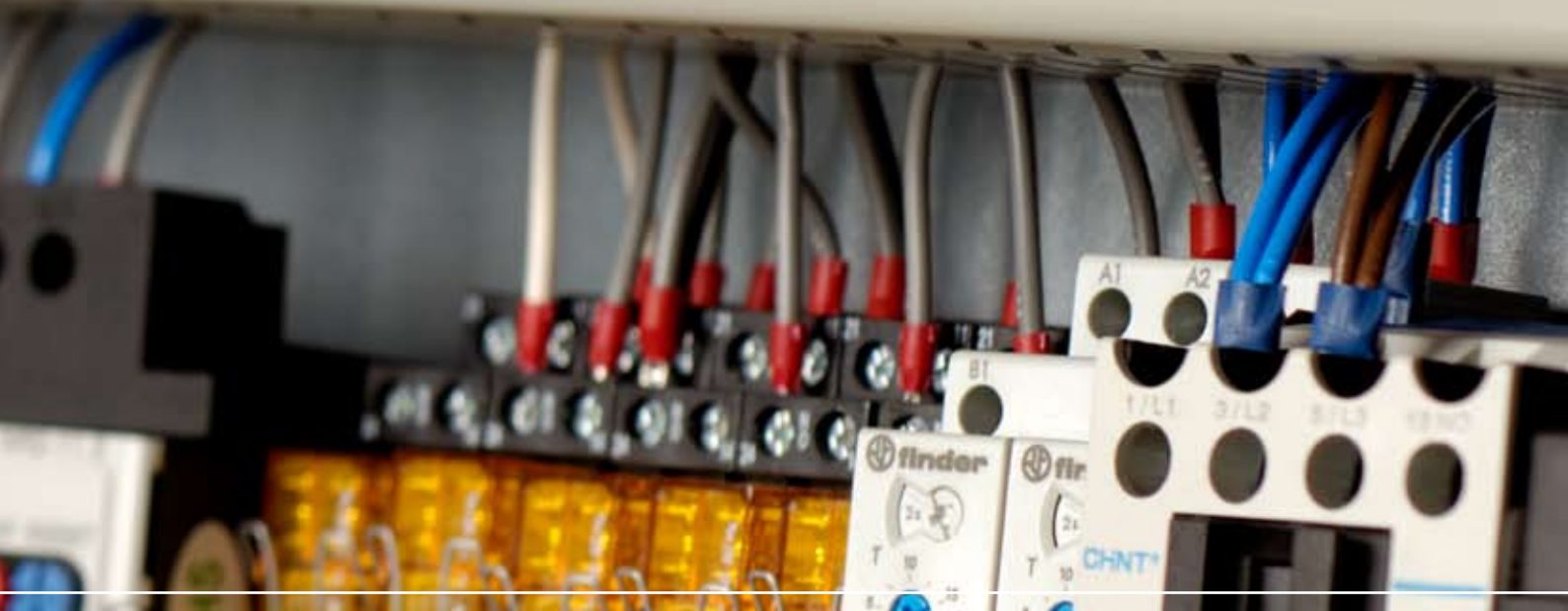
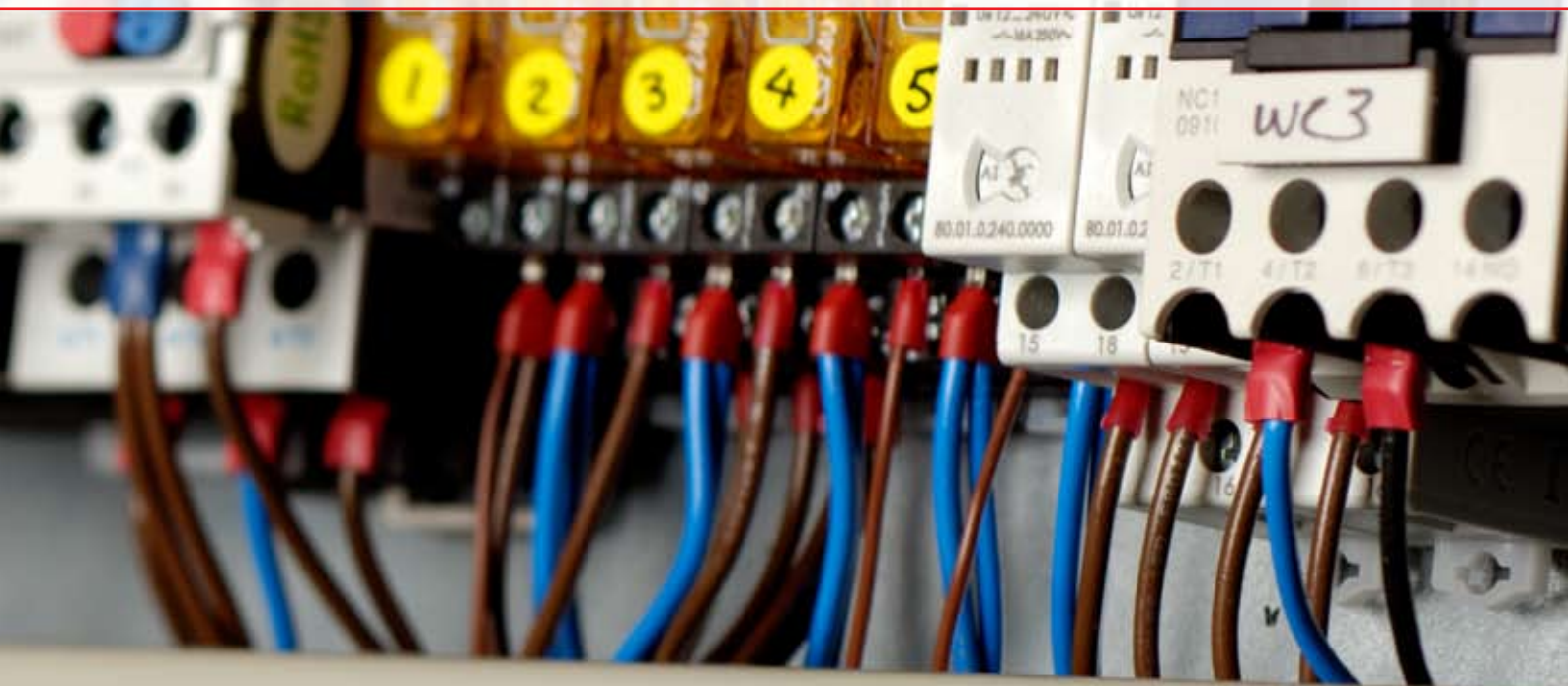


Rotem Controllers

Specialist Control Systems



hydor

ROTEM Controllers

Specialist Control Systems

Introduction

Hydor supply a range of high quality control panels to meet all farmers requirements. These panels conform to the latest standards and are designed to give years of trouble free service. Precise control of the environment and systems within livestock buildings is of upmost importance to the health and well being of your animals.

Panels can be simple ventilation units controlling small numbers of fans to complex automated control panels operating main ventilation fans, re-circulating fans, lighting, feeding, heating, winch inlet control, pop-hole control either by time clock or radio control, mains and temperature alarm systems. These functions can be linked to either built-in electronic thermostats or local computer control units.

For 30 Years Rotem have been designing, developing and manufacturing microprocessor control units for agriculture.

A large variety of control units and control equipment is available, ranging from single function control units up to multi function units specifically designed to operate all systems within the building.

There are two parts to any electrical control system. Firstly the Rotem control units are the brain and provide the switching control, and secondly a power delivery panel is required to send electrical power to the motors, lights, heaters etc. Hydor manufacture bespoke power delivery panels to the specific requirements of the equipment installed.

PC Computer Control



To fully exploit the potential of Rotem Controllers, the option of operating and controlling the poultry house or houses from a computer is possible.

Numerous poultry house control units can be linked together and communicated through the Rotem Communicator to a PC. The PC can either be located close to the controllers, or some distance away utilising telephone lines or line of sight radio signals. Advanced easy to use software for the computer is included.

The communicator is also an advanced alarm message communication device. See Table 1.0 for detailed description of the controllers capabilities.

Function	Rotem Communicator
Communicate to PC	Via USB
Communicate to PC remotely utilising phone lines	Yes - modem included
PC Software included	Yes
Communicate to control units by wire	Yes
Communicate to control units wirelessly	Yes
Alarm communication	Yes
Alarm messages communicated by telephone	Yes
Alarm messages communicated by GSM mobile network	Yes
Call up to 8 telephone numbers with voice message in the event of an alarm	Yes
Send a text message up to 8 telephone numbers in the event of an alarm	Yes
Battery backup in the event of a power failure	Yes

Table 1.0

Multi Function Controllers

A range of controllers designed to control all systems present in livestock buildings, by controlling the ventilation, temperature, humidity, heating, cooling, lighting, feeding, as well as monitoring and recording bird inventory, bird growth, feed consumption, water consumption and environmental conditions where applicable.

Three models are available for use within Poultry housing specifically, the AC600, Platinum Junior and Platinum Plus. The products functionality increasing dependant on model. See the comparison Table 3.0 for details. The SuperGuard controller is also available for specific use within Pig Housing.

	AC600	Platinum Junior	Platinum Plus
Controller Type	Microprocessor Computer Controller	Microprocessor Computer Controller	Microprocessor Computer Controller
User Interface	Keyboard. LCD Display, Menu Driven, Table Format	Keyboard. Large LCD Graphic Display, Menu Driven, Table Format	Keyboard. Large LCD Graphic Display, Menu Driven, Table Format
Relays	8	Upto 20	Upto 40
Additional Relays	Optional extra 16	Optional extra up to 40	Optional extra up to 40
Manual Override Switches	No	Yes	Yes
Ventilation Control	Power, Tunnel and Natural Ventilation	Power, Tunnel and Natural Ventilation	Power, Tunnel and Natural Ventilation
Fan Control	Switching on/off	Switching on/off	Switching on/off
Variable Fan Speed Control	Optional	Yes - with analogue output	Yes - with analogue output
Circulation Fan Control	Yes	Yes - Programmable by time, duration and temperature	Yes - Programmable by time, duration and temperature
Pressure Control	Yes	Yes	Yes
Air Inlet Control	Yes	Yes	Yes
Temperature Control	Daily Temperature Setpoints	Daily Temperature Setpoints	Daily Temperature Setpoints
Humidity Control	Yes - Reduction by ventilation	Yes - Reduction by ventilation. Increase by control of up to 4 fogging systems	Yes - Reduction by ventilation. Increase by control of up to 4 fogging systems
Heating System Control	Heater Switching	Heater Switching, Radiant Heater Control	Heater Switching, Radiant Heater Control
Heating Zones	Up to 3	Up to 8	Up to 8
Cooling System Control	Switching on/off	Switching on/off	Switching on/off
Lighting Control	Switching on/off - Programmable up to 10 light periods daily.	Programmable light periods by day and time with variable light intensity. Dawn and dusk simulation	Programmable light periods by day and time with variable light intensity. Dawn and dusk simulation
Feed Quantity Measure	By calibrated feed pulse	By weight with feed container. Silo weigher or by calibrated feed pulse	By weight with feed container. Silo weigher or by calibrated feed pulse
Feeding Control	Programmable up to 10 feeding periods. Duration by time or feed quantity count. Define quantity per bird	Programmable up to 10 feeding periods. Duration by time or feed quantity count. Define quantity per bird	Programmable up to 10 feeding periods. Duration by time or feed quantity count. Define quantity per bird
Extra System Control	Up to 3	Up to 4	Up to 4
Water Quantity Measure	By calibrated water meter pulse	By calibrated water meter pulse	By calibrated water meter pulse
Temperature Sensors	Up to 4	Up to 9	Up to 9
Humidity Sensors	Up to 2	Up to 4	Up to 4
Weather Sensors	Wind direction	Wind direction and wind speed	Wind direction and wind speed
Bird Weighing	No	Automatic bird weight recording with 1 or 2 optional scales	Automatic bird weight recording with 1 or 2 optional scales
Flock Management	Poultry count, Mortality, Growth day, Feed inventory	Poultry count, Mortality, Growth day, Feed inventory	Poultry count, Mortality, Growth day, Feed inventory
Alarm	Up to 16 alarm events	Numerous programmable alarms, highly flexible	Numerous programmable alarms, highly flexible
Emergency Backup Power Battery	No	Optional	Optional
Data Recording	Temperature, Feed and Water consumption, Mortality, Heaters, Alarm events	Temperature, Feed and Water consumption, Mortality, Heaters, Alarm events, Bird weights, Feed conversion, Bird data, Events record	Temperature, Feed and Water consumption, Mortality, Heaters, Alarm events, Bird weights, Feed conversion, Bird data, Events record
PC Computer Link	Yes	Yes	Yes

Table 3.0

AC600 - Multi Function Controller



The ROTEM AC-600 Environmental Controller monitors and analyzes climate conditions using advanced electronic temperature and humidity sensors.

The panel enables the user to maintain optimal conditions in the house by activating and deactivating fans, curtains, heaters, cooling systems, light feed and alarm according to preset parameters.

The user friendly ROTEM AC-600 is a standalone controller equipped with its own keyboard and alphabetical LCD display, it can independently operate a poultry house and is suitable for Power, Natural or Tunnel ventilated poultry houses. It is menu driven and set in table format. ROTEM AC-600. PC Communication Package is included.

Platinum Plus - Multi Function Controller



ROTEM's Platinum Plus controller sets new standards in the poultry industry. The large LCD display makes it user friendly and easy to use. The Platinum Plus contains two program selections, the industry standard "Staged Ventilation" and ROTEM's Advanced Dynamic Ventilation.

The versatile unit is suitable for poultry farmers seeking first class controller with minimum programming or those who prefer to be involved in every program detail.

The Platinum Plus offers control of the ventilation, temperature, humidity, heating, cooling, lighting, feeding, as well as monitoring and recording bird inventory, bird growth, feed consumption, water consumption and environmental conditions.

Also available is the Platinum Junior offering the same functionality for smaller houses.

Platinum Junior - Multi Function Controller



ROTEM's Platinum Junior controller offers all the functionality of the Platinum Plus but with fewer relays for smaller operations. The large LCD display makes it user friendly and easy to use. The Platinum Junior contains two program selections, the industry standard "Staged Ventilation" and ROTEM's Advanced Dynamic Ventilation.

The versatile unit is suitable for poultry farmers seeking a first class controller with minimum programming or those who prefer to be involved in every program detail.

The Platinum Junior offers control of the ventilation, temperature, humidity, heating, cooling, lighting, feeding, as well as monitoring and recording bird inventory, bird growth, feed consumption, water consumption and environmental conditions.

SuperGuard - Multi Function Controller



The SuperGuard provides you maximum capability with minimal complexity in programming and controlling up to ten Piguard units.

SuperGuard is the ultimate pig house controller. Equipped with an easy programming interface, it provides programmable outputs for all major features and a 4x20 character LCD that provides display feedback on the programming and device status. The coordinated cursor, positioning scrollbar, quick access to device, feature selection, and a large numeric keypad are all easily accessible on the SuperGuard.

The SuperGuard communicates with up to ten Piguard units to access history, collect events and alarms for each Piguard and all relevant data up to 100 days. A complete remote communication is built-in with a real time graphics HMI. Included within the SuperGuard is an alarm centre for all attached Piguard units. In addition, the user-friendly SuperGuard features a real time display with a clock, a data plug for quick program transfer, plus a multilingual support.

Single Function Controllers

A large range of controllers providing a single function, be it lighting control, feed delivery control, etc. See Table 2.0 for summary details.

Function Control	Model	Description	Accessories Required
Light	RLC-1	Controls light periods and light intensity. Simulates sunrise and sunset	NA
Static Pressure	RSP-3	Maintains a set negative pressure in the house by opening and closing air inlets	N/A
Cooling Systems	RCC-2	Maintains a cooler temperature by switching system on and off. Humidity limit levels can be set.	N/A
Bird Weighing	RSC-2	Uses 1 or 2 bird weighing platforms inside the house which automatically weigh and record when the bird jumps on the scale.	Bird Scale Platform (RBS-1) or Hanging Bird Scale (RBS-2H) plus components
Portable Bird Scale	RPBS-1	Measures and records each bird placed on the scale. Data can be downloaded to a computer.	Optional communication package for transferring data to a computer (RPBS1-COM)
Silo Weigher	RSW-2	Weighs and records weight in 1 or 2 feed silos. Controls delivery of feed, lighting and records water consumption	Silo Load Cells (RSLC-10) plus components
Feed Weighing / Mixing	RFS-6	Measures up to 25kg batch of food. Proportions delivery of up to 3 food types into containers and then into feed lines. Also controls lighting and records water consumption	Batch Feed Container (RFC-1) plus components
Pressure Alarm	RPA-2	Monitors static pressure	N/A
Water Alarm	RWA-4	Monitors water flow rate	N/A
Alarm and Backup System	RBU-3	Monitors 3 phase supply. Monitors temperature and operates fans and heaters when applicable	N/A
Piguard Plus	-	Monitors temperature and humidity	N/A
Smart A Series	-	Control of temperature and humidity in agricultural buildings using intelligent, user-friendly climate control software. Supports 3-4 relays.	N/A
Smart C Series	-	Control of temperature and humidity in agricultural buildings using intelligent, user-friendly climate control software. Supports 4, 6 or 8 relays.	N/A

Table 2.0

RLC-1 - Light Control



The RLC-1 Controls light periods and light intensity. The unit also incorporates sunrise and sunset simulation.

RSP-3 - Static Pressure Control



The unit measures and compares between the inside and outside pressure and opens or closes air inlets as required, to bring the static pressure inside the house to the optimum level. It has optional outside temperature sensor for correct automatic summer or winter control.

RCC-2 - Cooling Control



The RCC-2 is a cooling system controller. It includes one temperature sensor and one humidity sensor. The user can set the temperature to turn cooling on, set humidity to turn cooling off and set the On/Off duty cycles.

RSC-2 - Scale Centre



The RSC-2 Displays and stores daily data collection of average weight, daily gain, standard deviation and CV. The RSC-2 can be used for broilers, breeders and turkeys and is ideal for use with the Rotem Hanging Bird Weigher. PC Communication Package is included.

RPBS-1 - Portable Bird Scale



The RPBS-1 is a powerful tool for manual weighing of live birds. It provides data on number of birds weighed their average weight, standard deviation and CV. All data of up to 10,000 bird weighting will be stored in unerasable memory classified by farm number, flock number and house number.

The RPBS-1 can operate on rechargeable batteries. It also has a PC communication package that includes a cable and software. The communication software can be used for data processing and storage.

RSW-2 - Silo Weigher



The Rotem RSW-2 is a Silo weighing control system to allow the farmer precise control of feed deliveries, feed inventory and feed conversion. Feed dispensing may be set to preset times for meal time feeding, continuous full feeding, or restricted feeding.

The RSW-2 can monitor water consumption (if water meter is connected) and also control lighting.

RFS-6 - Feed Scale



Designed for broilers or breeders, the RFS-6 can collect display and store feed consumption, water consumption, feed conversion and average bird weight per day during the growth cycle. It activates up to two feed augers (mixing optional), feeders, lights, bird weighing platform and alarm. PC Communication Package is included.

RPA-2 - Pressure Alarm



The RPA-2 is an independent static pressure alarm system. It measures static pressure inside the house and activates the alarm system in case of low or high pressure conditions. A ventilation system failure can create a critical situation inside livestock housing. The RPA-2 can serve as an independent backup alarm in case of main controller failure, or other failure.

RWA-4 - Water Alarm



The RWA-4 independently monitors water flow rate.

RBU-3 - Alarm Backup System



The RBU-3 monitors inside temperature, phase 1-2-3, static pressure, and temperature curve, emergency control of fan, heater, alarm and dialer.

Piguard Plus



Piguard Plus is ROTEM latest advance in environmental controllers specially designed for the pig house industry. The user-friendly has high performance and quick response time.

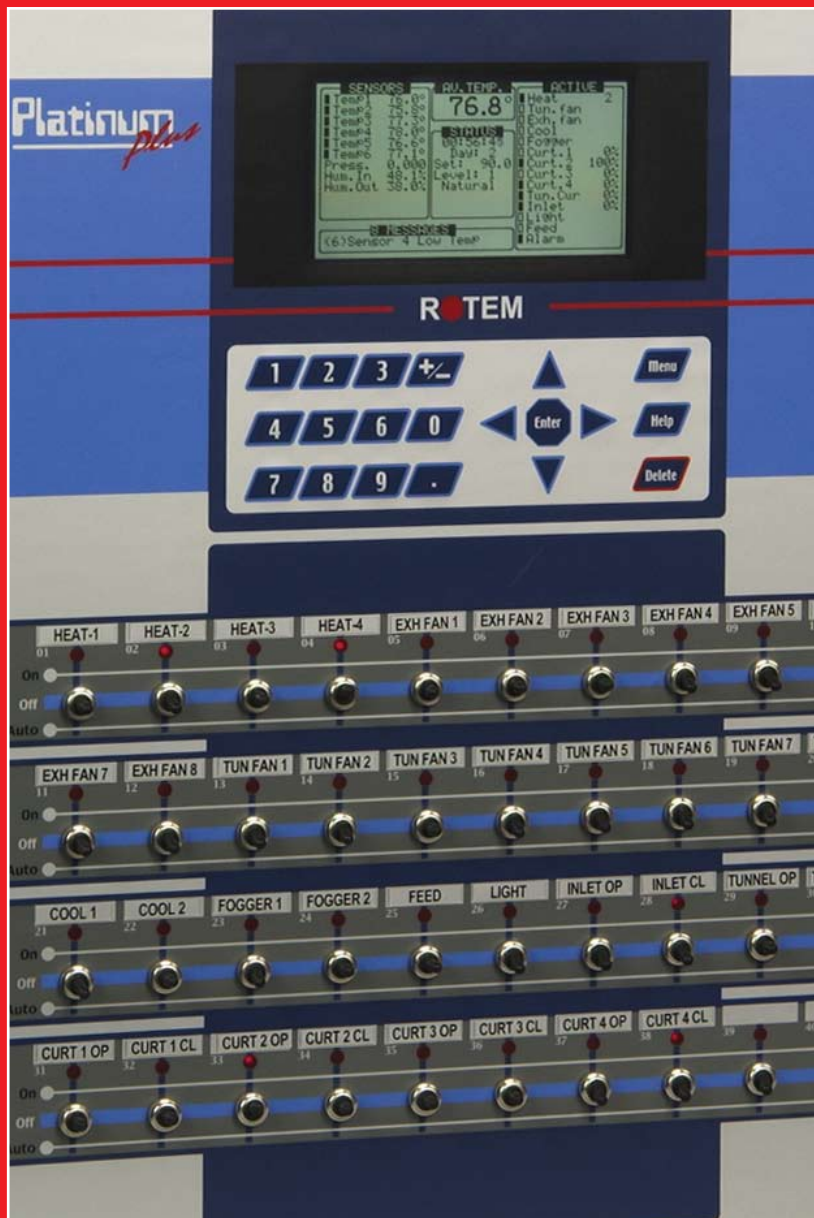
The Piguard Plus features accurate temperature and humidity sensors, secure transmission of data even in noisy environments and the added convenience of eight output relays as well as four analog outputs. A technologically leader, it satisfies your requirements by optimizing control between input & output. The Piguard Plus is fully equipped to monitor and fine tune all aspects of the environmental system. The advanced environmental control unit improves animal comfort and gives you peace of mind knowing that the ultimate controller is on guard around the clock.

Smart A & Smart C Series



The SMART series in control technology is designed for control of temperature and humidity in agricultural buildings using intelligent, user-friendly climate control software. The SMART controllers are easy to use yet sophisticated, simple to program yet can operate a large variety of devices. The various SMART controllers can all be on the same network using the RotemNet PC communication software.

The SMART-A controller supports 3 or 4 relays.
The SMART-C controller supports 4, 6 or 8 relays



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