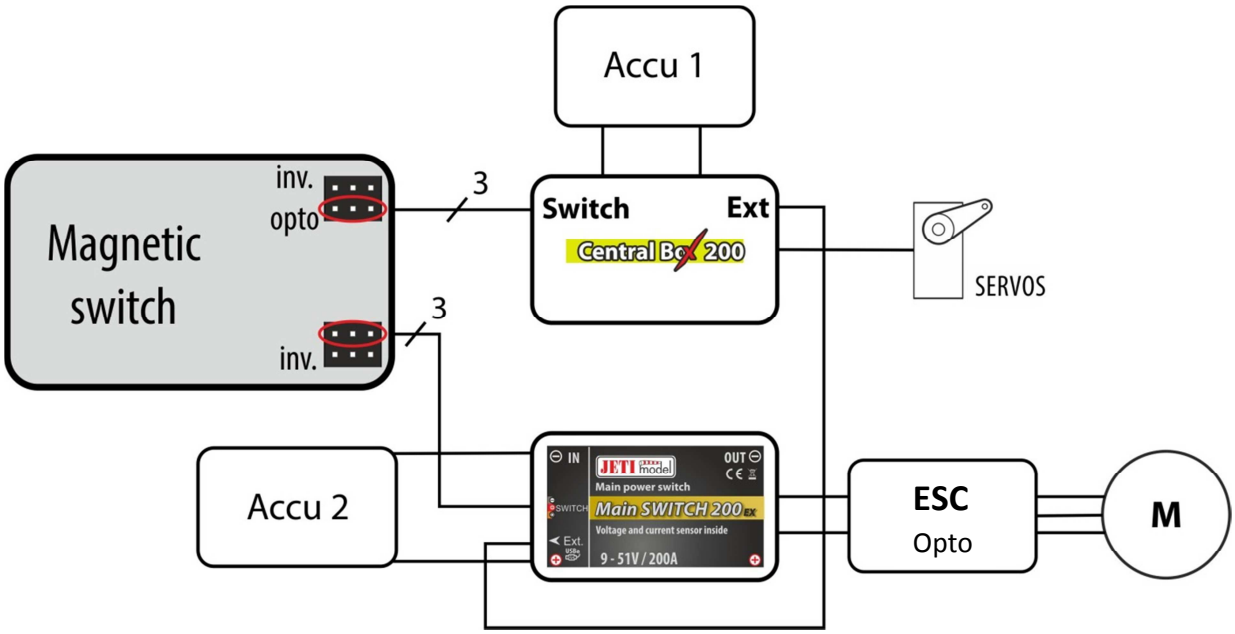
# 1. Introduction

The Magnetic switch is an electronic switching device designed to be used as a switch for JETI model products. A big advantage of electronic switches in comparison to mechanical switches is that, in general, electronic switches are highly resistant to vibration. Also, virtually an unlimited number of ON and OFF cycles is guaranteed with an electronic switch. Because electronic switches have no mechanically movable elements, contacts etc. to wear out, an extremely long service life is another important feature. Unlike with mechanical switches, electronic switches cannot be unexpectedly or falsely tripped.

The Magnetic switch's trigger pad is designed for installation on an aircraft fuselage. The system is switched on and off using a special magnet (see chapter 3).

# 2. Connection

The Magnetic switch has 4 outputs that can be connected via three-wire cable with JR connector. The outputs are divided into two pairs, one pair of outputs is electrically isolated (using an opto coupler). Each pair of outputs has a single non-inverted output and a single inverted output.



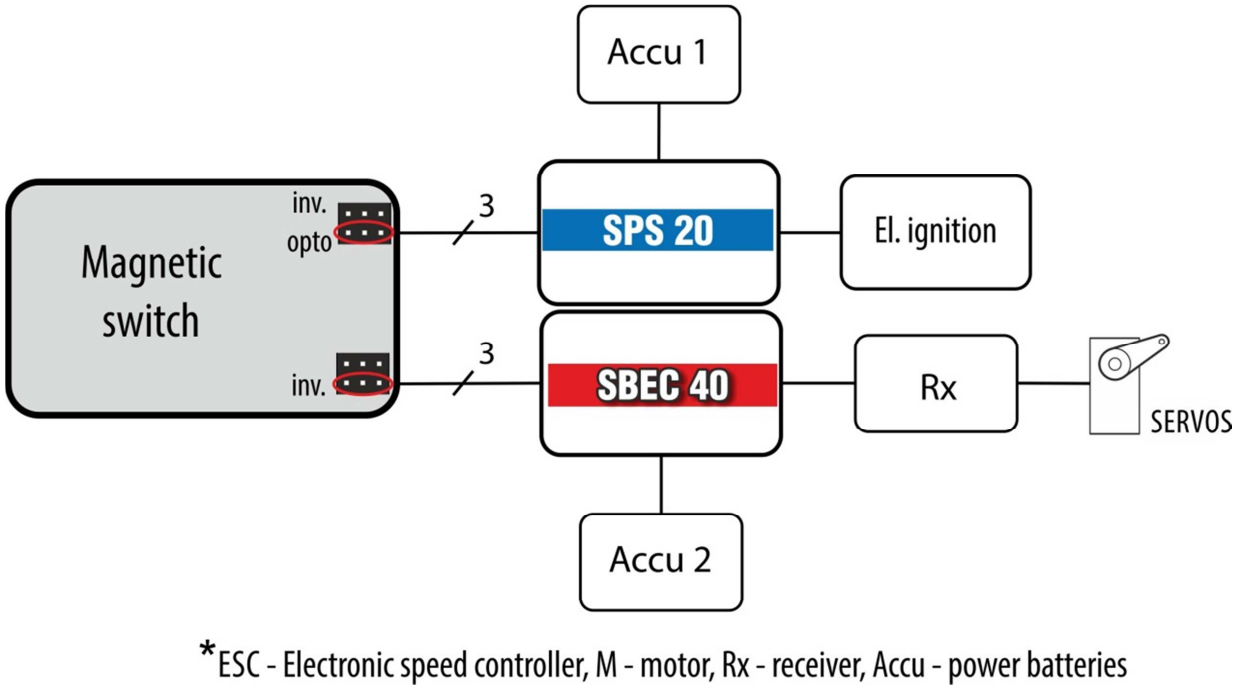



Fig. 1: Magnetic switch application connections

Every individual device must be connected to the correct output from the Magnetic switch. If the inverted output connection is confused for the non-inverted output, the switch will operate in reverse! This means that the green LED on the magnetic switch will indicate the OFF state of the device!

If it is necessary to separate two circuits to prevent interference, be sure that the wiring is correct. One circuit (the one where the interference is possible) must be connected to one of the switch outputs that are optically isolated. The other circuit must be connected to one of the switch outputs that are not optically isolated, see Fig. 1: Magnetic switch connections. When optical isolation is desired, the –poles of the separated circuits must not be connected, as well as the + poles must not be connected.

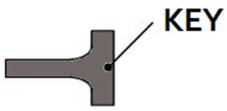
The Magnetic switch is powered from unseparated outputs, so at least one of these outputs must be connected. **If the power supply is interrupted when the magnetic switch is turned on, the devices connected to optically isolated output are turned off!** For example: in Fig 1, when power is restored, the ignition would be turned off but the Rx would stay turned on.

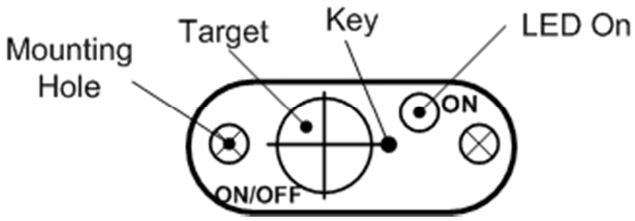
# 3. The function of the Magnetic switch

The Magnetic switch is designed to switch the JETI model products on and off. For switching on, the magnetic key must be placed on the small target in such a way that the small hole in the key and the dot on the switch target has the same orientation. The Magnetic switch is equipped with a green LED indicating the „switched on“ condition.

**LED ON** - blinking light indicates magnet range

- steady light indicates switched on condition




When you correctly position and hold the magnet on the target as described, after 1 sec the green LED will turn on as a steady light, showing that the electronic switch is ON. Switching off is done in a similar way. When the magnet touches the target in the proper orientation again and is held in place for 1 sec., the green LED turns off and the system switches OFF.

The switch system remembers its last switch position (non-opto isolated outputs only). This means that if you switch it on with the magnetic switch and then disconnect the batteries, it will automatically return to the on position after you connect the batteries again. **For safety reasons always switch the system off with the magnetic switch before removing the supply batteries.**

**When switching on the electronic switch, first connect both batteries and only afterward switch the system on by using the magnetic switch. When switching off, follow the same rule. First switch the system off using the magnetic switch and only afterward disconnect the batteries.**

# 4. Installation

The magnetic switch can be mounted to the model using the provided mounting holes. When drilling holes for the magnetic switch, use the outer cover as a pattern. The outer cover of the magnetic switch is designed to be attached to the outside of the model fuselage and is mechanically connected by bolts to the base.

# 5. Magnet Handling Safety Rules

As the electronic switch system is operated by a magnet, it is necessary to observe safety measures as far as handling magnets is concerned. The magnet in the magnetic key is mounted inside a light weight alloy carrier.

1. Keep a safe distance from equipment which could be damaged by magnetism, like for instance TV sets, credit cards, PCs etc. A magnet may disturb operation of pacemakers!

2. Keep the magnet out of reach of children, it may be swallowed or cause bruises

# 6. Technical data

| Technical data: | |
|---|---|
| Recommended input voltage | 3.5 – 59 V |
| Current consumption in switched-off state | 70uA@63V |
| Number of outputs | 4 |
| Operation temperature | - 20°C up to +85°C |
| Weight | 11 g |
| Dimensions | 45x25.5x11 mm |

# 7. Warranty

For this product JETI model grants a warranty of 24 months from the day of purchase under the assumption that it has been operated in conformity with these instructions at recommended voltages and that it has not been damaged mechanically. Warranty and post warranty service is provided by the manufacturer.

We wish you successful flying with the products of **JETI model s.r.o. Příbor, www.jetimodel.cz**