Service Bulletin

Bulletin No: SB-0028-19-354-FS   Effective Date: 12-20-2019   Type: Instruction

Subject: Toggle procedures for the flexSCADA Q-5 series

Scope
This service bulletin provides instructions on how to toggle the flexSCADA Q-5.

Background
The flexSCADA Q5 device has eight (8) relays that can be toggled "on" or "off" to control a device. There are three methods that can be utilized to toggle these relays.

Procedures
1. *Manual toggle of a relay:* The simplest method to toggle a relay on the Q5 is through the device itself. Locate the rotary knob on the front of the device, to the right of the LED screen. Assuming the device is powered on, but the screen is blank, press the rotary knob in once to wake the LED screen. Rotate the knob to the desired relay, then press the rotary knob inwards to hear an audible click. The screen should show that the device has toggled.

2. *Webhost toggle of a relay:* From the device's Webhost page (Q5 Direct Link) locate the desired relay to toggle on the screen. Displayed below the name of each relay is a status (on/off). Click on the status name to bring up a drop-down menu, providing access to toggle the relay. This option allows the user to select a permanent status change (on/off), a pulsed status change (10 seconds) or to reset digitally fused devices. Select the desired option and view the result. Status on the Webhost should now reflect the new toggle state.

3. *Grafana toggle of a relay:* The third option for toggling is useful when there is no direct access the device or to the Webhost (Q5 Direct Link). Through the Grafana cloud service, users can send commands to the device to toggle a relay. Note that toggling through this protocol is not instantaneous. The command will be sent to the device based on the Cloud Sync Interval (CSI) set onboard the device. For example, if the CSI is set for 30 minutes, it could take up to 30 minutes for the relay to toggle.

To toggle using this option, Grafana must be loaded for the selected device (flexSCADA cloud). There is a red option at the bottom left-hand side that looks similar to the flexSCADA logo. To accesses this page, hover the mouse over this and select the option *Devices*. This will load a new page displaying each of the devices that are stored on the cloud for each user. Find the device that will need to have a relay toggled, then select the device by clicking on the name of the required device.
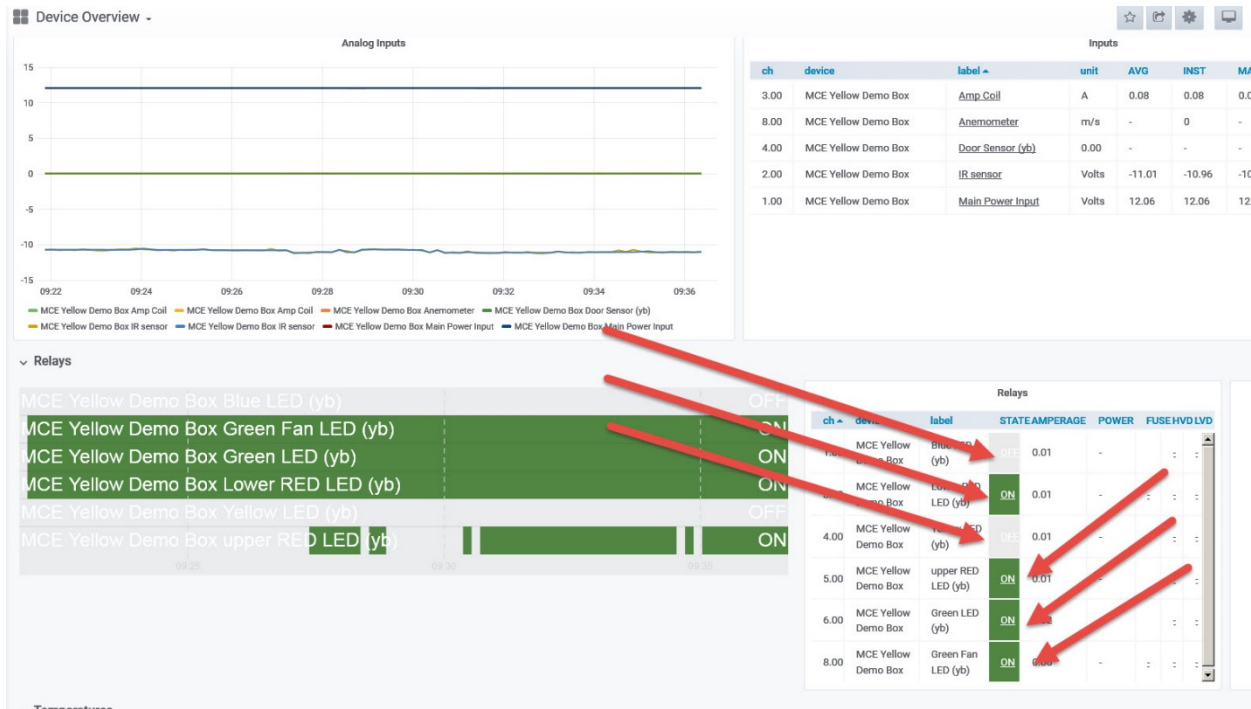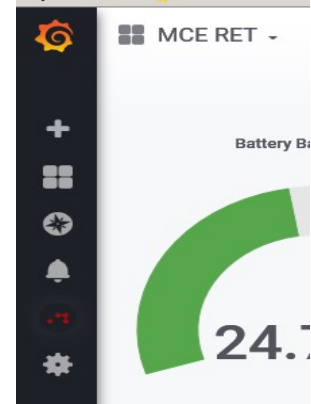
This will again load a new page. On this new page, to the lower right is an option titled *Relays*. This shows the last known status of each of the relays on the device. To toggle the relay, click on the status located on the line for the relay. This will open a new window and load a command-prompt type screen within the flexSCADA cloud service. The command prompt will auto load based on the user's selection for the relay.

Click *Save* to the lower right of the command prompt box. The screen will then load back to the main devices page. **The relay will not toggle instantly.** The relay will not toggle until the next CSI, at which point the device sends off data and receives the command prompt to toggle. Once this happens, depending on the CSI, the cloud data may not show the relay in the new state for one to two cycles. This is because the device operates as a send-first-receive-second (SFRS).

The data has already left the device before it gets the command to toggle. When the device sends data on the next CSI it should show the relay in the new state, however for shorter CSIs it could take an additional cycle to reflect. To toggle the relay again, repeat the procedure above.

Note: Only **one** relay can be toggled at a time. This is true for each of the three protocols. During a pulsed status change, this counts as a toggle, so no other relays can be toggled during the 10-second pulse test. When toggling through the cloud service, only one command prompt line to toggle can be sent. Sending a command prompt to toggle multiple relays will result in a failure to toggle any of the relays.

For more information please contact Mission Critical Energy at (716) 276-8465 or visit us at www.missioncriticalenergy.com.

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