

Stedham Electronics Corporation

Application Bulletin – XTRL-100 (Latching Relay Control Units)



How they work

The XTRL-100 family of Latching Relay Control Units are typically used in applications requiring low power. Two Stedham Electronics' sensors are wired to the unit to control the latching relay. A typical example is the control of a solenoid valve in a liquid level control application.

To drain a tank when it becomes full, Stedham Electronics' liquid level sensors would be placed at the high and low level points. The high sensor would be used as the "start" sensor. Its signal would latch the relay, which in turn opens the solenoid valve to start the draining process. When the level reached the low level sensor its signal would unlatch the relay. This would close the solenoid valve, thus halting the draining process.

Conversely, to fill a tank when it becomes empty, the low sensor would be used as the "start" sensor. Its signal would latch the relay, which in turn opens the solenoid valve to start the filling process. When the level reached the high level sensor, its signal would unlatch the relay. This would close the solenoid valve, thus halting the filling process.

In processes requiring high power, such as starting and stopping pumps and other devices, the XTRL-100 family relay would be used to trigger devices of high enough current/voltage capacity to handle the power required.

Features

The XTRL-100 family is equipped with color coded terminals to simplify wiring. Each unit has a green power LED indicator and yellow LEDs to indicate which relay output is active. This makes it easy for the user to select which terminal(s) to hardwire.

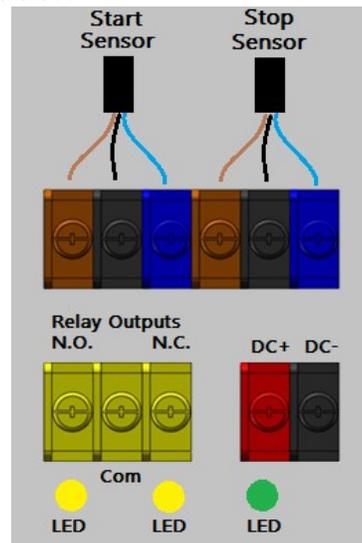
The housing has easy to use mounting brackets for extremely simple installation.

Sensor Selection

XTRL-100 units require the use of three wire DC sensors. All Stedham Electronics 3-wire DC sensors may be used. For level control applications, utilize a normally closed (N.C.) sensor for the bottom and a normally open (N.O.) sensor for the top. Either sensor can be the "start" sensor depending on your application. Use either PNP (sourcing) sensors or NPN (sinking) sensors. Both sensors must be of the same type.

For other applications select either N.O. or N.C. Sensors, depending on your needs. Call us for application help anytime!

Installation



The XTRL-100 units should be mounted in a protected enclosure, following appropriate local codes. Attach the wiring as indicated. If you are using your own power supply verify that the voltage is correct for the unit you have.

Part Numbers

Voltage	Sensor Type	Part Number
5VDC	PNP Sensors	053001
5VDC	NPN Sensors	053002
12VDC	PNP Sensors	053003
12VDC	NPN Sensors	053004
24VDC	PNP Sensors	053005
24VDC	NPN Sensors	053006

Customization is always an option. Contact us if you need a different voltage, or other requirement!

Contact us if you have any difficulties. A friendly engineer is standing by to assist you!