DGC-2020 Product Notes
PRNote 133
November, 2009

Using digital logic control relays to create multiple layer logic schemes

BESTCOMS*Plus* PC software is a very powerful tool for set-up, remote monitoring, programming, and file management for many devices produced by Basler Electric. Within the software is the flexible and adaptable programmable logic. The programmable logic allows users to develop logic schemes ranging from very simple to very complex, utilizing parameters measured and monitored by the devices, as well as local and remote I/O. This tool allows custom schemes to be implemented in a system that may have required multiple control relays or even a PLC in the past.

Some of these schemes require multiple combinations of I/O, logic gates, and elements. Each line of logic is limited to a maximum of 5 layers of element and gates. Logic lines such as the one below use all five layers of logic to implement.

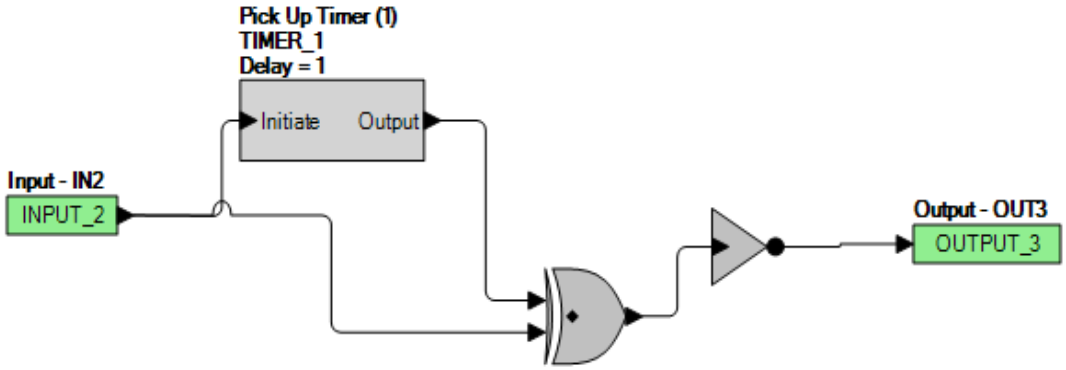

Figure 1: Sample logic line

In some logic schemes, more than five layers may need to be used to accomplish the desired task. Using the above logic as an example, if the application requires the output of the inverter and input 3 to be present before output 3 is energized, another layer of logic is required. In this case, a logic control relay can be utilized.

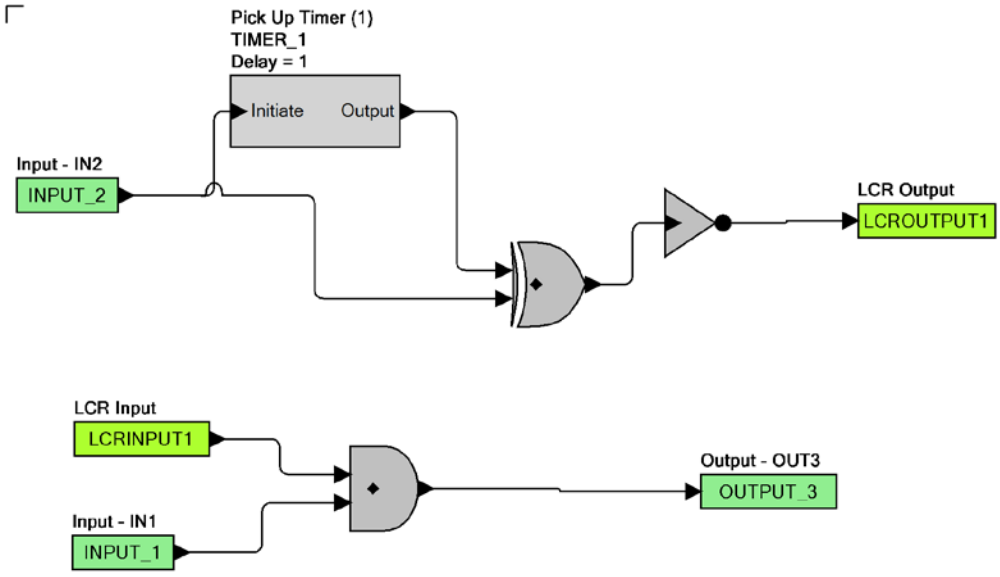

Figure 2: Utilizing a logic control relay

In this example, the upper line of logic drives logic control relay out 1. When logic control relay out 1 is true it will force the logic control relay input 1 to be true as well. This now allows additional layers of logic to be implemented.

Logic control relays also can be enabled using the output of one line of logic as input elements for multiple lines of logic. In the example, if output 1 also needs to be energized when the output of the inverter in the first line of logic is high, this can implemented easily using the logic control relay. Simply adding an additional logic control relay input1 in the main logic to drive output 1 accomplishes this task.

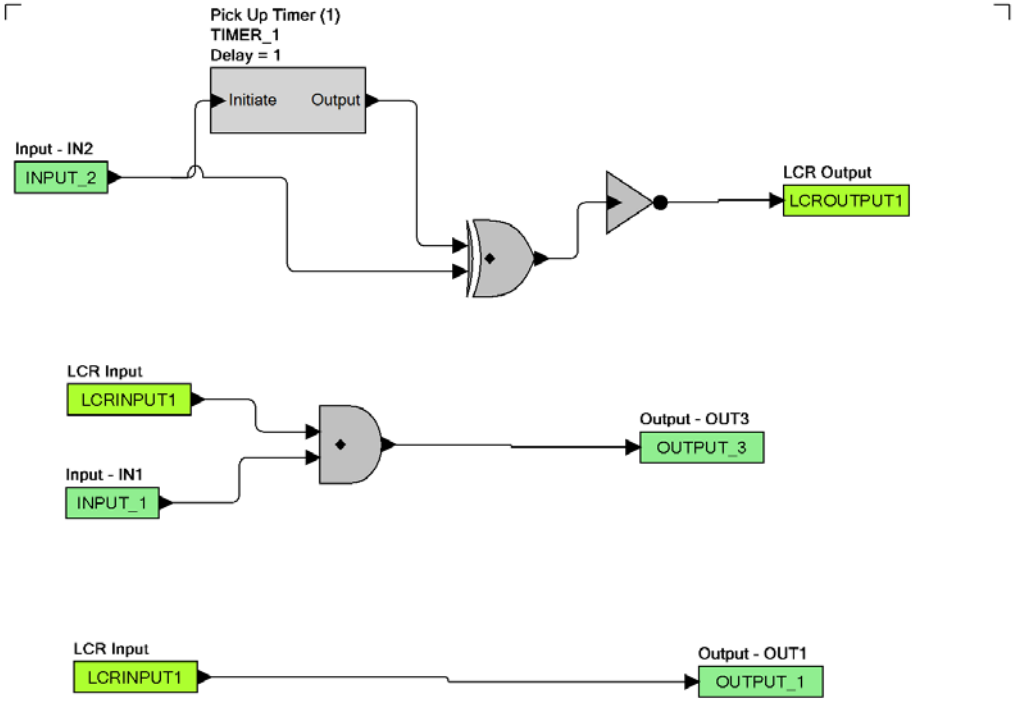

Figure 3: Adding an additional logic control relay

For more information on the DGC-2020, consult the Basler factory at 618/654-2341 or visit **www.basler.com**.

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