

Evaporative Cooling Control

Model: ECC-1

Control direct or indirect evaporative cooling equipment

The Evaporative Cooling Control has six relays you can program to control a combination of sprinkler solenoids, pumps, and/or single-speed fans.

Direct evaporative cooling using Soaker Mode

Direct evaporative cooling is achieved by evaporating water from the surface of objects. In livestock facilities, sprinklers shower the animals, long enough to wet the hides. Fans move air across the backs of the animals and cause evaporation. The energy/heat required to evaporate the water cools the animals.

In Soaker Mode, the length of the cooling cycle automatically changes according to temperature. As the temperature increases, the cycle shortens so that soaking occurs more often. The soaking duration stays the same.

Indirect evaporative cooling using Mister/Fogger Mode

Indirect evaporative cooling is achieved by evaporating moisture in the air. Mistifiers water vapor into the air. Fans move the air and cause evaporation. As the water droplets evaporate, they remove heat from the air. Indirect evaporative cooling is commonly used in greenhouses.

In Mister/Fogger Mode, the misting duration automatically changes according to temperature. As the temperature increases, misting duration increases proportionally. The duration of the cooling cycle does not change.



Features

- Automatic temperature-based duty cycle operation, programmable range: 32 to 113°F (0 to 45°C)
- **Soaker Mode** for direct evaporative cooling
- **Mister/Fogger Mode** for indirect cooling
- 6 relays for controlling sprinkler solenoids, water pumps, or single-speed fans
- Active times — cycles occur only during the times of day you specify
- Information logging and display:
 - Current and previous day's high and low temperatures
 - Current and previous day's total relay run time
- Optional humidity monitoring and high humidity bypass — skip the soaking/misting part of the cycle when humidity levels are too high
- Manual control mode for testing equipment
- Alarm relay that indicates power failures, probe damage, or high/low temperatures
- Temperature probe; 30 feet, extendable to 500
- NEMA 4X enclosure (corrosion resistant, water resistant, and fire retardant)
- CSA approval
- Limited warranty (2 years)

Electrical ratings

- **Power** 120/230 VAC, 50/60 Hz
- **Fuse** 250 V, 1 A fast-acting glass
- **Power relays** 10 A at 120/230 VAC, general-purpose (resistive)
1/3 HP at 120 VAC, 1/2 HP at 230 VAC
360 W tungsten at 120 VAC
250 VA at 120 VAC for pilot-duty use
- **Alarm relay** 0.4 A at 125 VAC ; 2 A at 30 VDC, resistive load
0.2 A at 125 VAC; 1 A at 30 VDC, inductive load

Available options

Humidity sensor

A humidity sensor is necessary if you want to monitor humidity and use the high humidity bypass. Phason offers two models of humidity sensors: the **RHS** or the **RHS-P**. The RHS monitors humidity at the control. The RHS-P monitors humidity up to 100 feet from the control.



Manual Override Box

The Manual Override Box (**model MOB-4**) increases the load handling capability of control relays and provides an external disconnect. The MOB-4 includes four 240 V power contactor relays and **AUTO-OFF-MANUAL** switches.



Phason 3K Series temperature sensors

You can install a second temperature sensor for controlling fans independently of sprinkling cycles. This is useful if you want to monitor temperatures in a second area or zone. Sensors are available in several lengths and can be extended up to 500 feet using extension cable.

