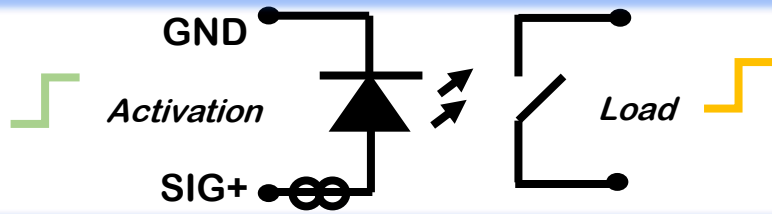


# DC Solid State Relay

# DC-SSR

# 40V-10A



DC Loads  
Switches even at 0V  
Bidirectional

$T_{on} < 50 \text{ ms}$   
 $T_{off} < 50 \text{ ms}$

Stripped Wire Connection



Jumper Wire connection.



3.3V to 12V level  
(no limiting resistor required; Directly drive from Raspberry, Arduino, Micro-controller)

Current Draw: 10-15 mA

Optical Isolation



Fused for safety

Ring Terminal Connection

Stripped Wire Connection



Approx. Current Measurement.  
 $V_{meas} = \text{Current} * (\text{Fuse resistance})$

Ring Terminal Hardware:

Nut, Bolt, Washer:  
M3 or M4 (metric)  
6-32 or 10-24 (Imperial)  
Crimp Ring: Example :  
McMaster 8429T53

Stripped Wire Connection : up to 5A  
Ring Terminal Connection : > 5A

## Operational Specs

Maximum Load Voltage : 40 V

Maximum Load Current : 10 A

Maximum Turn-on Time : 50 ms

Maximum Turn-off Time : 50 ms

Fuse : 10A

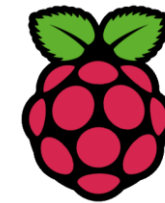
Maximum Input Signal Voltage : 12 V

Minimum Input Signal Voltage : 3 V

Maximum Current Drawn on Input : 15 mA

Great DIY Tool for

Arduino & Raspberry enthusiasts



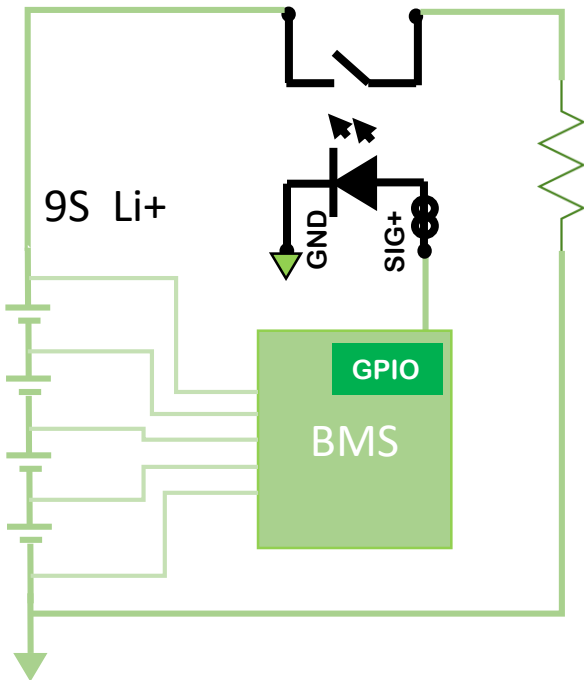
RaspberryPi

Product to be used for DIY experimental purposes only. Must not be used for mission critical applications.

Product Questions & OEM Opportunities:

info@sciencecadets.com

**Application Example :**  
Switch for Battery Management Systems

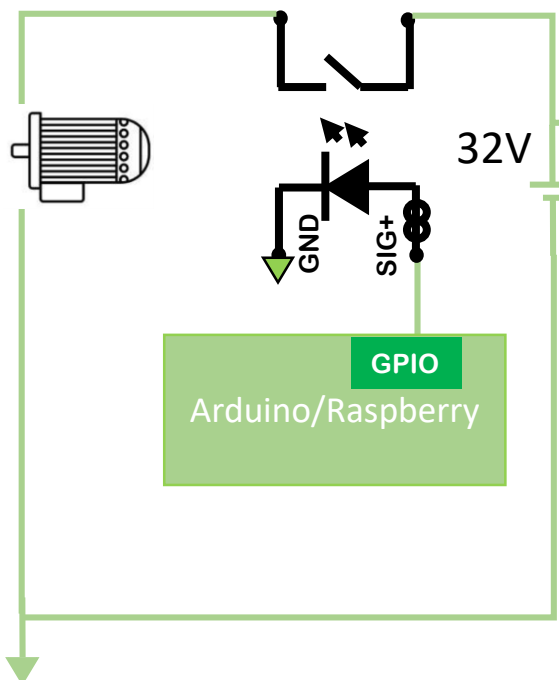


High-side switching in a BMS is a difficult problem to solve – requiring specialty chips and charge-pumps.

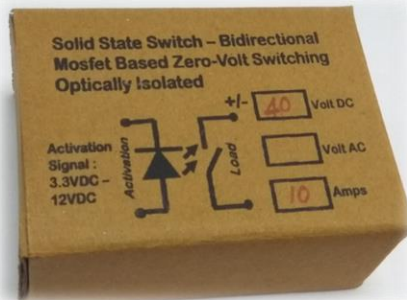
This is a dream device if you want to design your own BMS – this SSR completely disengages the power path with a signal from the micro-processor in the BMS.

*Minimal Power Loss because it is not a SCR or IGBT device – it is made from Mosfets.*

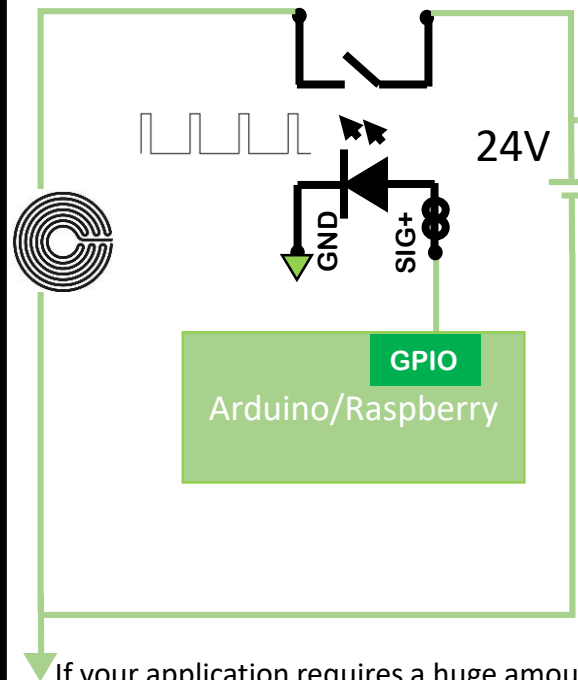
**Application Example :**  
Remote Switch for DC Motors



Your Motor line is completely isolated from the “logic line”. You don’t have to worry about electrical noise from motor disturbing your sensitive controller electronics.



**Application Example:**  
PID / PWM Control of Heater



If your application requires a huge amount of on/off cycling – such as PID control with PWM, then mechanical relays will burn out fast. This type of SSR is a good solution.



**Better Features than Mechanical Relays :**

- Long Life
- Virtually unlimited on/off cycles
- Quiet Operation
- Low Power Consumption
- No Electrical Noise
- Easy Plug in to Control Systems
- Orientation Insensitive

**Board Dimensions**

3” x 2” ; Height < 1.5”

**Mounting Hole**

Pitch: 1.75” x 2.75”  
Diameter : 5/32”

**DC-SSR 40V-10A**

