



What is a Motor Efficiency Controller?

Power Efficiency's Motor Efficiency Controller is a solid state motor controller that is designed to dynamically optimize the efficiency of a 3-phase electric motor. In constant speed variable load applications, our patented **E-Save Technology™** provides precisely the right amount of power to meet the demands of your application. In numerous tests, performed by independent third parties, the Motor Efficiency Controller has proven to save up to 40% of the energy normally used in appropriate applications. The reduction in electricity can instantly reduce your carbon footprint and may qualify for a utility rebate.

Our Motor Efficiency Controller integrates soft start functionality to provide a smooth acceleration of the motor to normal operating speed. It also incorporates electronic overload protection to protect your valuable assets.

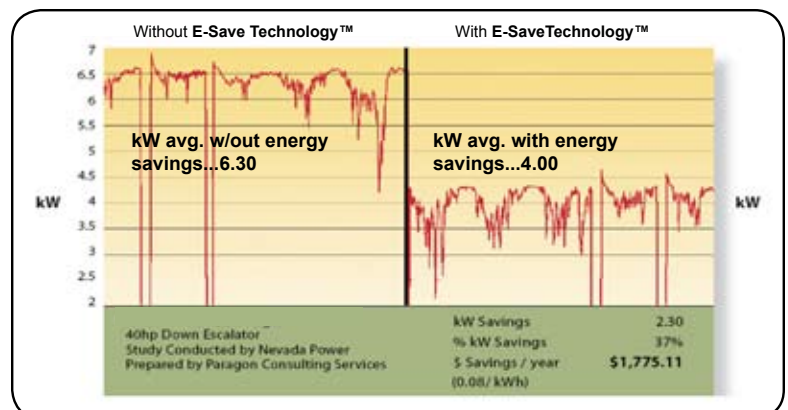
Since the Motor Efficiency Controller provides only the voltage and current required for the application, it reduces the operating temperature of the motor and thereby extending its useful life. Another benefit of the soft start functionality is reduced stresses on the mechanical system which reduces costly maintenance expenses.

Designed for out of the box installation and operation, the Motor Efficiency Controller is easily configured for your application and can be installed quickly – allowing you more time to focus on other demands.

What is E-Save Technology™ and how does it save energy?

E-Save Technology™ is Power Efficiency Corporation's core patented energy saving technology that uses a microprocessor and circuitry to sense the energy requirements of a motor. By monitoring both voltage and current being fed to the motor, it can precisely calculate the power the motor requires. The high speed response circuits continuously monitor the current and voltage to instantly provide the exact amount of energy the motor needs. This reduces unnecessary energy use. As a result, the motor maintains its rated speed and torque under variable loads, while reducing the energy consumption of the motor.

Graph on the right shows results from a test on a 40HP "down" escalator conducted by Nevada Power.



Why would you need a Motor Efficiency Controller?

The concern for our environment is growing rapidly and we all must make a conscious effort to conserve energy by reducing carbon emissions. Also with energy prices rising, cutting the cost of electricity is critical. Electric motors consume roughly a quarter of all electricity in the United States and over 60% of all electricity used by the manufacturing sector. The most effective way to conserve energy is to use it more efficiently. Power Efficiency's Motor Efficiency Controller provides a solution.

BENEFITS

ENERGY SAVINGS

- Optimizes energy efficiency
- Qualifies for utility rebates
- Environmentally friendly

MOTOR CONTROLLER

- Solid state motor controller
- Electronic overload protection
- Soft start functionality

REDUCED MAINTENANCE

- Extends motor life
- Decreases stress on mechanical systems
- Easy to install and configure

Who uses the Motor Efficiency Controller?

Thousands of units are saving energy in the field. Major end users and resellers include:

- Leading OEMs of escalator equipment
- Major U.S. department store chains
- Airports, museums and universities
- Leading hotel chains
- Numerous manufacturers



Power Efficiency's Motor Efficiency Controller works on constant speed/ variable load applications. It can be retrofitted onto existing equipment or included as a component for original equipment manufacturers.

Below is a list of some of the possible applications for the 3-Phase Power Efficiency Motor Efficiency Controller:

- ESCALATORS
- ELEVATOR (MG SETS)
- CONVEYORS
- GRINDERS
- CRUSHERS
- GRANULATORS
- MIXERS
- PUMPS
- STAMPING PRESSES
- RECIPROCAL
- COMPRESSORS
- INJECTION MOLDERS
- SANDERS
- POLISHERS
- BALERS

Product Selection

MEC - A C 034 N C - W
 a b c d e f

a

Control Type	
Code	Description
A	Solid-State Motor Controller

b

Input Line Voltage	
Code	Description
C	200 - 600V AC Three Phase

c

Control Type	
Code	Amprere Ratings
022	22 A
034	34 A
052	52 A
080	80 A
125	125 A
192	192 A

d

Enclosure Type	
Code	Description
N	NEMA 1
F	NEMA 4

e

I/O Voltage	
Code	Description
C	10-30V DC, 100 - 250V AC

f

Options	
	Description

Catalog Number	HP @ 460 V	Weight	Dimensions (L x W x D)	Short-Circuit Withstand
MEC-AC022NC	5-15 HP	8 lbs.	7.0" x 10.90" x 5.60"	5 KA
MEC-AC034NC	5-25 HP	8 lbs.	7.0" x 10.90" x 5.60"	5 KA
MEC-AC052NC	20-40 HP	25 lbs.	12.20" x 17.10" x 7.25"	10 KA
MEC-AC080NC	20-60 HP	25 lbs.	12.20" x 17.10" x 7.25"	10 KA
MEC-AC125NC	50-100 HP	TBD	29" x 16.5" x 9"	TBD
MEC-AC192NC	100-150 HP	TBD	33.5" x 24" x 9.5"	TBD

Please contact Power Efficiency for units above 150 HP

Specifications

Ambient Temperature:	0 to 50° C (Open) 0 to 40° C (Enclosed)
Altitude:	2000 m (6560 ft)
Humidity:	5 to 95% non-condensing
Voltage:	200 - 600
Frequency:	50 - 60hz
Certifications:	UL 508, CSA B44.1/ASME A. 17.5, CE
Inputs/Outputs:	2 Discrete Input and 2 Relay Outputs
Input/ Output Voltage:	10-30VDC, 120 - 250VAC

Features

- Soft Start Ramp Times: 5, 10, 15, and 30 seconds
- Electronic overload protection
- Phase loss and reversal detection
- Over and under voltage detection
- Configured outputs (Fault, Run, Soft Start complete)
- Configurable auto and manual start (Input 1)
- RS 232 Interface