

Connections

I/O, I/O, it's off to work we go!



“Communication is a skill that you can learn. It’s like riding a bicycle or typing. If you’re willing to work at it, you can rapidly improve the quality of every part of your life.”

-Brian Tracy

As New England Drives & Controls constantly strives to become a better asset to our customers, our whitepaper series will feature new technologies or helpful insights that may be pertinent to the reader. It is our sincere hope that this information will be beneficial in both relating, and applying content to your industrial needs.

We hope you find this whitepaper series an enjoyable and informative read.

We always welcome your questions and comments.

What do you know about I/O link? Most of us have heard about it, but how many of us truly know the who, what, where, and why of it?

I/O link is probably the best thing to come to sensor based systems since the photosensor. Are you using it? Why or why not? Let’s review what exactly I/O link is.

Simplistically it is communication between a sensor and a controller. Now the real question is why should you care? We’ll I’m glad you asked.

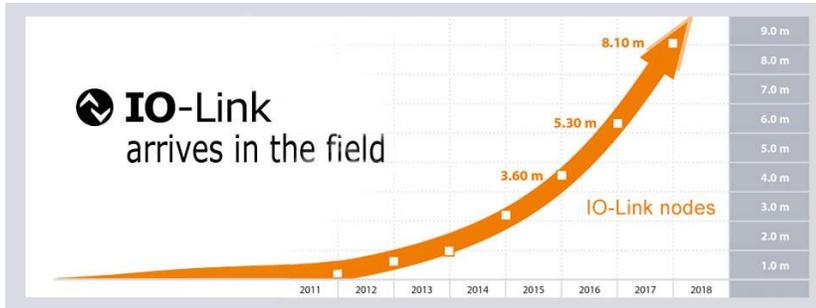
The real benefit of I/O link in my opinion is not the fact that because it utilizes a serial protocol you can update sensor firmware, change “teachable” parameters, get more than a simple analog, PNP or NPN signal back to the controller. Yes, it can do all these things, but the fact that existing cabling infrastructure can be used is what I feel to be its main advantage.



This makes updating a simple switch type sensor input into a fully communicable device quite easy. No new wires to run. (or buy) The simple power, ground and signal wires already installed are ready to make this improvement a reality. Using I/O link when you are designing

and building a system is a no-brainer, but the above-mentioned advantage is rarely considered when having to replace a bad sensor. A few lines of code at the controller and voila! The system has been improved and is a next generation system. Again, all without changing or adding a single cord-set.

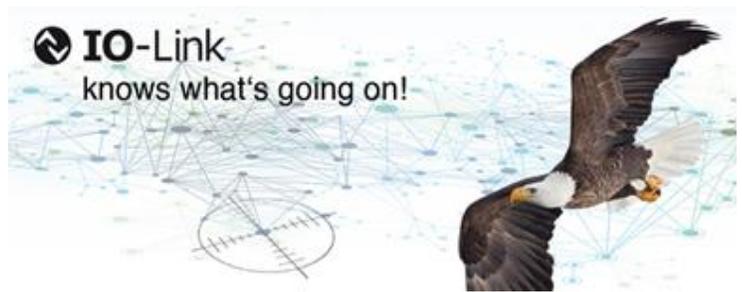
I know what you are thinking; “What if I do not have a controller?”, or “my sensor simply actuates a solenoid.” Well admittedly you’ve got me there. Like everything else, I/O link isn’t the one cure all for all of your problems, but it can



give you a leg up on your competition in the right application. The new system can be remotely monitored, and the sensor itself can indicate if it has a problem, and what it is. As you can see the implications of this are huge.

Incorporating I/O Link is easy and the wealth of information it can report back is infinite. Even an I/O link equipped circuit breaker can now report back its status. Everything in the system can communicate. With I/O Link an indicator light can now be “smart” and can talk, flash, change and blend colors, the sky truly is the limit.

Using blocks, much like a network switch can also now extend several sensors into one cable. The cost and complexity of an entire networked system is brought to its least common denominator, and remember it is still backwards compatible!



Although most people I talk to indicate that they believe I/O Link is great for new designs, it really may be better when trying to update old ones. Something to keep in the back of your head!

Any way you look at it, I/O Link is another great tool in the tool box.

As my Dad used to say, “The trick to any good tool is utilizing it properly. Not doing this is like hammering in a screw, or using a screwdriver as a chisel. “

-Peter Lavoie (Engineering Manager)



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