IMPORTANT ! please read the whole manual before connecting the motors and external power supply.

SOLENOID can drive four solenoid motors. Motor driving circuitry and CV input circuitry are optically isolated without any ground connection. This avoids any possible noise or power transfer between the motors and the modular circuitry. Therefore it requires an external 12V-24V DC power supply for driving the motors. The power supply voltage should match the recommended power supply voltage of the solenoids. We recommend to use 12V solenoids.

instruction

First, connect the module to the bus board of your modular. Power up the modular and then connect the power supply for the motors. Connect some trigger signals to the trigger inputs. Now the LEDs for every output should be indicating that there is already a motor driving signal present. Connect the solenoid to its socket briefly to check whether it is working. If not, disconnect the power supply for the motors immediately! After a while of using the solenoids, please check that they are not overheating. If they are - turn down the output pulse width knob or check if they are not specified for lower voltages.

The module has four channels: A, B, C and D. They have identical driving circuitry. The power supply is shared by all channels.

❶ The power input jack has a standard 2.1mm power plug with center-positive polarity. I.e. "+" is in the middle, surrounded by "-". The voltage should be 7.5 - 12 V DC. Please make sure that no part of the motor power supply is touching the metallic front panels of another module. This would connect the grounds and noise transfer could be occur. The power supply for the motors provide give at least 1A, but the final current consumption depends on the type of motors used! We highly recommend to use modified PC power supplies that are protected. Please see www.bastl-instruments.com for more details.

❷ The solenoid output connectors are standard power plug with 2.1mm center pin. The polarity of most solenoids doesn't really matter. Once there is current flow they trigger. Please connect each solenoid one by one to the connector that is already being triggered and check if it is moving. If not, disconnect it immediately and look for mechanical or electrical connection problems.

❸ The trigger input sockets react to standard 0-5V trigger signals. On the rising edge of the pulse, the output pulse for the solenoid is generated.

❹ The output pulse width knob adjusts how long the output pulse for the solenoid is. Depending on how long you drive the solenoid, it can hit the object with more or less power. The knob can be therefore used for adjusting the dynamics. Most solenoids are limited by the amount of time they can be turned ON so that they don't overheat. Usually it is less than 50% of ON time. The module takes care of having the motors turned off for at least 50% of the operating time. If the motors start to overheat, please turn down the output pulse width knob.

❺ Expander socket for intended for individual CV control of output pulse width.

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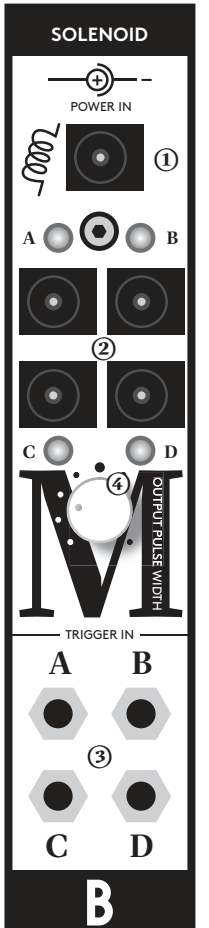
QUAD TRIGGER TO SOLENOID MOTOR DRIVER



B

Solenoid

technical details

- 5HP
- PTC fuse and diode protected 16pin power connector
- requires 5V in the bus
- 50mm deep
- current consumption: +5V: <30mA

features

- four channel solenoid motor driver
- CV circuitry and motor circuitry are optically isolated
- external power supply for motors required
- motors are driven directly from external power supply
- trigger input per channel
- Output pulse width knob applies to all channels

Connecting module to your system

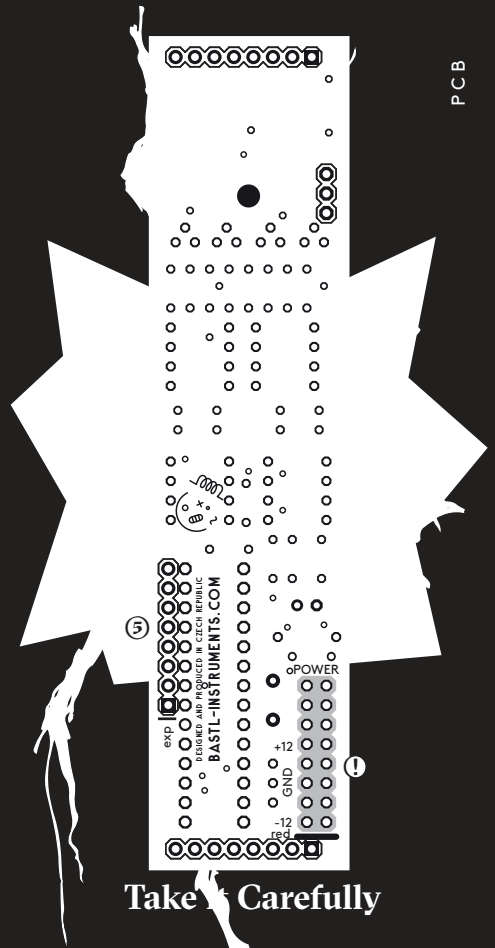
Before connecting the ribbon cable to this module disconnect your system from power !

Double check the polarity of the ribbon cable and that it is not shifted in any direction. the red cable should match the -12V rail both on the module and on the bus board !

please make sure of the following

- you have a standard pinout eurorack bus board
- you have +5, +12 and -12 power rails on that bus board
- the power rails are not overloaded

Although we put protection circuits in the device, we do not take any responsibility for damages caused by wrong power supply connection.
After you connected everything, double-checked it and closed your system, so no power lines can be touched by hand, turn on your system and test the module.



Take it Carefully

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#ALL

www.bastl-instruments.com