

PULSA^{tr}ol[®] Controller Specification Sheet

MPT250AR1 Dual 28-Day Biocide Control

PULSA^{tr}ol Controllers are microprocessor based units specifically designed for a wide range of water treatment control and monitoring options.

MPT250AR1 is designed to dose inhibitor to and control bleed from a cooling tower on a timed or proportional basis.

This controller would normally be employed when an existing biocide dosage regime is in place.

The standard unit has a number of upgrade options to enable it to perform additional functions.



Key Features

- Microprocessor based for accurate and reliable control
- Wall mounted unit for ease of operation
- Easily programmable via display and menu activated keypad
- Keypad activated hand/off/auto control of all really outputs
- Modular hardware and software for easy access and servicing
- IP65 High Impact Resistant PVC enclosure for protection against harsh environments

Operation

- Two independent **selectable timers** are incorporated in the Controller, each with choice of;
 - **percent**; also referred to as a cycle timer. The timer runs continuously on an adjustable time cycle, such as ten minutes, with the output being activated for an adjustable percentage of the time cycle. The timer is adjustable in increments up to 100% and the cycle time is adjustable from one to 120 minutes.
 - **pulse with accumulator**; also referred to as water meter or reset timer. The timer accepts pulses from a water meter to actuate the inhibitor metering pump. The timer has an adjustable feed time (Run Time) in one second increments up to 59 minutes and 59 seconds with an elapsed time display. It has a built in accumulator that can count pulses up to 255 before activating the out put with an elapsed pulse counter. Also incorporated into the timer is a pulse totaliser that keeps an on-going count of the number of pulses received by the timer.
- **Scale and corrosion inhibiting chemical** can be dosed and bleed effected in one of two ways.
 - i) On a **timed** basis; in which case the **percent** option would be selected.
 - ii) On a **proportional** basis; in which case the **pulse with accumulator** option would be selected and an impulse water meter installed in the make up line to the cooling tower.

Additional Equipment Requirements

The **MPT250AR1 Controller** is a stand alone unit. To operate as a complete system the following equipment must be in place – either existing or supplied in addition to the controller.

- **Dosage Pump**
 - ◇ A dosage pump will be required for inhibitor dosage. Care must be taken to ensure that the pump is capable of delivering the chemical requirement specified by the controller.
- **Chemical Storage**
 - ◇ Treatment chemicals will normally be stored in a chemical storage tank. Dosage can be from the container that the chemical is supplied in, but it should be ensured that a means of monitoring usage is available.
- **Solenoid Valve**
 - ◇ A normally closed solenoid valve will be required for bleed control.
- **Impulse Water Meter**
 - ◇ If proportional inhibitor dosage or bleed control is required, an impulse water meter will be required, for the cooling tower make up line, to monitor the rate of make up flow into the cooling tower. The “K” factor, i.e. the volume of water passing through the water meter between impulses generated, will depend on the individual operating parameters.

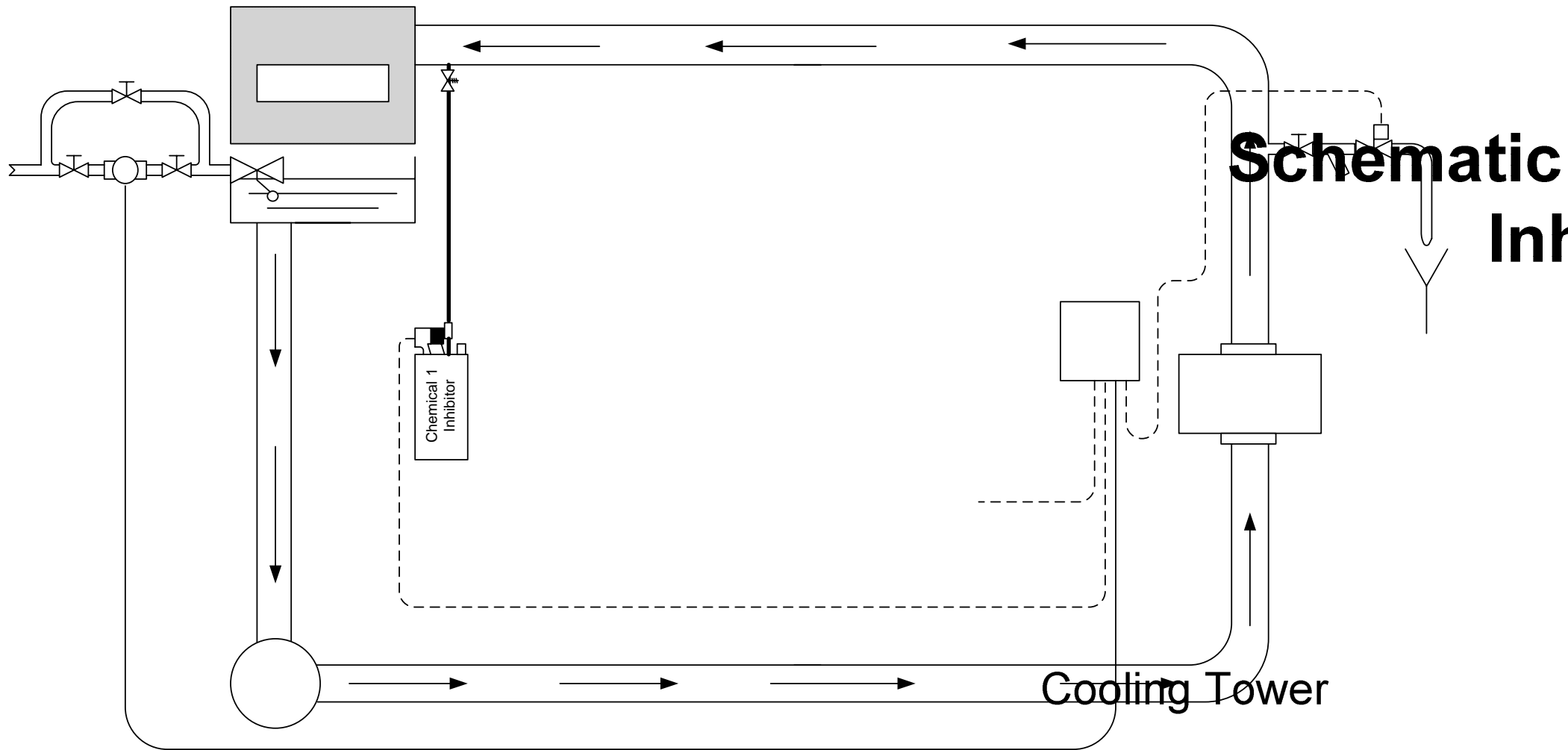
Options

The MPT250AR1 is the standard control unit to perform the tasks defined above. If additional features are required, the following options are available at additional cost.

- An alarm output relay can be fitted to give an external signal of any alarm conditions.
- One volt free contact can be incorporated to provide a signal of timer activation.
- The PULSAworks communications package can be employed to provide remote or local accountability.

Specification

Feature	MPT250AR1
MPT250	Two Dual Selectable Timers
A	“Conduit” which signifies cable gland connections on base of controller.
R1	CE approval
Power input	90 to 250 VAC @ 50/60 Hz 100 VA
Control Output	Line Voltage @ 600 VA
Display	2 x 16 Alpha Numeric, Back Lit Display
Electronic Environment	-17.8 to + 52°C, 100% Humidity
Controller Weight (kg)	3.7
Shipping Weight (kg)	4.6
Maximum Width (mm)	254.0
Fixing Hole Centres (mm)	228.3
Controller Width (mm)	220.0
Depth (mm)	179.8

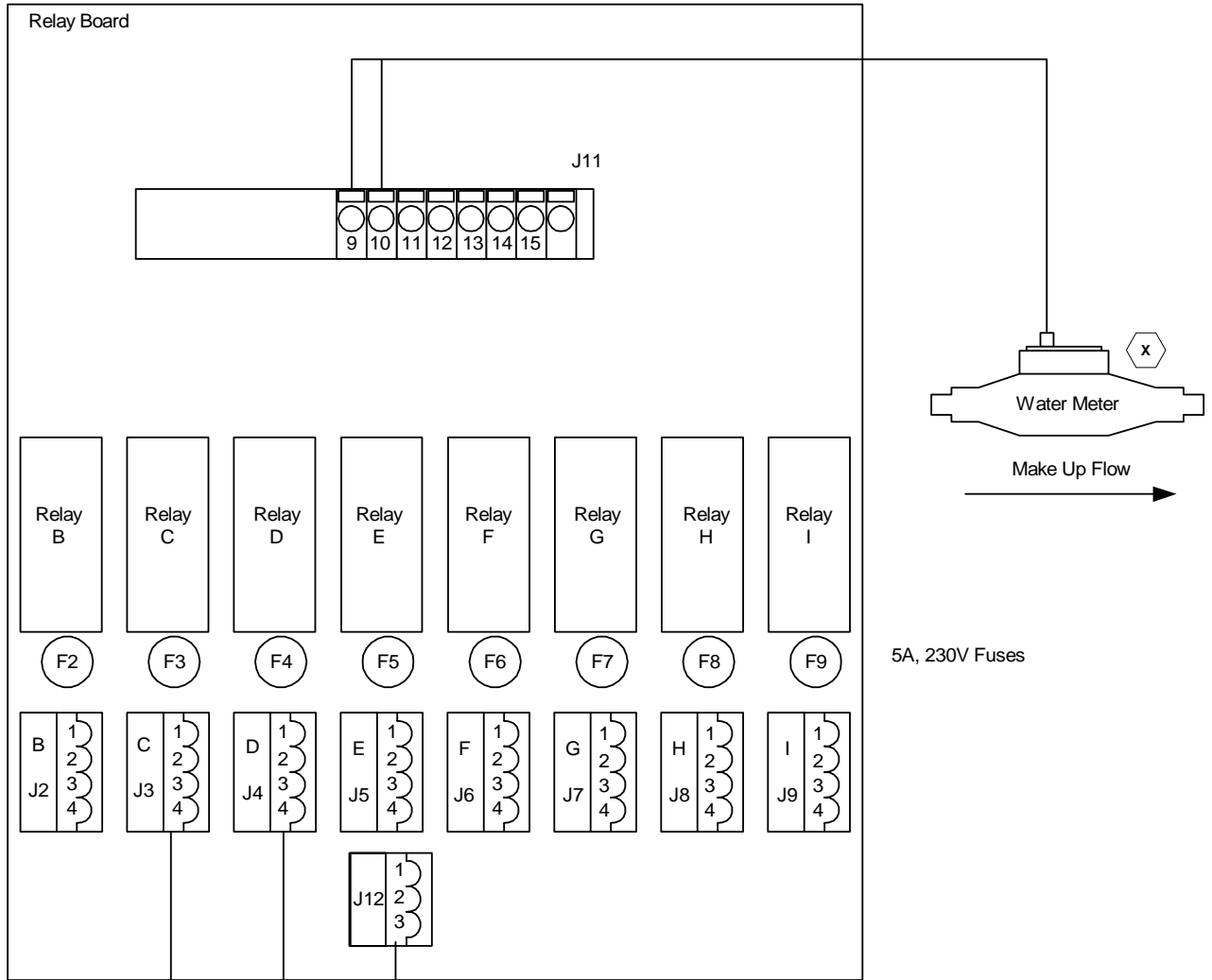


**Schematic
Inh**

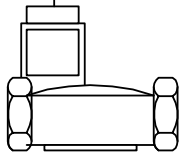
Cooling Tower

**Water
Meter**

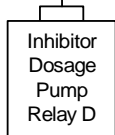
Electrical Schematic Detailing Connections for MPT250AR1



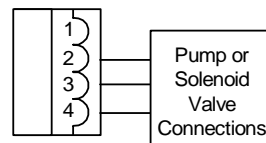
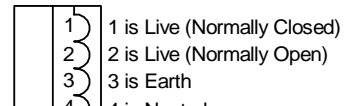
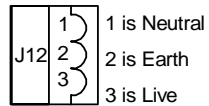
Bleed lock
Out Relay C



Power
Supply In



Clarification of Terminal Connections



All Equipment Must Be Earthed



Items marked thus are Input and Output devices to be connected by the Installer. It should also be understood that applications will vary such that not every item will always be supplied.