

Set up and connect the slot sensor module

Special version for analog racetracks

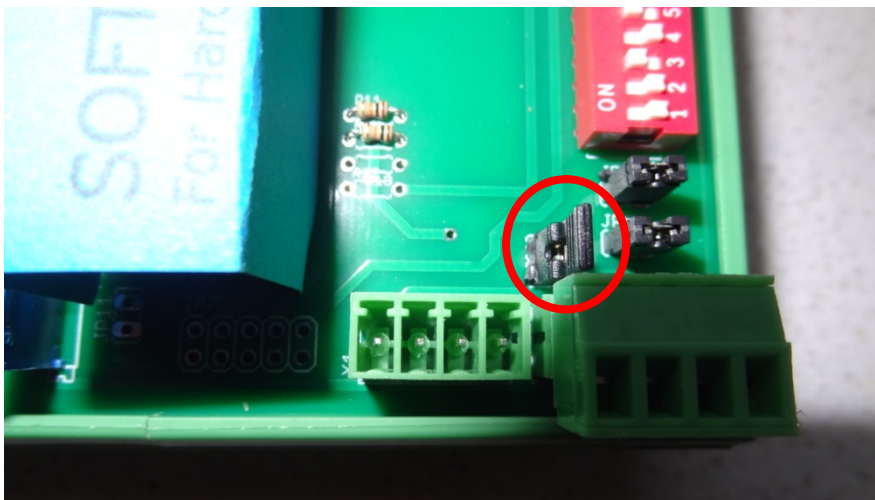
Standard slot sensor module:

2x slot sensor connectors

6x Outputs suitable for switching up to 50mA

Power is supplied via a USB-C port (5V)

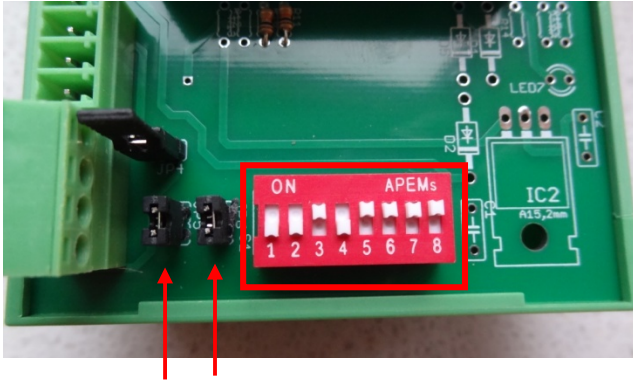
The slot sensor is connected to connector X1 or X2. This second connector allows you to connect a slot sensor to both this slot sensor module and a USB box and/or Arduino (32/15) I/O card (in parallel).



J1 must then be removed!

Depending on the application, the sensors are mounted next to each other in a track section (see photo).



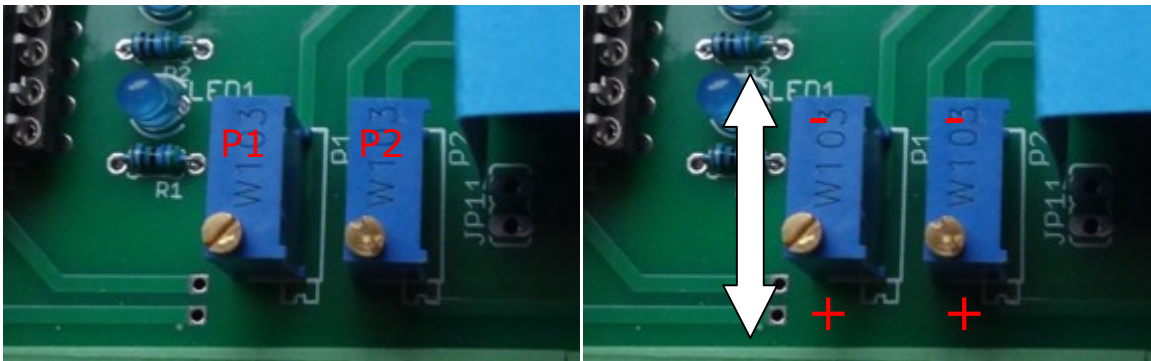


Dipswitch:

- S1 = External 124/ 132, on/ off
- S2 = External release on/ off
- S3 = Duration or on/off control
- S4 = No function
- S5 = Time setting 100 mS
- S6 = Time setting 200 mS
- S7 = Time setting 400 mS
- S8 = Time setting 800 mS

Jumpers (2x) are required if pull-up resistors are not yet installed on the Slot sensor output.

- P1** = Variable time setting for outputs 1 and 3 (S1 = On)
- P2** = Time setting for output 6



- S1** = External 124/132 on/off
- Off** => 132 fixed adjustable time (S5...S8)
- On** => 124 variable with **P1** in combination with S5...S8 (100 mS...8000 mS)

- S2** = External enable on/off
- Off** => External control possible to block outputs 1...6
- On** => No blocking

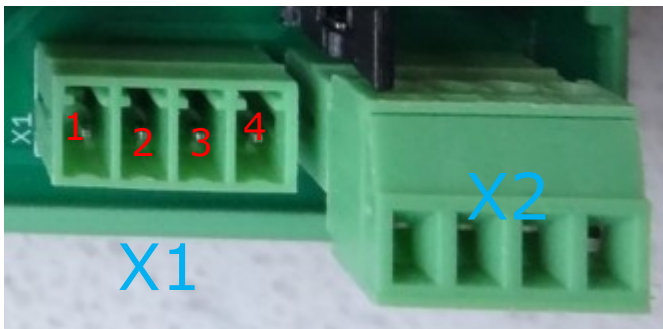
- S3** = Duration or On/Off control
- Off** => Duration on => After activation of Slot sensor A or B, outputs 1 and 4 are activated until the set time is reached. Outputs 2 and 4 are activated for 100 mS, outputs 3 and 6 are deactivated for 100 mS.
- On** => On/Off => Slot sensor A activates the corresponding output, Slot sensor B deactivates the corresponding output.

S4 = no function

Connecting the 5V power supply:

Connect a standard USB-C power supply to the connector. Be careful when connecting, as it may break.

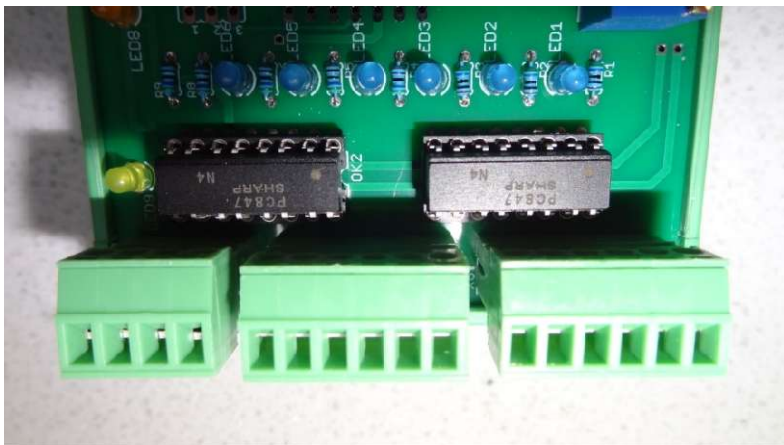
Connecting the two Slot sensors:



from left to right for both

- 1 = +
- 2 = Sensor A
- 3 = Sensor B
- 4 = - (ground)

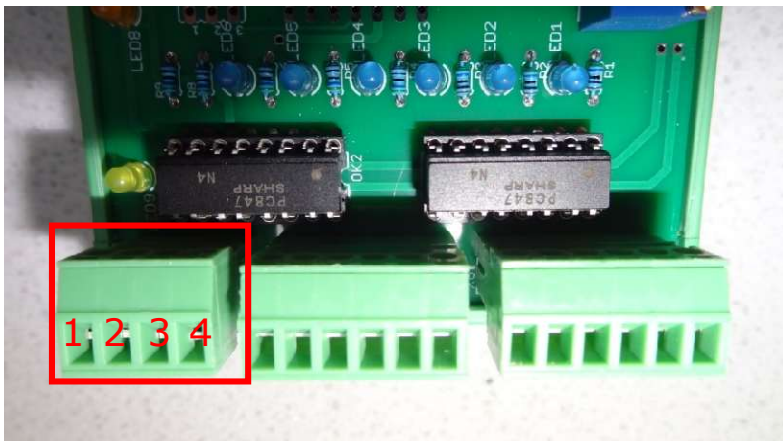
Connecting the 6 outputs:



from left to right output 1...6

Each output has 2 connections, which can be connected to the **PWM controller analog**.

Connecting the 2 inputs (function S1 and S2):



from left to right

- 1 = + 5V
- 2 = Select 132/ 124
- 3 = Enable outputs 1...6
- 4 = - (ground)

To activate the input, connect terminals 2 and/or 3 to terminal 4 (Ground).

Installing the Slot sensors:

If you purchased the Slot sensors separately, they must be mounted next to each other or one behind the other, depending on the application, with the necessary space between them.

To install the Slot sensor, a slot must be milled in the underside so that the sensor can be placed in this slot. The positioning is not critical and can even be done on curved sections of track.

S5...S8 see table

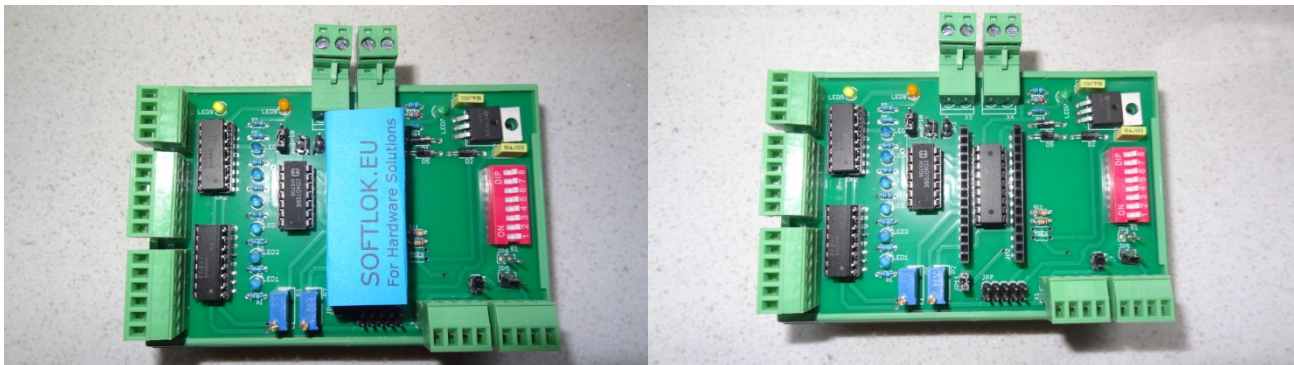
S5...S8 time setting between 100...1600 mS.				
S5	S6	S7	S8	Time (mS)
Off	Off	Off	Off	100
ON	Off	Off	Off	200
Off	ON	Off	Off	300
ON	ON	Off	Off	400
Off	Off	ON	Off	500
ON	Off	ON	Off	600
Off	ON	ON	Off	700
ON	ON	ON	Off	800
Off	Off	Off	ON	900
ON	Off	Off	ON	1000
Off	ON	Off	ON	1100
ON	ON	Off	ON	1200
Off	Off	ON	ON	1300
ON	Off	ON	ON	1400
Off	ON	ON	ON	1500
ON	ON	ON	ON	1600

Jumpers:

- J1 = Power supply external or via USB-C
- J2 = Power supply for sensors A & B 5V or external
- J3 = Pull-up resistor for slot sensor A
- J4 = Pull-up resistor for slot sensor B
- J5 = D13 as output (removed by default)
- J6 = Output 7 active when outputs 1-6 are active, output 8 has no function
- J7 = Debug on/off (removed by default)

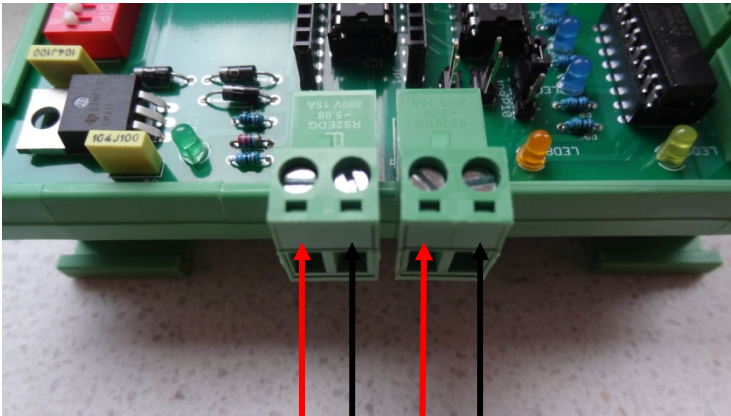
Extended slot sensor module:

- 2x slot sensor connections
- 6x Outputs 1-6 suitable for switching max. 50mA
- 6x Outputs 1-6 suitable for switching max. 2.0A
- 1x output as a shared output (for max. 2.0A) for outputs 1-6
- Power is supplied via an external unit (e.g., a Carrera transformer)



Extensive Slot sensor module with the option to connect a relay module.

Connecting the 9-15 V power supply:



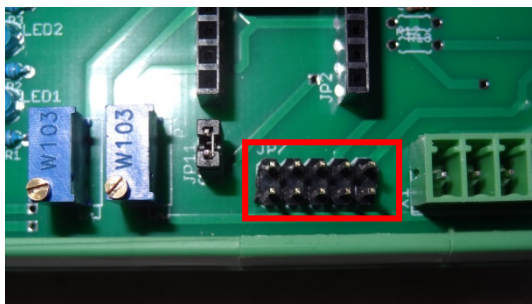
A dual power connection allows for easy looping to the next module.

The connection is protected against incorrect (+/-) connection swapping..

Red arrow = +
Black arrow = -

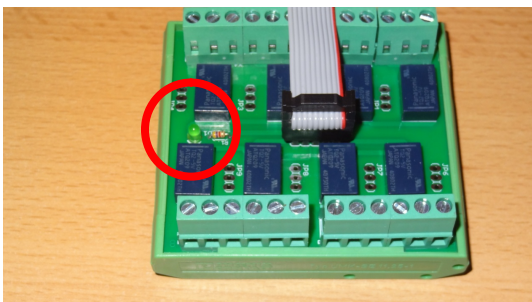
Once the power supply is properly connected, the **green LED** will light up.

Connecting the relay module:



This is connected to the PCB header using a 10-pin flat cable (included with the relay module).

Pin number 1 is at the top left.



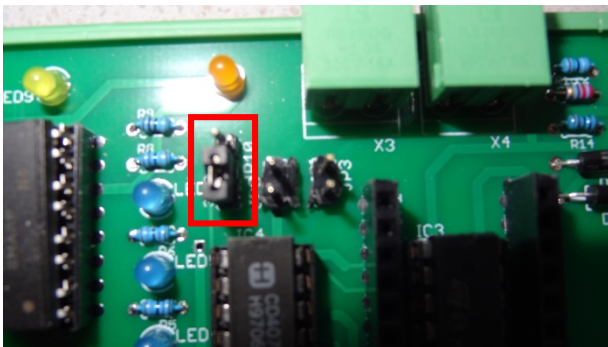
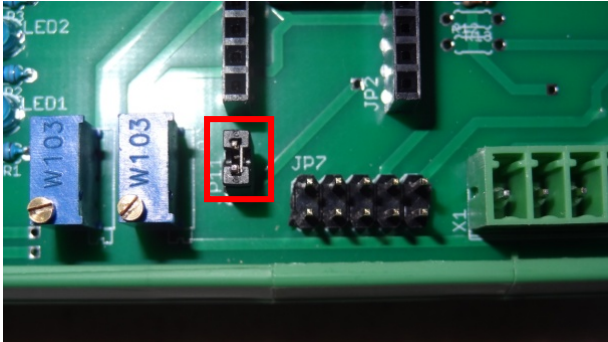
If the cable is connected correctly, the **green LED** on the relay module will light up.

Note: Connecting multiple Slot sensors to a single input is not possible.

Additional jumper settings:

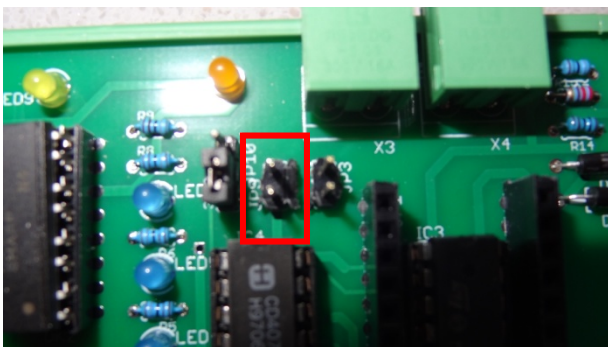
Next to the pin header for the relay module is a jumper. This must be present when the 9-15 V power supply is connected, instead of via USB-C.

USB-C must not be connected in this situation!

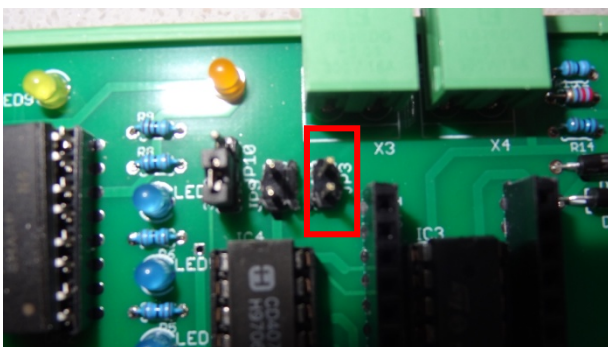


This jumper also switches relay 7. Relay 7 becomes active when outputs 1...6 are activated.

In the photo, relay 7 is not activated by outputs 1...6.



This jumper must not be installed!
(It has no function in this application.)



This jumper allows you to control the outputs (**blue LEDs**) of the Slot sensor module. As soon as the Slot sensor module is powered (jumper inserted), outputs 1-6 light up one by one (5 seconds on, 0.5 seconds off).

Remove the jumper for normal operation!