

## Failed Switch Diagnostic

BOTH Isolated block versions will report Failed Switch diagnostics for internal faults independent of the output state, on both input and output-configured circuits. Examples include loss of communications with the block's internal microprocessor and some internal power supply faults.

Block version IC660BBS100 will also report this diagnostic if an output's switch state is not the same as its commanded state. The block sends a Failed Switch message identifying the failed circuit. The logic state of the circuit is set to OFF.

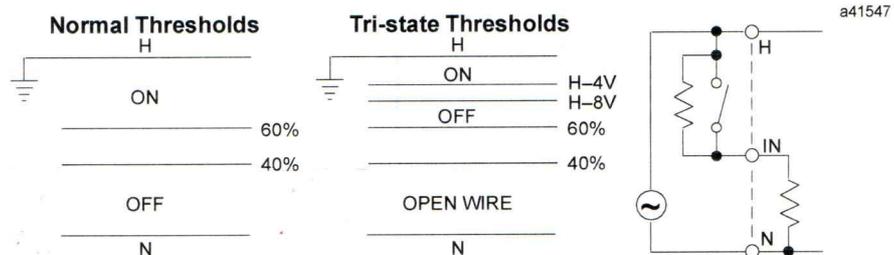
When an output fault occurs, the actual condition of the output switch is not known. If the output switch has failed shorted (or closed), current flow is not interrupted when the block forces the output state OFF. Action external to the block must be taken to remedy the problem. The FAILED SWITCH message can alert personnel or cause program logic to be activated, possibly shutting off power to the block, I/O section, or process.

### Note

False Failed Switch diagnostics may be reported if an external device like a manual switch is wired in parallel with an output. Even if fault reporting for the circuit is disabled, it will be necessary to clear each Failed Switch fault detected by the block. If the application requires such a configuration, block version IC660BBS101 (no Failed Switch diagnostic) should be used.

## Open Wire Diagnostic

The block automatically performs this diagnostic on any circuit configured as a tristate input. It will detect an electrical (not mechanical) malfunction. In addition to being configured as a tristate input, the circuit must have a 5.1K ohm, 1/2 Watt or larger non-inductive resistor installed across the actual dry contacts of the input device (such as across the field device terminals).



With the switch closed (ON state), the circuit senses the low source impedance. With the switch open (OFF state), the circuit senses the added resistance. If a wire is broken, cut or removed, impedance becomes very high. The block will transmit 0 as the state of the input, and send an OPEN WIRE message.

Devices such as photo-sensors, electronic high-speed counters, instrumentation, fiber optic sensors, and similar electronic devices cannot be monitored for Open Wire conditions. Such devices should be set up as standard, not tristate, inputs.

GE offers compatible input devices including a 5.1K ohm monitoring resistor with its line of General Purpose Control sensor devices.