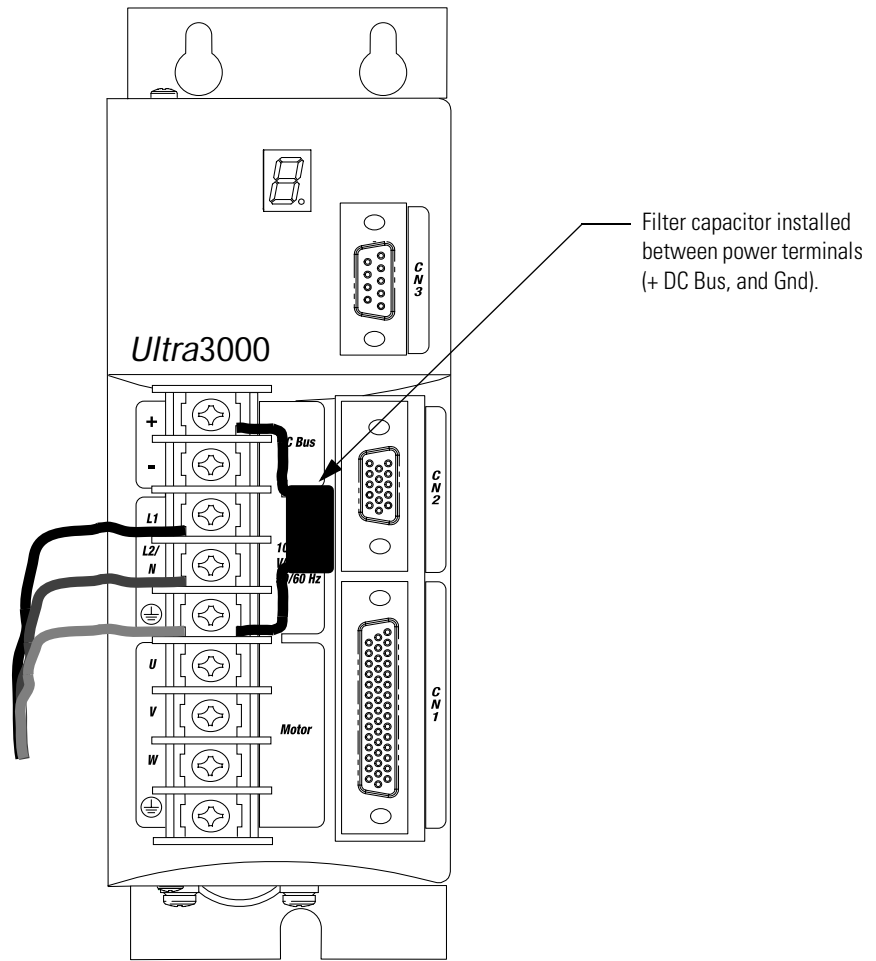
Recommended Solution

In most cases, a properly installed AC line filter provides the necessary filtering to eliminate the erroneous faults. Refer to *System Design for Control of Electrical Noise* (publication GMC-RM001x-EN-P) for recommended installation guidelines of AC line filters.

If an AC line filter is not practical for the application, or does not provide adequate filtering, a filter capacitor can be installed directly on the power terminal block as shown in Figure 1. Contact Technical

Support and a filter capacitor will be shipped free of charge. In the U.S. call 952-914-3990, and in Europe call 44 1270 580142.

Figure 1 Filter Capacitor Installation on Ultra3000 Drive



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