

Installation and operating instructions TeleLED516V12

0. TeleLED516, intelligent wireless solar charge controller

Swarm control

Solar powered street lamps are linked by the radio regulator TeleLED to a swarm. So all lamps of a group are enabled to switch on and off coordinated. A laptop with an extra wireless USB stick will help you to configure, maintain and monitor all lamps and their battery.

At the entrance to a bike path or parking lot for example, the entire cycle will be illuminated at once.

All lamps will still work autonomously if they get lost from the swarm. Ranges above 200m are possible. It can operate 255 lamps in a network.

PWM output for dimming

A freely configurable PWM output allows individual settings for the LED lamp power. The LED power can be automatically reduced to save energy in case of low battery voltage.

Swarm behaviour

If desired, all the lamps of the swarm will switch on at dusk at the same time switch. The first lamp, which switches to the "night" condition will set all other lamps. The brightness level can be set for each charge controller individually or all together. Similarly, in the morning all the lights are switched off together when all regulators have recognized the "day". Two or more swarms can share the same range (channel controlled)

night and morning light

While the adjustable evening and morning hours of light, the lamp is operated at maximum brightness, interspersed with medium brightness.

An optional motion detector can switch on all the lights in the swarm simultaneously for maximum light intensity. The adjustable delay time is restarted every time when any motion detector of this swarm is activated.

Thus, all lights will stay on as long as someone is within the swarm.

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or alternative:

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night duration control

For four different lengths of night, the illumination times can be programmed for each hour. Thus, the available solar energy can be precisely adjusted to the different seasons of one year.

data logger

The inbuilt data logger records the state of the battery for the last 400 days.

For each day it stores the min and max battery voltage. These values can be monitored via a laptop on any place inside the swarm. So you detect batteries running down or too low module power.

Technical data:

system voltage	U _{sys}	12V
final charge voltage	U _{float}	14.1V
load disconnect	U _{Last ab}	10,0V ..12,0V, default 11.2V
load reconnect	U _{Last an}	+1,5V
max. module voltage	U _{INmax}	50V
max module current	I _{Kmax}	16A
max. Load current	I _{load max}	16A
self consumption	I _v	15mA
ambient temperature	T _a	-15...50° C
max. humidity		75 %
case protection		IP 65, wheather proofed
terminal diameter		10mm ²
cable glands		M20:6-12mm; M20: 2x5mm; M32:4x8mm
dimensions		120 x120 x 55mm
weight		300 g

LED-display:

- red - main load off : battery low or during daytime
- yellow - night state, different blink signals for high or low LED power
- green - wireless connection to the swarm

special feature:

- PWM output 0..10V for LED dimming. Two stages 0..100% programmable
- wireless range > 200 meter
- max. Lamps in a swarm 255 pcs.
- 400 days data logging of battery min/max
- wireless transmission power fine adjustable to save energy

connections TeleLED516M1

