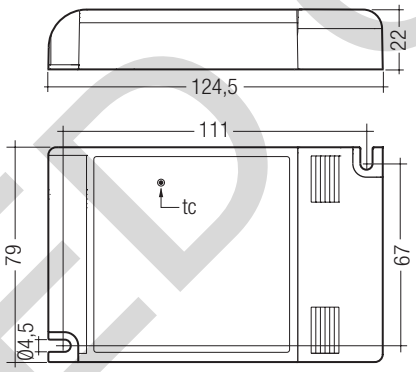
IP20 SELV RoHS

TALEXconverter LCI 50 W 1050 mA N020

TOP series

Product description

- 1-channel LED control gear
- Independent LED control gear for indoor use
- 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[1]
- Overload protection[6]
- Thermal protection[6]
- Short-circuit protection
- No-load protection
- Type of protection IP20



Technical data

Rated supply voltage	220 – 240 V
Rated current (at 230 V / 50 Hz / full load)	0.25 A
Input voltage range, AC	216 – 264 V
Mains frequency	50 / 60 Hz
Typ. efficiency (at 230 V / 50 Hz / full load)	91 %
λ (at 230 V / 50 Hz)	0.95
THD	< 10 %
Inrush current	20 A / 400 µs
Control input	1 ... 10 V, potentiometer 100 kΩ and PUSH function[2]
Stand-by power (at 230 V / 50 Hz)	< 2 W
Max. output voltage[3]	90 V
Dimming range	1 – 100 %
PWM frequency	230 – 250 Hz
Set up time at 230 V	500 ms
Switch-off time (at full load)	100 ms
FAN output, voltage	12 V
FAN output, current[4]	50 mA
Max. casing temperature tc	80 °C
Max. casing temperature tc (at lifetime 50,000 h)	75 °C
Dimensions LxWxH	124.5 x 79 x 22 mm

[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: 50 mA.

[5] Operation with TALEXmodule SPOT TS 310 / TS320 / TS 325 possible. See page 4.

[6] On overload and over temperature the output power will be reduced.

Ordering data

Type	Article number	Packaging carton	Packaging pallet	Weight per pc.
LCI 050/1050 N020	24166468	50 pc(s).	2,000 pc(s).	0.205 kg

Specific technical data

Type	Output	Tolerance	Typ. power	Output voltage range	Max. output current	Operating temperature ta
LCI 050/1050 N020	350 mA	±6 %	25 W	2 – 74 V	–	-25 ... 50 °C
	500 mA	±5 %	35 W	2 – 72 V	–	-25 ... 50 °C
	700 mA	±5 %	50 W	2 – 71 V	–	-25 ... 50 °C
	900 mA	±5 %	50 W	2 – 55 V	–	-25 ... 45 °C
	1,050 mA (default)	±5 %	50 W	2 – 48 V	–	-25 ... 45 °C
	48 V®	±5 %	50 W	–	1,050 mA	-25 ... 45 °C

Standards
EN 55015
EN 61000-3-2
EN 61347-1
EN 61347-2-13
EN 61547
EN 62384
DIN VDE 0710 part 14

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.

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.

Dip SWITCH position

Output	Position					
	6	5	4	3	2	1
350 mA	–	–	–	–	–	–
500 mA	on	–	–	–	–	–
700 mA	on	on	–	–	–	–
900 mA	on	on	on	–	–	–
1,050 mA (default)	on	on	on	on	–	–
48 V	on	on	on	on	–	on

Before use, always check Dip SWITCH setting.

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.

Function of the PR terminal:
The PR connection can improve EMC behaviour, LED residual glow and immunity (surge). The PR terminal must be connected to an earthed or non-earthed metal surface such as a heat sink and/or luminaire housing. If connected to non-earthed components there may be a difference in potential compared to earth.

The PR connection need not be used, it merely serves to make improvements in certain applications.

Maximum loading of automatic circuit breakers

Automatic circuit breaker type	C10	C16	B10	B16
Installation Ø	1.5 mm²	1.5 mm²	1.5 mm²	1.5 mm²
LCI 050/1050 N020	15	25	9	15

Wiring guidelines

- The cables should be run separately from the mains connections and mains cables to ensure good EMC conditions.
- The maximum secondary cable length at the terminals is 5 m. The LED wiring should be kept as short as possible to ensure good EMC.
- 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

If a temperature sensor is to be used either the preinstalled resistor in the NTC terminal or the "JP51" jumper must be removed, depending on the device version. A temperature sensor can then be connected.

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.		

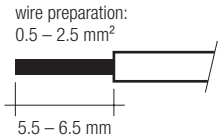
Information about the correct handling of LEDs can be found in the TALEXX brochure
"Installation instructions and guidelines" → www.tridonic.com

Wiring type and cross section

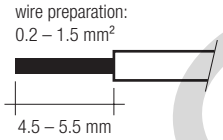
Strain relief for Ø 3 – 8 mm.

Input / Output terminal

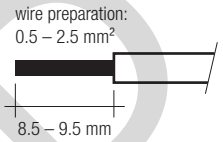
Please use only one wire per terminal.



1...10 V/NTC / FAN



PUSH

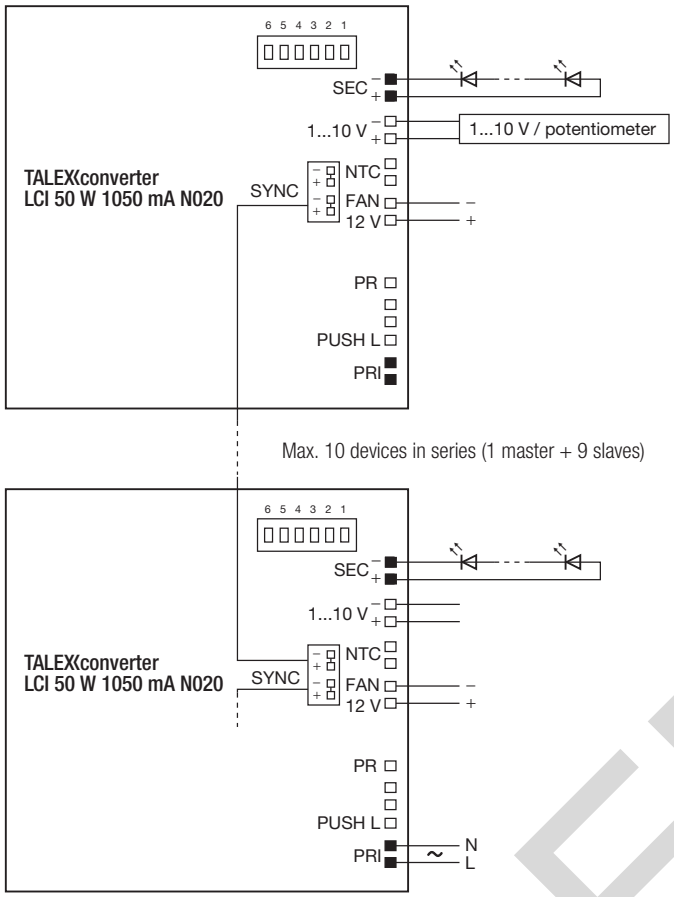


Connector for the synchronisation cable

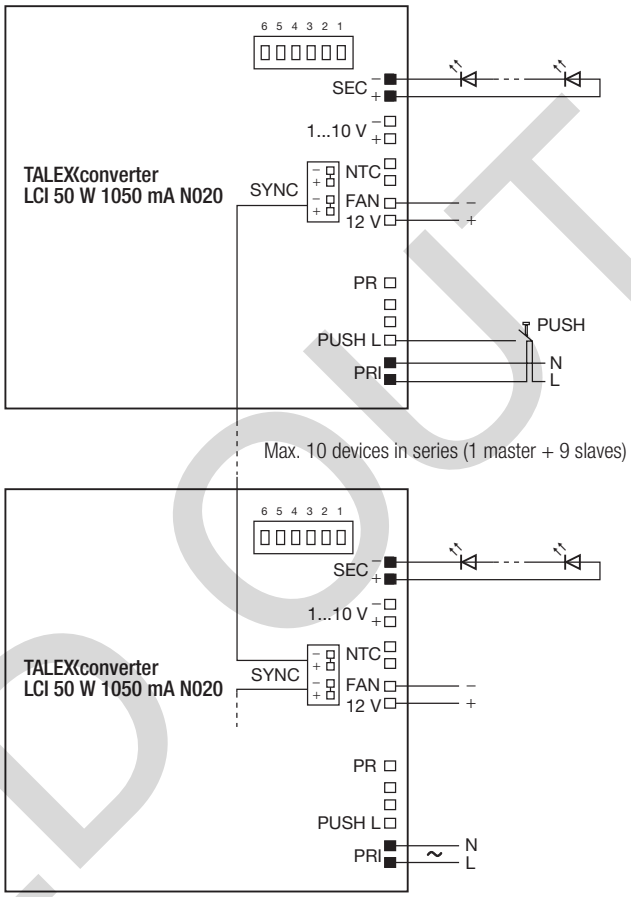
SPOX from Molex

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

Wiring diagram 1...10 V or potentiometer



Wiring diagram PUSH function



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.