

1. OBJECTIVE

Details the installation of a latching relay for switching flow between a waste water plant and drain.

Typical Application:

A wastewater plant has a capacity of 40,000 Gallons/day.

After 40,000 Gallons, the controller opens a bypass solenoid to drain, diverting flow from the waste water plant.

At midnight flow is re-directed to the waste water plant.

This application requires either two unused controller relays OR one unused controller relay and a 24 hour reset timer with a 120VAC or dry contact output.

2. Parts List

Description	Vendor Part #	Nominal Cost
Potter & Brumfield, 120VAC Latching Relay part# KUL-11A15S-120	886-2455	\$34.00
& Socket 27E121 Source: www.alliedelec.com 800.433.5700	Requires Socket 886-2503	\$8.50

3. Installation

Install the latching relay & socket on the controller enclosure aluminum backplate using self-tapping sheet metal screws, if room is available.

Note: The relay and socket are nominally 4" high. Ensure the installed relay clears door mounted components with the door closed.

Wire the relay socket to the controller and/or to optional reset timer using the table on page 2.

Set the controller relay setpoints to turn ON for 60 seconds after 40,000 Gallons, controlled by the water meter measuring the flow to the waste water plant.

If you are using a second controller relay to reset the latching relay, set the controller to 7 day biocide timing and program a 1 minute biocide feed event to run every day at 00:10 in the morning, This event will reset the latching relay, redirecting flow to the wastewater plant at the start of every day.

Typical wiring for control by Controller Relays **No.4** (*Reset at Midnight*) & **No.5** (*Turn ON diverter solenoid*) with Relay **No.2** used for solenoid or Valve to Waste Water Plant

Controller Terminals	Latching Relay Socket Terminal	Solenoid – Valve Wiring Controller Set-up
NO5 N5 LF	B – Latch A – Common 7 – Contact Set Common	Using Trackster, right click the Bleed Relay No.2 & Select Configure Control . Set the Interlock on Relay No.2 to No.5 . Wire the diverter solenoid 120 VAC Line to Latching Relay Socket terminal 4 – Contact Set N.O.
NO4	8 – Reset Latch	If you are using an external reset timer; power terminal No.8 with 120VAC from the timer for 15-60 seconds to reset the latching relay.

Verify operation:

1. Every time you Prime relay No.5, the flow to the waste water will turn **OFF** and the flow through the diverter solenoid will turn **ON**.
2. Prime relay No.4 and then Clear Alarms on Relay No.4 to switch the flow back to the waste water plant.