



## Mounting instruction Electronic Rotating Beacon - SFi (ERB-SFi)

### Dear customer,

the Electronic Rotating Beacon - SFi (ERB-SFi) is a highly innovative product which contributes to saver airspace.

The new LED technology allows an incredibly excellent, red light with only approx. 10% of the input power compared with conventional lights. The casting in a high-optical plastic makes the ERB-SFi absolutely insensitive against water, vibrations and other environmental influence. The efficiency of the output is much higher, than with conventional electric light bulbs. The self-warming of the ERB is low and can be determined as safe. To avoid overheating, the heat balance is controlled electronically.

The ERB-SFi is part of our energy strategy „Intelligent Synchronisation“. This increases the visibility of aircrafts and improves the energy mamangement at once. Available elements of the Intelligent Synchronisation are: EPL2, EPTA-LSA, ELL50, ELL60, ELL80is, ERBis, ERB-His, ERB-SFi, ERB2, ACL4.

The ERB-SFi is intended for mounting on an appropriate position of the rudder of an airplane. Please adhere to the following instructions for a professional mounting. The illumination angle complies to the regulations for general aviation.

### Required materials and tools

- 3-core twisted cord, according to the length of fuselage (5 - 8 meters)
- colored silicone
- metal gripper clamp
- soldering iron, tin solder
- shrink hose (enclosed)

### Recommendations

#### Cable

We recommend a tripple core, flexible and twisted cable with a cross section of at least 1.5 mm<sup>2</sup> and minimum 0,5 mm<sup>2</sup> for synchronisation cable. In case of doubt, you can order the suitable cable from Thiesen Electronics GmbH.

#### Adhesion

We recommend standard silicon in a tube. It is available in do-it-yourself markets. This adhesion is strong and in case of a dismantling you only need a sharp knife. We strongly advise against using other kinds of adhesion, like polyester or epoxy resin.

#### Mounting

The Metal-Gripper-Clamp in combination with a silicon-glue is sufficient for proper mounting of the ERB. By the use of silicon twisting of the ERB is prevented and sealing against dirt and water is guaranteed. The ERB must be mounted parallel to the longitudinal axis and vertically to the yaw axis of the aircraft (see illustration 1).

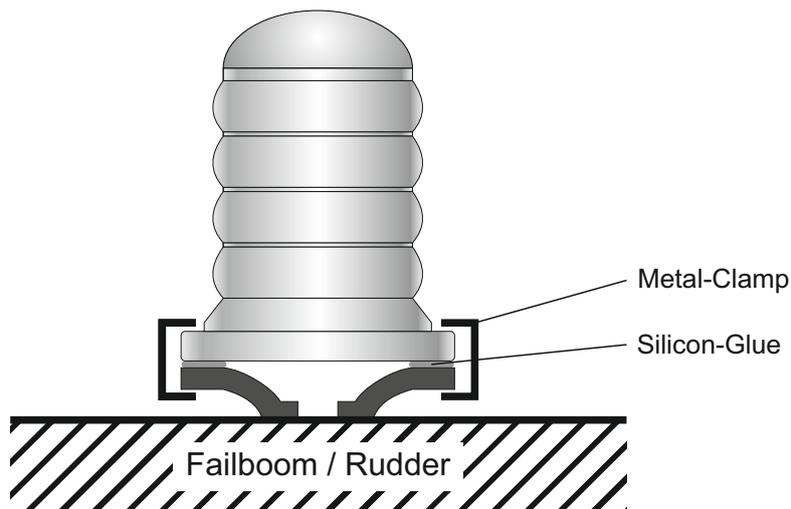
Refer to the instructions of the helicopter / aircraft - Manufacturer for the correct mounting-position of the ERB.

#### Pasting

Apply only as much silicone as required to paste the ERB plane (see illustration 1).

Silicone needs time to cure (vaporization of acetic acid). The best results are achieved at a temperature of 20° Celsius (68° Fahrenheit). Just follow the handling instructions of the silicone. The final firmness (stability) will be reached after a few days.

### Illustration 1



## Electric power supply / cable connection to the aircraft system (12 Volts)

The best connection is solder with additional shrinking of the soldering joint with a shrink hose (enclosed). Only use solder for electronic soldering never use cored solder. It contains acids which cause corrosion!

## Synchronisation

The ERB-His has an additional yellow synchronisation cable to synchronize with EPL2 or EPTA. Therefore connect the yellow cable of the EPTA (or EPL2) with the yellow cable of the ERB-His (additionally with ELL50 if required). The intelligent synchronisation scales the light pulse (and thereby the current pulse). This will prevent the battery respectively the generator by constant current consumption. If you do not use the synchronisation, connect the yellow cable with +12V (red cable).

## Important notes

Carefully install the cables inside the rudder and / or the fuselage. Connect the cables professionally to the aircraft system (**RED = positive, BLACK = negative, yellow = synchronisation**). Protect the circuit with a 5Amps fuse.

Do not use luster terminals. Suitable connectors are available at pilot's shops.

The Electronic Rotating Beacon is provided with overload protection. In case of over voltage the protector switches off the ERB. After reset or voltage drop the ERB is again fully functional. The automatic overload protector shall be activated at a voltage above 18 Volts (If the voltage reduces to a value below 18 Volts, the ERB-His will again be functioning).

## Servicing / maintenance

Should the ERB be scratched, use a good polish to refurbish the damages. With slightly deeper scratches use wet sandpaper with very fine granulation (800-1000) carefully polish again. Do not use aggressive chemicals like gasoline or solvent.

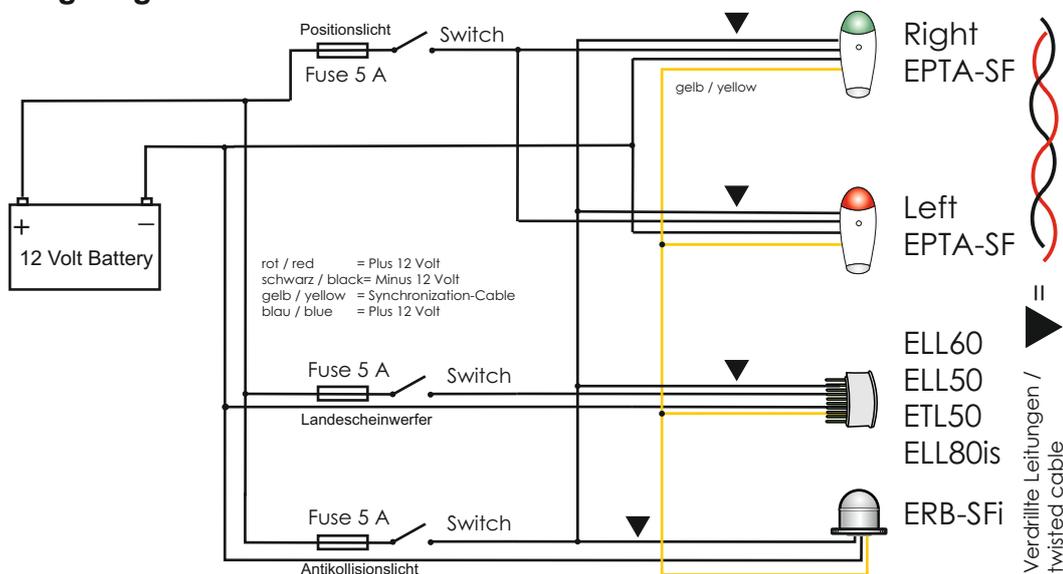
## For day to day cleaning use soap water!

Some insect removers and detergents forces embrittlement of epoxy based plastics and laminates. Use only aircraft certified products. **If the aircraft can not hangarized, please cover the lamps to prevent surface aging!**

## Technical data

Operating voltage: 10-17 volts (DC), typically 12.8 - 13.4 volts  
Input : approx. 25 watts  
Fuse : 5 ampere (fusible cut-out or automatic fuse)  
Dimensions : 47 (63,5) x 77 mms  
Weight : approx. 199 grams with connecting cables  
Warranty : 5,000 operating hours or max. 3 years

## Wiring diagramm:



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5.000 hours or max. 3 years assured  
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