



Product Notice

PN Number 99

Protecting the ZEUS RS422/485 interface from destruction and common mode noise and surges

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Notice:

This note is provided to highlight customer reported damage to the ZEUS RS422/485 interface in the field. On investigation the cause has been attributed to grounding non-isolated RS422/485 ports together where the ground potential difference has exceeded the current rating of the ferrite beads used to EMI filter the ZEUS RS422/485 ground. As little as 100mV is enough to destroy the ferrite beads.

Eurotech recommend that the installation site into which the ZEUS is to be used for RS422/485 data communication is subjected to a full assessment. The two driving factors in selecting the most reliable, cost effective solution are the location of connecting devices to each other and whether connecting devices share the same power system. Every customer installation is unique, so a good understanding of the environment into which the RS422/485 data communication is required will aid in determining if non-isolated, partially isolated or fully isolated data communications is the most appropriate. If there is a reasonable probability of lightning storms or power system faults that can generate hundreds or thousands of volts then the use of fully isolated data communications or external common mode surge protection shall be required.

For an excellent source of installation options for RS422/485 data communications the following application note is highly recommended from Robust DataComm Pte Ltd.

<http://www.robustdc.com/library/san005.html>

If you have any questions about this or about any of our products please contact Eurotech Ltd Technical Support.