ALGE-TIMING

Version-E100930

RLS1n

Manual

Important Information

General

Before using your ALGE-TIMING device read the complete manual carefully. It is part of the device and contains important information about installation, safety and its intended use. This manual cannot cover all conceivable applications. For further information or in case of problems that are mentioned not at all or not sufficiently detailed, please contact your ALGE-TIMING representative. You can find contact details on our homepage www.alge-timing.com

Safety

Apart from the information of this manual all general safety and accident prevention regulations of the legislator must be taken into account.
The device must only be used by trained persons. The setting-up and installation must only be executed according to the manufacturer's data.

Intended Use

The device must only be used for its intended applications. Technical modifications and any misuse are prohibited because of the risks involved! ALGE-TIMING is not liable for damages that are caused by improper use or incorrect operation.

Power supply

The stated voltage on the type plate must correspond to voltage of the power source. Check all connections and plugs before usage. Damaged connection wires must be replaced immediately by an authorized electrician. The device must only be connected to an electric supply that has been installed by an electrician according to IEC 60364-1. Never touch the mains plug with wet hands! Never touch live parts!

Cleaning

Please clean the outside of the device only with a smooth cloth. Detergents can cause damage. Never submerge in water, never open or clean with wet cloth. The cleaning must not be carried out by hose or high-pressure (risk of short circuits or other damage).

Liability Limitations

All technical information, data and information for installation and operation correspond to the latest status at time of printing and are made in all conscience considering our past experience and knowledge. Information, pictures and description do not entitle to base any claims. The manufacturer is not liable for damage due to failure to observe the manual, improper use, incorrect repairs, technical modifications, use of unauthorized spare parts. Translations are made in all conscience. We assume no liability for translation mistakes, even if the translation is carried out by us or on our behalf.

Disposal

If a label is placed on the device showing a crossed out dustbin on wheels (see drawing), the European directive 2002/96/EG applies for this device.
Please get informed about the applicable regulations for separate collection of electrical and electronical waste in your country and do not dispose of the old devices as household waste. Correct disposal of old equipment protects the environment and humans against negative consequences!

Photocell RLS1n

The ALGE photocell RLS1n is made with most advanced electronic. You can use the reflection photocell RLS1n for a distance from 1 to 25 Meter. If you need a longer distance than 25 Meters you have to use the type RLS1nd, which consist of a separate transmitter and receiver photocell.

Principal:

The transmitter of the photocell sends a modulated infrared beam. The receiver controls the infrared beam and makes an impulse for each interruption.

If transmitter and receiver is built into one case we call it reflection photocell. The infrared beam is sent to a reflector. The function of the reflector is like a mirror, which reflexes the beam to the receiver. The other type of photocell (RLS1nd) has on one side a transmitter and on the other the receiver. The infrared beam goes direct form the transmitter to the receiver.

Types of Photocells:

RLS1n:	Infrared reflection photocell
RLS1nd:	Infrared photocell with separate transmitter and receiver
RLS3c:	Three-fold-photocell for track and field

Power Supply for the Photocell RLS1n:

+ Up to 100 m cable length from the ALGE timing device by a 3-wire cable (this cable includes the power supply and impulse line).
+ Internal Alkaline battery or NiCad battery (data cable with 2 wires, distances of some kilometers are possible).

The internal battery supplies the RLS1n for:

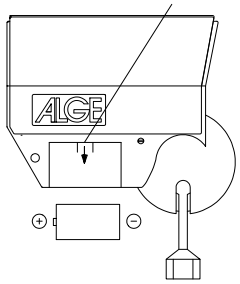
Alkaline C-Cell Battery:	about 40 hours
Rechargeable Battery:	about 18 hours

Meter Indication:

about 1/4 in the white field:	not adjusted or beam interrupted
green field:	adjusted to the reflector and beam is not interrupted

Input of the battery:

Press down to open battery compartment



Insert the battery:
Input the battery as far as possible into the battery compartment. When closing the cover press the battery into the compartment.

Switch on of internal Battery:

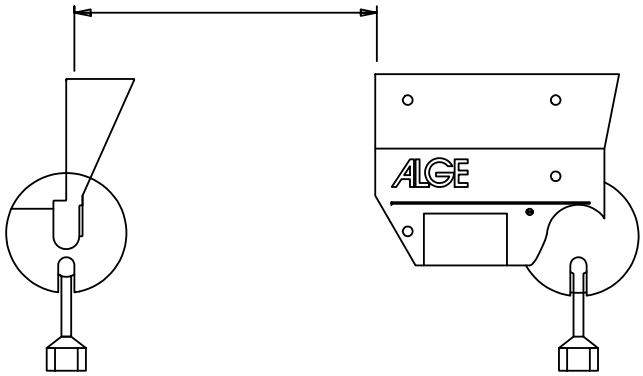
The internal battery of the photocell RLS1n you can switch on with switch (1).
upper position = battery on lower position = battery off
Attention: If you use a battery be careful that the battery is switched of when you do not use the photocell. Otherwise the battery will be empty if you need the photocell the next time.
If you use no battery the switch position does not matter.

Adjustment of the Photocell RLS1n:

+ Fasten the fastening-bracket for the photocell and reflector at a pole
+ Screw the photocell and reflector on the fastening-bracket
+ Twist the reflector toward the photocell
+ Connect the cable (e.g. 001-10) at the photocell and timing device
+ Turn the timing device (and photocell if intern battery) on
+ Open the socket joint of the photocell (turn the yellow knob counter-clockwise)

+ Aim at the reflector by using the sight on top of the photocell
+ The needle of the level meter has to move as far as possible into the green field
+ Close the socket joint of the photocell (turn the yellow knob clockwise)
+ If you interrupt the infrared beam of the photocell you hear a beep of the timing device. The needle of the lever moves into the white area.

min. 0,5 m
max. 25 m



Weather Cover:

You can move out the weather cover in order to protect the lens from snow and rain.

When using the RLS1n on a glacier please use always the weather cover.

Please notice that the sun is not allowed to shine direct into the lens of the photocell. This could destroy the photocell.

Technical Data of the Photocell RLS1n:

Max. Distance: 0,5 to 25 Meter

Output: NPN transistor, open collector, active low

Reaction Time: 300 µs, 2 ms fix adjusted

Impulse length: 20 to 1400 ms adjustable

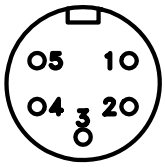
Measurements: 160 x 135 x 58 mm

Weight: 0,6 kg

Switch: on/off-switch for internal battery

DIN-Socket Pin Connection:

1.....Signal output
2.....Signal output
3.....0 Volt
4.....empty
5.....+5V stabilized



Banana Socket:

red .....signal output
black .....0 Volt

Power Supply: external 5 VDC stabilized
internal battery: C-Cell

Power consumption: when giving an impulse max. 30mA
without impulse max. 15 mA

Working Time of Photocell RLS1n with Internal Battery:
about 40 hours with alkaline battery
about 18 hours with rechargeable battery

Impulse length is adjustable from 20 to 1400 ms
(use a small screw driver)