LogiSwitch

Simplifying Real-World Design

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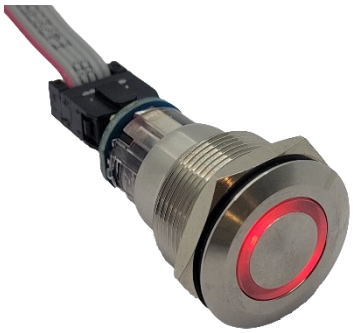
LOGISWITCH RELEASES A NEW LINE OF DEBOUNCED VANDAL-RESISTANT SWITCHES

Eliminates Switch Bounce and Adds Industry-standard IDC Connector

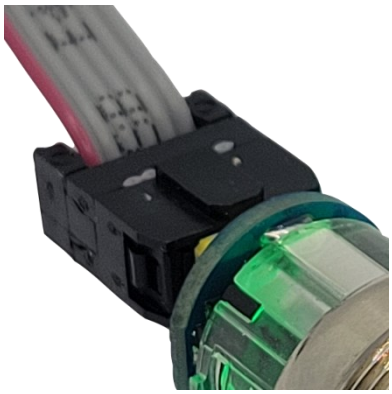
Las Vegas, NV – October 26, 2021 – LogiSwitch, a leader in switch debounce electronics and switches, has released a new line of pushbutton, vandal-resistant, LED illuminated switches with built-in LogiSwitch NoBounce™ technology. The LSVR series of switches has more compact built-in switch debounce electronics than our previous generation and has an industry-standard 6-pin IDC interface.

These full featured switches fit the same form factor of conventional vandal-resistant switches with the added benefits of self-contained switch debounce and an IDC interface for industry-standard cable connection. The system designer is no longer burdened with having to add additional hardware or software to the system to eliminate switch bounce and the IDC interface provides a highly reliable, industry-standard interface to the switch.



Vandal-Resistant Switch with IDC Connector

Back of Switch Showing IDC Connector and Electronics



IDC Cable Connection

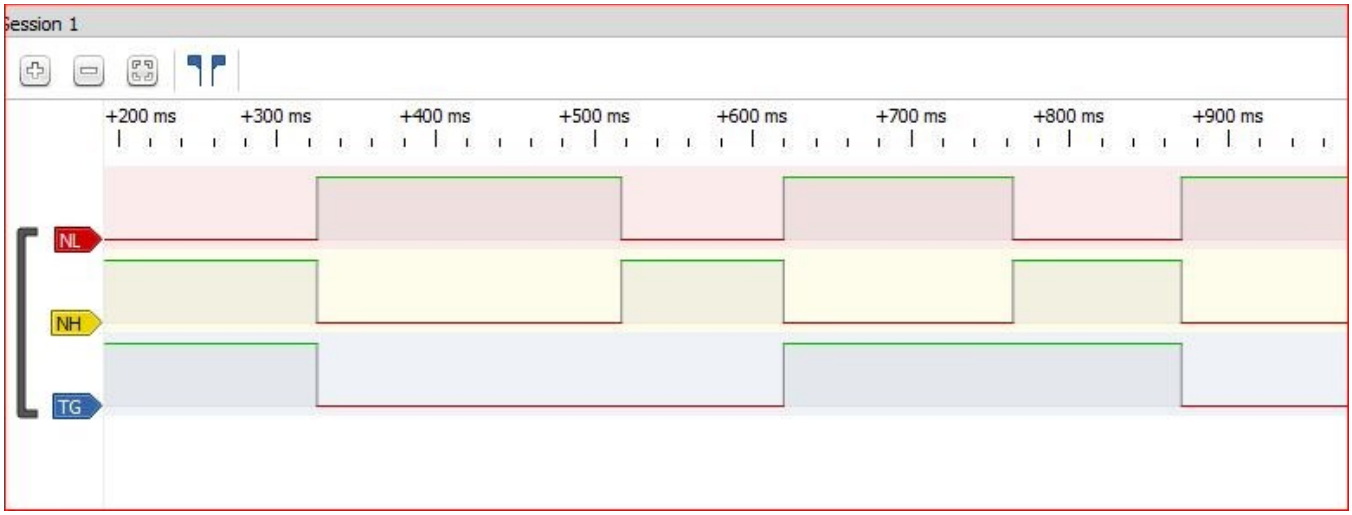
NoBounce Technology

LogiSwitch's NoBounce technology has proven to be very robust since it was released in 2016. The switches and ICs have high customer satisfaction with no reported field failures. This technology has been designed into a wide range of products including military, robotics, medical, industrial, and consumer applications.

The user can take advantage of additional features not available in conventional switches:

- All outputs bounce-free
- Reliable two-circuit debounce circuit – no delay on make or break
- Both momentary and latched outputs – active high, active low and toggle
- LogiSwitch Ultra-High-Speed Handshake Protocol eliminates time-wasting polling
- Six-pin IDC Interface – two momentary and one latched outputs with LED control
- Cost competitive with legacy vandal-resistant IP67 pushbutton switches
- Available in 19mm and 22mm sizes and red, green, and yellow LED colors

The toggle output, not available in conventional switches, powers up in the high state and changes state with each switch closure.



Logic Analyzer Capture of the NL (Normally Low), NH (Normally High), and TG (Toggle) outputs of LSVR Switch

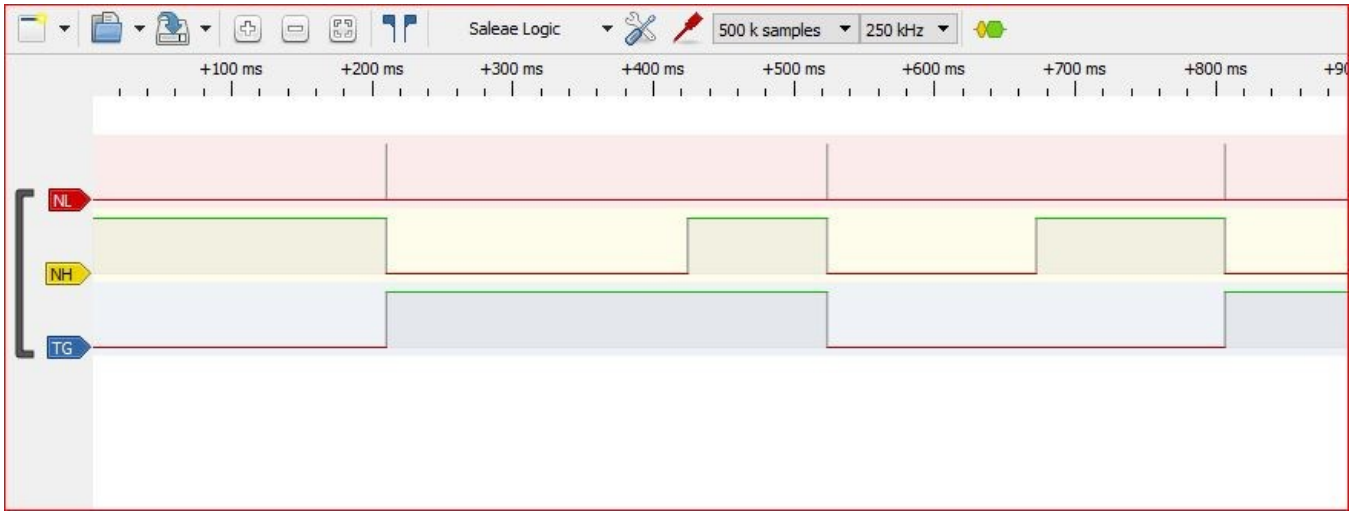
Proprietary LogiSwitch Handshake Option

Rather than poll the switch status waiting for the switch to be released, the handshake option provides a simple mechanism to end the software switch service routine when the program no longer needs it rather than waiting in a time-wasting loop for the switch release. The amount of time the switch remains pressed is rarely relevant to the program.

The LogiSwitch handshake works as follows:

> The NL (normally low) line is implemented as a wired-or signal connected between the host computer and the LS-VR switch. The pin is pulled up high by a resistor internal to the LogiSwitch switch. The only rule is that neither the LogiSwitch device nor the host computer is ever allowed to drive the pin high, but either device at separate times or simultaneously may assert a low level on the pin. To implement the handshake, the chosen pin of the host computer must be configurable as either an input or an output. A host pin with a fixed input or output will not work in handshake mode.

Note that the cycle will terminate as normal on release of the switch if the handshake feature is not used.



NL Output Acknowledged by Host with Handshake

The above logic analyzer capture shows the cycle when the host computer responds with a 5 us handshake pulse. Note that the switch is released after approximately 200ms in the example of the cycle shown. The handshake feature of the LogiSwitch device eliminates the need to poll the switch output for release and the system can go back to work immediately after issuing the 5 us low pulse.

About LogiSwitch

LogiSwitch was founded in 2016 by Mike Pelkey, a serial inventor and entrepreneur who has a long engineering career in industrial automation. LogiSwitch's NoBounce™ line of ICs and switches is a result of his 40+ year career in electronic design engineering where he developed switch bounce solutions for automation applications.

For more information, visit www.logiswitch.com.

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