

AmpLight Solo



Product sheet

AmpLight Solo

AmpLight Solo is a wireless streetlight control system which is based solely on the use of SMS both in connection with controlling the light and configuring the system.

AmpLight Solo does not require a server and merely consists of a number of AmpLight modules which are installed in each street cabinet.

An AmpLight Solo solution consists of an AmsCPU module and an AmsSwitch module. With this solution you can turn the streetlights on/off. The solution can, however, easily be extended to cover monitoring and battery backup by adding an AmsCurrent module and an AmsBattery module, respectively. The different solutions are described on the next page.

The AmsCPU module has a built-in web server which is configured before the module is installed in a street cabinet. This is done by connecting the AmsCPU module to a PC and configuring it by means of a web browser. For that reason, no separate software installation is required in order to configure the system. Changes to configuration after installation are made by means of SMS.

AmpLight Solo can later on request be upgraded to a full server-based AmpLight system which offers wider functionality.

With the AmpLight Solo solution the streetlight is controlled by a twilight table which contains the sunrise and sunset times for the location for all days of the year. If desired, an offset for sunset/sunrise times can be specified in the twilight table.

It is also possible to connect an analog or digital photocell to the AmsCPU module. The photocell controls the streetlight in combination with the twilight table.

Additionally, a door switch can be connected to the AmsCPU module. This provides the option of monitoring if the street cabinet is wrongfully open.

Features

- + **Inexpensive start-up** - install only a few modules in each street cabinet and the system is up and running.
- + **Short installation time** - The AmsCPU module is connected to a PC and configured. Then the modules are installed in a street cabinet and the system is up and running.
- + **Easy control of the streetlight via SMS** - turn the streetlight on and off or request light status via SMS.
- + **Ongoing configuration via SMS** - reconfigure the system easily via SMS when needed.
- + **No expenses for server operation** - and thus minimization of operating costs.
- + **The only fixed expense is SIM cards** - comprising expenses for alarm issuing and clock synchronization.
- + **Can be upgraded to an AmpLight server solution** - and thus full use is made of the existing investment in connection with upgrading to the more advanced AmpLight solutions.
- + **Automatic time setting** - sets time itself via international time server. Built-in backup battery ensures correct time at start-up after power outage.



AmpLight Solo



Product sheet

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AmpLight Solo consists of an AmsCPU module and an AmsSwitch module which are installed in a street cabinet. With this solution the streetlight is turned on/off by means of a twilight table and a photocell if one is connected to the AmsCPU. Furthermore, you can turn the light on/off or request light status by the use of SMS, just as configuration of the single street cabinet can be changed via SMS. Ideal in connection with maintenance of the street cabinet.

Overall, the following actions can be performed with an AmpLight Solo solution:

- Turn the streetlights on/off
- Request light status (on/off?)
- Change times in twilight table
- Change/specify offset for sunset and sunrise times in twilight table
- Change LUX values for the analog photocell

AmpLight Solo - Monitoring and Battery backup

An AmpLight Solo solution can be expanded with an AmsBattery module and/or an AmsCurrent module.

An AmsBattery module provides the option of monitoring power outage in the street cabinet. In the event of power outage, the AmsBattery module supplies the AmsCPU with power and a power outage alarm is issued.

An AmsCurrent module provides the option of monitoring the street cabinet by measuring current on the single phases. An alarm is issued if for example the streetlight is turned off when it should be turned on and vice versa, just as an alarm is issued if current leakage is detected.

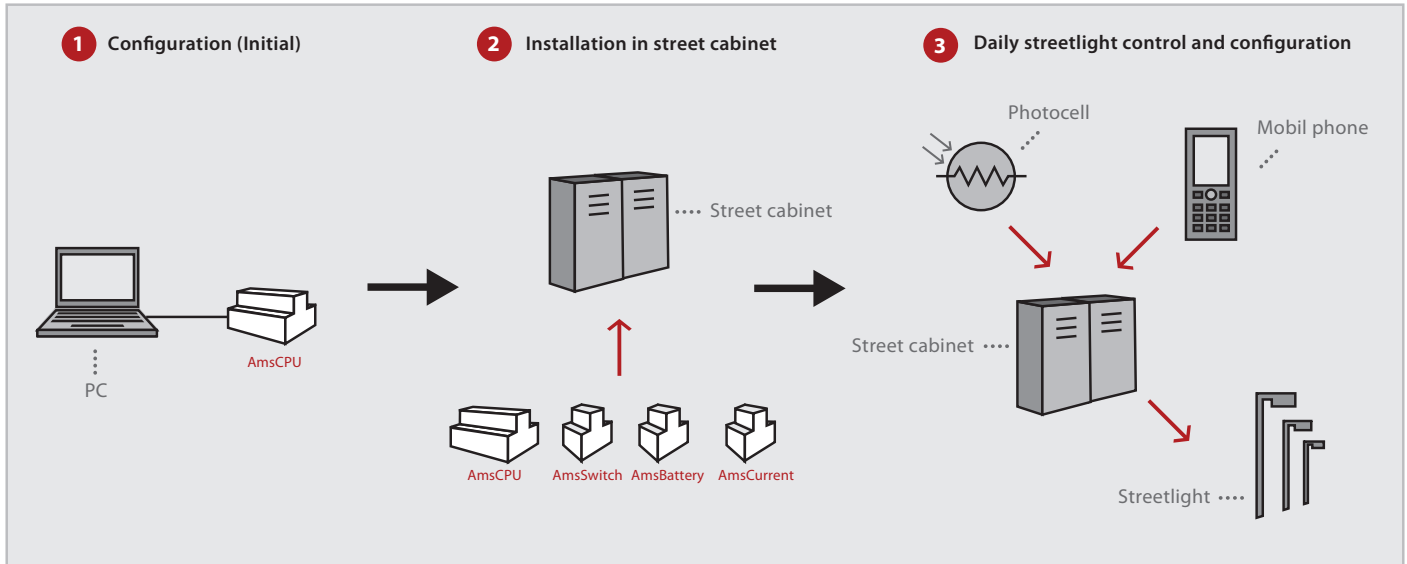
AmpLight Solo - alarm overview

Alarms	AmsCPU+AmsSwitch	AmsBattery (Battery backup)	AmsCurrent (Monitoring)
Cabinet door open	X		
Power cut on one or two incoming phases	X		
Main power failure - AmsCPU is supplied with power from the battery		X	
Power cut on outgoing phases			X
Light is off, but should be on			X
Light is on, but should be off			X
Leakage detected			X

AmpLight Solo

Product sheet

Overall setup overview



1. Configuration (initial)

The AmsCPU module is connected to a PC by means of the Ethernet port. Open a web browser, enter the web address supplied by Amplex and subsequently configure the module as desired.

The web page which is used to configure the module can be found on page 4.

2. Installation in the street cabinet

When the AmsCPU module has been configured, it is installed in the street cabinet along with the other modules.

Details concerning installation can be found on page 5.

3. Daily streetlight control and configuration via SMS

When the modules are installed in the street cabinet, the system runs automatically and the streetlight is turned on/off by means of the twilight table and a photocell if one is connected to the AmsCPU module. Hereafter, in connection with maintenance the configuration of the single street cabinets can be changed by use of SMS. In addition, the streetlight can be turned on/off manually for one or more street cabinets, also by use of SMS. If needed, the status of the streetlight can also be requested by use of SMS.

AmpLight Solo



Product sheet

Example of the web interface for initial configuration

AmpLight Solo
 Parameters [SMS Commands](#)

Modify the parameters below as needed & hit 'Apply changes'

Parameters	Value	Description
Position	<input type="text" value="56.197525,10.674441"/>	Position of the cabinet in signed degrees eg. Amplex: '56.157,10.193'. These can be taken from, or entered into maps.google.com. Use <menu> => "What's here?" to show position. Eg: http://maps.google.com?q=56.157,10.193
Timezone	<input type="text" value="GMT +01 Brussels, Copenhagen, Madrid, Paris"/>	Timezone of the cabinet. Only used for alarm texts. A unique substring may be used when setting via SMS. Eg. country capital.
Sunrise_offset	<input type="text" value="0"/>	Offset from sunrise in minutes to turn light off eg. '-30'
Sunset_offset	<input type="text" value="0"/>	Offset from sunset in minutes to turn light on eg. '30'
Alarm_on_digin	<input type="text" value="0"/>	Set to 1 or 2 (normally open) if eg. a door switch is wired to digital_in Set to 0 to disable
Alarm_on_digin_open	<input type="text" value="Door open"/>	Text to send when digital in condition becomes true
Alarm_on_digin_close	<input type="text" value="Door closed"/>	Text to send when digital in condition becomes false
Alarm_on_anain	<input type="text" value="-1"/>	Set to threshold in millivolts where analog input alarm triggers The impedance is 510 Ohms so input current in mA is mV / 0.51 Must be wired to 'Analog Input 2'. Set to -1 to disable
Alarm_on_anain_open	<input type="text" value="Door open"/>	Text to send when input voltage exceeds threshold
Alarm_on_anain_close	<input type="text" value="Door closed"/>	Text to send when input voltage drops below threshold
Doorswitch_on_phase4	<input type="text" value="0"/>	Set to 1 if a door switch operated lamp (230V) is wired to phase_4
Phases_wired	<input type="text"/>	A comma separated list of phase inputs to monitor (1-3) eg. 1,2,3
Photocell_digital	<input type="text" value="0"/>	Set to 1 if a digital photocell is wired to digital_in Must be of "contact closed when dark" type.
Photocell_threshold	<input type="text" value="0"/>	Set to the lux threshold of a ServoDan 43-198 photocell. Must be wired to 'Analog Input 1' according to diagram.
Photocell_active_zone	<input type="text" value="60"/>	Number of minutes before sunrise/sunset the photocell is enabled
Currentsensor_wired	<input type="text"/>	A comma separated list of wired current coils (1-6) eg. '1,2,3'
Leakage_threshold	<input type="text" value="0"/>	Set maximum leakage in mA if a leakage sensor coil is wired
Alarm_telno	<input type="text"/>	Comma separated list of phone numbers to receive alarms about Phase undervoltage, Door open, Circuit broken / contactor errors
Trusted_telno	<input type="text" value="*"/>	Comma separated list of phone numbers allowed to control the cabinet. Each telno may end in "*" as a wildcard. Empty means all allowed.

AmpLight Solo



Product sheet

Wiring diagram

