SureCross Wireless Technical Note



DC Latching Operation

The DC latching devices operate the solenoid output as a single discrete output.

When using the DX80 User Configuration Tool to map discrete inputs to the DC latching device output, multiple outputs may appear to change together as a result of only one input changing. Although only one device is changing value, the other DC Latching devices are set to the same value. Because the solenoid physically makes noise, it is interpreted as being the wrong state but is actually correct.

Unfortunately, when all DC Latching devices activate with every input change, energy is wasted every time the device is told to go to the same state. This can be changed by adjusting the Report Type of the specific input to analog instead of discrete. With discrete inputs, the system attempts to optimize the radio frequency messaging by sending all discrete values in one transaction, resulting in this behavior. As an analog input, the system sends only the input that changes, eliminating the extra same-to-same transitions.

Use the DX80 User Configuration Tool to set the Report Type of each input mapped to a DC Latching output to an analog report type.

- 1. Click Get to see the current value of the Report Type. The default setting for this field is zero for a discrete input.
- 2. Change the Report Type to 1 and click Send. Do this for each discrete input that is mapped to a DC Latching output.

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register view	device parameters	device information	device restore	site survey	load/save	network formation			
device config	Device Parameters								
i/o mapping	Show Value as: Integer Hexadecimal Get Send								
system parameters	De	vice 1/0	1/O Number		Parameter			Value	
	Gateway	• 4	•]	Report Type		•	þ	×	
master mode settings	Report Type (bits 1:0). Defines the internal data structure and reporting definition for an I/O point. If a discrete point changes state, all I/ O points are reported to the Gateway in discrete values. An analog input can be treated as a digital value using the Threshold and Hysteresis parameters. (Parameter number 0x0E).								
help	 Discrete/bit report type = 0. Use for discrete values. Analog report type = 1 (default). Use for all analog values (two bytes). Double report type = 2. Use for 32-bit counter values (four bytes). 								
	Supported in Gateway RF Firmware Version 2.7 and above. Supported in Node RF Firmware Version 1.0 and above.								