Installation – CEPU1500

once® ANIMAL LIGHTING

EPU-1500

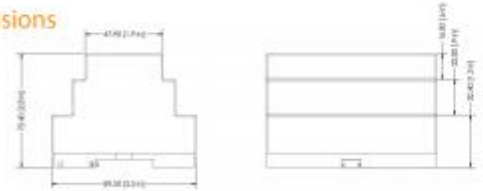
- *User friendly design*
- *Easily controlled via computer analogue-signal, remote or digital interface*
- *Built-in protection for dimmer and lamps*
- *Optional alarm connection available*

Invest in the quality of your lighting system

The EPU-1500 is an electronic dimmer that smoothly controls the lighting of our 230VAC fixtures. It can manage multiple input signals, 0-10VDC analog input, remote 10-100 kOHM signal or a RS485 digital interface.

The EPU-1500 features various settings that can be chosen for output, including leading edge, trailing edge, or digital mode and PWM dimming. In case of emergency the manual override can be used to set lighting levels. It has built-in electronic protection against overload, short circuiting and overheating, and is designed with many integrated software functions that deliver optimal power at both 50 and 60HZ.

Dimensions



Visit our website for more information: www.once.lighting

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Specifications and Ordering

EPU-1500 Dimmer Specifications

Nominal power	1500VA maximum
Input voltage	230VAC
Input frequency	50/60 Hz
Power input	3.3W
Power output	230VAC 50/60 Hz
Power consumption tolerance	+/- 10%
Power factor	-
Inrush current	28A
Inrush time	10µs
Electrical protection	Overload, short circuit, over voltage. Low voltage
Control interface	Computer analogue-signal 0 – 10VDC, remote 10 – 100kOhm or RS485 digital interface
Warranty period	3 years
HS code	90328900
Country of origin	Republic of Poland

Operating and Mechanical Specifications

Operating temperature	-10°C to 40°C / 14°F to 104°F
Maximum devices	170 pcs. XENA-PRO 150 pcs. ILU-MAX 54 pcs. SILOX (22W) 50 pcs. SILOX (24W) 35 pcs. incandescent bulbs
Connection	Screw terminals
Diameter	-
Height	90mm
Length	60mm
Width	105mm
Mount	35mm DIN rail
Housing material	Plastic
Color	Light grey
Product weight per piece	0.385 kg/0.85 Lbs pc.

Safety and Certifications

Electrical protection	Overload, short circuit, over voltage. Low voltage
Alarms	Overload, short circuit, over voltage, low voltage, over heating (Relay, buzzer)
CE mark	Yes
RoHS compliant	Yes
CB	Yes
Flammability mark	-
IEC protection class	Class II
IK impact rating	-
IP code	IP20

Ordering Information

Description	SKU	Order code
EPU-1500	1000000180	9290 021 00315

Contact us
or learn more at:
www.once.lighting

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once
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Revised 2/2021 Data subject to change

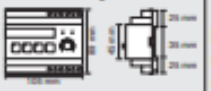
ENG

by signify

EPU-1500

ELECTRONIC-DIMMER-CONTROLLER

TECHNICAL SPECIFICATIONS

Nominal voltage: 	230 VAC (+/-10 % max.) sinusoidal, 50 / 60 Hz, 1-phase + neutral **NOTE:** Upstream-connected insulating- or auto-transformer or 2-phase-power-supply may cause damage to connected electronic load while dimming.
Preliminary fuse:	16 A max.
Power consumption:	2,5 W
Dissipation power:	5,35 W
Permitted ambient temp.:	-10°C to +40°C
Permitted storage temp.:	-10°C to +65°C
Terminal clamps:	0,75 to 2,5 Ø mm
Protection class:	IP 20
Mounting method:	Snap to 35mm din rail
Conformity:	EN 60699-1, EN 60669-2-1, EN 55015
Digital-/Input push button:	230 Vac, possible to connect an illuminated button (=5 mA max.), max. wire length 50 m
0-10 VDC analogue input:	1,5 mA, suitable for potentiometer (= terminal 4) 10 –100 kΩ- log. - 150 mW
Alarm output:	N-MOSFET; Open drain; 12/24 VDC-200 mA max.
RS 485 interface:	Modbus

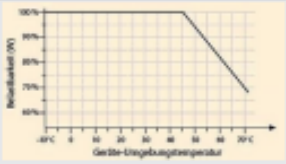
LOAD SPECIFICATION

Minimum load:	60 W min.
Incandescent bulbs:	1500W max.
Dimmable LED-energy-saving-lamps:	1200 VA max.

IMPORTANT: Please operate with EPU-1500 only lamps and transformers, which can be dimmed without any problems by sinusoidal-cutting-controllers. The dimming operation is only permitted if the valid technical directives (e.g. EMC-limit-values) are observed during this operation.

INFLUENCE OF TEMPERATURE

The permissible load will be reduced when the ambient temperature level is exceeding +45°C (see diagram). Install sufficient airflow to ensure ambient temperature parameters are met.



WARRANTY

Terms and conditions apply to terms of ONCE GmbH respectively legal regulation.
Date: 02/2021

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MODES OF OPERATION

man — Manual output adjustment via knob control

auto — Via ext. 0–10 V analogue computer signal or connected potentiometer or 230 V time switch signal in SLS-mode

man (blinking) — Displays the selected operating mode (Blinking = Standby, permanent glow = Active)

SET THE OPERATING MODE (OBSERVE THE ORDER)

Mode A: Standard (Factory setting)

min (press and hold) then max (press and hold) then 3 sec. simultaneously press and hold = Beep

Mode B: HWDKS-LED

min (press and hold) then max (press and hold) then auto (press and hold) then 3 sec. simultaneously press and hold = Beep

Mode C: HWDKS-11W

max (press and hold) then min (press and hold) then 3 sec. simultaneously press and hold = Beep

Mode D: Mixed operation (light recipe for multi-channel luminaires freely adjustable, dimmable 0 - 100%)

max (press and hold) then auto (press and hold) then 18 sec. simultaneously press and hold = Beep; max & min **permanent glow** = active

Mode E: Switching mode (switching of the color channel for multi-channel luminaires, dimmable 0 - 100%)

min (press and hold) then man (press and hold) then 18 sec. simultaneously press and hold = Beep; max & min **permanent flashing** = active

SETTING THE DESIRED LIGHT RECIPE (MIXED OPERATION)

Mode D „Mixed operation" must be activated.

Terminal ⊘ 12 ≙ 230V then adjust (0 – 50 – 100) then Terminal ⊘ 12 ≙ 0V = Set color dimmable 0-100%

SWITCHING THE COLOR CHANNEL (SWITCHING MODE)

Mode E "Switching Mode" must be activated.
Terminal ⊘ 12 ≙ 0V = Color channel 1 > 0-100% dimmable
Terminal ⊘ 12 ≙ 230V = Color channel 2 > 0-100% dimmable

LIFTING MIN-LEVEL OF BRIGHTNESS

man (click) then min (3 sec. press and hold) = Beep then adjust (0-45%) then min (click) = **stored**

DECREASING MAX-LEVEL OF BRIGHTNESS

man (click) then max (3 sec. press and hold) = Beep then adjust (55-100%) then max (click) = **stored**

SWITCHING THE DIMMING PRINCIPLE (ONLY POSSIBLE IN MODE A)

Progress bar: man or auto — Flashing 1 time > Trailing-edge; Flashing 3 times > Leading-edge

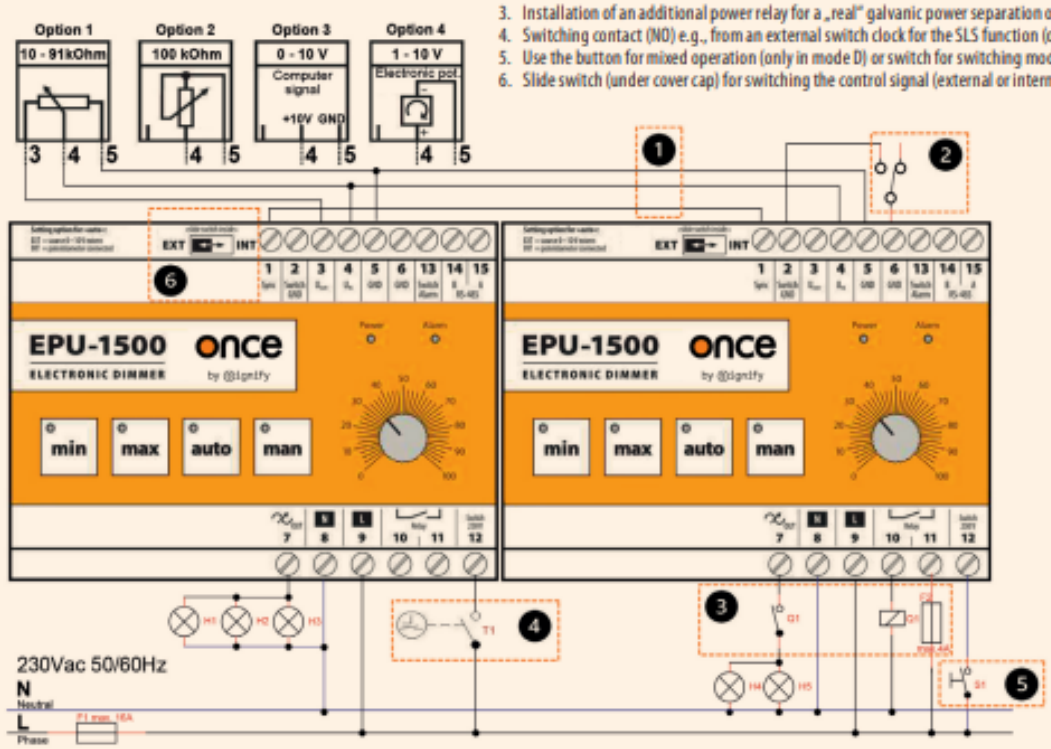
Switching: man (18 sec. press and hold) = Beep

RESET THE DEVICE TO FACTORY STATE

min + max + auto + man (5 sec. press and hold simultaneously) = Beep & flash

DESCRIPTION CIRCUIT DIAGRAM

1. Wire bridges to extend the overall system performance
2. Additional switching option (ON/OFF) of the load in conjunction with twilight switch or motion detector
3. Installation of an additional power relay for a „real" galvanic power separation of the load
4. Switching contact (NO) e.g., from an external switch clock for the SLS function (only in mode A)
5. Use the button for mixed operation (only in mode D) or switch for switching mode (Only in e mode)
6. Slide switch (under cover cap) for switching the control signal (external or internal)



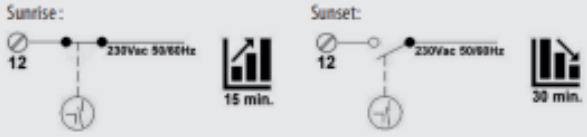
SLS SUNLIGHT SIMULATION (ONLY POSSIBLE IN A MODE)

With an external timer, you can create an artificial sunrise (15 Min.) and artificial sunset (30 Min.).

Activating or disabling the SLS function

auto 18 sec. hold = Beep

3 x Beep = enabled
1 x Beep = disabled



ERROR ALERTING

In the event of an error, the EPU-1500 is used for visual and acoustic alarms. An error is automatically acknowledged as soon as it is no longer attached. The alarm tone can be muted by pressing any button on the EPU-1500. The device is restarted by switching the main voltage off and on again.

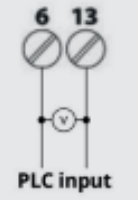
Fault	LED Power	LED Alarm	Beeper	Alarm-relay	Fault cause	Workaround
Low voltage	ON	Blinking (6x sec.)	YES	YES	Power supply below 160 VAC	Check the mains voltage
Overvoltage	ON	ON	YES	YES	High voltage peaks, inadmissible supply-voltage-level or inductive load	Check the mains voltage
Overheating	ON	Blinking (5x sec.)	YES	YES	Temperature inside controller higher than 120°C/ 248°F or excessive ambient temperature	Check cooling/ventilation
Overload	ON	Blinking (2x sec.)	YES	YES	Load exceeds >1700 W	Check the connected load on terminal 7
Short-curcuit	Blinking (1x sec.)	Blinking (1x sec.)	YES	YES	Short-circuit to load output (>10 sec.)	Check the output or connected consumers
Bad voltage	Blinking (1x sec.)	OFF	NO	NO	Power supply frequency not in range between 45-65Hz or shape of sinusoidal distorted or load shows bad power factor < 0,4	Check mains voltage quality
Communication	Alternating blinking (1x sec.)		YES	NO	Malfunction of internal microprocessor (= will switch over automatically to turn knob adjusting) or RS-485 communication fault between connected devices	Check the RS 485 communication or internal device error
Drop voltage detection	Blinking (6x sec.)	OFF	NO	NO	Incorrect load peak to power supply net vs. fast voltage dropping (= may be exceeded supply-cable impedance).	Check mains voltage / mains quality
Overload alarm contact	ON	OFF	YES (2x)	NO	Excessive current level to terminal 13 (= > 200mA).	Check the connected load on terminal 13

ALARM MESSAGE OUTPUT

Mechanical switching relay

⚠ K1=24Vdc, max. 200mA Coil current

Alarm output

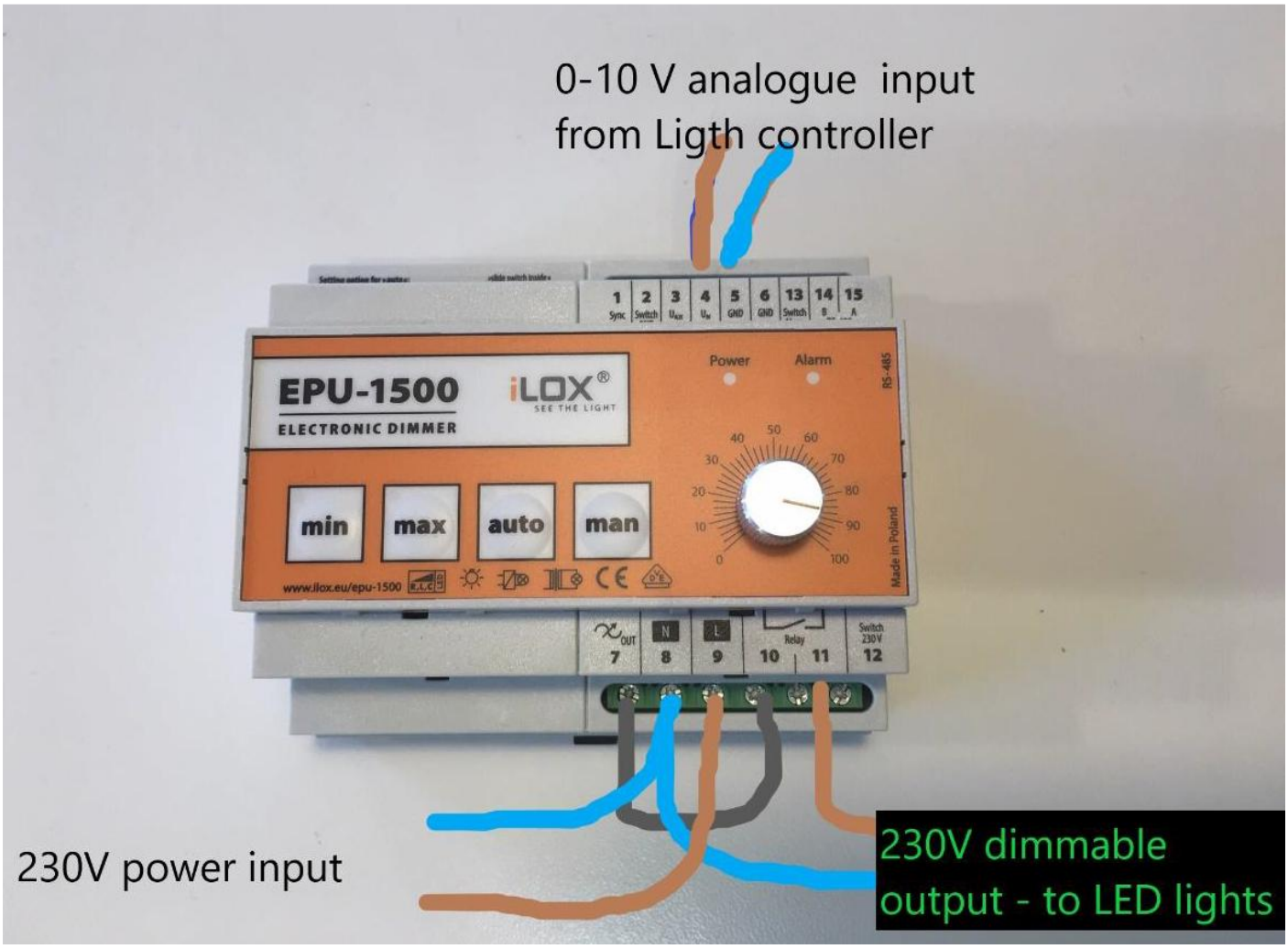


⚠ 12Vdc, max. 1mA

Installation:

DK: **0-10V. signal fra ekstern lysstyring eller staldcomputer**

EN: **0-10V. signal from external light controller or farm-computer**



DK: VIGTIGT: Undgå forstyrrelser for bl.a. EMC (elektronisk støj) og frekvensomformere fra andre installationer m.m.
Husk også at anvende skærmet kabel til 0-10V styrekable (evt. F0103S) samt "jorde" skærmen i ene ende. Desuden anbefaler vi at CEPU1500 sidder separat i gruppetavlen.

EN: IMPORTANT: Avoid interference from, among others, EMC (electronic interference) and frequency converters from other installations, etc.
Also, remember to use shielded cable for the 0-10V control cable (e.g. F0103S) and to "ground" the shield at one end. Furthermore, we recommend that the CEPU1500 is installed separately in the distribution board.

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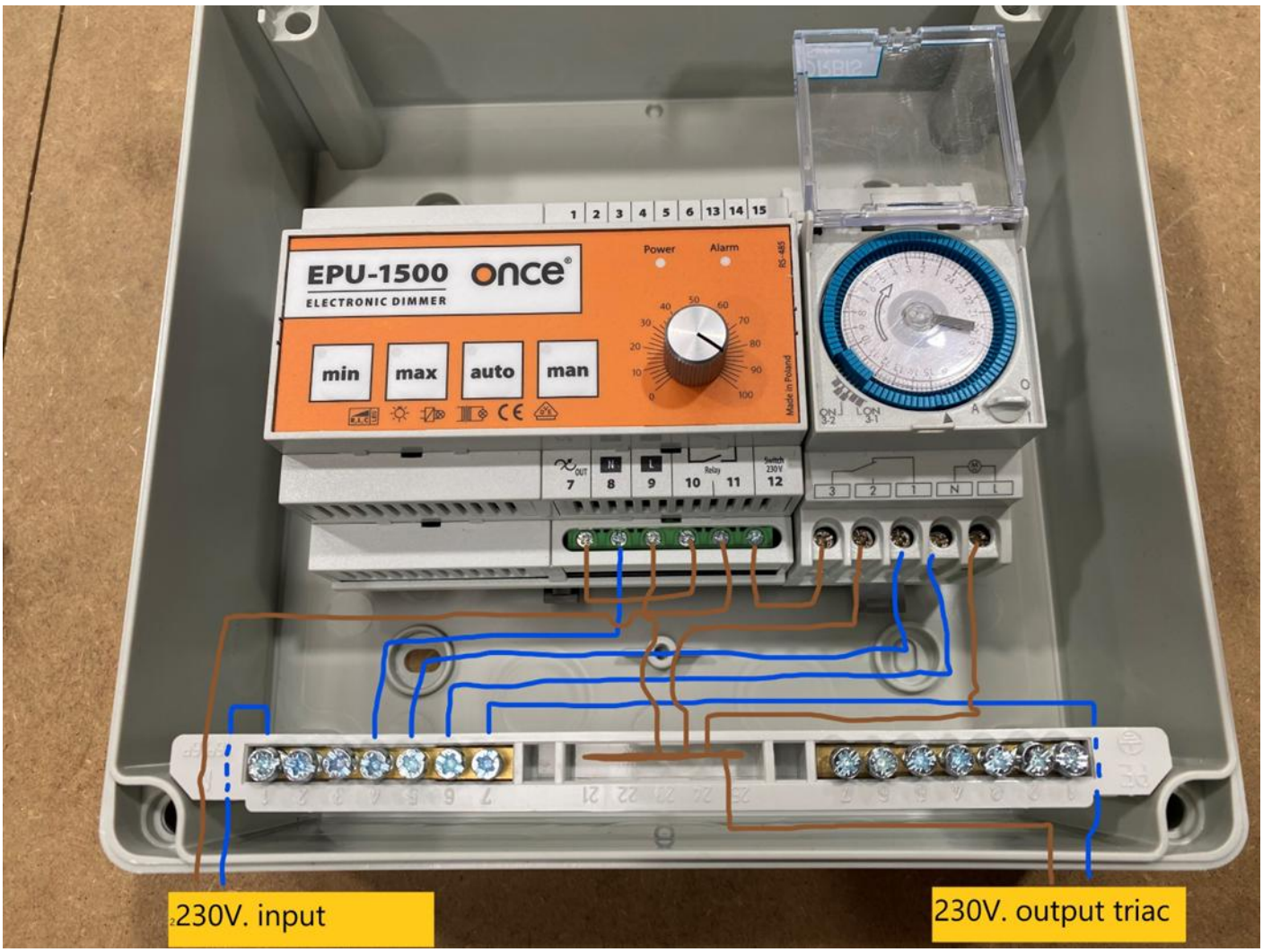
Installation:

DK: **Signal fra analog timer (evt. Orbis)**

EN: **Signal from analog timer (e.g. Orbis)**



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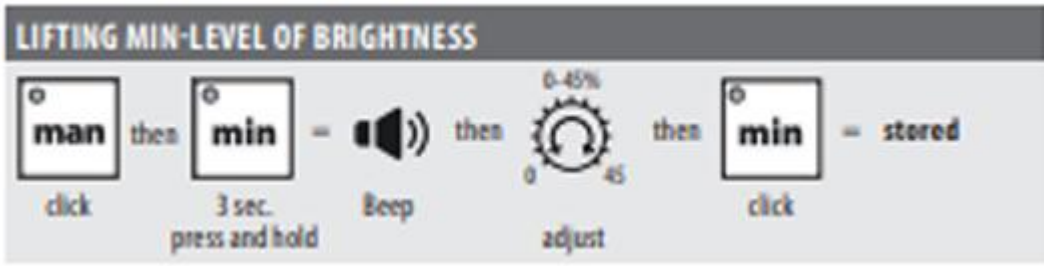
Installation min. max level – simpel lysstyring vha. f.eks. døgnur:

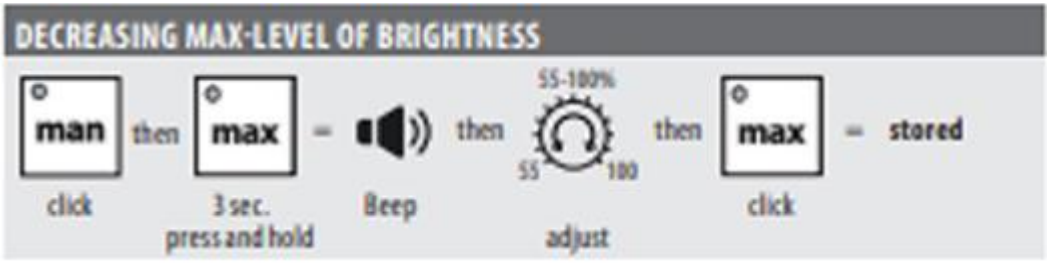
1:

Set min. level:



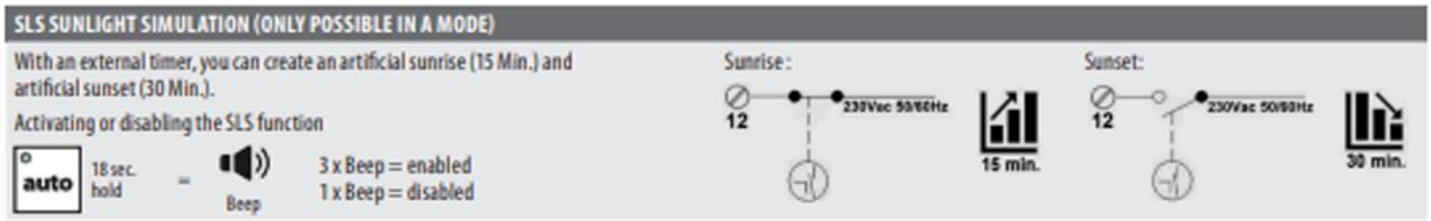
2:

Set max. level:



3:

Installer 230V. "push" input på klemme 12 (f.eks. fra døgnur)
Husk at aktiver / activate sunrise / sunset function



DK: **Hver opmærksom på sunrise 15min. sunset 30min. tid er låst**
ENG: **Be aware that sunrise 15min. sunset 30min. are a fixed time**

Ved fejl – rød lampe blinker – test altid reset funktion først – alle 4 knapper holdes indtrykket i 5 sek. - Indtil der kommer biplyde

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