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Automation Service News

The Newsletter of Delta Automation Inc.

Tech Tip!

Utilization of “F” connectors with a built in “stinger” VS no “stinger”

200 Series I/O Replaced in Record Time

Delta Engineers Provide Unique Solution for I/O Upgrade in Short Shutdown

I/O Upgrade Extension Cables

I/O Extension Cables & Test of Phoenix Modbus Plus Tap

Important Info!

Delta Automation Inc. is authorized by Yaskawa for Drives service

Delta Automation Contact Info

Contact names, numbers and e-mail addresses

Utilization of "F" Connectors with a built in "stinger" VS no "stinger"

Tech Tip!

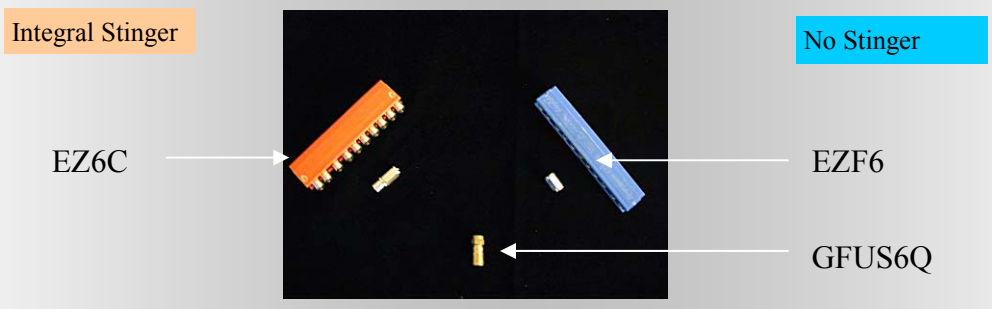
There are many issues which may cause Remote I/O problems in a given system. Proper planning and product selection for the system will provide a strong base that should assist in preventing problems and issues with the communications.

One of these choices is in the selection of the connectors utilized in all drop cables, and in some systems, the trunk cables. On the RG-6 cable specified by the manufacturer, the center conductor is a copper clad steel conductor, 18 AWG in size. This conductor may be used as the so called "stinger" on the connections themselves. There are two schools of thought on this design.

The first, states that this conductor, when cut for installation, may leave rough edges on the conductor itself. An example of this type connector is the Raychem EZF6 which is no longer available and been replaced by the GFUS6Q. There is concern that these rough edges may damage the female portion of the mating connector when inserted.

The second, concerns the intermediate connection within the connector itself, when the center conductor is inserted into the "cup" of the integral stinger. An example of this type of connector is the EZ6C currently available from the manufacturer. This connection cannot be inspected or be properly tested as needed. Even when this type of connector is installed by qualified personnel, there is still no guarantee that it will perform over temperature changes or cable movement issues. At best it will fail solidly, at worst it will fail on an intermittent basis and be difficult to locate and eliminate. These are not the conditions that are conducive to reliable communications.

Delta Automation engineers have installed literally thousands of "F" style connectors, and feel that the connectors that utilize the **center conductor as the stinger are much more reliable**. They are usually much less expensive as well. These are the type of connectors that Delta supplies in the installation kit and installs during its network certifications. Delta Automation also provides pre-made and tested drop cables utilizing the specified cable and connectors.



These are the types of issues and problems that can be avoided by utilizing the network services of Delta Automation Inc. for all of your network design and support needs. Delta Automation Inc. certifies Modbus Plus, Modbus II and Remote I/O networks in metallic and fiber optics.

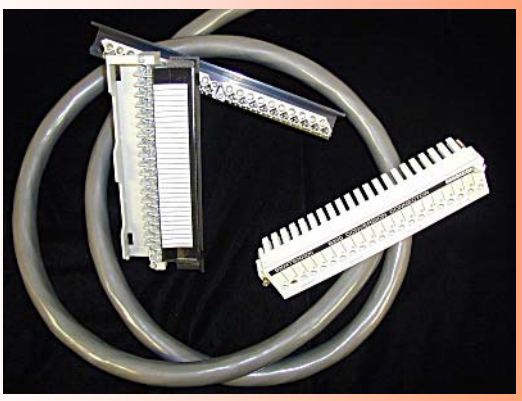
Delta Automation Inc.
Service Related Success

Two 200 Series I/O Channels Replaced in Record Time

The product distribution system for a large production facility was in need of upgrading a 584 redundancy system installed in the early 80's. This system had been initially commissioned by Bob Culley, so Delta Automation Inc. was the logical choice for the company to engineer and install the upgrade. The system selected to replace the 584 was a Quantum controller utilizing J290's for the P453's and J890's for the J810's. The software was converted, the components were delivered and an installation date was set. This date was eventually pushed back and changed numerous times until over one year had passed. This system is so vital to every line within the plant, that the production schedules would not allow for a scheduled shutdown. Ultimately, a mechanical failure necessitated a planned site shutdown of four to six hours. Once this date had been set, a planning meeting was called with Delta Automation Inc. It was during this meeting that another issue involving the same system arose. Two of the 200 series I/O channels had been experiencing intermittent operations due to the B240 housing cam connectors. The company wanted to convert these two channels to 800 series style I/O. Their plan was to remove the 200 series I/O and housings and replace them with 800 style I/O and housings in the same cabinet. Delta Automation engineers explained that with the two channels of I/O there are approximately 800 field terminations to make. Also a system that is over twenty years old will most likely have numerous un-documented wiring changes that would also require debugging time. There was not enough time in a six hour window to accomplish this task. Delta engineers devised a plan to replace the I/O in two hours. Delta suggested and got approval to locate a separate panel with the 800 series style I/O already mounted and wired via 25 conductor extension cables to the B200 replacement connector. Delta Automation Inc. designed, fabricated, tested and delivered the completed panel within two weeks of receiving the order. This allowed time to place the cabinet prior to the planned outage. These connectors were simply inserted into the positions once the 200 series I/O cards were removed. No time consuming wiring or debugging was required. The entire upgrade was completed well within the allotted time window. The entire staff at this facility was pleased with the results and ease of the conversion. Once again Delta Automation Inc. demonstrated the knowledge, desire and ability to assist a customer in a time of need. Contact Delta Automation Inc. for any of your upgrading questions or needs.

I/O extension cables to convert 200 series to 800 or Quantum series

During a system upgrade or PIP process, there often is a need to replace the existing 200 series I/O family with the newer 800 series or Quantum type of I/O. Unfortunately, scheduling rarely allows for the time consuming labor required to re-terminate and de-bug a system. Delta Automation Inc. offers a custom cable fabrication service to cover these requirements. Provide Delta with the part number of the module to be replaced and the part number of the module to be installed, and we will fabricate the required cables. There are of course several issues that must be discussed depending on the specific module or modules. Delta engineers will assist in the choice of options available when you inquire about these cables.



Phoenix Contact Modbus Plus Tap Module Assembly

Delta Automation Inc. has recently been requested to test the Phoenix Contact Modbus Plus Tap assembly. This unique design allows for both the drop cable and the trunk cable to be terminated with screw down type terminals. It also allows for the ability to terminate easily from either the “right” or to “left” with the movement of an on-board mounted slide switch. This switch may prove useful in troubleshooting as well as installation. This compact unit mounts upon a DIN rail.

Upon testing, which was done in a real working Modbus Plus network, these units performed as well as the Tee type connector supplied by the manufacturer. No anomalies were detected with any of the test equipment utilized by Delta Automation Inc. during its network certifications. Delta Automation Inc. will certify systems utilizing these devices.

There is always room for improvement, and this product is no exception. The documentation supplied is not very clear in describing the terminal designations, and the slide switch , although useful, can be inadvertently changed causing network problems. Also, a strain relief for the cables should be provided. As for pricing, these units are more expensive that their counterparts, however the savings on installation time and labor may offset the cost.

Important Info

The **Yaskawa Company** has Authorized Delta Automation Inc. as an

Authorized Service Provider for Yaskawa Drive Products.

The Yaskawa corporation has authorized Delta Automation Inc. as an Authorized Service Provider for its' line of A.C. drives. This includes the Magnatek line that has been known and utilized as a Mod-Connect partner for some time. Delta Automation Inc. will provide on-site field service and start-up procedures, as well as depot repair for warranty and non-warranty products.

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For after hours

Emergency Service or Parts

Call our main number 888-723-3582

Extension 55

Leave a message and someone will respond within fifteen minutes to answer your call.

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