

307582 01 27.07.2021



**EN** Flush-mounted universal dimmer

DIMAX 545 plus P 5450130



# Safety



Assembly and installation should only be carried out by a qualified electrician, somebody who has completed appropriate professional training and has the knowledge and experience necessary to be able to recognise and avoid the potential dangers posed by electricity.



Before installation/disassembly, disconnect the power supply and ensure that the parts are no longer live.



Prior to commissioning and using the product, read the entire manual and follow the instructions.

- ① Due to continuing technical progress, abnormalities in dimming response or radio interference cannot be ruled out when operating dimmed lamps (in particular LEDs).
- ① In order to achieve a good result, several dimmable LEDs should always be of the same type.

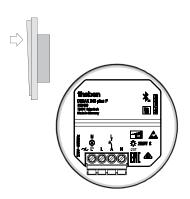
# Proper use

- The universal dimmer switches and dims the brightness of different lamps such as bulbs, high-voltage halogen lamps, low-voltage halogen lamps (conventional or with electronic transformer) or dimmable LED lamps for 230 V as well as fans
- The brightness can be adjusted by using the buttons connected to the dimmer and/or via app
- The universal dimmer is equipped with a "gentle" lamp conserving function for switching on and off, automatic detection of the load type, overheating protection against overload as well as short-circuit protection
- For use in private and public residential construction, in closed rooms
- Suitable for retrofitting
- Convenient control via smartphone with Theben MAXplus app via Bluetooth V4.2
- The flush-mounted universal dimmer conforms to EN 60669-2-1 and EN 60730-2-7 if correctly installed

## Installation and connection

- ① When the mains returns, the lamp illuminates briefly for load detection.
- ① In case of a voltage drop, time and program will be stored. After restoration of the power supply, the device will start with the time offset of the voltage drop. The time will be updated when connecting to the app.

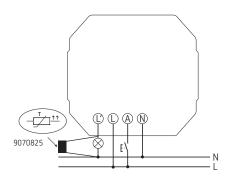
### Mounting the dimmer



➤ Install in conventional flush-mounted boxes (according to DIN 49073).

#### Connecting the dimmer

① Several dimmers can be controlled with one button.



- ➤ Use compensation module 9070825 to prevent the LEDs from afterglow or flickering.
- ➤ Install the compensation module parallel to the consumer.



Component can get hot!



#### Risk of electric shock!

- ➤ Protect against accidental contact during installation.
- ➤ Maintain a minimum distance of 3 mm from live parts or use additional insulation, e.g. separating strips/walls.
- ➤ Always operate electronic and conventional transformers with the minimum load specified by the manufacturer.

- ➤ Only use dimmable LED lamps, as normal LED lamps may be destroyed.
- ➤ When changing the lamps, switch off the power supply (at the fuse box) so that the automatic load detection is reactivated.
- ➤ Do not connect dimmer load connections (L´) in parallel.
- ➤ Do not bypass or short-circuit the dimmer.
- ➤ Do not install any isolating or variable transformers before the dimmer.
- ➤ Do not mix wound and electronic transformers in the installation.
- ➤ Do not mix wound transformers and LEDs in the installation
- ➤ Do not connect buttons with glow lamps.
- Correct automatic load detection is only possible with a connected load.
- ➤ Only use transformers approved by the manufacturer for dimmer operation.

# Settings and functions – operation via app

# Connecting universal dimmer and smartphone (via MAXplus app)

The universal dimmers can be programmed using an app (from Android 4.4, iOS 8) on mobile devices. Communication takes place via Bluetooth BLE.

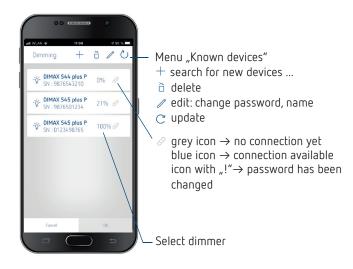
➤ Download the MAXplus app from the App Store or Google Play Store.





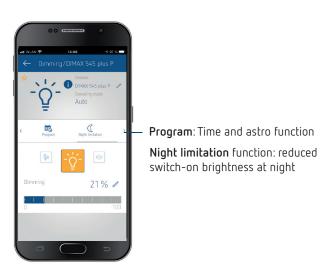
- Start the app and push + at the top right (see fig.).
   → Device list with serial numbers appears.
- ➤ Select the device
- > Confirm with OK.
  - → Window for entering dimming values, brightnesses, etc. opens.
  - → Dimmer is now connected and displayed on the start screen.





- > Select the device.
- ➤ Confirm with OK.
  - → Window for entering programs, dimming values, brightnesses, etc. opens.

# Program with time and astro function as well as night limitation function



→ Afterwards, an empty page appears where a new program set can be created with +.



#### 1. Program: time function



"Time" menu Each switching point allows you to select between

- Time or astro function
- On or Off
- additionally with dimming value (in %) and ramp (dim up and down at desired switching point)
- The switching points can also be mixed, i.e. astro on and time off, or vice versa.

#### 3. Night limitation function



The night limitation function @ also starts with an empty page.

- "Activation" menu
- + new program set
- duplicate
- paste
- † delete

#### 2. Program: astro function



"Astro" menu Each switching point allows you to select:

- the switching at sunrise and sunset as well as offset
- On or Off
- Weekdays
- additionally with dimming value (in %) and ramp (dim up and down at desired switching point)



- "Night limitation" function Each switching point allows you to select
- the time period with reduced switch-on brightness (from – to)
- the weekdays
- additionally the switch-on brightness (in %)



all programs can be activated all programs can be copied and pasted



Display of "night limitations"

By deleting the checkmark, these programmed data can be deactivated for a short time (e.g. for a party, etc.).

Also in this function, the light can be dimmed brighter or darker via the button.

# Dimming — brightness levels — staircase light — comfort — settings





- → Functions as dimming, staircase light, comfort and settings (with alternative dimming curves) can be selected.
- ① If the star is activated (yellow), the device appears as a favourite on the start screen.



#### 1. Dimming

- $\rightarrow$  Enter the desired dimming value from 1 100 %.
- The lightbulb is used for switching on and off; the dimming value can be entered via the bar arrangement, or directly via the pencil.

#### 2. Brightness levels

→ Minimum, maximum brightness, switch-on brightness in %, memory function "Save last switch-on brightness"



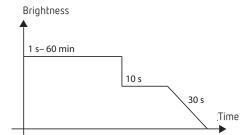


#### 3. Staircase light

① Has to be activated in → Setting → Operating mode "staircase light"



- You can select the staircase light time, the dimming level for the switch-off pre-warning and the behaviour when pressing the button again.
- Long time function 60 mins: activation by pressing the button for longer (confirmed by change in brightness).



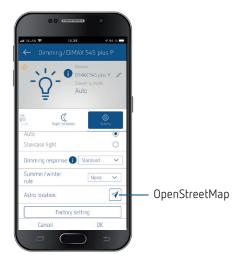
#### 4. Comfort

① Has to be activated in  $\rightarrow$  Setting  $\longrightarrow$  Operating mode "auto".



 $\rightarrow$  Snooze and wake-up function, adjustable in s - min

#### 5. Setting





- → Operating mode selectable:
  - Auto (dimmer function with comfort function)
  - Staircase light
  - Dimming response: standard, LED A, LED B, linear, leading edge, standard fix leading edge, fan
  - Summer/winter rule: none, Europe; GB, IRL, P; FIN, GR, TR
  - Astro location
  - Factory setting: Settings will be reset to the factory setting

#### Scenes

Here, you can create, delete or edit a new scene.

① The current state of the dimmer can be saved as a scene. If several dimmers are present, various dimmer states can be combined in one scene.







## Assign/change password/PIN

If you have activated  $\rightarrow$  "Shared PIN" under Settings, this PIN will be suggested for all other devices and can thus be adopted.

If you want to change the PIN, you can do this in the menu  $\rightarrow$  Edit  $\rightarrow$  Assign password.







# 5. Push button operation

## 1. Auto operating mode (default)

① The memory function as well as wake-up and snooze function can be activated/deactivated in the app.

## Light is OFF (with button: Input A)

Light is Of I (with button, input A)					
1 x short button press	< 0.5 s	Memory function (if activated in the app) The dimmer switches on with the last brightness value saved prior to switch-off.			
1 x short button press	< 0.5 s	If the memory function is not activated in the app, the dimmer starts with the learned switch-on brightness (factory setting: 100%)			
1 x long button press	> 0.5 s	Dimming switch-on function The dimmer switches on with minimum brightness and dims until the button is released again, or the maximum brightness has been reached.			
2 x short button press		Wake-up function Dimmer switches on with minimum brightness, then dims to 100% within the set dimming time (factory setting: 5 min).			

#### Light is ON (with button: Input A)

Light is on (with outton: input //				
1 x short button press	< 0.5 s	Switch off		
1 x long button press	> 0.5 s	Dimmer dims up or down. Dimming stops at minimum or maximum value. The dimming direction is changed by pressing the button again.		
2 x short button press		Snooze function The dimmer dims to minimum brightness within the set dimming time and switches off (factory setting: 5 min).		
1 x long button press	> 15 s	all dimmers are off		

## 2. Staircase light operating mode

① The staircase light function must be activated in the app.

#### Light is OFF (with button: Input A)

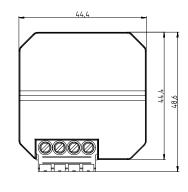
1 x short button	< 0.5 s	Staircase light is activated	
press			
1 x long button press	> 2 s	60 minute extended function is activated	
hiess			

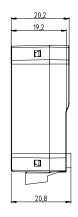
#### Light is ON (with button: Input A)

1 x short button press	< 0.5 s	can be switched off: off secondary switching: staircase light time is restarted
1 x long button press	> 2 s	60 minute extended function is activated
1 x long button press	> 2 s	If the extended function is active, it will be switched off

# 6. Technical data

	Trailing edge	Leading edge	
Operating voltage	230 V +10% / -15%		
Frequency	50/60 Hz		
Standby output	0.2 W		
Load types	R/L/C		
Minimum load	5 W		
Incandescent/halogen lamp load	250 W (up to 25 °C) 200 W (up to 45 °C)		
Dimmable LEDs (typical)	250 W (up to 25 °C) 200 W (up to 45 °C)	24 W (up to 25 °C) 12 W (up to 45 °C)	
Electronic transformers (C)	250 W (up to 25 °C) 200 W (up to 45 °C)		
Inductive transformers (L)		200 W (up to 25 °C) 130 W (up to 45 °C)	
Fan	-	50 W	
Cable length	max. 50 m		
Cable cross-section	max. 4 mm²		
Permissible ambient temperature	−25 °C +45 °C		
Time accuracy	< 2 s/day		
Mode of operation	type 1 RTU		
Rated impulse voltage	4 kV		
Pollution degree	2		
Software	class A		
Radio frequency/transmis- sion power			





Theben AG herewith declares that this type of radio installation complies with Directive 2014/53/EU. The complete text of the EU Declaration of Conformity is available at the following Internet address:

www.theben.de/red-konformitaet

## Cleaning and service

- ➤ Only use a dry, soft cloth to clean the device surface.
- ➤ Do not use any cleaning agents or solvents.

# Disposal

➤ Dispose of device in environmentally sound manner (electronic waste).

# 7. Contact

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### Hotline

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