Allen-Bradley

How Can I Reduce Wiring Time and Errors?

Wiring Systems Reduce I/O Wiring Time and Errors

Customer Need

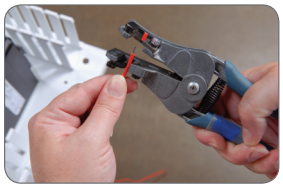
Wiring an I/O module can prove to be a time consuming process. As more devices need to communicate, more connections need to be made. Following the traditional I/O wiring assembly process, it can take just over 46 minutes to wire and label a single I/O module. Wiring 10 modules would take an entire 8 hour work day. This doesn't take into account having to check for errors and effectively correct them. Considering the hourly cost to have personnel complete this task, this could lead to significant additional costs. In large scale applications, these costs only have the potential to grow.

Traditional I/O Wiring Assembly Process

0:23

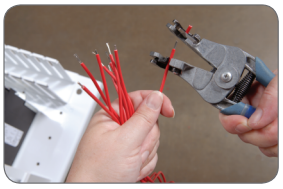
The assembler begins the arduous task of measuring, and cutting each control wire.

0:36



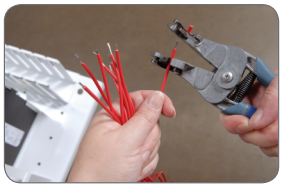
Continuing to measure and cut each control wire.

0:45



Continuing to measure and cut each control wire.

1:08

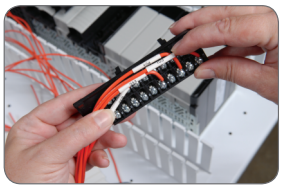


The assembler using the traditional method has measured and cut about 10 of the 18 wires needed for the same job. And there are numerous steps remaining.

14:58

Still not done with wiring PLC module.

18:04



Assembler has begun the tagging process.

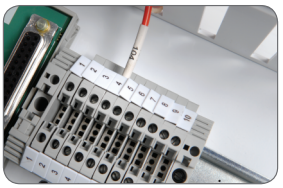
24:37

Finally half of the process is complete and PLC Module is wired and snapped into place.

34:34

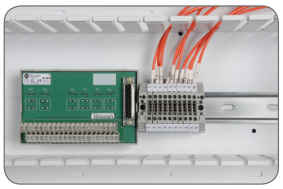
Assembler begins tagging each wire before connecting it to the terminal blocks.

37:00



Wiring each terminal block one at a time.

46:30



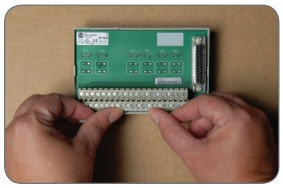
Traditional wiring process is now complete.

Component Solution

The two-piece Bulletin 1492 Wiring System, consisting of an Interface Module (IFM) and prewired cable, is capable of reducing wiring time over 4000% and is 100% factory tested to eliminate any would-be errors. Wiring those same 10 modules could be completed in just over 11 minutes - less time than it would take to wire a single module using the traditional method!

Bulletin 1492 I/O Wiring System Assembly Process

0:23



The assembler removes the Bulletin 1492 Interface Module (IFM) from its box and applies the supplied preprinted labels to mark the terminals.

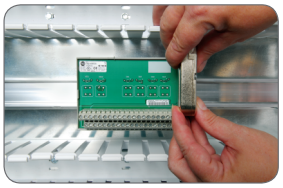
0:36

Simply snaps the 1492 module to the DIN Rail.

0:45

The assembler removes pre-wired 1492 cable from the box and connects the PLC end of the cable to the PLC.

1:04



Then routes the cable through the wire duct and snaps the other end of the cable to the 1492 IFM Module.

1:08

Now the process is complete.

Summary

Allen-Bradley Bulletin 1492 Wiring Systems simplify making connections between the PLC and devices, allowing less time and money to be spent wiring the system and more time benefiting from production.

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