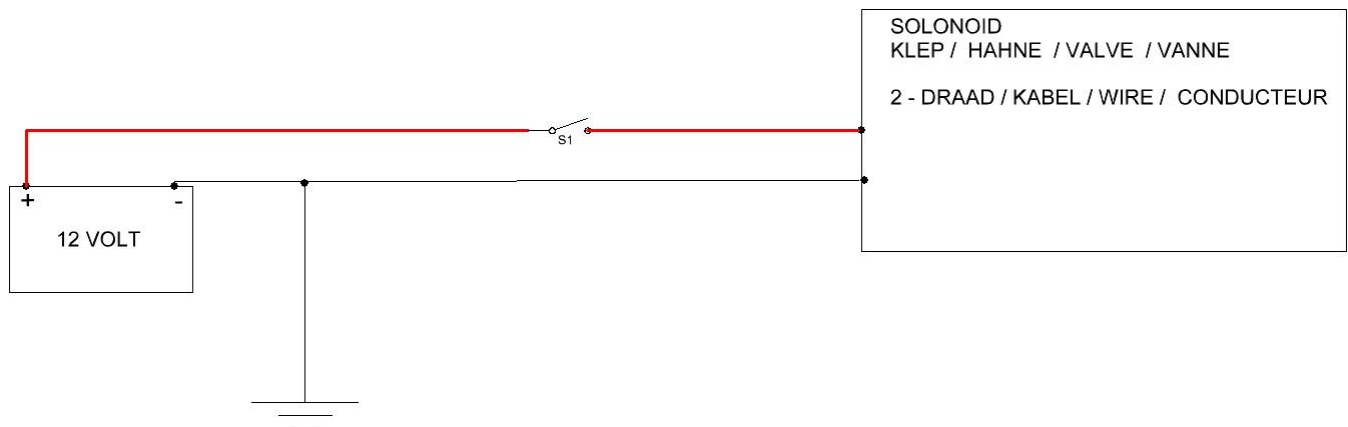


Number : 16-1004	Author : P. de Haan	UK
Group : 16-ELECTRICAL SPRAY PARTS	Version : 2015-04-24 1.21	
Subject : Overview Switching electrical valves	Type : Technical description	
Kramp partno.: 463.. , 853.. , 854...	Search : Valve, SPST ,DPDT,	

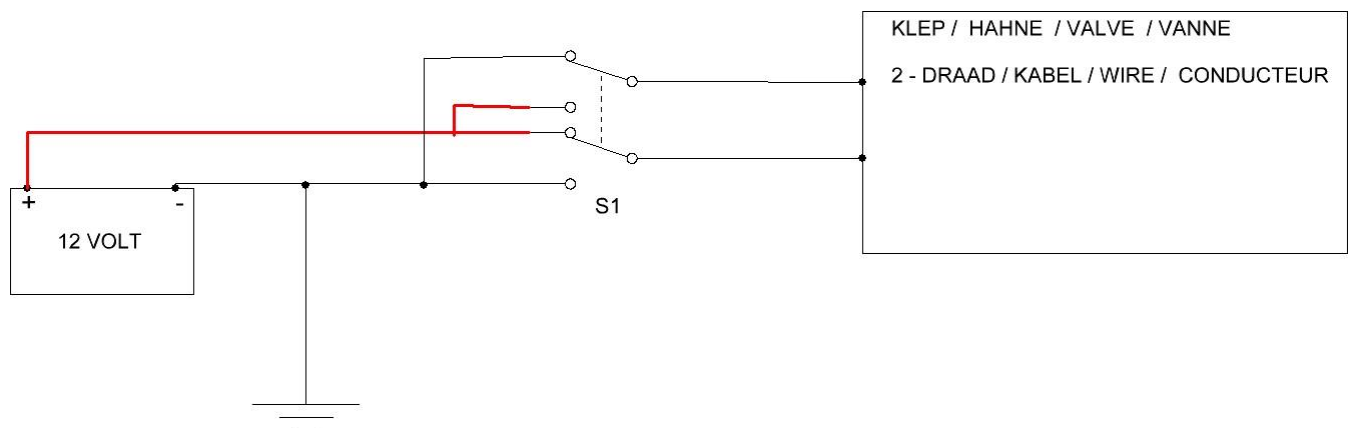
To connect sprayer valves there are several different possibilities

Depending on the used system some valves can be connected directly and some others need an extra relays to work

## SOLONOID VALVE

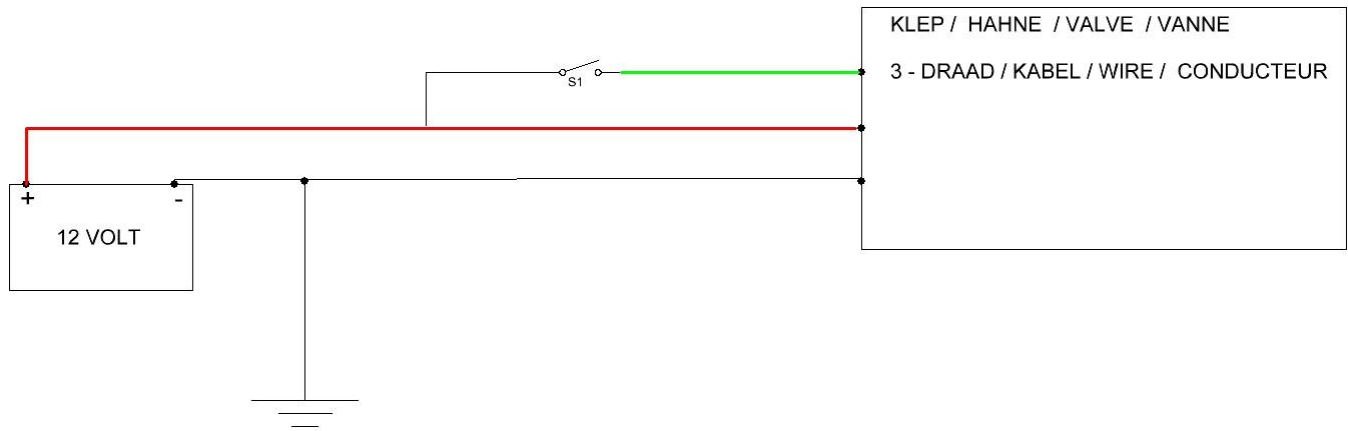


## 2 – WIRE MOTOR VALVE



When you want to open the valve, you need to switch polarity. When you reverse the polarity, the valve will close again.

### 3-WIRE MOTOR VALVE

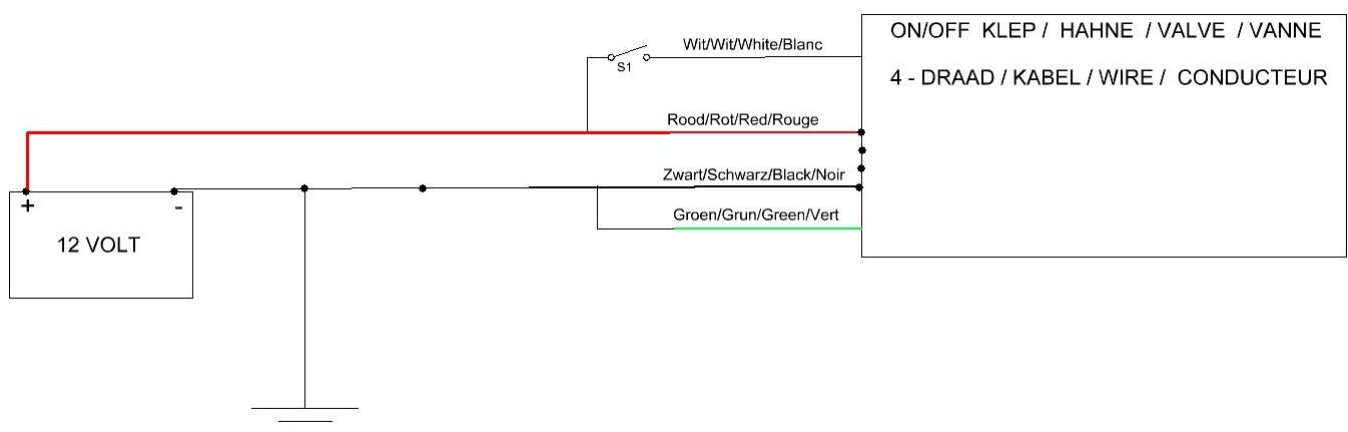


When you want to open the valve, you need to put power on the green wire

Colorcoding :

BRAND/TYPE VALVE	Power	Ground	Control
Teejet	Red	Black	White
Banjo	Red	Black	White
Arag	Red	Black	Green

### 4-WIRE MOTOR VALVE

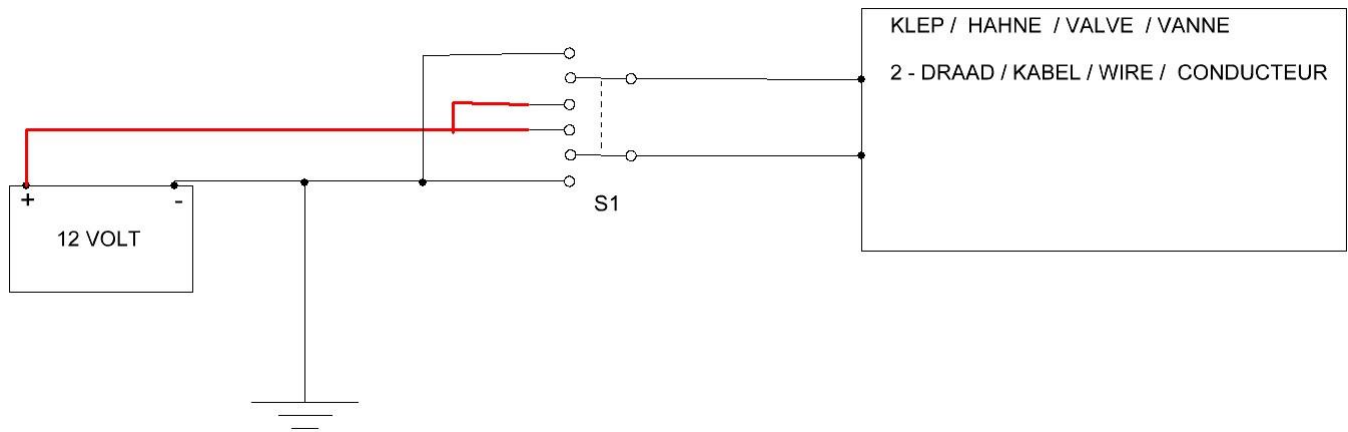


When you want to open the valve, you need to put power on the white wire

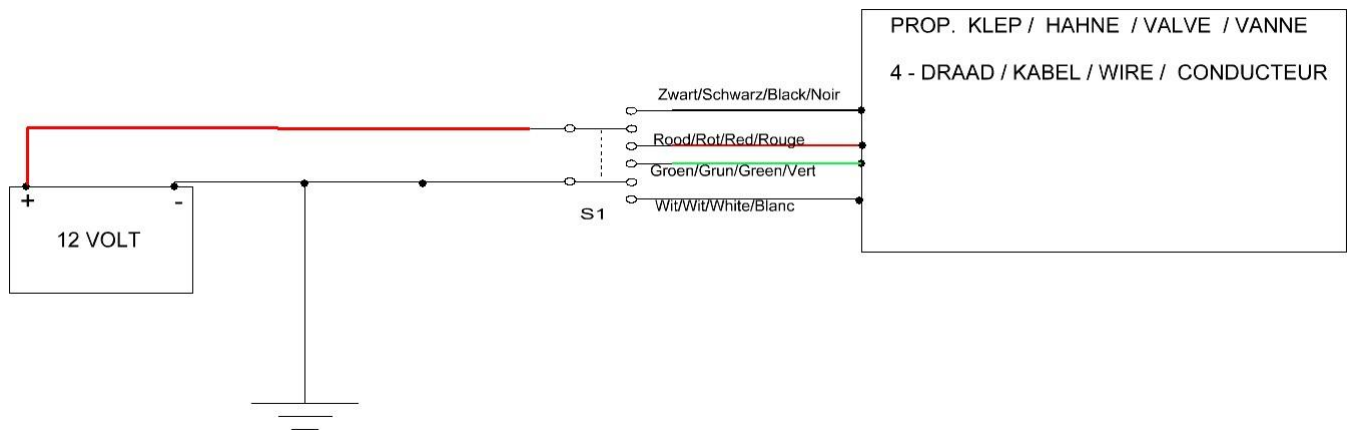
## PROPORTIONAL VALVES

These valves are used to regulate the amount of flow through these valves.  
When the switch is not operated the valve stays at his current position/opening.

## 2-WIRE PROPORTIONAL VALVE

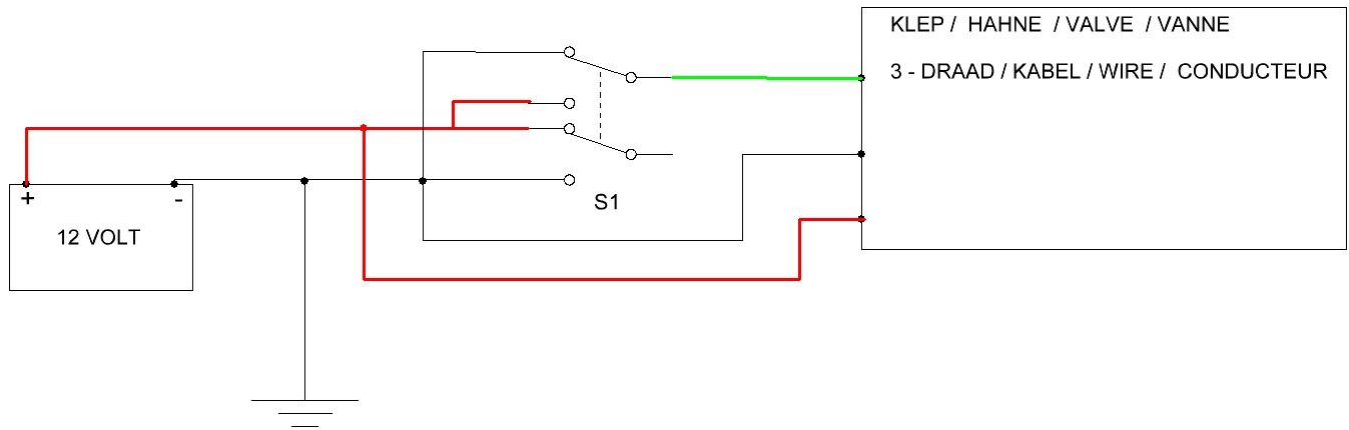


## 4-WIRE PROPORTIONAL VALVE

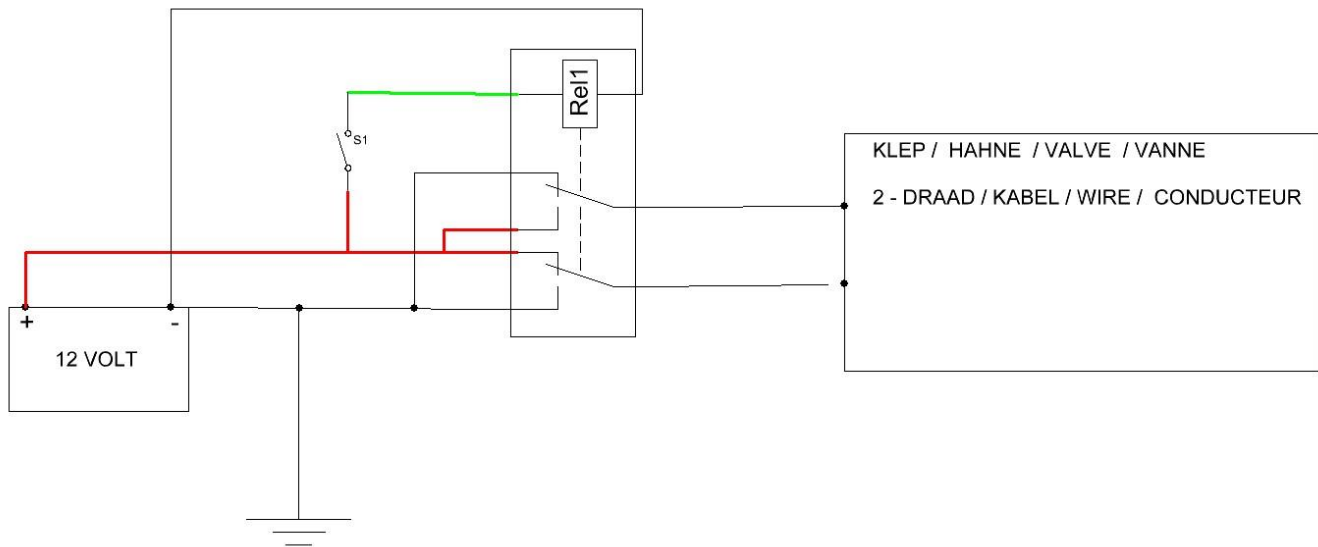


When we look at the exchange of valves on different systems, we need to be aware of the type of switching.

When a 3-way is attached to a 2-way system, there is no problem.



When a 2-way valve needs to be connected to a 3-way or solenoid operated system we need to use the following relay's circuit.



This is also the required configuration when the valve needs to be operated from more than 1 position.

The power from S1 on the green wire can come also from another switch or from a GPS switching system.

A safety diode is good to include in the system.

