

TABLE 1—FAIL-SAFE MODES (TWO CYCLES OF V_{OUT} OR $\overline{V_{OUT}}$)

$(V_{OUT}, \overline{V_{OUT}})$	Mode
(1,0) then (0,1) or (0,1) then (1,0)	Normal mode, both pulses valid
(1,0) then (0,0) or (0,0) then (1,0)	Failure, valid $\overline{V_{OUT}}$ pulse, $\overline{V_{OUT}}$ failure, cable failure, or partial sensor failure*
(0,1) then (0,0) or (0,0) then (0,1)	Failure, valid $\overline{V_{OUT}}$ pulse, V_{OUT} failure, cable failure, or partial sensor failure*
Always (1,1)	Short-circuited cables or failure in IC ₁
Always (0,0)	Severed cables, failure in IC ₁ or failure in Q ₁ and Q ₂

*System remains functional in failure modes.