



## Semaphore Decoder



### Introduction

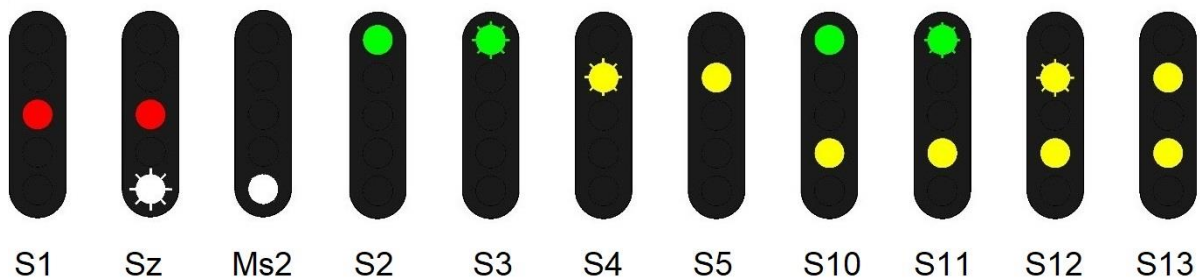
This Accessory Decoder is designed for controlling light semaphores on the Model Railroad. The controller can work in analog or DCC mode.

In the analog mode, switching works by using an external toggle switch with a resistor ladder.

**Note: The SET external button is used to applying a specified signal. The RESET external button is used to quickly returning from a specified signal to S1 (STOP) by using**

**Signals:** - S1, S2, S3, S4, S5, S6, S7, S8, S9, Sz and Ms2

With special strip: S6 - S9, S10a - S13a



### Features:

Power supply - directly from the DCC bus (switchboard or tracks)

In DCC mode the controller works as an accessory decoder (crossovers)

Simple programming - the decoder "learns" the base address.

Dimensions approx. 50x50mm

The Decoder can handle several semaphores by displaying the same signal.

Common "+" for semaphore LEDs.

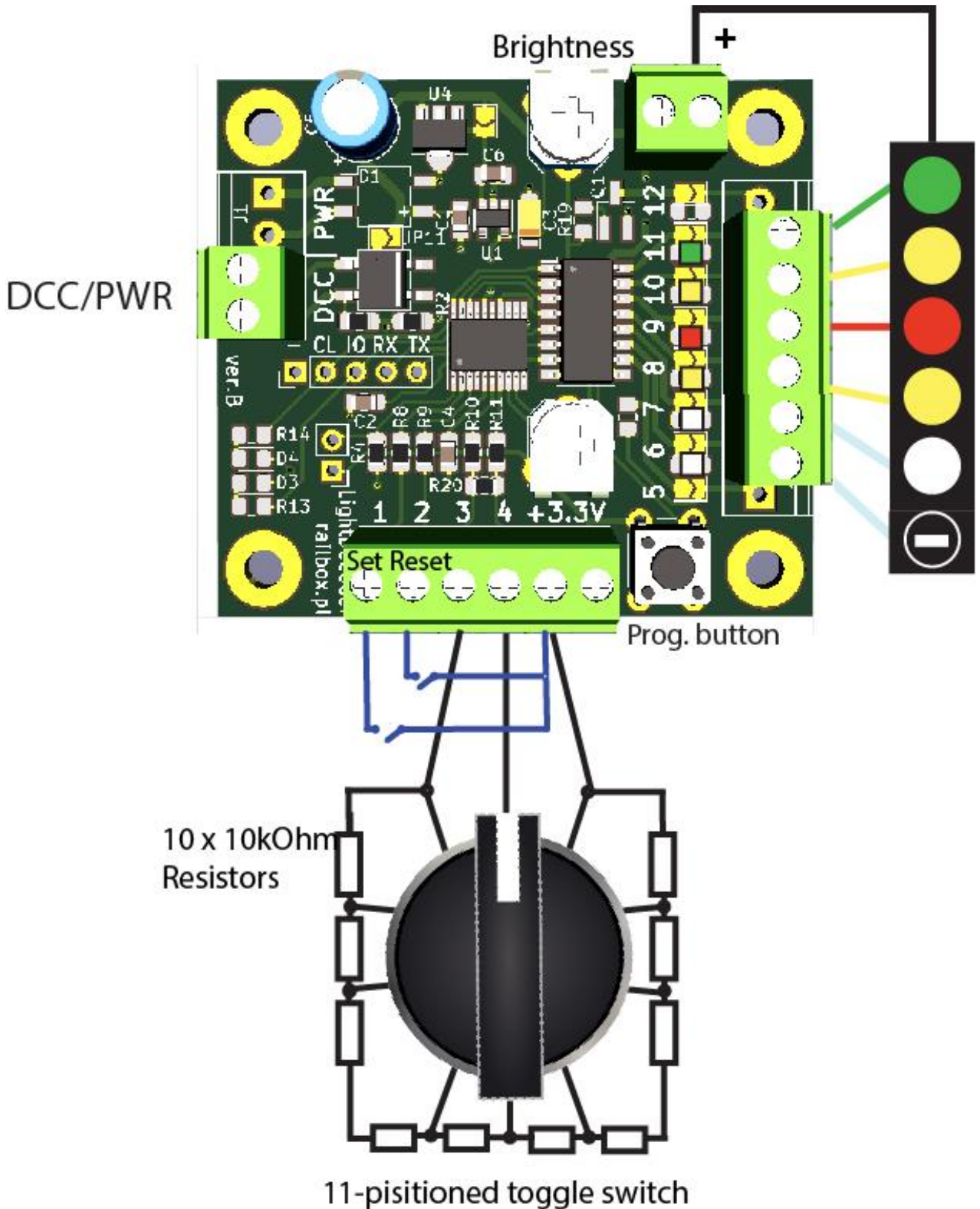
### Electrical specification

- DCC Input: AC/DC 0-20V



- LED Output voltage is equal DCC Input (max 50 mA)

Connection





Configuring module DCC address

To configure module DCC address User should repeat the following steps:

- Press and hold the programming button
- Send from the command station the accessory command with required address three times: on/off/on. After that module should start performing the base address action.
- Release the programming button.

**List of available actions using Manipulator (DCC Accessory Mode):**

- Base address(off): Signal S2,
- Base address(on): Signal S3,
- Base address+1(off): Signal S4,
- Base address+1(on): Signal S5,
- Base address+2(off): Signal S10,
- Base address+2(on): Signal S11,
- Base address+3(off): Signal S12,
- Base address+3(on): Signal S13,
- Base address+4(off): Signal Sz,
- Base address+4(on): Signal OFF,
- Base address+5(off): Signal Ms2
- Base address+5(on): Signal S1
- Base address+6: State of an additional strip (Signals S6-S9, S10a-S13a).

**Main Configuring table**

CV	Value	Default value	Description
44	0..255	255	Maximum brightness output 11
45	0..255	255	Maximum brightness output 10
46	0..255	255	Maximum brightness output 9
47	0..255	255	Maximum brightness output 8
48	0..255	255	Maximum brightness output 7
49	0..255	255	Maximum brightness output 6
68	0..255	10	Lamp mode switching time 1 ( * 10ms)
98	0..11	11	Common signal1: 0 – S2, 1 – S3, 2 – S4, 3 – S5, 4 – S10, 5 – S11, 6 – S12, 7 – S13, 8 – Sz, 9 – OFF, 10 – MS2, 11 – S1
99	0..255	0	Common signal1 DCC address: Set here the DCC address of which the signal from CV 98 will be set. Note: some DCC central stations may send accessory DCC address, which differ by 4. So if you see no actions try to send (address+4) or (address-4).
100	0..11	11	Common signal2 (Same as signal1)
101	0..255	0	Common signal2 DCC address