PowerBox Systems ®

*World Leaders in RC
Power Supply Systems*

POWERBOX 12

Dear customer,

congratulations on your decision to buy the **PowerBox 12** - the switch backer! This compact product combines the performance features of our safety switch and a powerful battery backer in a single case which will fit in virtually any model.

1. LAY-OUT AND CONNECTIONS

The actual enclosed switch is fitted with four floating-mount double contacts. Only the positive conductor of each pair is switched; all the negative terminals are connected together for additional security.

All the backer components are soldered to a single circuit board. The cables to the backer are soldered directly **(no kinks)** to broad solder pads, and protected from the effects of vibration by means of a **special supporting adhesive**. The cables which exit the case are also protected from vibration and kinking by **heat-shrink sleeving with internal adhesive**.

2. SWITCHING ON AND OFF

The switch positions are marked on the case: when the switch is moved towards the LED, it is in the ON position.
The primary purpose of the integral **three-color LED** fitted to the switch case is to indicate the switched state of the **PowerBox 12**. However, it also changes colour to indicate the condition of the two batteries connected to the backer: if both batteries are in good order, the LED glows **orange**.

3. INSTALLATION

Please do not throw away the inner packaging immediately, as it includes a template for marking the switch aperture.

Even though our product is very well protected from the effects of vibration, the switch should always be mounted in a part of the model relatively low in vibration. Please note that the GRP fuselage sides of a large power model are not suitable, as they are always subject to considerable vibration. You can remedy the situation by cutting a ply plate (2 - 3 mm thick) about 3 cm larger than the switch aperture, and gluing it in the appropriate place. The plate damps the vibration, and at the same time provides plenty of "meat" for the switch retaining screws to bite into.
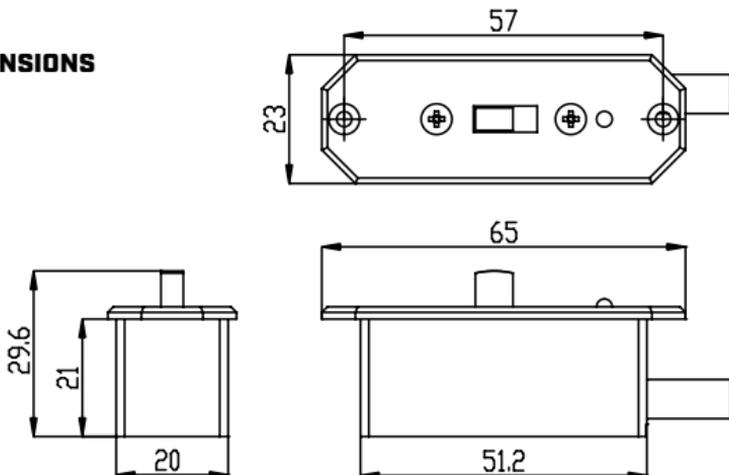
4. BATTERY TYPES

It is possible to use NiCd / NiMh batteries as well as LiPo / LiFePo batteries.

It is only permissible to connect **LiPo** cells **directly** to the receiving system or the **PowerBox 12** battery backer if all the electronic components, including the receiver and servos, are approved for use with a voltage of up to 8.4 Volt! If you need to bring down the voltage of a 2S LiPo to a normal value of 6.0 Volt then you need to use a **voltage reducer**; we recommend our **linear** voltage regulator for this purpose. It is simply connected **between the receiver** and the **PowerBox 12**. Two of these voltage regulators are required.

5. SPECIFICATION

Voltage range:	4.0 – 9.0 Volt
Power supply:	2 x 5s NiMH/NiCd, 2s LiPo, 2s LiFePo
Output voltage:	equal to the input voltage
Current load:	Peak 2 x 6A
Dropout voltage:	0.3V
Dimensions:	65 x 23 x 23 mm
Weight:	35g
Temperature range:	-30° C to +75° C
EMV approval:	EN 55014-1:2006
CE approval:	2004/108/EG
WEEE Reg. No.	DE 639 766 11

6. DIMENSIONS

7. 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 <u>before</u> you telephone us.

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

8. 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 **24 month guarantee** on our **PowerBox 12** 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

9. LIABILITY EXCLUSION

We are not in a position to ensure that you observe our instructions regarding installation of the **PowerBox 12**, 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 **PowerBox 12**, 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 **PowerBox 12**.

Donauwoerth, December 2020

PowerBox-Systems GmbH

Ludwig-Auer-Straße 5
D-86609 Donauwoerth
Germany

📞 +49-906-99 99 9-200
🖨 +49-906-99 99 9-209

www.powerbox-systems.com