



Supra

Because you want reliability, versatility, and value in one complete electronic control package



You told us what you needed...

Powerful, versatile environmental control for your whole barn, building, or greenhouse

Trustworthy, reliable performance over the whole productive life of the control

Cost effectiveness, second to none

...and we provided it

CONFIGURATION
Relay Stages
Variable Stages
0 to 10V outputs
Humidity Zone

The Supra has 4 variable stages for heating or cooling control and 12 relay stages for heating, cooling, actuator control, duty cycle, or timed events.

You can set up and manage *your* unique control strategy using the Supra's keypad and easy-to-understand menu system.

MAIN MENU
Settings
Maintenance
View Logs
Security
Configuration
Diagnostics
Factory Settings

Designed with quality and you in mind

We designed the Supra so one unit can control an entire hog or dairy barn, poultry house, or greenhouse. For larger facilities, you can connect up to 32 Supras and operate them from a central computer using the powerful and convenient SupraWare software.

The Supra, like every Phason control, was designed to our strict quality standards and is CSA certified. We test every Phason control — yes, every unit we produce — before it leaves our factory, ensuring it works as designed and you get the best product possible.

Superior customer service and support

Year-after-year, our experts train all Phason dealers, and others in our value chain, to support the Supra and other Phason controls. We also offer Phason's own technical support and service hot line.

All service bulletins, user manual updates, and other relevant information, are available on our website at www.phason.ca. This means you always have access to the latest and most accurate information available.

DIAGNOSTICS
Display Inputs
Power Supply
View rly stages
Set rly stages
View VAR Stages
Set VAR Stages
Change Version
Force Reset

The Supra's onboard diagnostics make sure important internal systems are working as intended. The Supra's easy-to-read user manual includes configuration and programming worksheets, as well as troubleshooting sections.

The five-level PIN security system allows you—the facility manager—to prevent unauthorized changes to configurations and settings.

We know of no other electronic control used for these or similar commercial purposes which provides so many important features and benefits for so modest an investment.

More great features

- ◆ One alarm relay (for external alarm siren or alarm system)
- ◆ Four-zone temperature monitoring and control
- ◆ Outdoor temperature monitoring ability
- ◆ Adjustable temperature settings, including two configurable seven-step growth curves
- ◆ Temperature setback for day/night temperature (DIF) control
- ◆ Water usage monitoring ability
- ◆ Humidity monitoring and control ability
- ◆ Startup timer for distributing backup generator initial startup load
- ◆ Three-second full-power-turn-on for minimizing fan ice-up
- ◆ Logging of temperatures, alarms, relay "on" durations, and setting changes
- ◆ Power-failure memory protection, including internal 24-hour clock
- ◆ Four-line, backlit LCD display
- ◆ Thirty-foot temperature probe, extendable to 500 feet (additional probes available)
- ◆ Rugged enclosure (corrosion and water resistant, fire retardant)
- ◆ Two-year limited warranty

MAINTENANCE
Manual Override
Calib. Actuator
Set Clock
Switch F/C
Set Unit Name
Set Main Display
Hysteresis
De-Icing
Warnings
TempProbe
Motor Curves
Averaging On/Off
Averaging Setup
Humidity Factor
Startup Timer
Restore Settings
Save Settings

VIEW LOGS
Daily Log
Alarm Log
Audit Log
Erase All Logs

SECURITY
Security On/Off
Change PIN
Add User
Remove User

SETTINGS
Group Setpoint
Heat/Cool Stages
Variable Stages
Growth Curve
Curtains
Alarms
Actuators
Duty Cycle
Timed Events
Water Meter
Humidity Control
Temp Setback
Tunnel Mode



Versatility and adaptability, the Supra has it!

Swine applications

In a naturally-ventilated hog building, use the Supra to control curtain machines, recirculation fans, heaters, and evaporative cooling equipment.

Use the optional humidity sensor to reduce humidity accumulation by automatically adjusting ventilation within a set humidity range.



In a tunnel ventilation building, use the Supra to control tunnel fans and curtains, pit fans, wall fans, ceiling inlets, and heaters. The Supra can close ceiling inlets or switch off wall fans when changing to tunnel mode.

Use the Supra's timer function to control water misting for evaporative cooling. The optional humidity probe can automatically adjust the ventilation to reduce high humidity.



In a typical power ventilation setup, use the Supra to control all fans, heaters, and actuator-controlled ceiling inlets. If you have lights or feed augers that need to be on at certain times, use the Supra to easily operate these. In a farrowing setup, use the Supra's variable stages to control the heat lamps.

Greenhouse applications

In a power or naturally-ventilated greenhouse, use the Supra to control motorized louvers and ridge vents and single-speed, two-speed, or variable-speed motors.

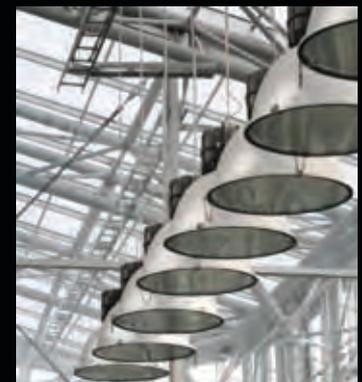
During hot weather, use the Supra to automatically switch on the fan and water pump of an evaporative cooler at specific temperatures.

For watering or misting plants, use the Supra's on/off cycle timer that you can program for certain times and/or temperatures.



For greenhouses with separate temperature requirements, for example, ventilation and heated earth beds, use the Supra's four-zone feature that provides independent climate control for each zone.

For applications using the DIF technique, use the Supra's temperature setback feature. For example, use setback to reduce the temperature of the greenhouse for two to three hours at dawn to control plant height and growth.



"I use two Supras in my double-wide tunnel-ventilated swine finishing building. Each Supra controls six pit fans, six tunnel fans, the tunnel curtain, ceiling inlets, and two heaters. It also provides evaporative cooling by operating the misters on a timer at high temperatures.

When the Supra switches to tunnel mode, I have the option to switch off certain fans and close the ceiling inlets to maximize the cooling effect.

Controlling everything from my Supras is convenient, gives me effective ventilation, and minimizes my electrical costs."

Tom Dressel
Medford, Minnesota



Supra works here...

Turkey and other poultry applications

In a naturally-ventilated turkey house, use the Supra to control curtain machines, recirculation fans, heaters, and evaporative cooling equipment.

Use the optional humidity sensor to reduce humidity accumulation by automatically adjusting ventilation within a set humidity range.



“For pullet rearing and egg production, I use the Supra to control my variable and single-speed fans and ceiling inlets. I use the timing feature to operate the feed system and lights at chosen times.

Using multiple temperature probes lets me take advantage of the average room temperature and provides a backup if a probe fails.

Another helpful feature I use is the Suprasaver. It acts as a backup for my settings and makes it easy to change settings on one Supra and then transfer them to another.”

Hermann Grauer
Nature’s Farm
Steinbach, Manitoba



In a broiler or layer house with tunnel ventilation, use the Supra to control all fans and curtains, ceiling inlets, and heaters. The Supra can close ceiling inlets or switch off wall fans when changing to tunnel mode.

Use the Supra’s timer function to control water misting for evaporative cooling.

Use the optional humidity sensor to reduce humidity accumulation by automatically adjusting ventilation within a set humidity range.

Dairy applications



In a naturally-ventilated free-stall building, use the Supra to control curtain machines, mixing fans, and water misting for evaporative cooling.



“Since converting my natural ventilation freestall barn to an automatic system controlled by the Supra, I have seen improved milk production and no freezeups during winter.

The Supra automatically adjusts variable frequency drive fans and inlet curtains, providing proper minimum ventilation and consistent temperature and air flow. On hot days, the Supra controls high-pressure fog cooling using its duty cycle timer.

Automatically-controlled ventilation has proven to be a great improvement over manually controlled ventilation, and the Supra has the ability to make it happen.”

Bob Donahue
Luckwaldt Farms
Woodville, Wisconsin

In a tunnel ventilation facility, use the Supra to control curtain machines and heaters. Use the optional Variable DC Expansion Kit to control large variable-frequency drive fans.

During hot weather, use the Supra to control evaporative cooling equipment, such as pumps and solenoids.

Use the optional humidity sensor, to reduce humidity accumulation by automatically adjusting ventilation within a set humidity range.

Supra accessories make the Supra *even more* versatile

SupraWare...configure and monitor your Supras from a computer



SupraWare eliminates the need to go to a control to check settings or make changes; you can do it all from one location.

Connect up to 32 Supras together at distances up to 4000 feet (1220 metres).

Easy-to-read displays show control settings, temperatures, and alarms.

SupraWare maintains logs of temperatures, alarms, and system changes. The software includes a viewer, four reports, and a chart to help you analyze your information.



Supra Data Report

Supra: High-Flow
Report Name: 2005-04-27 to 2005-04-28
Report Created: 2005-04-28

All temperatures in degrees Fahrenheit
water usage in US Gallons
Address location is provided

Avg. Ambient Temperature: 84.0 (no point temperatures)

2005-Apr-27

| Time | Zone 1 Amb. Temp | Zone 2 Amb. Temp | Zone 3 Amb. Temp | Zone 4 Amb. Temp | Outdoor Humidity | Water |
|----------|---------------------|---------------------|---------------------|---------------------|------------------|-------|
| 11:00 AM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 11:30 AM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 12:00 PM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 12:30 PM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 1:00 PM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 1:30 PM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 2:00 PM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 2:30 PM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 3:00 PM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 3:30 PM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 4:00 PM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 4:30 PM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 5:00 PM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 5:30 PM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 6:00 PM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 6:30 PM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 7:00 PM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 7:30 PM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 8:00 PM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 8:30 PM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 9:00 PM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 9:30 PM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 10:00 PM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 10:30 PM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 11:00 PM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 11:30 PM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |
| 12:00 AM | 74.0 | 74.0 | 74.0 | 74.0 | 58.0 | 0.0 |

Remote-access

Using remote-access software and a phone line or Internet connection, you can monitor and control your system from anywhere with an Internet connection.

Variable DC Expansion Kit



The Variable DC Expansion Kit is a small, auxiliary circuit board that allows you to connect equipment requiring a 0 to 10 V input, such as variable frequency drives or modulating valves.

The kit connects to a socket on the Supra's main circuit board and installs in seconds. The kit has four outputs you can configure for cooling or heating.

Intaglio and SupraSaver...innovative and easy-to-use

The Intaglio allows you to upgrade a Supra's firmware in seconds and can upgrade all the Supras at your site. Phason constantly improves and adds new features to their products. With the Intaglio, you can upgrade the firmware in the Supra as these features become available.

The SupraSaver allows you to store a complete copy of a Supra's configuration and settings. You can use the SupraSaver to set up new Supras in seconds!



Single-Phase Slave...increase the capacity of your Supra

The Single-Phase Slave has a 20 A variable AC stage for controlling loads such as variable-speed fans or heat lamps.

Installation is simple and there is no additional configuration required; all slave units follow the programs and settings of the Supra.

- ◆ Input: 115 VAC, 50/60 Hz, 1 A
- ◆ Variable AC output: 20 A, 2300 W at 115 VAC



You can connect up to six Slave units to a single Supra.



Temperature probes and extension cable

Temperature probes are available in 1, 6, 30, 75, or 150-foot cable lengths and can be extended up to 500 feet using extension cable. Extension cable is available in 500-foot lengths.



Relative Humidity Sensors...monitor and control humidity

Relative Humidity Sensors come in two models, standard (RHS), and extended (RHS-P).

The RHS monitors relative humidity at the Supra. The RHS-P monitors up to 100 feet away from the Supra.

The Supra has four temperature probe connections for monitoring different zones or outdoor temperatures.

Phason power contactors

Power contactor relay (PC-240) – includes power contactor relay and mounting hardware for easy mounting in an enclosure.

Power contactor kit (122-1) – includes power contactor relay, on-off-auto switch and label, snubber filter (reduces electrical noise), and mounting hardware for easy mounting in an enclosure.

Power contactor unit (129-0) – includes two power contactor relays, two on-off-auto switches, and two snubber filters, mounted in a large enclosure. The enclosure has room for two additional contactor relays or kits.

Phason power contactors have the following ratings.

- ◆ Coil: 10.2 mA at 240 VAC
- ◆ Contact: 25 A at 240 VAC; resistive 1300 W at 120 VAC; tungsten 1 HP at 120 VAC; 2 HP at 240 VAC, motor power factor 0.4



Power contactors increase the load handling capacity of relays and help increase the life of your control system.



Feature list

- Variable stages 4
- Relays 12
- Variable DC signal output
- Slave unit capability
- Inlet actuator control
- Curtain control
- Tunnel ventilation mode
- Duty cycle and timed events
- Manual override
- Custom growth curves
- Four-zone temperatures
- Outdoor temperatures
- Humidity control
- Water use monitoring
- Programmable alarms
- De-icing start (VAR fans)
- Computer compatibility
- Upgradeable firmware
- Transferable settings
- CSA approval
- Two-year warranty



Electrical ratings

Input

- ◆ 120/230 VAC, 50/60 Hz

Variable stages

- ◆ 10 A at 120/230 VAC, general-purpose (resistive)
- ◆ 7 FLA at 120/230 VAC, PSC motor
- ◆ 1/2 HP at 120 VAC, 1 HP at 230 VAC, PSC motor

Relay stages

- ◆ 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

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

3.9 inches

11 inches



11.85 inches

Who is Phason?

Phason is a world leader in the development of technologically-advanced environmental controls, environmental monitoring systems, and production management systems.

Phason was established in 1985 and is headquartered in Winnipeg, Manitoba Canada. We have a long history of innovation, growth, and stability.

Phason contributes 20% of annual revenue to research and development. Phason is committed to technological advancement and innovations—innovations designed to help our customers achieve higher productivity and lower production costs.



Phason follows strict guidelines when designing and building our products. For our customers, this means **reliable, well-built, and dependable products**. High reliability and cost effectiveness are two of the guiding principles that motivate all the employees of Phason. All our products are made from **high-quality components** and are built to withstand the most extreme conditions.

Phason is a solutions company. **We work with our customers to satisfy their needs**. We take pride in the level of support and complete satisfaction we provide. At Phason, our goal is to provide not just a solution, but the **best possible solution**.

Phason products and services

Yes we make great ventilation controls, but we also do much more. Phason products include everything from basic manual speed controls to advanced, integrated control and monitoring systems. Phason offers:

- ◆ Ventilation and environmental controls
- ◆ Programmable lighting controls
- ◆ Evaporative cooling controls
- ◆ Integrated production management systems
- ◆ Control and power accessories
- ◆ Standalone control software
- ◆ Electronic fence chargers
- ◆ Technical support and services
- ◆ Custom manufacturing services

At Phason, our goal is to provide you with the right solution. Whether you are in the **hog, poultry, greenhouse, dairy, or light-industrial business**, we have a production or control solution for you.



Your Phason dealer



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