

## Micron MSW11a Electronic Switch

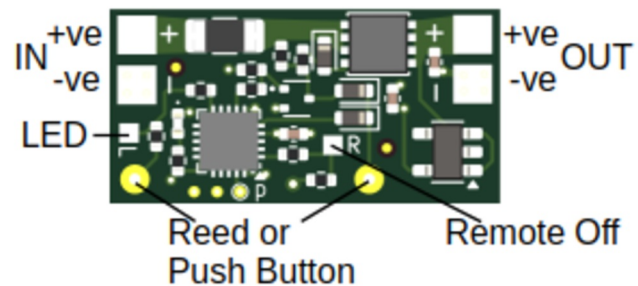
MSW11a is small self-contained electronic switch capable of handling up to 3A at a max of 13V (1S to 3S Lithium or 2 to 10 NiMH cells). The unit measures 20mm x 10mm (without connections) and can have an on-board reed switch or use a remote reed or push button. An on-board LED provides feedback of the switching action and switch state. It may also be connected to a Micron receiver LED2 output. Useful in model vehicle installations where a physical switch would be obtrusive.

A resettable fuse is mounted on the board; the default has a 2A holding current. Other fuse values are available.

### Connections

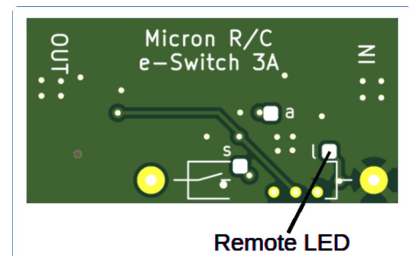
Connection pads on the MSW11a PCB are provided for:

- battery input
- switch output
- reed or push button activation switch
- LED2 input (3.3V to 5V), or 'on' indicator
- remote off (2.5V to 5V to activate)



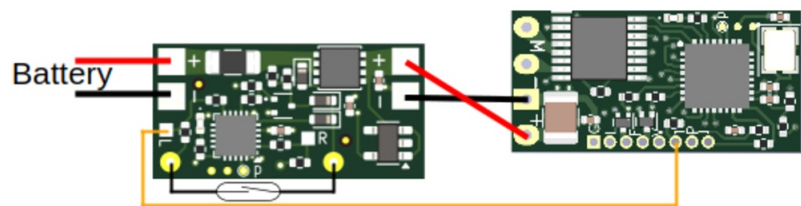
MSW11a is available as: a bare board with reed switch mounted; or without reed switch mounted (e.g. for use with a push button); and with optional input, output and charge connector wires.

A solder pad is available on the rear of the board to allow a remote LED to be connected - e.g. when using with the MSW01 remote reed board.



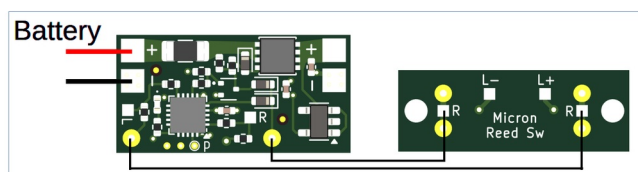
### Use with Micron Receiver

The diagram shows MSW11a used with MR601a using a reed switch and with LED2 connection to P1 on the MR601a. The Remote Off pad is not shown connected; if required this can be wired to the receiver P3 which is configured to activate (switch MSW11a off) when ch3 is low (S1 toggle down on Micron transmitters).



MSW11a may be used with MR603 provided that the peak current is kept below 3A. For average currents above 2A, MSW13a is a better choice as this can handle up to 10A.

A remote reed board is available for use when MSW11a cannot be placed in an accessible location. This is wired to the solder pads where the reed switch would normally be mounted. The remote reed board also has an LED in between the 2 reeds - this can be connected to MSW11a so that it follows the on-board LED.



## Operation

Either a magnetically operated reed switch or a push button can be used to activate MSW11a; the LED will give feedback on the status of the switch. MSW11a should be mounted so that the LED is visible - e.g. behind a grille or below the chimney on a steam loco.

The following notes assume a reed switch is used.

To switch on:

- hold the magnet near the reed
- the output will immediately switch on
- the LED will light and then start flashing after 3s
- remove the magnet

If the magnet is removed before the LED starts flashing, the output will switch off. The LED will flash briefly every 6 seconds to show that the output is still on.

To switch off:

- hold the magnet near the reed
- the LED will slow flash for 2-3s then rapid flash for 3s
- remove the magnet while the LED is rapid flashing
- the output will switch off

The output will remain on if the magnet is removed before the LED starts rapid flashing or held in place until the 3s rapid flash finishes.