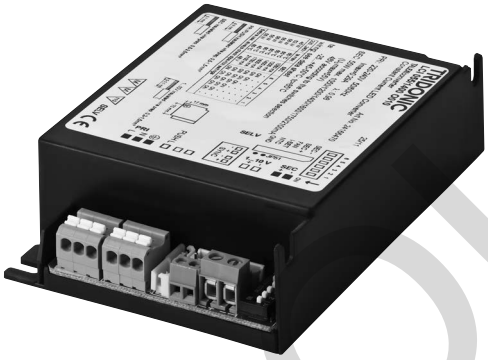
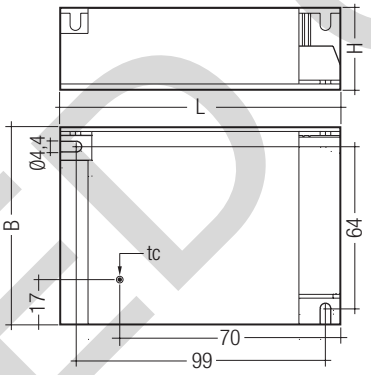
IP20 SELV RoHS

TALEXconverter LCI 55 W 1400 mA 0010
TOP series





Product description

- 1-channel LED control gear for indoor use
- Inbuilt LED control gear for luminaires of protection class I
- Output current and output voltage adjustable
- FAN output 12 V
- NTC input channel
- Nominal life of 50,000 h (at ta max. with a failure rate of 5 %)
- Dimmable via 1 ... 10 V, potentiometer or PUSH function (incl. Memory function)①
- Overload protection⑤
- Thermal protection⑤
- Plastic casing, black

Technical data

Rated supply voltage	220 – 240 V
Input voltage range, AC	99 – 264 V
Mains frequency	50 / 60 Hz
Rated current (at 230 V / 50 Hz / full load)	0.29 A
Typ. efficiency (at 230 V / 50 Hz / full load)	90 %
λ (at 230 V / 50 Hz)	0.98
Leakage current (PE)	0.34 mA
Control input	1 ... 10 V, potentiometer 100 kΩ and PUSH function②
Stand-by power (at 230 V / 50 Hz)	< 1 W
Max. output voltage③	55 V
Dimming range	0 – 100 %
PWM frequency	220 – 240 Hz
Set up time at 230 V	600 ms
Switch-off time (at full load)	100 ms
FAN output, voltage	12 V
FAN output, current④	50 mA
Max. casing temperature tc	85 °C
Max. casing temperature tc (at lifetime 50,000 h)	80 °C
Dimensions LxWxH	110 x 76 x 30 mm

Ordering data

Type	Article number	Packaging carton	Packaging pallet	Weight per pcs.
LCI 055/1400 0010	24166470	40 pc(s).	1,600 pc(s).	0.225 kg

Specific technical data

Type	Output	Tolerance	Typ. power	Output voltage range	Max. output current	Operating temperature ta
LCI 055/1400 0010	1,050 mA	±6 %	45 W	2 – 44 V	–	-25 ... 50 °C
	1,200 mA	±5 %	52 W	2 – 44 V	–	-25 ... 50 °C
	1,400 mA (default)	±5 %	55 W	2 – 39 V	–	-25 ... 50 °C
	1,600 mA	±5 %	55 W	2 – 35 V	–	-25 ... 50 °C
	1,750 mA	±5 %	55 W	2 – 30 V	–	-25 ... 50 °C
	2,100 mA	±5 %	55 W	2 – 26 V	–	-25 ... 45 °C
	48 V⑦	±10 %⑥	55 W	–	1,150 mA	-25 ... 50 °C

① PUSH function is not compatible to switchDIM.

② 1 ... 10 V_{DC} source with double or reinforced insulation with respect to AC mains. Max. source current: 0.35 mA.

③ No-load operation.

④ Max. permitted inrush current: 100 mA.

⑤ On overload and over temperature the output power will be reduced.

⑥ Ripple 5 Vpp.

⑦ Operation with TALEXXmodule SPOT TS 310 / TS320 / TS 325 possible. See page 4.

Standards
EN 50172
EN 55015
EN 61000-3-2
EN 61347-1
EN 61347-2-13
EN 61547
EN 62384

Dimming
Dimming range 1 % to 100 %
Control with:
- PUSH function
- Potentiometer
- 1 ... 10 V

1 ... 10 V function
The light intensity of the LEDs vary proportionally to the signal sent to the terminal. Intensity is null with a signal less than 1 V.

Potentiometer function
By rotating the potentiometer there is variation of the LED light intensity in a proportionate or logarithmic way depending on the model of potentiometer used. The use of a logarithmic potentiometer is recommended.

PUSH function
Integrated Push function allows a direct dimming via push button. Push button must be connected between the terminal block (PUSH) and Phase (L).
Maximum 10 driver in series controlled by one or more push buttons.
The maximum length of push cables is 15 m.

- Brief push (<1 s) switches the device ON and OFF. The device switch-ON at light level set at switch-OFF
- When the push button is held (>1 s), the devices are dimmed. After repush the device is dimmed in the opposite direction.

The use of the push button inhibits the use of the 1...10 V signal. To return to use of the 1...10 V signal keep the signal less than 0,5 V for at least 2 seconds.

PUSH function (memory mode)
If the mains isn't switched off and the switching on/off is done by a momentary-action switch (push button) then the LED driver will start again at the same level it was.

Maximum forward voltage
Note:
It's not allowed to connect LED modules with a higher forward voltage then declared, otherwise the LED control gear will be over loaded and the expected nominal life time will be reduced.
This issue isn't covered by the warranty.

Synchronisation
A maximum of 10 devices in series can be controlled with a momentary-action switch, potentiometer or 1...10 V interface.
Only one master device is permitted. (1 master + 9 slaves)

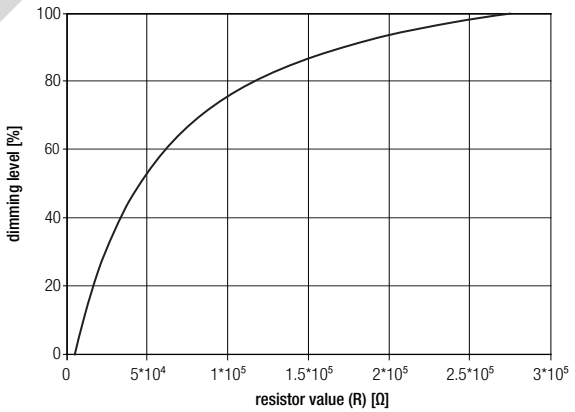
The maximum cable length for synchronisation between the devices should not exceed 4 m.

PUSH-Synchronisation
If more than one device is operated with a single key during PUSH operation, asynchronous behaviour can occur, which will require manual resynchronisation using the method described. It is recommended not to control more than four devices using a single key. Should this be unacceptable, a synchronisation cable will have to be used instead. Any 1-key dimmer that does not feature a central control module (as each driver will have its own controls) can develop asynchronous behaviour (e.g. children might play with the key). The system will then be out of sync, i.e. some lamps will be on, others off or the dimming direction will differ from lamp to lamp.

If the drivers are switched on, press the PUSH key for more than one second (long PUSH) followed with a short push (<1 s). Now the devices are switched off, do a long PUSH, the system will now be resynchronised."

The PUSH function is not compatible to switchDIM. The wiring of the PUSH function and switchDIM is not exchangeable.

I-Set
The I-Set function allows the limitation of the upper dimming level.
For the exact resistor value and dimming level please refer to the following diagram.
The I-Set function cannot be used with DALI. For limitation of the upper dimming level please use DALI command 42 (store the DTR as MaxLevel).



Maximum loading of automatic circuit breakers

Automatic circuit breaker type	C10	C16	B10	B16	Inrush current	
Installation Ø	1.5 mm²	1.5 mm²	1.5 mm²	1.5 mm²	I_{max}	Pulse
LCI 055/1400 0010	31	51	18	30	10 A	200 µs

Harmonic distortion in the mains supply (at 230 V / 50 Hz and full load) in %

Type	THD	3	5	7	9	11
LCI 055/1400 0010	12	11	3	1	1	1

Wiring guidelines

- The cables should be run separately from the mains connections and mains cables to ensure good EMC conditions.
- The LED wiring should be kept as short as possible to ensure good EMC (max. 5 m recommended).
- The LED control gear does not have polarity reversal protection on the secondary side. LED modules that do not have polarity reversal protection may be damaged if polarity is reversed.

Thermic sensor

NTC value	Start operation temperature (3 V Req = 26 kΩ)	Total switch-off temperature (2,2 V Roff = 15 kΩ)
100 K	55 °C	72 °C
150 K	65 °C	80 °C
220 K	75 °C	90 °C
Component tolerances are not considered.		

Storage conditions

Humidity: 5 % up to max. 85 %, not condensed (max. 56 days/year at 85 %)

Storage temperature: 0 °C up to max. +50 °C

The devices have to be within the specified temperature range (ta) before they can be operated.

Glow wire test according to EN 60598-1

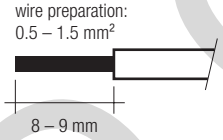
650 °C passed.

Information about the correct handling of LEDs can be found in the TALEXX brochure "Installation instructions and guidelines" → www.tridonic.com

Wiring type and cross section

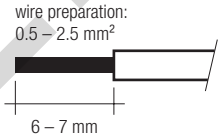
Input terminal (PRI) / PUSH / ⏚

Please use only one wire per spring terminal.



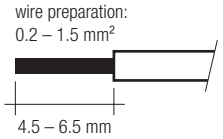
Output terminal (SEC)

Please use only one wire per screw terminal.
Max. torque: 0.4 Nm



1...10 V

Please use only one wire per screw terminal.
Max. torque: 0.4 Nm



Connection

SYNC

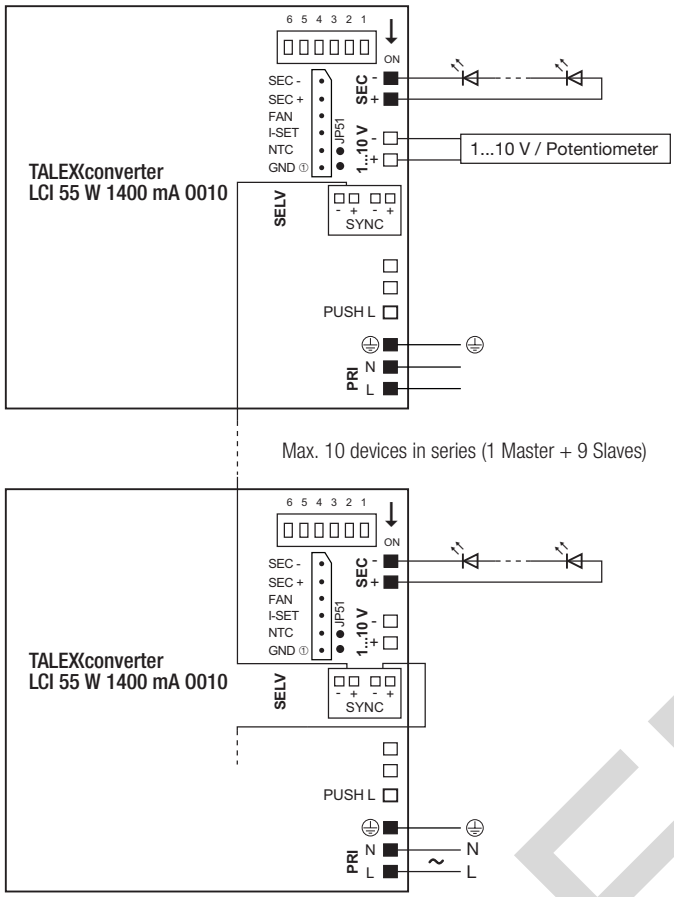
SPOX from Molex

- Plug for cable (art. no. Molex: 0022433020)

SEC- / SEC+ / FAN / I-SET / NTC / GND

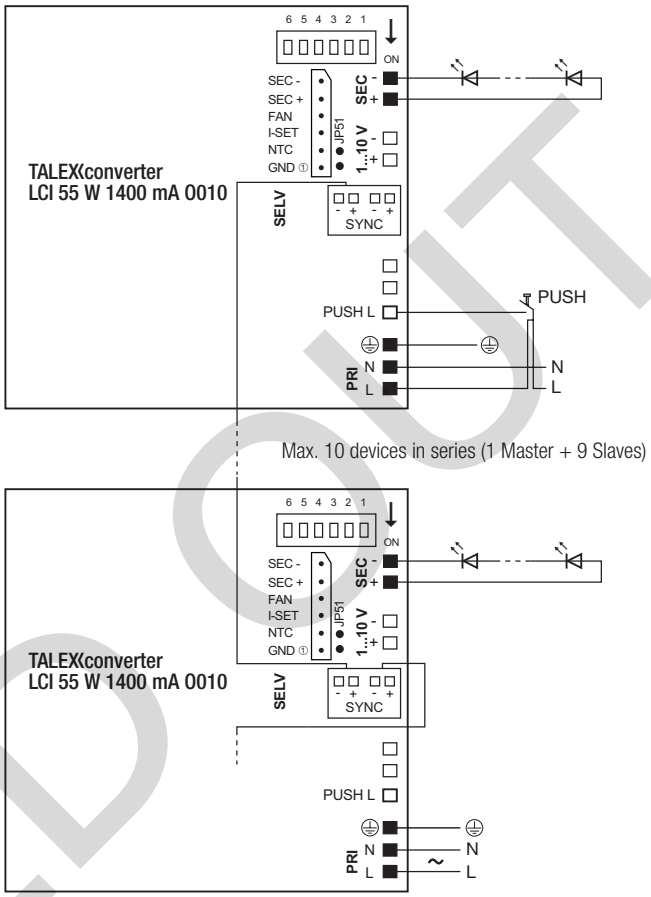
- Plug for cable (art. no. Molex: 0022433060)

Wiring diagram 1...10 V or potentiometer



① common ground (GND) for FAN, I-SET and NTC

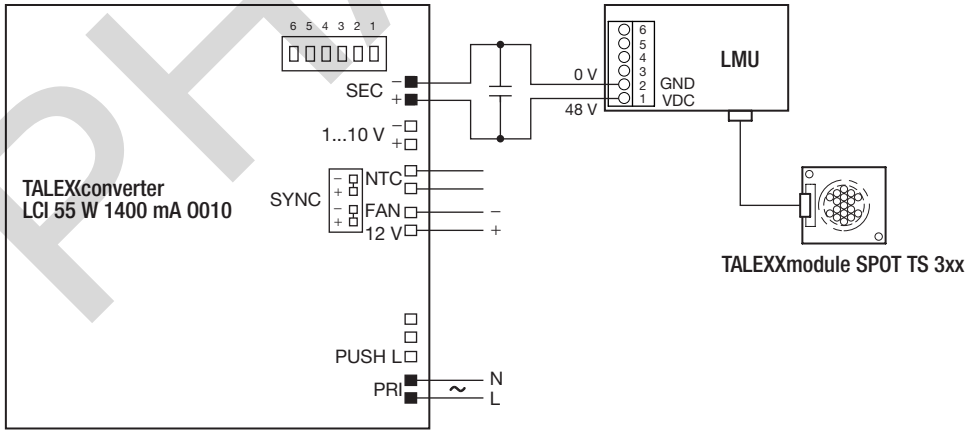
Wiring diagram PUSH function



① common ground (GND) for FAN, I-SET and NTC

Wiring diagram TALEXXmodule SPOT TS310 / TS320 / TS325

For operation with TALEXXmodule SPOT TS310 / TS320 / TS325 a capacitor (47 µF / 100 V) has to be switched to the output in parallel.
Dip SWITCH position has to be connected to 48 V.



Dip SWITCH position

Output	Position					
	6	5	4	3	2	1
1,050 mA	–	–	–	–	–	–
1,200 mA	ON	–	–	–	–	–
1,400 mA (default)	ON	ON	–	–	–	–
1,600 mA	ON	ON	ON	–	–	–
1,750 mA	ON	ON	ON	ON	–	–
2,100 mA	ON	ON	ON	ON	ON	–
48 V	ON	ON	ON	ON	ON	–

Before use, always check Dip SWITCH setting.