

## SafetyPowerSwitch

Electronic safety switch with  
"anti flash" function

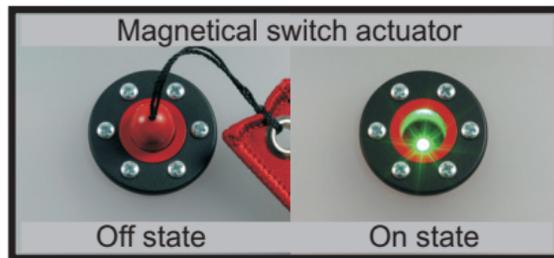


The **EMCOTEC SPS** serves as an additional protection against unintentional initiation of an electric motor and avoids an emerging flash (spark) when connecting the supplying battery.



Switching (On/Off) occurs with an external magnet, which resides in a funnel-shaped opening of the switch actuator when in off (SPS turned off). The magnet holds itself due to its magnetism. By pulling easily on the magnet (or key ring) the magnet is removed from the opening and the

SPS turns on. An ultra bright green LED indicates the activated system.



### Mounting instructions:

The SPS safety power switch is "looped in" between the supplying battery and the motor controller. As an example, apply 4mm gold plated plugs or sockets on the input side. The red cable of the SPS is the positive pole, the black one the negative pole. Obeying polarity is mandatory!

The output of the SPS is to be connected to the motor controller (soldered or with plugs/sockets - positive to positive, negative to negative). The SPS switches battery negative!

Keep cable length between motor controller and battery (incl. SPS) as short as possible!

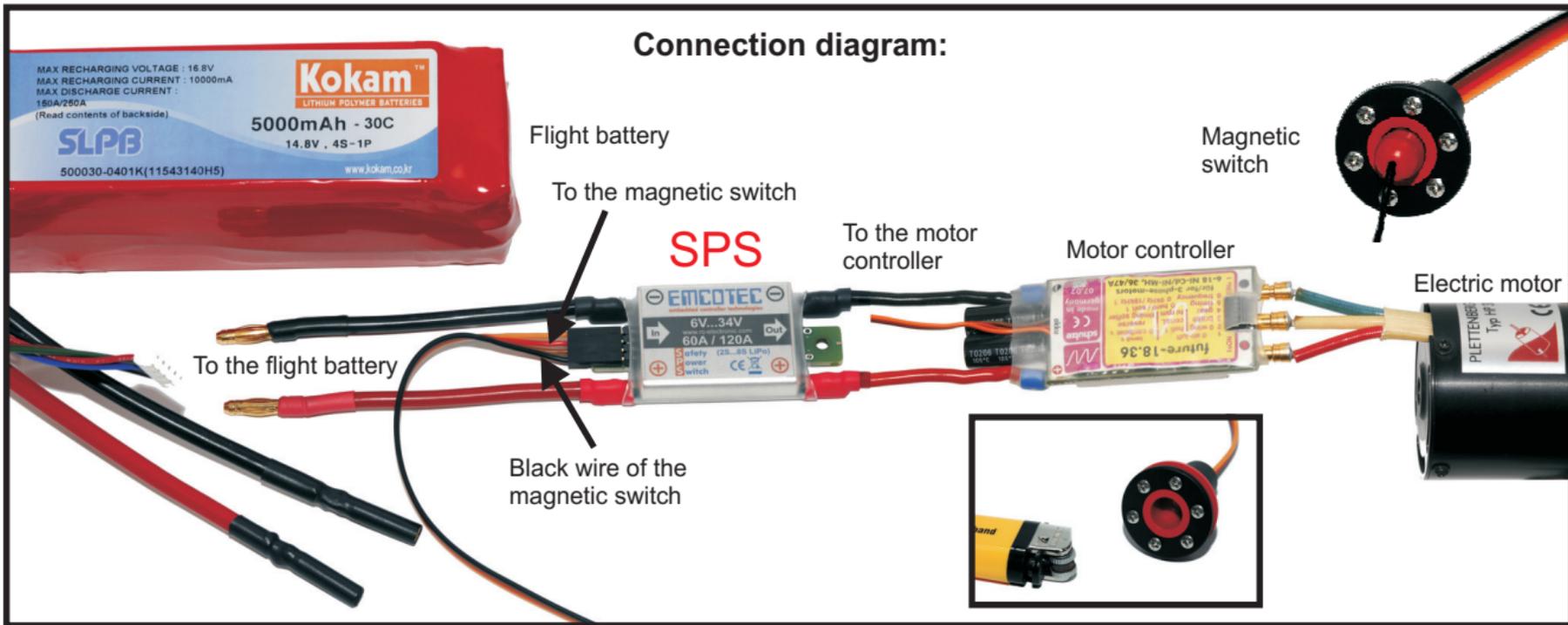
The SPS can be fixed with Velcro to an appropriate surface. Alternatively the mounting with a small screw is possible. For using this method there is a small hole at the end of the PCB ("Out"). Please observe not to shorten the small solderpads beside the hole with the used screw.

The actual switch actuator is designed as a gas tank latch. For mounting (e.g. in the fuselages side wall) drill a 16mm (0.63") hole. **ATTENTION:** mounting depth of the magnetical switch actuator is 35 mm (1.4")! Therefore the fuselage has to be wide enough at this point.

Feed the funnel-shaped switch actuator through the hole and mark the 6 drilling holes (on a circle of 21 mm / 0.8" diameter) for the screws. Drill the holes using a 2.4 mm / 0.09" (alternat. 1.6 mm / 0.06") drill bit. Push the screwing flange over the connection cable of the magnetical switch actuator from the inner side of the fuselage and fasten it with the 6 screws.

If the fuselage is stable enough, the switch actuator can be directly mounted into the fuselage (without a screwing flange). In this case, simply drill 6 holes approx. 1.6 mm (0.06") each, in order to have enough material for the 6 stainless steel screws.





Plug the connection cable of the magnetical switch actuator into the multi pin connector on the main PCB. The black connection cable points toward the positive pole (i.e. the red battery connection cable => see photo). If the connector is plugged in reverse, the LED is not lit.

**ATTENTION:** when using the SPS in an environment with a Lipo-Saver, which is not galvanically isolated from the flight battery (optocoupler) the SPS does not work properly. The motor controller takes its ground supply out of the negative pole of the Lipo-Saver and therefore might damage it. The EMCOTEC LiPoSaver works properly without any limitations!

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