

3P P Series

Advanced Pressure Control Systems

- **Automatic Multi-Mode Pump Control**
- **Adjustable Pressure**
- **Intuitive Menu System**
- **Advanced Fault Tracking**
- **Works with almost all pumps**
- **Designed, Built, Programmed and Assembled in the UK**



P Series Control Unit

Overview

The 3P P series pressure controller is designed for use with booster sets and other applications where it is desirable to have variable pressure control. Features include adjustable pressure, duty standby/assist and BMS output, whilst remaining extremely compact. Pressure control is achieved by modulation of the pumps which are run as required to maintain pressure within a specified range, avoiding the loss of efficiency associated with variable speed systems when running at low demand.

An optional level sensor probe can be situated in a break tank or well and indicates the current water level, as well as providing an adjustable safety shut-off level which can be adjusted from the control panel.

Unlike most pressure controllers which must be situated above the pump, the P Series controller can be situated anywhere, allowing the use of submerged pumps, or remote situation of the panel. Submersible pumps let you take advantage of maximum pumping efficiency whilst reducing the overall component count of the system.

Any electric pumps, solenoids, motorised valves, etc can be used. Single or 3 Phase¹, the P Series controller does not need to 'know' the pumps it uses. Optional hardware (contactors) allows pumps of any power up to the limit of your electrical supply. Pumps can be replaced with other makes and models at any time and don't

need to be matched. Downtime due to reprogramming or lead times for a specific pump are eliminated.

9 Versions of the P series are available

Model	Pump Outputs	Level Control
120P	2	Float Switch
130P	3	Float Switch
140P	4	Float Switch
120PC	2	Conductivity Probe
130PC	3	Conductivity Probe
140PC	4	Conductivity Probe
320P	2	Level Sensor
330P	3	Level Sensor
340P	4	Level Sensor

Level sensor models have accurate level display and shut-off level adjustment. Float switch and conductivity probe provide low level shut-off only.

300 series models use a precise pressure transmitter is used to determine the exact level of stored rainwater. No other float switches or probes are needed. This provides the user with the added flexibility of being able to select the pump shut-off level from the panel, with no need to access the tank.

All 3P P Series systems have intuitive menu driven settings. There are no hidden menus, and almost everything is adjustable, including pump cut-in and cut-out pressures, overpressure alarm, pump failure pressure, etc. Safe default settings (3 bar) will operate straight away in single pump mode with auto tank level calibration.²

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Like most of our advanced controllers the P Series controller includes Advanced Fault Tracking. Fault codes are stored in memory until you choose to erase them, allowing easy identification of intermittent and historical faults.

Clever design of the circuit board provides the most robust unit on the market today, with overvoltage and brownout protection, immediate recovery from power failures with no loss of setting and auto reboot, individually fused outputs, oversized power supply to electronics, removable MCU chip (software) for easy upgrades, automatic failover of pumps, and automatic search for spare pumps even if not configured for twin pump use. Modular connector design and tolerant software allows pumps to be 'hot-swapped' without switching off the controller or remaining pump.

Designed, programmed, built and assembled in the UK. With full UK based technical support, rapid spares availability, and spare parts supply from UK stocks. Full



repair/recon service to board level.

13 Phase via optional connection kit.

Like all variable pressure systems, a pressure vessel is required for correct operation.

Features

- Adjustable pressure control (10bar max)
- *Duty Standby/Duty Assist with alternation*
- *Modular 'hot swap' of pumps and solenoids*
- *Automatic Tank Level Calibration*
- *Multiple pump model support at 230Vac 50Hz or any supply voltage/phase via contactors/overloads*
- *BMS Switched output*
- *Optional BMS serial output*
- *Advanced Fault Tracking*
- *Fault Warning LED*
- *Auto hunt for redundant spare pump during pump failure in single pump mode*
- *Swappable MCU chip (software)*
- *System Overpressure Alarm - protects pipework and attached appliances (UV system, etc) from overpressure due to faulty installation or incorrect pressure setting.*
- *Overvoltage protection*
- *Brownout protection*
- *Watchdog timer*
- *Fused Outputs*

Adjustable Settings

- *Pump cut-in/cut-out pressure (for each pump)*
- *System Overpressure Alarm*
- *Pump failure pressure*
- *Pump Mode (Pump1, Pump2, Twin pump assist/standby)*
- *Minimum Water Level (dry run prevention)*
- *Pump restart delay*
- *Fault code display*
- *Fault code erase*
- *Input test diagnostic screen*
- *Output test diagnostic screen*
- *Manual Stop - with BMS activation*
- *Restore Factory Default Settings*

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OEM Solutions

3P Control Panels are supplied either as a panel only, or can be offered as a kit, comprising of the panel, pumps, cables, pressure vessel, hose kits, etc.

We work with our customers to provide specific product bundles, with panel and software branded to your requirements.

We provide full training, design and technical support, and will customise the product and accessories to your requirements, and full UK based support and spare parts availability.

Benefits

Can be used in a packaged booster set (skid mount) or distributed installation.

Excellent configurability whilst retaining an intuitive menu driven user interface.

Made in Britain. Designed, built and programmed entirely in the UK by 3P Technik.

Full UK support, with customisations to hardware and software available with very short lead times.

Modular design allows extremely rapid swap-out of parts. Including hot-swap of pumps and sensors (no power-off). Also no need to match replacement pumps.

Very low lead times. All spare parts stocked by us in the UK for immediate dispatch. We don't follow the 'buy to order' business model of continental manufacturers whose lead times are often unsuitable for UK clients.

We can supply not only the control equipment, but also pumps, filtration and all tank fittings.

Accessories

RC3P Series 3 Phase 230v/400v IP65 Rated Connection Kits with contactors, thermal overload protection and optional over/under voltage detection, phase loss detection,

IP65 Rated Isolation Switches

IP68 Rated Cable joints

Vented sensor cables (multiple types)

IP68 Rated Vented cable joints

IP68 rated in-line plugs/sockets

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Technical Specifications

Control Unit

Width	240mm
Height	190mm
Depth	110mm
Material	ABS
Weight (control panel without cables)	1190g
Display	LCD 4 x 20 Monochrome
Backlight	Green
Keypad	Membrane
BMS	Volt-free contact
BMS (optional)	RS-232 Serial
Supply Voltage	230V _{AC}
Power Consumption	Max 7W
Operating Temp Range	0 - 40°C
Protection Class	Up to IP65

Conductivity Probe

Type	Passive probe
Length	15m
Cable Type	0.5mm 2 core flex
Medium	Rainwater
Protection Class	IP68

Float Switch

Type	Microswitch
Length	20m
Cable Type	1mm 3core flex
Medium	Water
Protection Class	IP68

Tank Level Pressure Sensor

Measurement Range	0 - 0.6 bar
Length	20m
Cable Type	0.5mm 2 core flex with external vent tube Or Multicore shielded signal cable with internal or external vent tube
Input	8 - 30 V _{DC}
Output	4 - 20 mA
Protection Class	IP68

Line Pressure Sensor

Measurement Range	0 - 10 bar
Input	8 - 30 V _{DC}
Output	4 - 20 mA
Protection Class	IP65

Switched Outputs

Supply Voltage	230V _{AC}
Current	10A