



Benefits of variable time-based burst firing

This white paper describes benefits of zero cross burst firing with a variable time base.

What are the benefits of variable time-based burst firing, a feature found on the Series SD, F4, 96, 988, and multi-loop controllers?

There are three reasons for utilizing variable time-based firing:

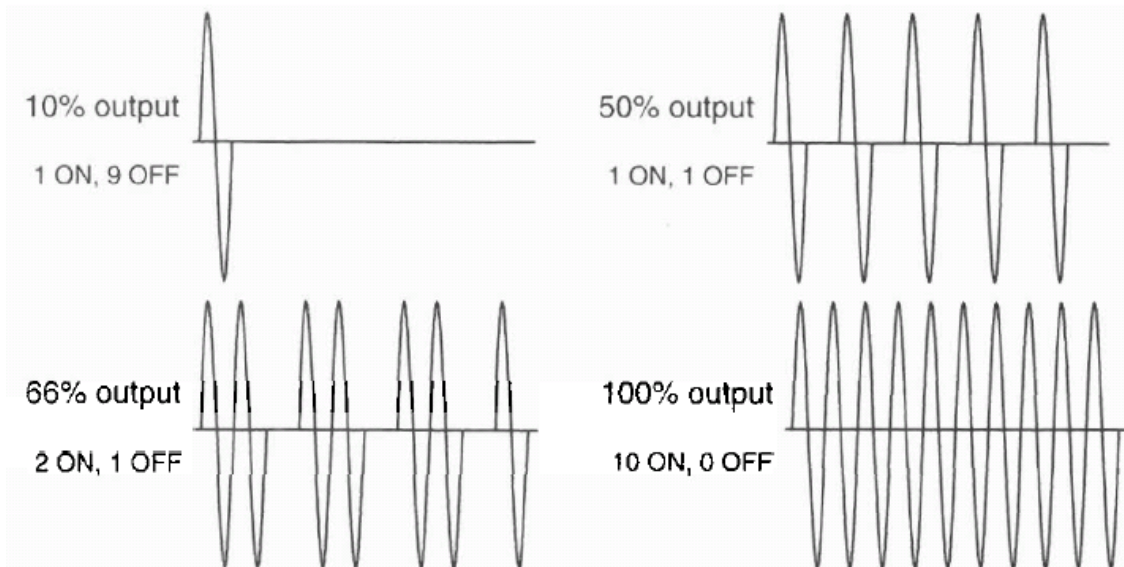
- 1) Reduced initial product costs
- 2) Reduced operating costs
- 3) Longer heater life

Here's how it works -

Burst firing repeatedly turns on and off full AC cycles. It's also commonly called "zero-cross fire," because it switches at the zero voltage point of the AC sine wave. The burst fire time base varies with the percent output power required by the load.

With variable time-based burst firing, the customer can use a switched DC output, to drive a DC input of either a Din-a-mite, a solid state relay (SSR), or other DC input solid-state power switch. The heater is supplied power based on the burst-fired signal from the control. The combination of using a no charge "C" output, and the no charge VDC input of the power-switching device, substantially reduces the initial investment when compared to using a control with out this feature. In addition, heater element life is extended due to the rapid on/off cycle times of the burst fire feature. These results in reduced continuing operating costs.

Burst fire output sample waveforms show output percent on and off.



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