No Ordinary Day

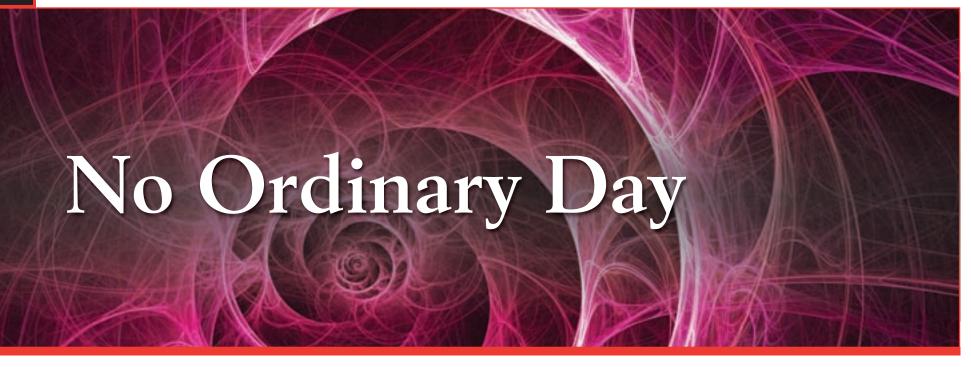**The work week had just begun and I could already tell it was going to be a long day. Sounds familiar, right? It was one of those days where you know you'll never come close to finishing all of the things you need to do. On top of it all, there was this program to write and upload to the new gas detection central controller that we had purchased a few days before. Deployment was scheduled for the end of the week. It was an Oldham MX43. The central controller was quite nice and very powerful: up to 32 analogue and digital sensors; 32 relay outputs or 4-20 mA integrated or remote outputs on digital modules, 32 logic inputs, bus cabling with direct connection to modules or point-to-point configuration.**

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"You've got nothing to worry about. It's incredibly easy to use," the salesman assured me. It seemed that, with all of these options, it would take me hours to get through the manual. But time was a luxury I didn't have that day, so I poured myself a hot cup of coffee and started to see what I could learn about COM43 (the application used to program the central controller). When I put the CD into the computer, the installation launched automatically and prompted me to select my language. In the few seconds it took me to discover that the CD had French and English copies of the user manual for both COM43 and the MX43 central controller, the program had finished installing and the quick launch and uninstall icons (which might come in handy one day I suppose) were already on my desktop.

I launched the application without picking up the manual, thinking I could always go back to consult it if I had a question. Everything was laid out very clearly and it seemed that the architecture would appear on screen as I went through the process. I selected between the 4 and 8 line versions and intuitively placed my cursor into the "Type of Lines" field. From that field, I could enter the lines and choose between analogue or bus field configuration. And just as I suspected, the architecture appeared in the lower portion of the screen.

With a right-click on the lines that appeared in the lower portion of the screen, I could enter my sensor modules and remote relays. That's one of the reasons we chose to work with Oldham. The MX43 central controller adapts to practically any situation and reduces installation costs by allowing you to place the remote relays as close to the control systems as possible.

We decided to install 3 detectors to monitor the same reactor, and wanted production to continue unless at least two of the sensor alarms were triggered. The three detectors were completely identical, so I was able to use the extremely helpful "copy-paste" feature built into COM43. A simple right-click saved me time and kept me from making any mistakes. Once I had configured the detectors and defined alarm thresholds, all that was left was to program the relays. The COM43 includes a library of the most

commonly used gas detectors. The library is a big time saver. Everything is pre-programmed according to industry standards; you simply validate the selections at the end.

I was blown away! There was a graphics function that made the programming process incredibly simple - even fun. All I had to do was select and drag events (at left in Figure 3) to the logic ports, choose a function (OR, AND, NOR, NAND and VOTING), and I was done. I glanced over the technical manual and selected the VOTING function. It was exactly what we wanted: process shutdown if two of the three sensors exceed the alarm threshold.

When I glanced over the manual, I read about a feature that allows you to verify that everything is properly programmed and that all variables are correctly assigned. I ran this feature and received an error message stating that I had failed to define a status for one of the relays in the relay module. So I deactivated the relay and got a green light to upload my program to the MX43 central controller.

With my PC connected to the MX43 central controller, I used the transfer feature and it finished in less than 3 seconds. The central controller was operational in record time -- much sooner than I expected based on my past experience with similar equipment. I was so impressed with the COM43, I went back and went through the programming process again for fun. Believe it or not, with just a little bit of experience, it took me less than 2 minutes! Needless to say, I had plenty of time to complete all of my work that day and even got a head start on the next day. It's not every day you get to program an MX43!

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