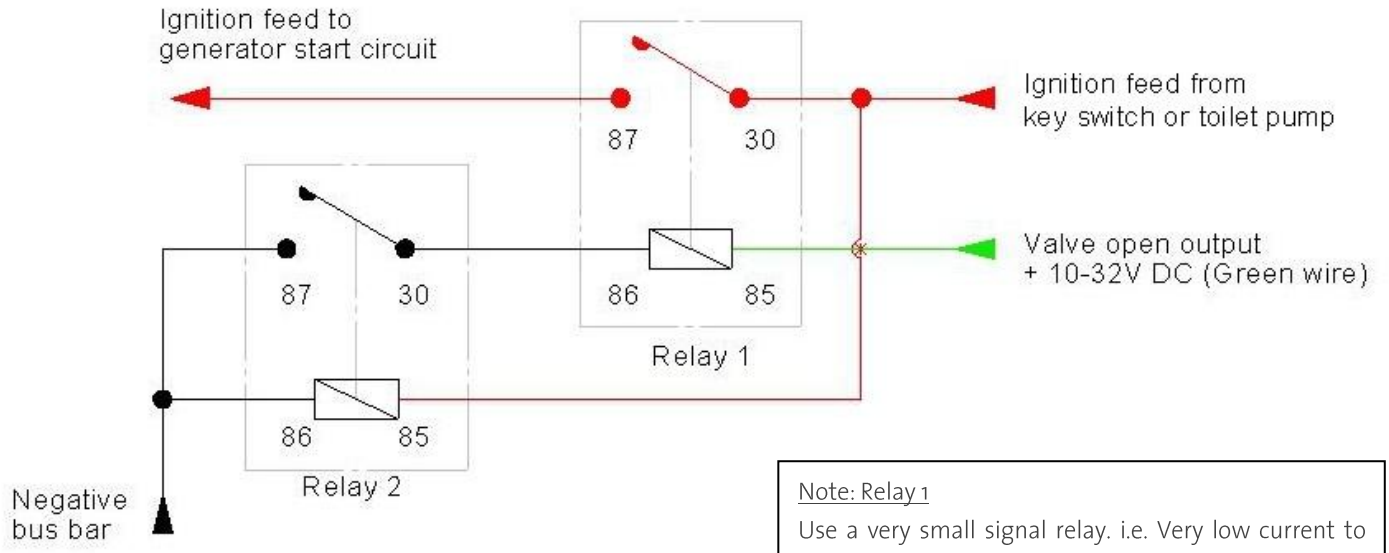
Monitored Ball Valve wiring technical details

Ignition Interlock Wiring Examples:

The options below show how to wire a Monitored Ball Valve to disable the ignition sequence. This prevents engine damage caused by lack of water coolant entering the engine because the intake Ball Valve is closed. This can also be used to stop an electric toilet pump from actuating when the monitored Ball Valve is closed. This wiring can also be done in parallel with the TruDesign seacock monitor panel to provide added security and monitoring.

Option A:

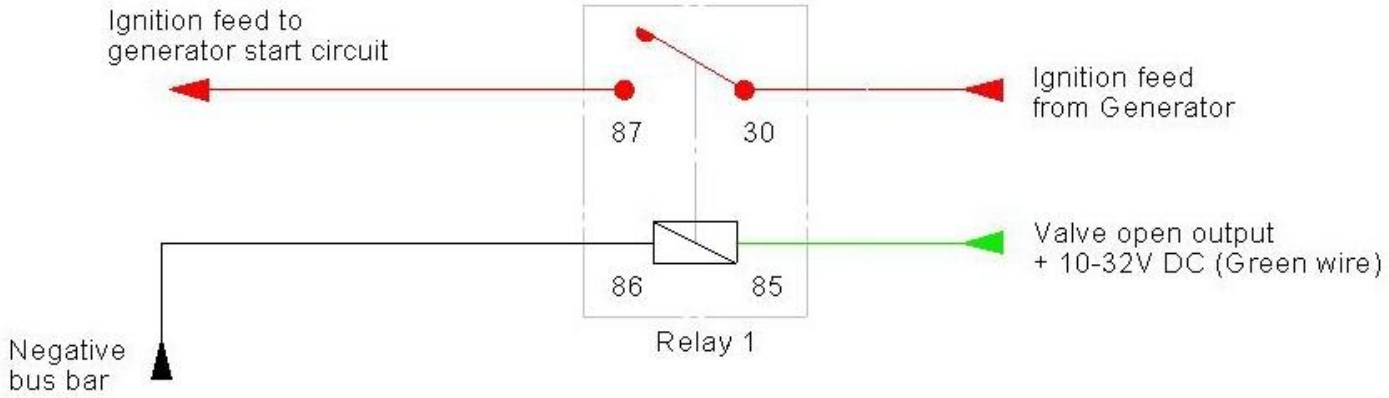
In this option, relays will only run when ignition is on and valve is in open position.



Note: Relay 1
Use a very small signal relay. i.e. Very low current to energize relay coil.
This relay could control another larger relay with higher contact rating for ignition or toilet pump control

Option B:

In this option relay 1 will run continuously while valve is in open position.



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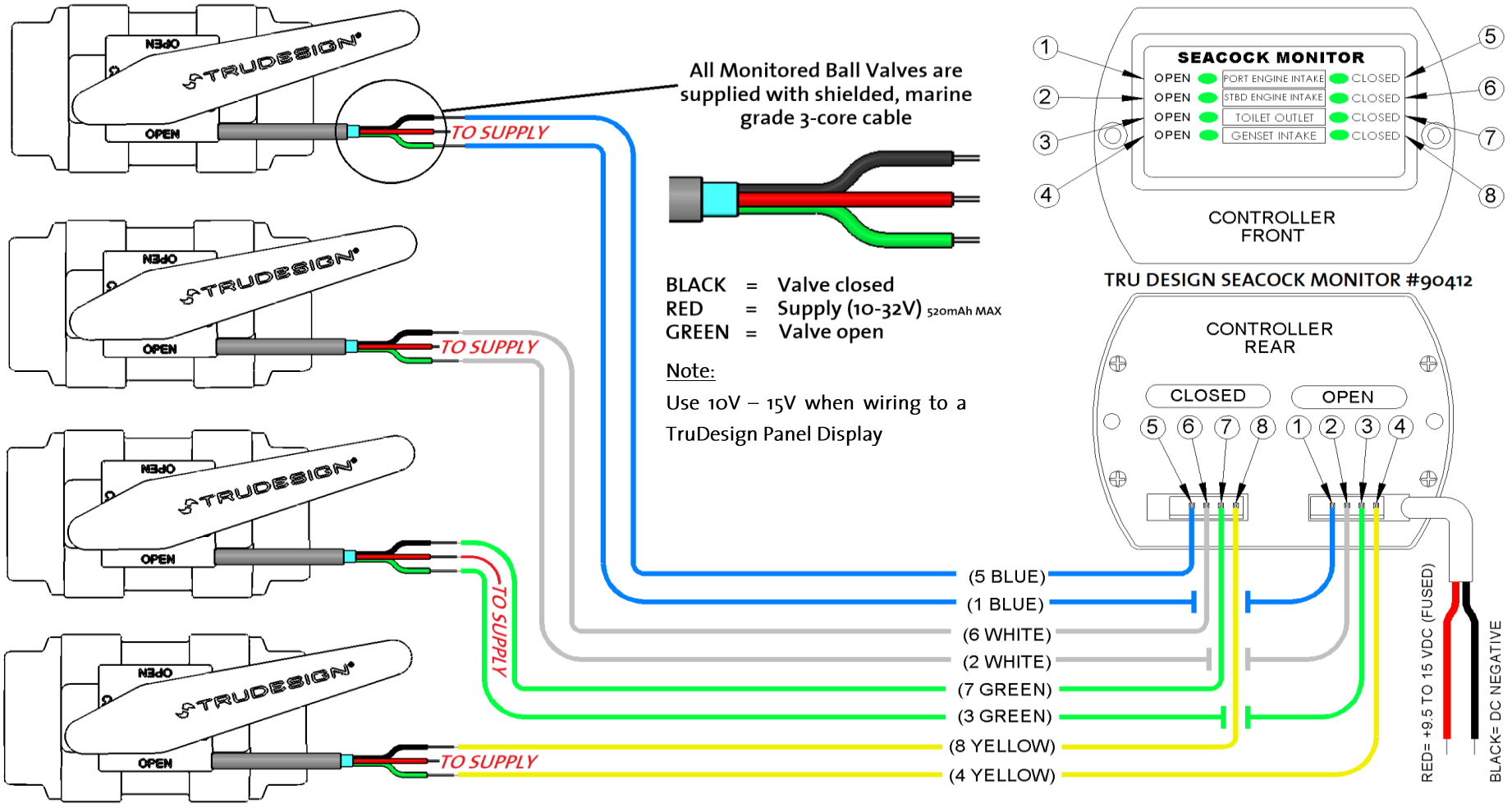
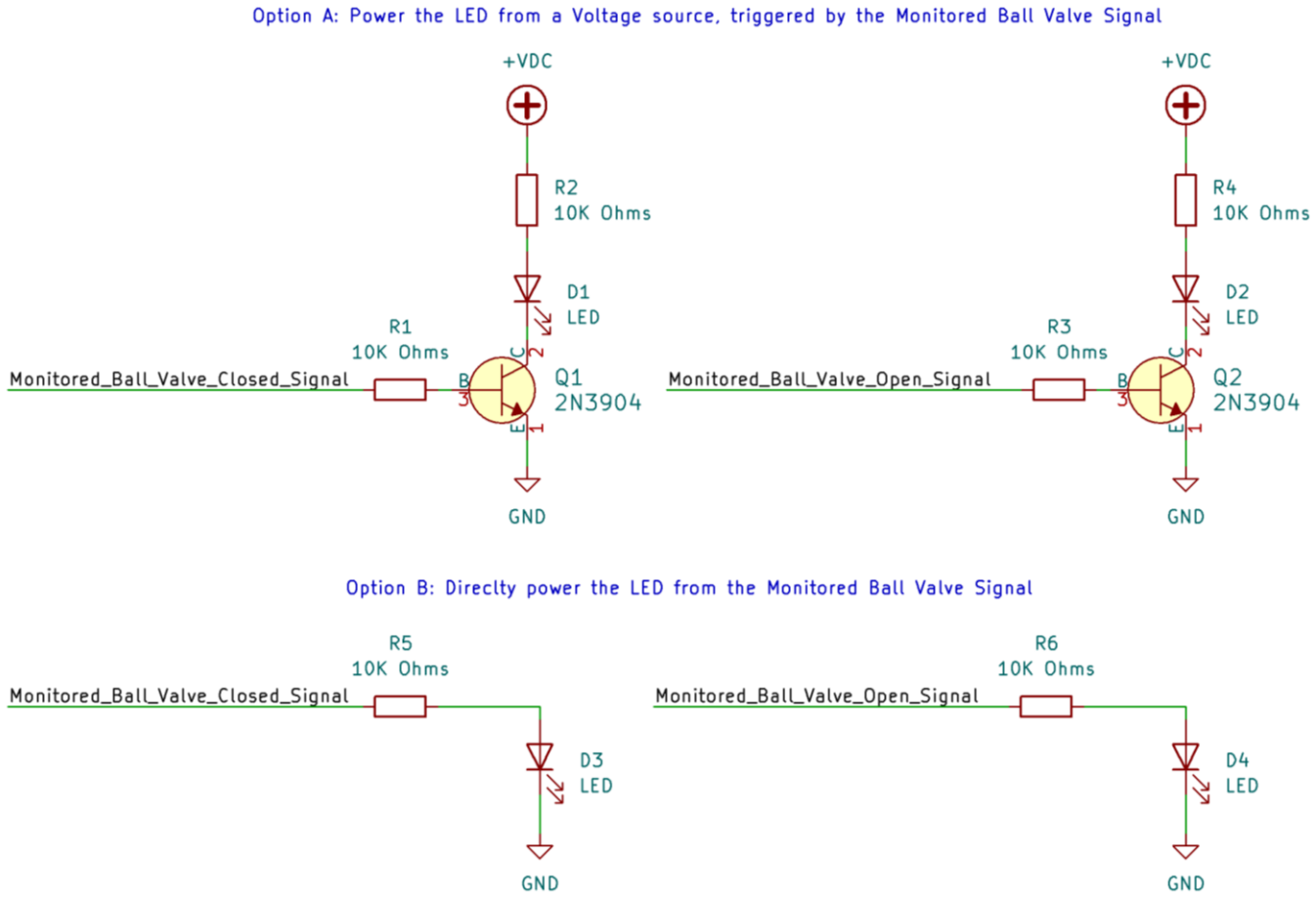


Leaders in Marine Composite Fittings

3rd Party Monitoring of Ball Valve Status:



Option A:

An LED and current limiting resistor can be wired to the collector of a NPN transistor as shown in the schematic. The signal from the Ball Valve Open and Ball Valve Closed wires can be wired into the base of the transistor. In this configuration, the transistor is acting as a switch which is turned on and off by the signals from the Monitored ball valve. Care should be taken when choosing other sizes of resistors as they dictate how much current is permitted to flow through the Transistors and LEDs and overcurrent can damage components. Our test circuit uses 10K Ohm resistors and 2N3904 NPN transistors and works with voltages from 12V to 24V.

Option B:

The signal from the Ball Valve Open and Ball Valve Closed wires can be used to directly power an LED when wired in series with a current limiting resistor. Note that depending on the location of the ball valve and lengths of wire used for the signals, the brightness of the LED can vary and altering the value of the resistor may be required to achieve the desired LED brightness. Care should be taken when choosing other sizes of resistors as they dictate how much current is permitted to flow through the LEDs and overcurrent can damage an LED.