



## LightGuard

### Remote Monitoring and Control of Aids to Navigation

LightGuard is the SABIK product family for remote monitoring and control all kinds of fixed and floating Aids to Navigation. LightGuard is based on extensive experience of remote monitoring with different technologies and approaches. The key elements in Sabik LightGuard concept are:

#### Reliability

Less interfaces, less problems! LightGuard monitoring is either directly integrated in the controller of the lantern or it uses current monitoring to determine the status of the light

#### Simple to Install

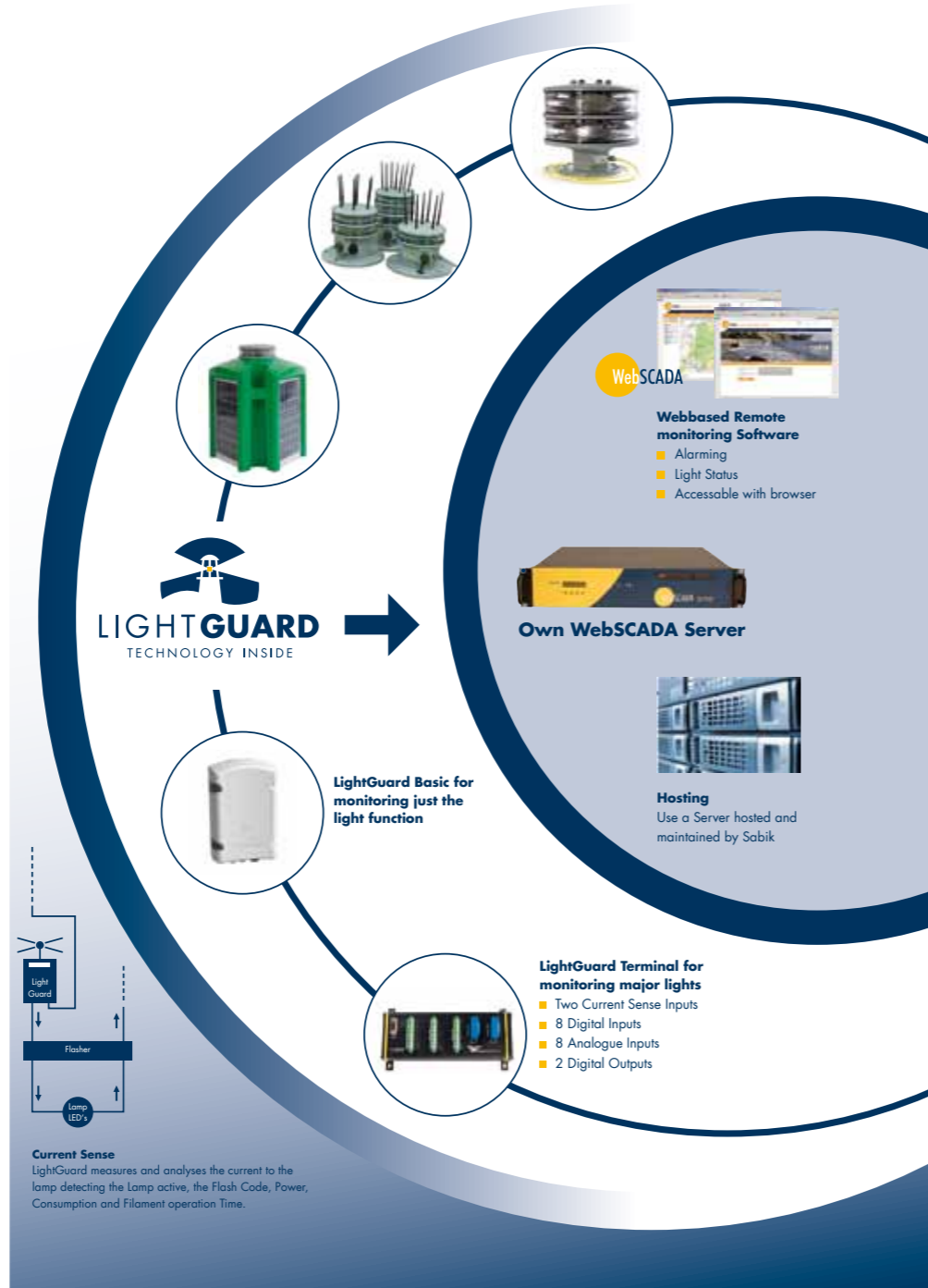
LightGuard can be delivered fully integrated in any new Sabik light. Lights of other manufacturers and previous generations of Sabik lights can be monitored with LightGuard by monitoring the current to the lantern. No serial interfacing or communication protocols are needed

#### Simple to Use

In most cases no special configuration is necessary. If, however, configuration is needed, it can easily be done with a user friendly Windows software. With the software it is possible to print or save documentation of the configuration made

#### Reporting

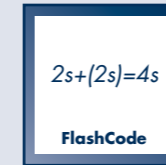
LightGuard can report valuable information about the AtoN to designated mobile phones or e-mail addresses and to your WebSCADA application



### LightGuard Functions (availability depending on LightGuard product)



**LightFunktion**  
Basic information about the state of the light; active or inactive



**Flash Code**  
On flashing beacons the LightGuard can detect the actual flash code running based on the measured supply current to the light



**Energy**  
Ampere-hour counting; lantern consumption and solar system production



**Voltage**  
Battery voltage and temperature



**Collision**  
Collision monitoring using integrated 3-axis acceleration sensor



**Position**  
The exact position of the AtoN is calculated with an algorithm to achieve a precision within 2 meters



**Off Location**  
Alarm if the AtoN moves outside the define boundary



**Astronomical Clock**  
Sunrise and sunset times of the location are used to either activate the light or to monitor the photocell



**SMS Report**  
Receive text messages on mobile phone with AtoN status information and use the mobile phone to send commands to the AtoN



**Binary Report**  
Binary messages including detailed status information sent to LightGuard Basestation for presentation on e.g WebSCADA



## Selection Guide LightGuard



### Integrated LightGuard

#### Do you need a new light which has to be monitored?

If you are going to use a new SABIK light the best solution is to buy the light with LightGuard already integrated.

#### Which SABIK light fulfills your requirements?

Most SABIK lights can be supplied with monitoring integrated. Just choose the product with the range and divergence needed for the location.



VP LED



MPV LED



SC 155



LED 155



LED 350



SC 110



SC 155 II



LED 110



LED 350 ODSL

### External LightGuard

#### Are you adding monitoring to an existing light?

If you already have the light you can use an external LightGuard Unit with CurrentSense to monitor the light.

#### What kind of AtoN are you going to monitor?

For minor fixed beacons or buoys the LightGuard Basic can provide the necessary valuable information. It can through current sense monitor any flashing beacon and is delivered in a IP65 rated enclosure.



LightGuard Basic

For lighthouses, larger beacons and leading lights the LightGuard Terminal has the needed functions. With two current sense inputs and the 18 I/O nearly any monitoring task can be covered.



LightGuard Terminal

#### What kind of communication is possible on the location?

GSM is the cheapest and simplest communication link to use. With a mobile GSM phone you can easily check whether a stable signal is available on the location.



SIM Card

INMARSAT is globally available. Reporting is relatively cheap, but the amount of data that can be transferred in one message is limited.



Skywave

ORBCOMM is available in most regions. The cost of communication is higher than for other options. High amount of data in reports is possible.



Orbcomm

AIS is an option if access to data from a base station close by is available. You can also establish a simple base station close to the AtoNs, if necessary.



AIS

#### What kind of communication is possible on the location?

GSM is the cheapest and simplest communication link to use. With a mobile GSM phone you can easily check whether a stable signal is available on the location.



SIM Card

INMARSAT is globally available. Reporting is relatively cheap, but the amount of data that can be transferred in one message is limited.



Skywave

ORBCOMM is available in most regions. The cost of communication is higher than for other options. High amount of data in reports is possible.



Orbcomm

AIS is an option if access to data from a base station close by is available. You can also establish a simple base station close to the AtoNs, if necessary.



AIS