

Setting up and connecting the ID Reader

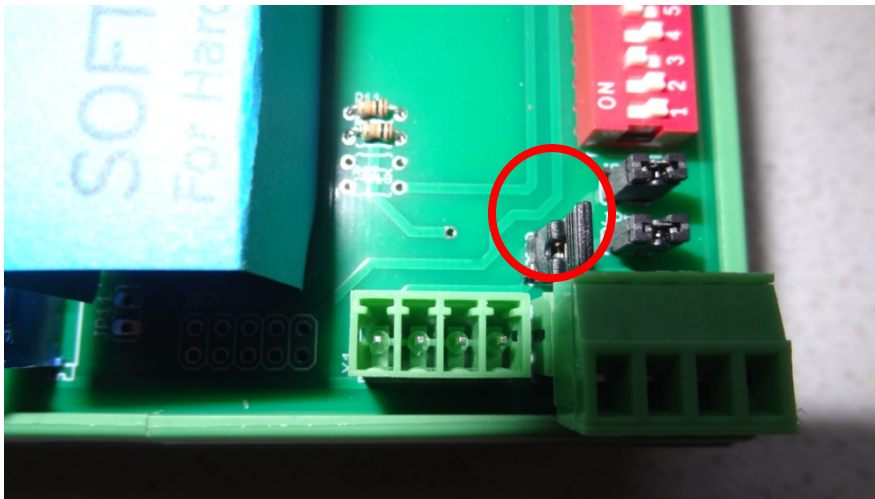
Standard ID Reader:

2x IR Sensor connectors

6x Outputs (ID 1...6) sOffable for switching up to 50mA

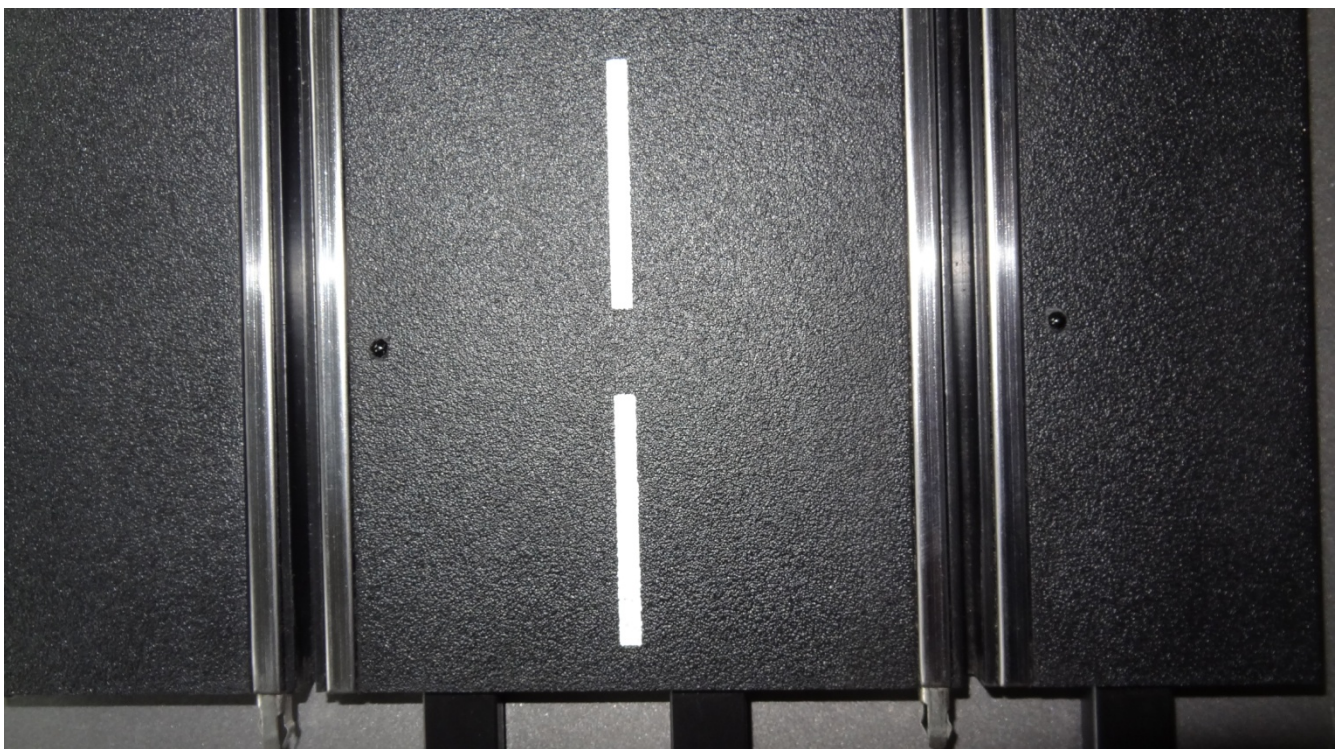
Power is supplied via a USB-C port (5V)

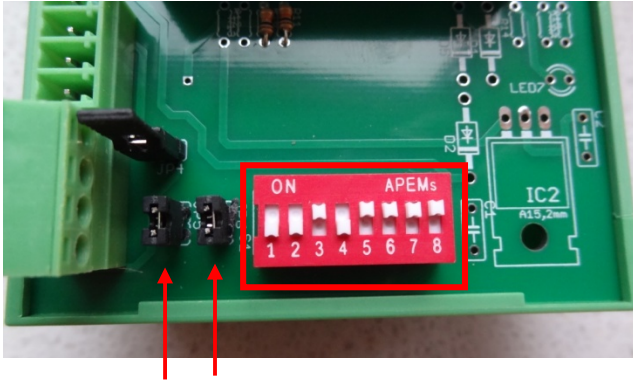
The IR Sensors are connected to connector X1 or X2. This second connector allows you to connect an IR Sensor to both this ID Reader and a USB Box and/or Arduino (32/15) I/O card (in parallel).



J1 must then be removed!

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





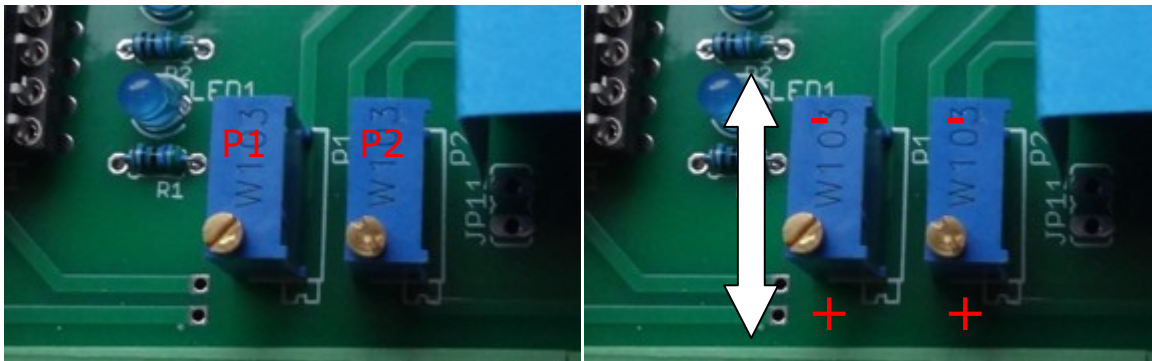
Dipswitch:

- S1 = External 124/ 132, on/ ff
- S2 = External release on/ off
- S3 = Duration or on/ off control
- S4 = Pace Car / Polishing station *
- S5 = Time setting 100 mS
- S6 = Time setting 200 mS
- S7 = Time setting 400 mS
- S8 = Time setting 800 mS

Jumpers (2x) are necessary if no pull-up resistors have yet been mounted on the output of the IR sensor.

P1 = Variable time setting for ID 1...6 (S1 = On)

P2 = Time setting for ID 8 (S4 = Pace Car) or ID 1...6 (S4 = Polishing Station))



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 (ID 1...6)

On => No blocking

S3 = Duration or On/Off control

Off => Duration on => After activating IR Sensor A or B, the corresponding output becomes active until the set time is reached.

On => On/Off => IR Sensor A activates the corresponding output, IR Sensor B deactivates the corresponding output.

S4 = Pace Car / Polishing Station*

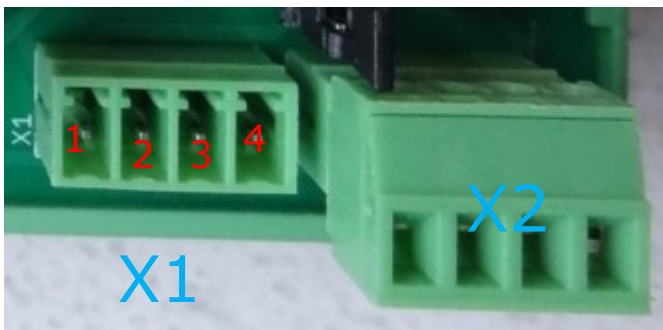
Off => Pace Car, output 8 (only possible via relay) is assigned to ID-8

On => Polishing Station, output 8 (only possible via relay) is assigned to ID-1...6

Connecting the 5V power supply:

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

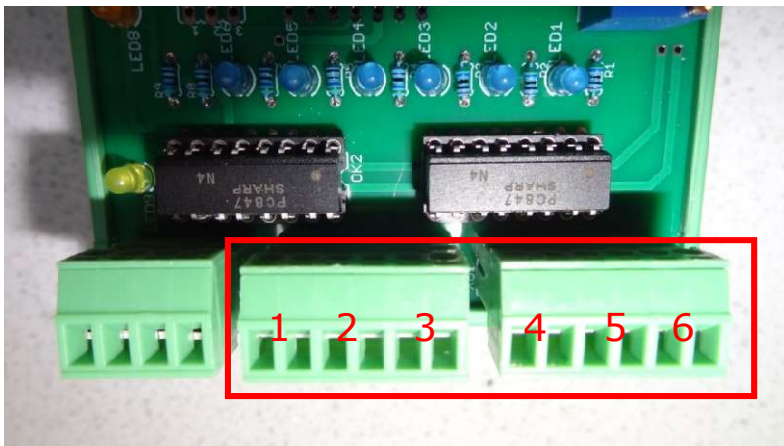
Connecting the 2 IR Sensors:



from left to right for both

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

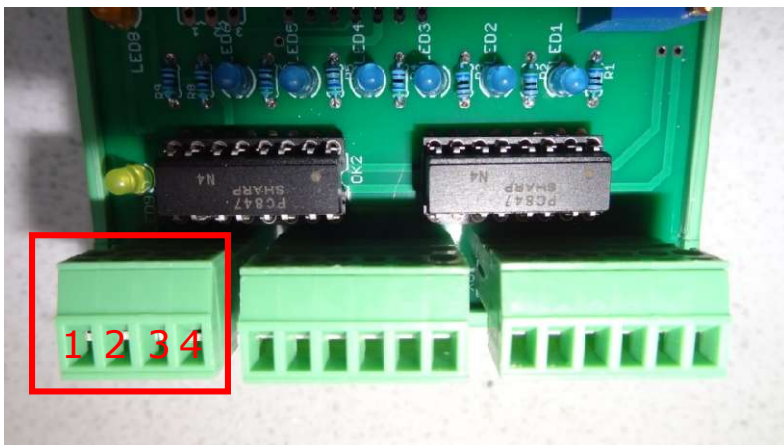
Connecting the 6 outputs:



from left to right ID1... ID6

Each ID has 2 connections, which can be connected to the Dual Speed Controller (External DRS Control)

Connecting the 2 inputs (function S1 and S2):



from left to right

- 1 = + 5V
- 2 = Select 132/ 124
- 3 = Release output 1...6
- 4 = - (mass)

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

*** S4 has no function in the standard ID Reader.**

Mounting the IR Sensors:

If you purchased the IR Sensors separately, they still need to be mounted next to each other or one behind the other, depending on the application, with the necessary space between them.

The IR Sensor has a marking hole, making it very easy to determine the exact location. This ensures that each sensor is placed at the correct distance from the lock. It is also important that the IR Sensor is placed as far away from a bend as possible, because if a car drifts, the IR Sensor will not be detected.

A distance of approximately 30 cm after a bend is usually sufficient.

S5...S8 see table

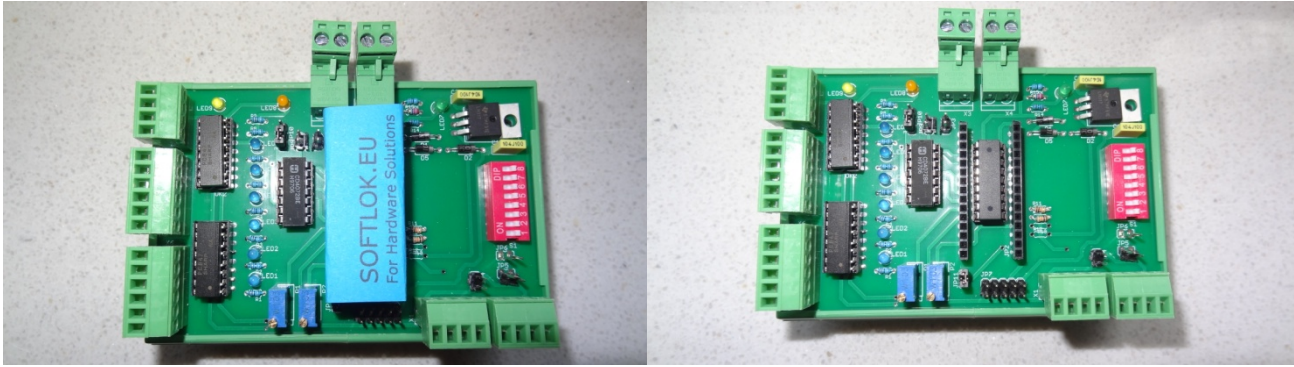
| S5...S8 time setting between 100...1600 mS. | | | | |
|---|-----------|-----------|-----------|-----------|
| S5 | S6 | S7 | S8 | Time (mS) |
| Off | Off | Off | Off | 100 |
| On | Off | Off | Off | 200 |
| Off | On | Off | Off | 300 |
| On | On | Off | Off | 400 |
| Off | Off | On | Off | 500 |
| 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 externally or via USB-C
- J2 = Power supply for sensors A & B 5V or externally
- J3 = Pull-up resistor for Sensor A
- J4 = Pull-up resistor for Sensor B
- J5 = D13 as off-output (removed by default)
- J6 = Off-output 7 ID 1...6 or also ID 8 (only required with an external relay module)
- J7 = Debug On/Off (removed by default)

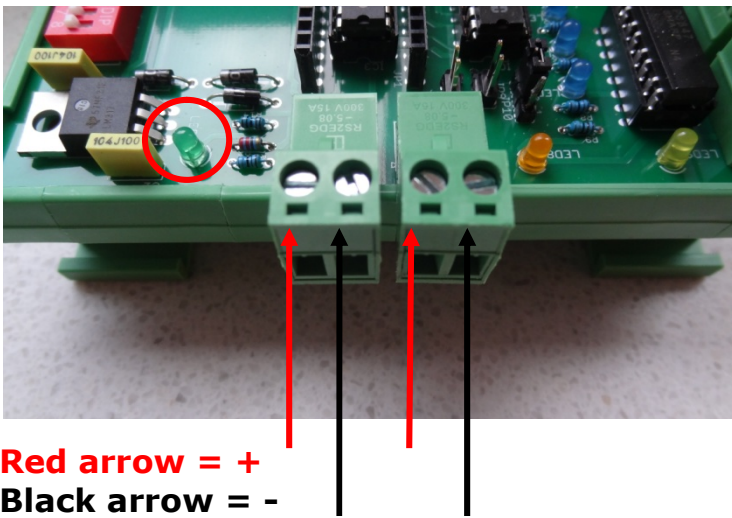
Extended ID Reader:

- 2x IR Sensor connections
- 6x Outputs (ID 1...6) suitable for switching up to 50mA
- 7x Outputs (ID 1...6 & 8) suitable for switching up to 2.0A
- 1x output as a shared output(up to 2.0A) for ID 1...6/8
- Power is supplied via an external unit (e.g., a Carrera transformer)



Extensive ID Reader with the option to connect a relay module.

Connecting power 9-15 V:



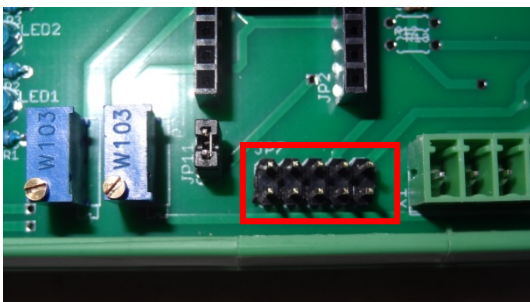
A dual power connection allows for easy looping to the next module.

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

Red arrow = +
Black arrow = -

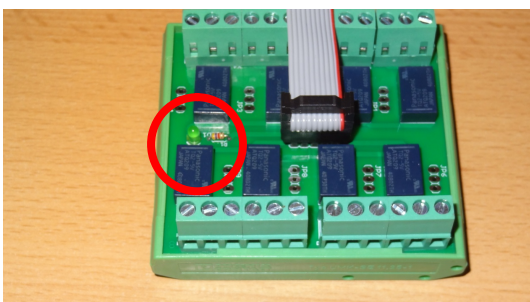
Once the power supply is properly connected, the **green LED** will light up.

Connecting the relay module:



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

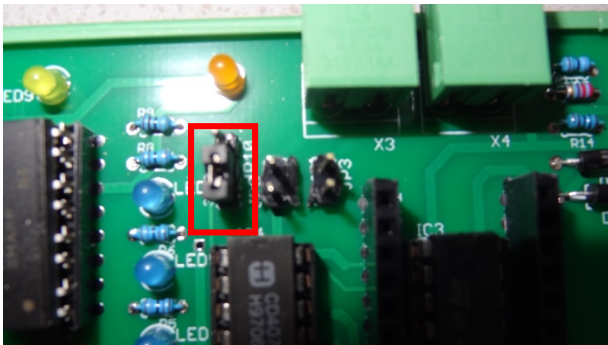
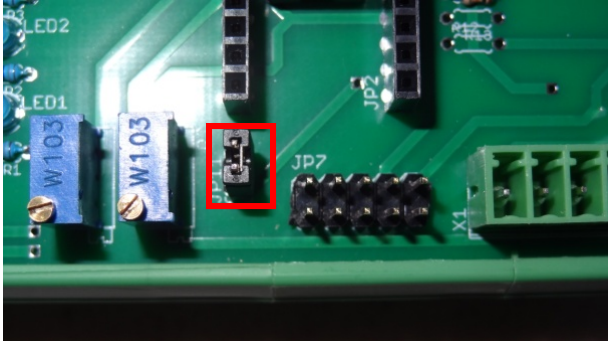
Pin number 1 is at the top left.



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

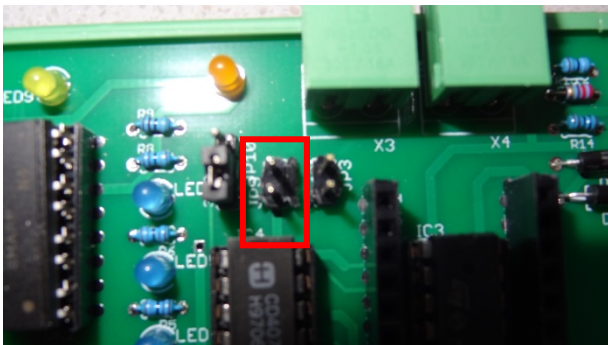
Additional jumper settings:

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 should not be connected in this situation.



This jumper selects whether ID-8 also switches relay 7. Relay 7 is activated when IDs 1...6 are read.

In the photo, relay 7 is also activated when ID-8 is read.



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

