

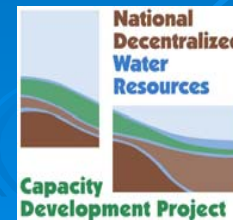
Controls Section I: Controls Overview

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Citation

Trotta, P.D., and J.O. Ramsey. 2005 Controls Section I: Overview - PowerPoint Presentation. *in* (M.A. Gross and N.E. Deal, eds.) University Curriculum Development for Decentralized Wastewater Management. National Decentralized Water Resources Capacity Development Project. University of Arkansas, Fayetteville, AR.

Controls Objective

To teach students the types of controls and their fundamental operation for controlling and monitoring onsite wastewater systems.

After the course, the students will know:

- The purposes and uses of controls used in onsite systems.
- The types of controls available for onsite systems.
- The properties and characteristics of the various controls.

Control Scope

The term “controls” includes those features of the system which:

- Actively or passively dictate or “control” the operation
- Provide information through visible signals, alerts, alarms or information transfer
- Log/collect, display, and/or summarize overall system performance

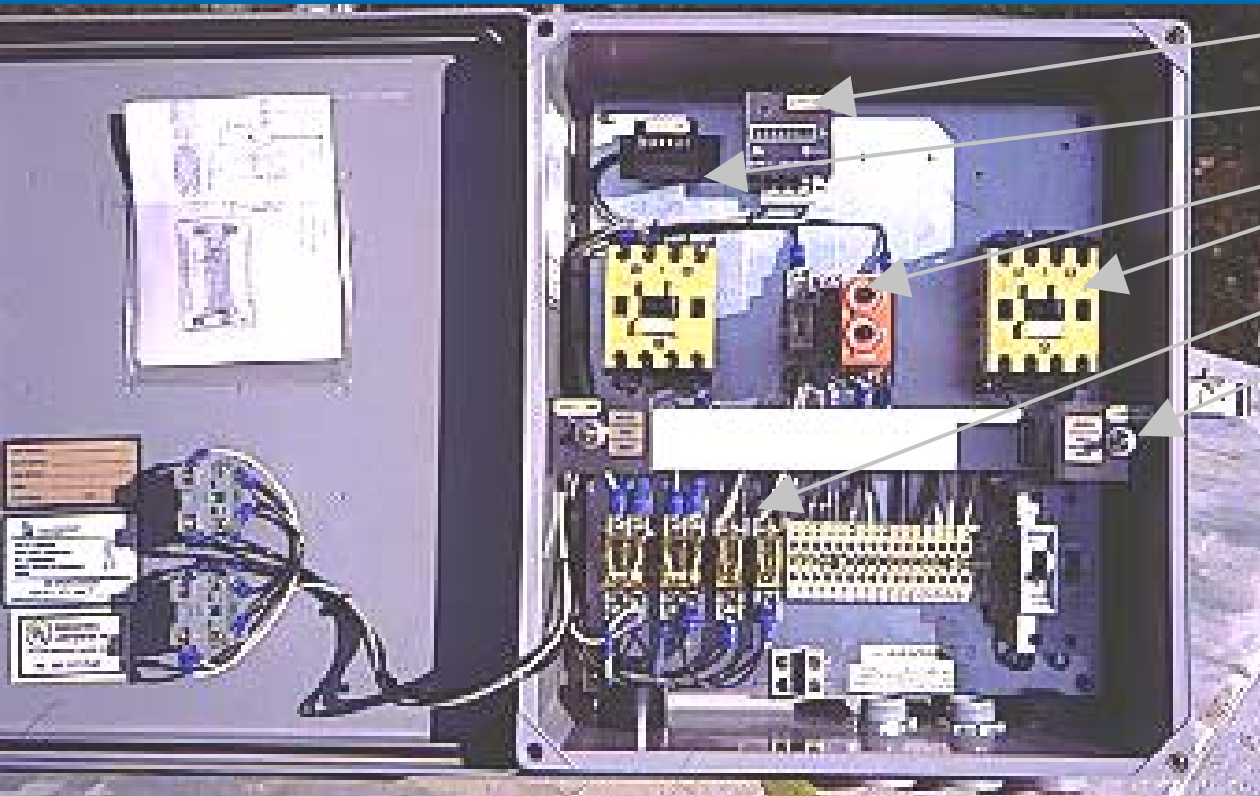
Introduction

Panels can range from simple on-off-alarm panels using only float settings to determine the characteristics of the systems operation to more elaborate panels which have programmable timers, elapsed time meters, event counters, data acquisition modules, programmer interfaces and even telemetry interfaces



Controls and Control Panels Come With a Variety of Capabilities

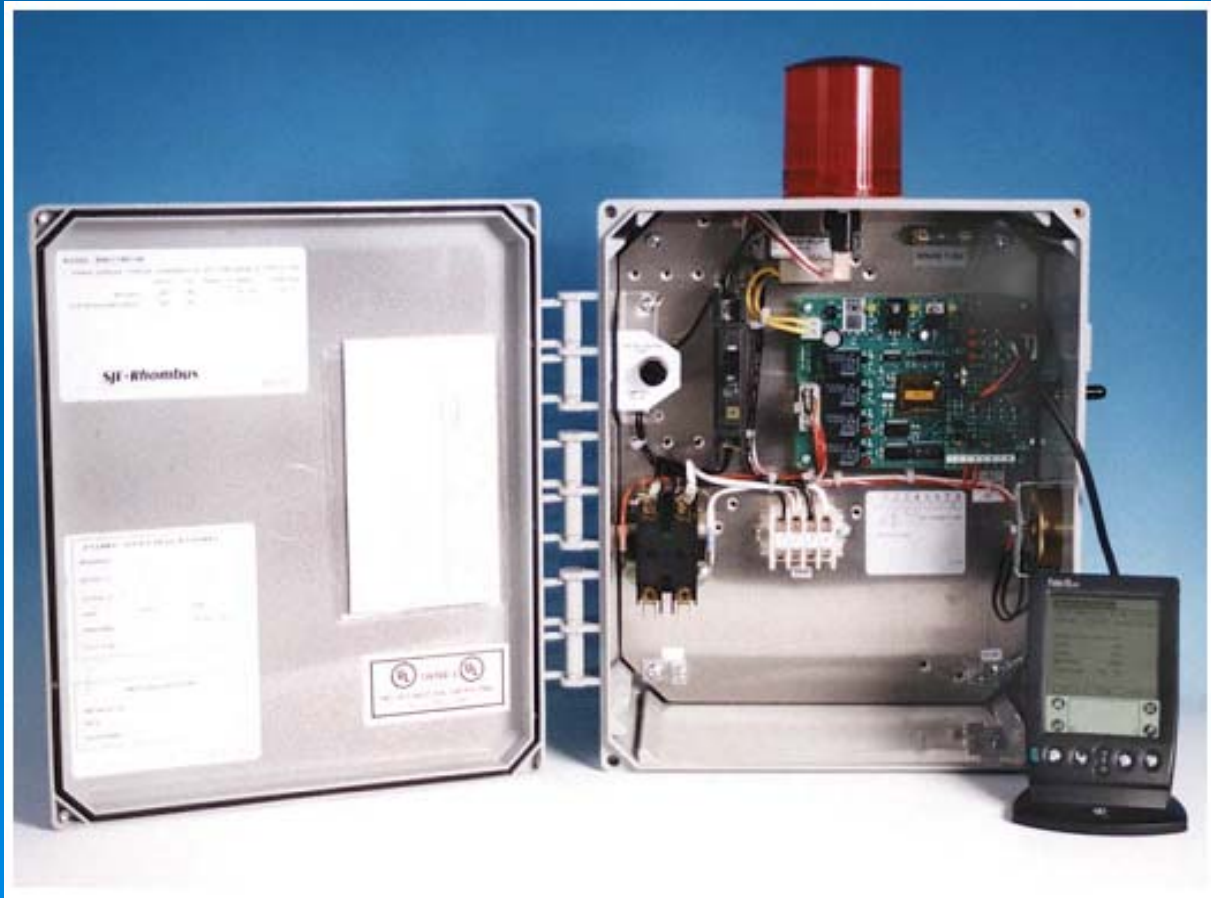
The technologies illustrated in this panel are common in a wide range of industrial applications.



EVENT COUNTER
ELAPSED TIME CLOCK
ADJUSTABLE TIMER
MOTOR CONTROLLER
RELAYS
MANUAL SWITCH

Elaborate Digital Control Panel With Palm Pilot Data Acquisition

Shown is the interior of a newer technology panel that has additional capabilities due to a large extent by the rapid advancements in electronics and computer technology



Overview

A control feature for an onsite wastewater system can be as simple as a valve, weir or orifice. The simplest electrical control is generally a float switch turning on or off a pump or blower. An alarm can be a simple float switch connected to a visual (light) or audible (buzzer or bell).

All of these functions can be enhanced to achieve additional levels of sophistication in the control, communication of problems, and recordation of data. Modern electronics make all kinds of capabilities possible.