

Power-Miser

Saves you electrical power on anti-sweat heaters in your supermarket 24 hours a day, 365 days a year.

The principle of cycling anti-sweat heaters to save electrical power in refrigerated cabinets is well established in major supermarket chains in Australia and world-wide. Savings of between 30% to 45% are commonly realised on the anti-sweat power consumed, leading to a pay back time of less than 1 year in most instances. Phasefale's Power-Miser has been at the forefront of this technology since 1985, and now leads the field with an improved model offering significantly higher power savings through intelligent operation.

Principle of operation.

As store humidity decreases (as in the case of air conditioned supermarkets), Power-Miser reduces the power to anti-sweat heaters. The lower the humidity, the greater the savings. At all times Power-Miser allows just enough heater power to prevent ice and condensation build up- the function of the anti-sweat heaters. The average level delivered to heaters is adjustable to suit store conditions and allow fine tuning of power savings. Power Miser increases heater life by reducing the average temperature, providing a further maintenance benefit over time.



The surface mounting Humidity sensor measures 80L x 80H x 26D mm



Power-Miser

Power Savings Calculator.

See over the page for our simple to use Power savings calculator sheet. All you need to know to check your savings are a few simple details; store type, anti sweat current load, your energy cost per kWh and kW peak demand cost.

Features of the new model

- In addition to Anti-sweat operation, Power Miser can be configured for Humidity and Temperature control/alarm or Retarder Prover operation.
- Attractive, flexible enclosure that can be mounted straight or angled for easy viewing.
- Precision interchangeable relative humidity sensor and digital humidity display to 1% RH resolution.
- Simple Setpoint adjustment saved in permanent memory, one touch settings display
- Solid State relays with in-built snubber circuits, conservatively rated to 15A 240VAC.
- A single Power-Miser can control up to 300 relays (total power 1 MegaWatt!)
- Log of humidity readings over last 99 hours
- Simple setup and wiring
- 100% Australian designed and manufactured



PHASEFALE

CONTROL

MONITOR

PROTECT

Power-Miser - Saving Calculation

Store _____

Date _____

The following is a method of calculating the per annum savings using the Power Miser and the pay back period of the system. To complete this you will need:

A	Total anti-sweat current draw. ???? Amps (in Amps on a single phase basis)	"A"	_____
B	Expected Savings ?? %	"%"	_____
C	Energy Costs (1) ??? c/kWatt hour (2) ??? \$ per kWatt per month (This will depend on the applicable tariff, consult your electricity bill)	"T" "MD"	_____ _____
D	Installed cost \$???? (This figure should include installation and capital cost)	"CAP"	_____

Savings Calculation

Energy used	E=Power(KW) x time (hours) E=Volts x Current x hours x days E=240 x ("A"/100) x 24 x 365 E=2102 x "a" KW Hours per year E=2102 x _____	= _____ kW/pa
Energy cost	(1) \$ = E(energy consumed kWhr) x "T" (cents per kWatt hour) = E x "T" x .01 (100 cent per dollar) (2) \$ = Power (kW) x "MD" x 12 = 240 x "A" kilowatt hours per year =2880 x _____ x _____	=\$ _____ (1) =\$ _____ (2) =\$ _____
	Total \$ = (1) + (2)	
Energy savings	= Total energy cost x "%" savings (p.a.) = _____ x _____	=\$ _____
Pay back	= Capital cost / Energy savings (yrs) = _____ x _____	=\$ _____

Typical Example

A Supermarket with 25 Amps of anti-sweat load, air-conditioned, paying 25c/kwH (i.e. peak tariff in Victoria) installed cost approximately \$ 2000.00, savings expected 40%.

1. Energy	2102 x 25	= 52550 kWh/pa
2. Cost	52550 x 0.25	= \$ 13,138 p.a.
3. Savings	13,138 x 0.40	= \$ 5255 p.a.
4. Pay Back	2000/5255	= 0.38 years, less than 5 months