



LUXOR 405

1.0 Designated use

The **LUXOR** dimmer module expands the existing **LUXOR** series of devices. It is suitable for installation in single-family and multiple family houses, offices, etc. The device is intended for designated installation in control and distribution cabinets. It is suitable for use in dry rooms with a normal amount of dirt.

2.0 Brief description

- The LUXOR dimmer module functions as an independent unit. It is connected to the LUXOR system via the 2-wire COM interface and is therefore involved in all comfort functions such as panic function, central ON, central OFF and presence simulation.
- Only keys can be connected to inputs **I 1** to **I 2**.
- In principle, various external wires/phases can be applied to the control inputs and the switching outputs.
- Various dimming responses can be selected using program selector switches P1 to P4.
- Key actuation differs as follows:

- short keystroke on the control button	= switching
- long keystroke on the control button	= dimming
- very long keystroke (> 3 sec.) on the control button (in P3 and P4 only)	= continuous light and/or continuous OFF

3.0. Safety notes



In order to eliminate danger of fire and danger of an electric shock, the device may only be connected and installed by an electrician in accordance with the national regulations and the valid safety provisions. Tampering with or making modifications to the device will invalidate the guarantee.

- Do not connect dimmers in series or in parallel!
- Do not bridge the dimmer!
- Do not install an isolation or adjustable transformer before the dimmer!
- Only use transformers (Tronic transformers) that are suitable or approved for operation with a dimmer!
- Operation with differing load types is not permitted. Only the combination of R and C loads (incandescent lamps and Tronic transformers) is permitted.
- Electronic transformers (Tronic transformers) that can be operated with reverse phase control (C load) and phase control (L load) must not be combined with other load types.
- The voltage supply (at the control cabinet or distribution cabinet) must be switched off for a load change and when replacing lamps!
- Transformers (Tronic transformers) may be operated only with the minimum load specified by the manufacturer. Correct, automatic load detection is only possible with minimum load. If no data are known, the transformer (Tronic transformer) must be operated at a minimum nominal load of 80 %. Non-compliance can result in radio interference and dimmers or transformers can be destroyed. The lamps have a reduced service life.
- Should a switch be series-connected with the dimmer and the load is on, a time delay will result when switching on.

4.0 Description of control level

2-channel operation **D1** and **D2**
rated at 300 VA each

1-channel operation **D1** rated at 500 VA
(channel 2 does not function)

When the selector switch on **LUXOR 400** is in position: the **LED set** indicates the program status.

LED illuminates when a contact signal is present at the input **I**.

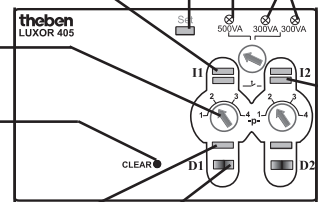
Program selector switch for programs **P1** to **P4**

CLEAR key for resetting the dimmer in the event of malfunction and on indication of overflow/over-temperature

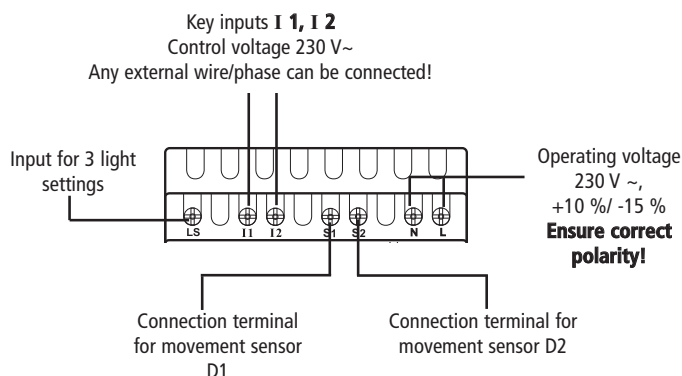
LED illuminates when the output is switched on.

Channel key **D1** (**D2**) for manual **ON/OFFS** switching (manual key) and programming of central functions

LED illuminates when a malfunction, overflow or over-temperature is present.



4.1 Description of input terminals



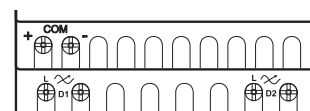
4.2 Description of output terminals

Dimmer outputs

LUXOR 405 (D1 and D2)	2 x 300 VA
D1 only	1 x 500 VA

Info:

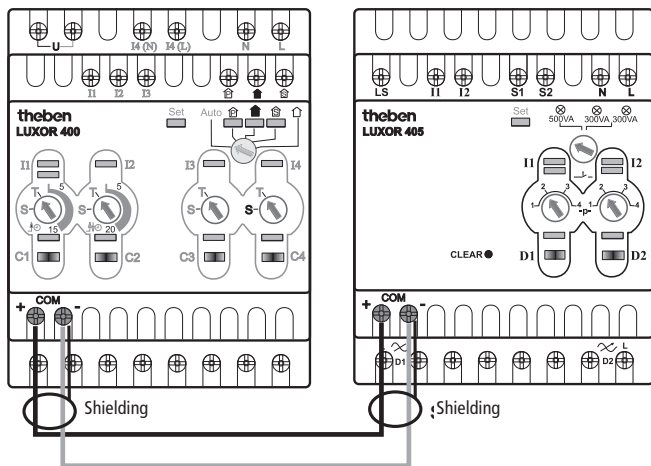
- The outputs are adjacent and isolated for the supply.
- Any external wire/phase can be connected!
- Semi-conductor switch outputs



5.0 Connecting upgrade devices

- Use the following lines: EIB/KNX bus line type YCYM or Y(ST)Y or telecommunication line J-Y(ST)Y.
- Connect both sides of the shielding to the minus bus terminal on the COM bus.
- The COM line length may be up to 100 m.
- Always route the COM line separately from other lines (separate cable).
- Do not route the COM line parallel to 230 V lines.
- Upgrades to max. 16 devices inc. basic module.
- Ensure correct polarity!

-> If the COM connection fails, the SET LED flashes continuously.



Ensure correct polarity!

Make the 2-wire connection between the COM interfaces.

6.0 Connection and installation

Connecting the inputs

Input **I 1** acts on output **D1**.

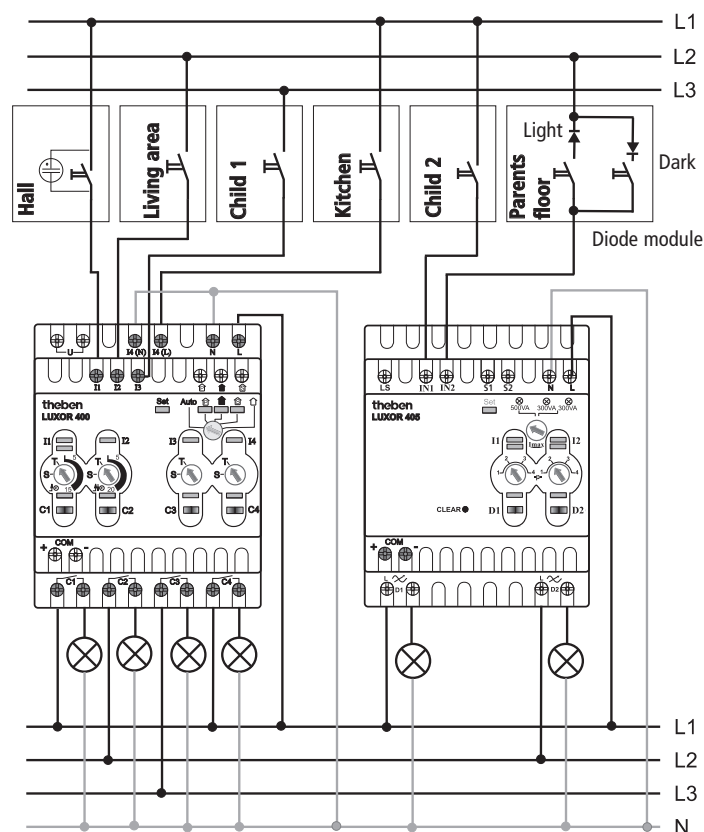
Input **I 2** acts on output **D2**.

Input **S 1** acts on output **D1**.

Input **S 2** acts on output **D2**.

Important: In 1-channel operation, **I 2** and **S 2** do not function.

Input **LS** can trigger 3 independent light settings.



Do not connect the inputs in parallel.

7.0 Selection programs P1, P2, P3 and P4

4 programs **P1** to **P4** can be selected using the program selector switch.

◆ Program P1

Program **P1** is the standard dimming program with the following sequences:

For the 1 key dimmer

- One brief keystroke switches on the light to 100 %.
- Pressing it again switches the light off again.
- A long keystroke dims the light.

The light is dimmed up to 100%, for example, for as long as the key is depressed.

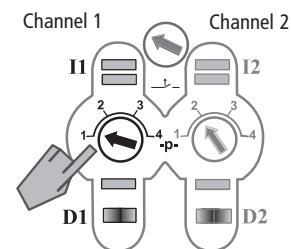
It is then dimmed down again. The entire process is repeated until the key is released again.

“Teaching-in” a brightness value (minimum value in P1 to P4)

The smallest value to which the dimmer is to be set can be “taught in” (in **P1** position), see **Section 8**.

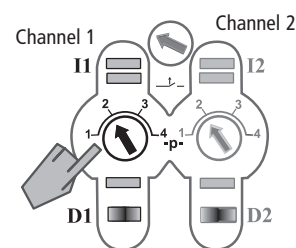
For the 2 key dimmer

- One brief keystroke on the (bright) key switches on the light on.
 - One brief keystroke on the (dark) key switches on the light off.
 - One long keystroke on the (bright) key slowly increases brightness to 100 %.
- If the key is previously released, the value that has been reached is maintained.
- A further long keystroke increases brightness to 100 %.
- One long keystroke on the (dark) key reduces the brightness to 10 % and/or the minimum value (if a value has been previously set).



◆ Program P2

- Program **P2** corresponds to **P1**, except when switched on. In this case, the light does not switch to 100% brightness but to the last brightness value prior to switching off.
- After the 1st short keystroke, the (bright) key (with 2-keys dimmer) dims to the set value and then down to 100 % brightness after the 2nd keystroke.



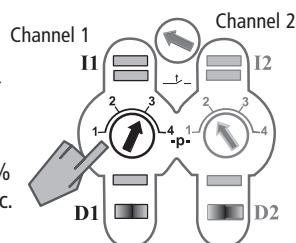
“Teaching-in” a brightness value (upper reduction value for P3)

The upper reduction value can be “taught-in” here (in **position P2**), see **Section 8**.

◆ Program P3 (stairwell function with continuous light)

Program **P3** behaves like an automatic stairwell light and is identical on 1 and 2 switch dimmers. **P3** runs as follows:

- One keystroke switches the light on to 100 %.
- The light is maintained at 100% for 1, 2, 4 or 8 min. periods (see “Teaching-in” the stairwell light time, Section 8).
- The value is then reduced to between 40 % and 80 %. This value is maintained for 40 sec.
- **P3** then switches to 30 % or the programmed minimum value. This value is maintained for 10 sec.
- Program **P3** switches off.



• If during this process the key is pressed briefly, the “stairwell light function” starts from the beginning.

• If during this process the key is pressed for longer than 3 sec., the program switches to continuous light (100%) and confirmation is signaled by flashing briefly.

- The continuous light can be switched off by one short keystroke.

“Teaching-in” the stairwell light time (in position P3), see Section 8.

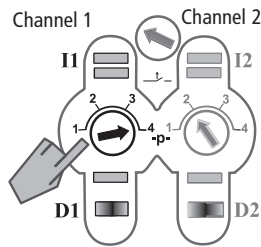
◆ Program P4

Program **P4** contains a **night** and/or **security light**.

- One short keystroke increases the light to 100 % brightness.
- The light is maintained at 100% for 1, 2, 4 or 8 min. periods.
- A further keystroke slowly reduces the light to 10 % or to the entered minimumvalue. This value is maintained (**night and/or security light**).
- A further keystroke increases the brightness to 100 % again.
- If while the minimum value is maintained, the key is pressed for longer than 3 sec. the light switches off.
- If - with the light switched on (100 %) - the key is pressed for longer than 3 sec. the program switches to continuous light (100 %) and confirmation is signaled by flashing briefly.
- A further brief keystroke reduces the light to the minimum value.

A “timer function” starts the switching at 100 % . When this expires, the light is automatically reduced to the minimum value.

“Teaching-in” the timer function (in position P4), see Section 8.



9.0 “Light setting” function (LS)

Important:

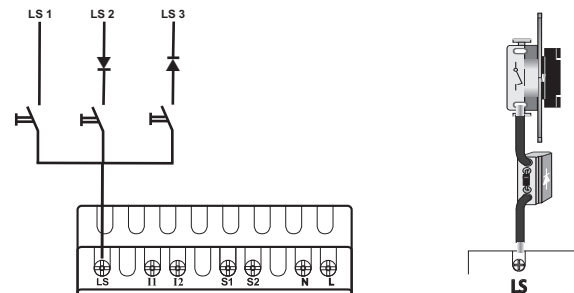
3 light settings can be “taught-in” and set; this is only possible, however, in programs **P1** and **P2**.

◆ “Teaching-in” a light setting

- Enter the required brightness values.
Press one of the 3 setting keys (additional keys for other light settings) for longer than 3 sec.
The brightness values will be saved and confirmation is signaled by flashing briefly.

◆ Running a light setting

- Briefly press one of the 3 setting keys. The channels switch to the “taught-in” light value.
- Pressing the setting key again switches the channels off.



Note:

Do not connect the input of the light settings of several devices in parallel.

8.0 “Teaching-in” various brightness values

You have the option of setting or “teaching-in” various brightness values in positions P1 to P4:

1) Brightness (minimum values) in position P1

- Press the manual key **D1 and/or D2** for longer than 3 secs. All LEDs illuminate; the lamp illuminates up to the previously set light value.
- Set the brightness value (10 % - 40 %) with the key (**not** with the manual key).
- Confirm briefly with the manual key **D1 and/or D2**. The set value is accepted. The LED illuminates for the output illuminates.

2) Brightness (top reduction value at 40 % - 80 %) in position P2

- For operation, see description under 1)

3) Stairwell light time (1, 2, 4 or mins.) in position P3

- Press the manual key **D1 and/or D2** for longer than 3 secs. All LEDs illuminate.
- Select the stairwell light time using the program selector switch:
P1 = 1 mind., P2 = 2 mind., P3 = 4 mind., P4 = 8 mind.
- Confirm briefly with the manual key **D1 and/or D2**. The selected time will be accepted. The LED illuminates for the output illuminates.
- If necessary, set the program selector switch back to **P3**.

4) Night and/or security light (1, 2, 4 or 8 mins.) in position P4

- For operation, see description under 3)
- Also select the time using the program selector switch: P1 = 1 mind., P2 = 2 mins., P3 = 4 mins., P4 = 8 mins., as described above.
- If necessary, set the program selector switch back to **P4**.

10.0 “Movement sensor” function (S)

◆ Switch-on

in **P1, P3, P4** => switches to 100 %.

in **P2** => If the light is already switched on, the brightness is increased to 100 %. If the light is not switched on, the last brightness value is achieved.

◆ Switch-off

in **P1** => switches to 0 %.

in **P2** => If 100 % was set, the last brightness value is achieved. If no brightness value was set, the program switches to 0 %.

in **P3** => starts the stairwell light function.

in **P4** => starts the “timer function”.

11.0 Central function

Each channel can be assigned either panic, central OFF, central ON or presence simulation as a central function. The function is possible only in combination with LUXOR 400 (see Operating Manual for LUXOR 400).

◆ Panic ☒ 1

The assigned channels are switched on. They cannot be operated again until panic is cleared.

◆ Central OFF ☒

The assigned channels are switched off. No further operation is possible.

◆ Central ON ☒

The assigned channels are switched on. Operation is now possible again.

◆ **Presence simulation (AWS)** ☼

The assigned channels are switched. Operation is now possible again.

- During operation, the current brightness values of the channels are checked and where applicable saved with the time information.
- The values thus collated are saved in the device every 24 hours. After 7 days, the old values are overwritten and resaved.
- After start-up, no further values are saved; a presence simulation sequence cannot be started until a week has lapsed.
- After a RESET and/or power is restored, the presence simulation values are maintained in the device .

12.0 Function in timer module LUXOR 414

Info:

- The dimmer module LUXOR 405 can be taught-into all 8 channels of the timer module (see Operating Manual LUXOR 414, Section 13).
- **Behaviour with switching time/astronomical time**
The percentage value set in the timer module UXOR 414 is output.
- **Behaviour with switching time/astronomical time**
If the sensor is taught into a channel in addition to the timer, the night-time interruption (i.e. the idle period) acts on the dimming function rather than on the astronomical time. Astronomical times are always used.
- **Central functions**
 - **Panic function**
If this function is active during a timer command, the timer command is not used until the function is terminated.
 - **Presence simulation (AWS)**
If this function is active during a timer command, the does not react to the AWS taught-in channel.
- **Astronomical time/nighttime interruption (idle period)** (see Table)

	Astro - evenings	Nighttime interruption	Nighttime interruption	Astro mor-nings	Explanation
	Sunset	Start	End	Sun rise	
Times	16:10	20:00	6:00	8:10	Winter
Switching	ON	OFF	ON	OFF	Normal sequence
Times	21:30	20:00	6:00	4:50	Summer
Switching	–	OFF	–	OFF	remains OFF
Times	19:30	20:00	6:00	5:55	evenings only
Switching	ON	OFF	–	OFF	ON
Times	20:30	20:00	6:00	6:55	mornings only
Switching	–	OFF	ON	OFF	ON

- **Switching time**
With normal switching times, the nighttime interruption (idle time) has no function. The switching time is always used.

13.0 Function in combination with sensor module LUXOR 411_412

Info:

- The dimmer module LUXOR 405 can be taught-into the dimming channel on the sensor module LUXOR 411 module (see Operating Manual LUXOR 411_412 Section 10).
- The dimmer module LUXOR 405 reacts only to twilight (80 secs. delay).
- When the set Twilight function is underrun, the channels assigned to the Twilight function are switched to 100 % (for programmes P1, P2 and P4, but not P3).
- When the set Twilight function is exceeded, the channels assigned to the Twilight function are switched to 0 % (for programmes P1, P2 and P4, but not P3).
- In programme P3, the dimmer module does not react to the sensor module.
- If the panic function, a motion sensor, a light setting or presence simulation are active, the dimming module will not react to the sensor module.

Relationship between twilight, idle time and output status (see table)

Twilight	Idle period % value (LUXOR 414)	Sensor	Channel (LUXOR 405)
getting dark	0 % was present	is disabled	unchanged
getting dark	>0 % was present	is enabled	100 %
it is dark	0 % approaching	being disabled	0 %
it is dark	>0 % approaching	being enabled	100 %
getting bright	0 % was present	remains disabled	unchanged
getting bright	>0 % was present	remains enabled	0 %
it is bright	0 % approaching	being disabled	unchanged
it is bright	>0 % approaching	being enabled	unchanged

14.0 Technical data

Operating voltage:	230 V~, +10 % to -15 %
Mains frequency:	50 Hz
Power consumption:	3 VA
Key / switch connecting cable:	230 V phase-independent
Key / switch cable length:	up to 100 m (NYM, H05/H07, NYIF)
Dimmer load cable length:	up to 100 m
2-wire connection for COM:	Any cross-section / max. length 100 m
Permitted ambient temperature:	–10 °C ... +50 °C
Protection class:	II subject to correct installation
Degree of protection:	IP 20 in accordance with EN 60529
Dimmer outputs:	per channel 20 ... 300 VA
for one channel:	20 ... 500 VA
Load type:	Automatic detection of R, C and L load
Short circuit:	the outputs are short-circuit proof (indicator↗↘)
Overtemperature:	monitored with cut-out (indicator↗↘)
automatic detection of R, C loads (reverse phase control) and L load (reverse phase control)	

15.0 Dimmable loads

Load type	Dimmable	Load type / Dimming type	Comment
Halogen lights and incandescent lamps for 230 V~	YES	Reverse phase control 	—
Low-voltage halogen lights with electronic transformer	YES	Reverse phase control 	*
Low-voltage halogen lights with laminated core transformer (toroidal core transformers and transformers from Block and ABB except for type series... Lv) are unsuitable	YES	Phase control 	*
Combined operation of low-volt halogen lights with Electronic transformer and 230 V~ incandescent lamps	YES	Reverse phase control 	*
Toroidal transformers	NO	X	—
Metal halide lamps	NO	X	—
Energy saving lamps	NO	X	—
Fluorescent lamps	NO	X	—
Lamps with own dimmer	NO	X	—
Lamps with other electronic ballasts	NO	X	—

* Only use transformers (Tronic transformers) that are suitable or approved and are operated at the minimum load.

16.0 Positive list of conventional transformers tested

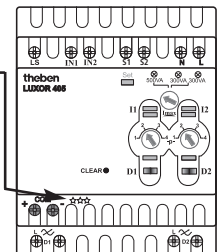
Type	Supplier / Manufacturer	Power [W]	
		mind	max
LDT 60	Bürklin	45	60
LTV 250/96 TB	Reichelt	180	250
LTV 300/96	Reichelt	200	300
Type 120/500 (LTV 500/135)	Reichelt	300	500
Si-TR 300-230/12 Lv	ABB	250*	300

* Not stated, therefore please use 80 % of maximum value.

Please note!

The 3 stars on the top of the LUXOR 405 denote a 3rd generation device.

This means that only these devices with LUXOR 411 (sensor module) and LUXOR 414 (timer module) can be controlled.



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