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TECHNICAL NOTE # 218B

RE: **NIM or 422A Adapter to Relay Module RS485 Communications over Fiber Optics**
Date: **June 29, 2007**

Due to the type of communications used between the NIM (Network Interface Module) or 422A Adapter installed in a Processor Module (PM) to the Relay Module (RM), some fiber optic line drivers may not work.

Some drivers build in a buffer which delays the data prior to sending. This delay is used to check the cable for messages as there is no CTS voltage available for flow control. This delay will adversely impact the communications as the RM communication uses a fixed timer to send out the data. After the PM with the NIM or 422A polls the RM, the RM(s) must answer within a given time.

The following manufactures and models have been tested and approved for the RS485 communications between the PM with a NIM or 422A Adapter to the RM:

- American Fibertek: Model MX-485-2
               Model MO-485 (MTM/MRM-0485 Series)

- Fiber Options: Model S711D-EST2
               Model S710D-EST2

- Black Box: Model ME310A for AC power
               Model ME310A-D24 for 24 VDC power
               Model ME310A-D48 for 48 VDC power