

3P TSR Series Controllers

Electronic Header Tank Controllers with Emergency Shut-off

- **Increased Reliability vs Float Switches**
- **High Precision of Level Control**
- **Increased Efficiency vs Ball-Cocks**
- **LED status indication options**
- **Control of Pumps, Solenoids and Motorised Valves up to 10 Amps**

A replacement for float switch or ball valve control, allowing a header tank to be filled at high speed and vastly improved efficiency compared with ball-cock systems.

Pumps run with reduced temperature and runtime, reducing failures.

A reed sensor detects a low water level and activates the pump, once the sensor level is exceeded a timer continues to run for a preset duration allowing it to run on for a period of time beyond the limited range of the sensor. In this way the system behaves in a manner similar to a float switch, but with far greater reliability, accuracy, and ease of construction. The problem of overlapping float switches is also eliminated.

TSR series controllers allow small tanks to be filled at high speed through an open orifice, eliminating the need to pump through the narrow orifice of a ball-cock. This creates a substantial increase in efficiency, allowing smaller header or break tanks to be selected, and eliminating pump failures due to persistent overheating, particularly when water cooled pumps are used.

Sensors are operated at extra low voltage (12v) and low current, preventing contact burning and voltage drop issues which affect float switches and ensuring longevity of components.



There are no cables within the header tank, no loose floats to become jammed or entangled, reducing maintenance and installation issues and costs.

TSR Controllers also work well in conjunction with float valve mains water top-up in a hybrid configuration, allowing for a non-electric mains water supply to be provided in the event of a power outage.

TSR23012A operates a single sensor and output, with additional emergency shut-off sensor. For controlling either pump or mains top-up solenoid.

TSR23012DA operates twin sensors and outputs, with additional emergency shut-off sensor, and can control both a pump and solenoid together.

Level sensing and output are combined on a single PCB, producing a very compact overall module of 180 x 94 x 57mm excluding cable entries.

Low voltage safety is ensured with an isolated power supply, overvoltage protection, and overcurrent protection. The entire module is rated Class 2 and splash resistant with ingress protection rated at IP66.

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Technical Specifications

Control Unit

Width	180mm
Height	94mm
Depth	57mm
Time Delay	0 - 30sec
Supply Voltage	230V _{AC}
Operating Temp Range	0 - 40°C
Material	Polystyrene
Protection Class	IP66

Power Consumption

Model	TSR23012A	TSR23012DA
Standby	1.9w	3.8w
Maximum	2.7w	5.4w
Protection Class	2	2

Sensors

Minimum Level Differential	20mm
Overall Length	80mm
Fitting Hole Diameter	16mm
Material	Polypropylene
Seal	NBR
Operating Voltage	12v
Protection Class	IP68

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