

Adaptive Photonic Controller

Date reviewed: 11/12/2020

Description of Technology		Energy Saving Opportunity	
<p>The Adaptive Photonic Controller is a device that varies the speed of single-phase fan motors to match air circulation requirements. To achieve this, the device uses sensors and photonic processing techniques to manage/regulate the voltage supplied to the motor. Savings are achieved from fan speed reduction and control.</p>		Sector(s):	<input type="checkbox"/> Residential <input checked="" type="checkbox"/> Commercial & Industrial
		Applicability Criteria:	Single speed, single phase motors < 5hp
		Efficiency Improvement:	Motor speed reduction and control
		Energy (%) Savings Potential:	30% - 50%
		Demand (%) Reduction Potential:	~45%
Strengths		Weakness	
<ul style="list-style-type: none"> No digital to analogue or analogue to digital conversions Less noise Less harmonics 		<ul style="list-style-type: none"> Only suitable for single phase motors Not suitable for motors > 5hp Economics need to be evaluated based hours of use and motor Hp 	
Third Party Analysis/ Previous MTAC Reviews		Suppliers Known to MTAC	MTAC Status
<ul style="list-style-type: none"> ConEdison Environmental Test Laboratory EME Consulting Engineers (NYSERDA) SUNY Oneonta McQuay Cooling Tests Purdue University Tests ConEdison Tests by ERS 		Aclectic (A Division of Custom Electronics)	Acknowledged to have energy savings potential and recommended to individual PA for their own EE program consideration
Market Development Issues			
Cost:	\$350 - \$450		
Market Risk and Barriers:	Minimal Risk		
Time to Market:	Currently on market		
Simple Pay-back: (Years)	1 - 4		
			