Dear customer,

we are delighted that you have decided to purchase our “magnetic“ On / Off switch. The MagSensor represents an alternative method of operating and switching our PowerBox battery backers. The circuit is based on modern, extremely sensitive, zero-contact „Hall sensors“, which respond to a defined magnetic field by activating the electronic switches in the PowerBox. The Hall sensors do not switch the current, but simply pass on the switching signal.

Description:

This accessory is suitable for all PowerBox systems, regardless of age, which are designed to be switched on and off using the SensorSwitch. The basic purpose of the MagSensor is to switch the dual power circuits on and off, but it can also be used to reset the capacity display fitted to more recent systems, if this is an integral feature of the PowerBox. The SensorSwitch must still be used for programming servos and carrying out set-up tasks within the PowerBox’s programming menu. The particular advantage of the MagSensor is that scale pilots can exploit all the advantages of our redundant battery backer systems, but without an exposed On/Off switch.

The magnetic trigger is powerful enough to penetrate reliably through thick GRP/CFRP walls panels, even if they are several millimetres thick. In addition to a pair of green LEDs for visual monitoring, the MagSensor features a supplementary Piezo sounder, which confirms the On/Off switching process by means of beeps of different pitch. The ribbon cable is the same standard length as that of the SensorSwitch.
1. CONNECTING AND MOUNTING THE MAGSENSOR

The MagSensor is simply plugged into the PowerBox instead of the Sensor-Switch: remove the SensorSwitch, and connect the MagSensor to the red socket on your PowerBox battery backer in its place. The MagSensor is ready for use immediately.

The MagSensor is designed to be mounted in your model in either of two ways:

a) Fully concealed Installation
The MagSensor is designed in such a way that the two Hall sensors for both power circuits can be „addressed“ from the front or back of the MagSensor. If you do not need to see the LED indicators, then there is no necessity to drill holes for the LEDs in the fuselage side. The MagSensor can also be installed at your selected location by the back surface: this is accomplished by using the strip of double-sided adhesive tape supplied in the set, and simply sticking the unit in place at the selected location.

The set includes film stickers which can be used as a visual aid, to help you locate the „power-on points“ from the outside of the model.

b) Monitor LEDs visible from outside
In addition to the audible confirmation signal, the monitor LEDs provide a visual indication of the power-on state. This is very practical, as it enables you reliably to confirm the system’s power-on status even in noisy surroundings. The set is supplied complete with film stickers (simulated screw fixings in various colours) which enable you to identify the hole spacing accurately. The MagSensor is mounted simply by sticking it to the inside of the fuselage side using the double-sided adhesive tape supplied in the set.
2. OPERATING THE MAGSENSOR

a) Switching on and off
The **MagSensor** still requires you to activate both power circuits individually - as with all **PowerBox systems**. The reason behind this feature is that the **PowerBox** contains two redundant switching and regulatory systems. Separate control also gives you the opportunity to check each of the **PowerBox**‘s power circuits individually - and this also applies to the **MagSensor**.

To switch the **PowerBox** off completely, you must operate both Hall sensors using the magnetic trigger, and you should check that both LEDs confirm this. You must also ensure that you have switched off both power circuits when you switch the system off.

Hold the ring magnet over one LED in such a way that the LED can be seen on the inside. When the power circuit is switched on, the LED glows green, and at the same time a brief audible signal is emitted. Repeat the procedure with the second LED.

The audible signal which accompanies the power-on procedure differs in pitch from the power-off signal. This makes it possible to differentiate between the processes of switching off and switching on even in the case of a completely concealed installation.

**Note:** Every time you switch on or off, a time lock is activated in the **MagSensor**. This prevents the switch being triggered a second time if you accidentally fail to remove the magnet immediately. If you switch on and then wish to switch off again immediately, you must wait about ten seconds before the unit allows the power-off process.
b) Resetting the capacity counter
In the case of recent systems, such as the **PowerBox Baselog**, **Competition** and **Cockpit**, and also the **SRS types**, the magnet trigger can also be used to erase the capacity counter. This is accomplished by repeatedly moving the ring magnet to and from between the two LEDs or switching points, as if you were trying to wipe something off. After five contacts have been made, you will hear an audible signal, and the backer’s integral screen displays the Reset message.

3. SPECIFICATION

Energy source: from the connected **PowerBox**
Current drain:  
  - Power-on state approx. 10mA
  - Power-off state approx. 20µA
Temperature range: -30 °C to +75 °C
Weight: 10 g
EMV approval: EN 55014-1:2006
CE approval: 2004/108/EG
WEEE-Reg.-No.: DE 639 766 11

**The MagSensor satisfies the EMV protective requirements, EN 55014-1:2006, with certificate dated 10 February 2009. EMC approval 2004/108/EG.**

**Caution:** The magnet trigger contains a powerful permanent magnet. Keep well away from heart pacemakers and magnetic data media such as EC and credit cards, etc.
4. DIMENSIONS

5. SET CONTENTS

- **MagSensor** with 40 cm connecting lead
- Magnet trigger containing ring magnet
- Double-sided adhesive tape
- Key-ring
- Blue key fob
- Operating instructions in German and English
6. SERVICE NOTE

We are anxious to offer good service to our customers, and to this end we have set up a Support Forum which deals with all queries concerning our products. This relieves us of a great deal of work, as it eliminates the need to answer frequently asked questions time and again. At the same it gives you the opportunity to obtain help quickly all round the clock - even at weekends. All the answers are provided by the PowerBox Team, guaranteeing that the information is correct.

Please use the Support Forum before you telephone us.

You can find the forum at the following address: www.forum.powerbox-systems.com
7. GUARANTEE CONDITIONS

At PowerBox-Systems we insist on the highest possible quality standards in the development and manufacture of our products. They are guaranteed “Made in Germany”!

That is why we are able to grant a 36 month guarantee on our MagSensor from the initial date of purchase. The guarantee covers proven material faults, which will be corrected by us at no charge to you. As a precautionary measure, we are obliged to point out that we reserve the right to replace the unit if we deem the repair to be economically unviable.

Repairs which our Service department carries out for you do not extend the original guarantee period.

The guarantee does not cover damage caused by incorrect usage, e.g. reverse polarity, excessive vibration, excessive voltage, damp, fuel, and short-circuits. The same applies to defects due to severe wear.

We accept no liability for transit damage or loss of your shipment. If you wish to make a claim under guarantee, please send the device to the following address, together with proof of purchase and a description of the defect:

SERVICE ADDRESS

PowerBox-Systems GmbH
Ludwig-Auer-Straße 5
D-86609 Donauwoerth
Germany
8. LIABILITY EXCLUSION

We are not in a position to ensure that you observe our instructions regarding installation of the MagSensor, fulfil the recommended conditions when using the unit, or maintain the entire radio control system competently.

For this reason we deny liability for loss, damage or costs which arise due to the use or operation of the MagSensor, or which are connected with such use in any way. Regardless of the legal arguments employed, our obligation to pay compensation is limited to the invoice total of our products which were involved in the event, insofar as this is deemed legally permissible.

We wish you every success with your new MagSensor.

Donauwoerth, november 2017