

PMAC II



The Intelligent Choice for Reducing Electrical Consumption From Your Anti-Condensate Heaters

CPC's Pulse Modulating Anti-Sweat Controller is a solid-state, anti-condensate heater controller designed to dramatically reduce the cost of operating anti-condensate heaters on low-temperature, door type cases that are found in most supermarkets today.

Uncontrolled heaters normally operate 24 hours per day, even though 100% operation is only required when in-store dewpoint levels are high. The PMAC II minimizes heater ON time based on dewpoint measurements, cutting down on energy usage without sacrificing the effectiveness of door heaters. The new PMAC II is available in either a standalone or networked version. The stand-alone version has a useful 4 line by 20 character LCD display. The networked version utilizes CPC's Facility Management System and gives the user a wide range of control in regulating case heaters.



Benefits

- Efficient control of anti-condensate heaters provides quick payback periods (less than one year on average)
- UL approved panels are easy to install, saving time and money in both new and retrofit applications
- Low maintenance triac design increases performance and reliability over other systems
- Network and stand-alone versions provide flexibility for applications with or without a central control system

The PMAC II Reduces Maintenance Costs & Increases Heater Life.

The PMAC II can be programmed to operate the heaters at a minimum on percentage, such as 10%. This means that no matter what store conditions are, the heaters would be pulsed on 10% of the time. Heater life is extended since the anti-condensate heaters are never turned off completely. By not completely turning off heaters, they do not experience the excessive expansion and contraction caused by going from cold to hot, thus significantly increasing the life span of the heaters. Additionally, the anti-condensate heaters are turned on and off independent of one another. This reduces the electrical in-rush that occurs when all of the heaters are turned on at once. This feature can be a valuable ally in demand limiting efforts.

Remote Monitoring

Unlike other anti-condensate heater controllers, the PMAC II allows the user to monitor its performance remotely. Using CPC's UltraSite™ for Windows™ software. Users can dial up a site to view and adjust the anti-sweat control setpoints like any other parameter.

New & Improved Hardware Design

The advanced Triac design allows the PMAC II to operate 16 channels at 16 amps/channel for a continuous duty cycle rating at 100%, virtually eliminating switch failure. In addition, the new PMAC II is available in either 208 or 480 Volt versions. The PMAC II comes complete with a Class II power supply.

Return on Investment

Reducing the run time of door heaters results in substantial dollar savings. PMAC typically saves enough energy to pay for itself within a year.

In tests conducted in several supermarket installations, the PMAC II was shown to reduce power consumption by as much as 50%!

Savings Analysis	
Total KW per Hour	19.49
Total KW per 24 Hours	467.71
Cost per KWH	\$0.05
Cost per Day 100% On	\$23.39
Annual Cost 100% On	\$8,535.74
Daily Savings 50% Cycle	\$11.69
Annual Savings 50% Cycle	\$4,267.87
Annual Savings 40% Cycle	\$5,120.95
Annual Savings 30% Cycle	\$5,975.05
Annual Savings 20% Cycle	\$6,829.15



The PMAC II is typically mounted in a motor room or electrical room near a circuit breaker panel.

The E2 monitors the store's dewpoint and commands the PMAC II to pulse the heaters for the required amount of time. Commands are sent via the three-wire RS485 to the PMAC II.



The PMAC II is easy to install. Simply provide power to the PMAC. Power to the anti-condensate heaters is supplied by the circuit breaker panel through the PMAC II terminal strip.



The PMAC II's Triac relays drive the door case anti-sweat heaters based on the conditions of the store environment.



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