

# IntelliPack Application Notes

## Isolating Software-configured Field Devices for Safety

### Application

**Protecting your PC when configuring field devices.**

**How do you know it is safe to connect your PC/Laptop to a field installed device? The answer is, you don't know! It is possible that a failure in the field may cause a high voltage potential at the serial port connector. There is no easy way to find out without connecting to the device. By then, it is too late.**

### Observations

While many manufacturers offer software-configurable devices, it is not always stated if the serial port connection is isolated from the field I/O. You need to know this answer. Additionally, there are field devices that include built-in isolation for the serial port. Question: Is placing the serial port's isolation barrier inside the field device the best approach?

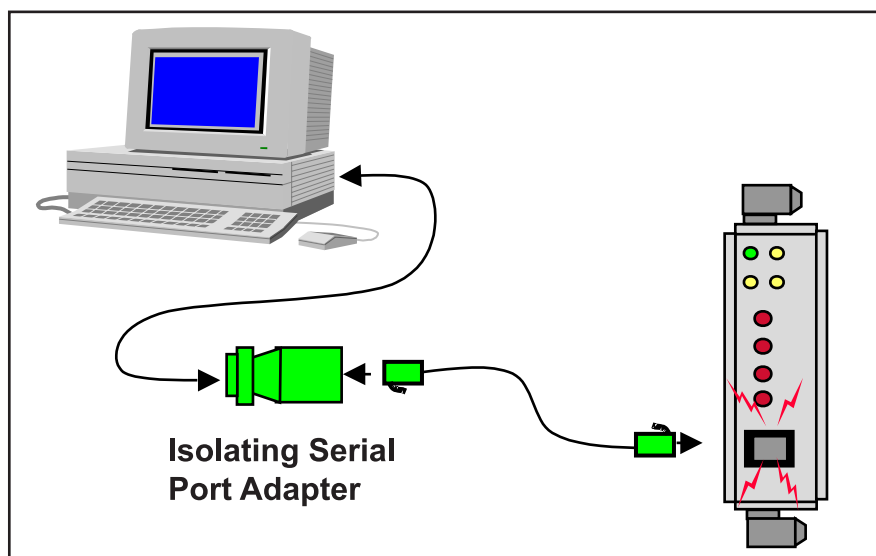
Consider the environment for the devices installation. Over time, temperature cycling, humidity, and board contamination, the effectiveness of the port's isolation barrier will diminish significantly. In the case of an isolating serial port adapter, the adapter is likely to stay with the computer. The computer's environment won't be nearly as harsh as the industrial field site. Therefore, the isolation barrier will maintain the necessary safety level for a much longer time. Consider this issue the next time you are evaluating software configured devices.

### Equipment Used

All IntelliPack transmitters and alarms use the isolated serial port adapter 5030-913.

### Solution

Acromag's IntelliPack modules use a serial port adapter, which provides an additional level of protection between your expensive calibration equipment and the field device. The serial port adapter electrically isolates the two connected devices. Therefore, if the field device is damaged, the low-cost adapter will sacrifice itself to protect the calibration equipment.



*Acromag's IntelliPack serial port adapter provides isolation between your PC and the field I/O. A safety requirement in order to protect you and your equipment in case of accidental mis-wiring or an electrical disturbance.*