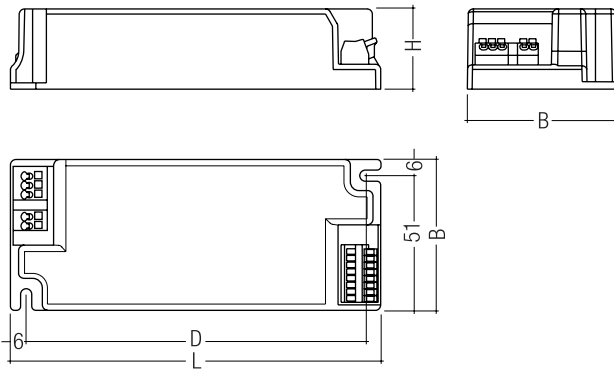




### TALEXconverter 0030 K500 one4all Constant current

#### Product description

- one4all converter for 500 mA output current
- Dimming curve adapted to the sensitivity of the eye
- Noise-free precise control via DSI signal, switchDIM or DALI
- Powerless switching via a digital interface (no need for switching via mains)
- Fault reporting and programmable operating parameters in DALI and DSI mode
- Thermal shutdown with temperature sensor (NTC)
- Short-circuit-proof fan output
- 2 output channels with 1 address
- Short-circuit shutdown
- No-load detection
- Intelligent Temperature Guard (protection against thermal damage)
- switchDIM-MEMORY



#### Technical data

Rated supply voltage	220 – 240 V
Rated current (at 230 V 50 Hz)	0.16 A
Mains frequency	0 / 50 / 60 Hz
Efficiency	> 85 %
$\lambda$	0.95
PWM frequency	480 Hz
Max. input power	35 W
Max. input power (with active cooling 3 W)	39 W
Output power	2 x 15 W
Max. output voltage	30 V
Input, temperature sensor	33 kOhm
Output voltage (DC) active cooling	12 V
Max. output current, active cooling	250 mA
Dimming	DSI, DALI, switchDIM – single switch
Ambient temperature $t_a$	-25 ... +45 °C
Max. casing temperature $t_c$	75 °C
Weight	0.17 kg
Dimensions LxWxH	141.3 x 57.5 x 30.5 mm
Hole spacing D	128.8 mm

① Further information see page 2

② Max. permitted inrush current of the fan: < 6 A at 4  $\mu$ s.  
If the inrush current is > 250 mA after 4  $\mu$ s, the converter switches off and will be changed into the failure mode.

#### Ordering data

Secondary voltage DC	Secondary current	Type	Article number
7 – 30 V	500 mA	0030 K500 one4all	86458561

Packaging: 18 pieces/carton



Standards, page 2

Wiring diagrams and installation examples, page 3

**Standards**

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

**Control input (DA/D1, DA/D2)**

Digital DALI/DSI signal or switchDIM can be wired on the same terminals (DA/D1 and DA/D2).

**Digital signal DALI/DSI**

The control input is non-polar and protected against accidental connection with a mains voltage up to 264 V. The control signal is not SELV. Control cable has to be installed in accordance to the requirements of low voltage installations. Different functions depending on each module.

**switchDIM**

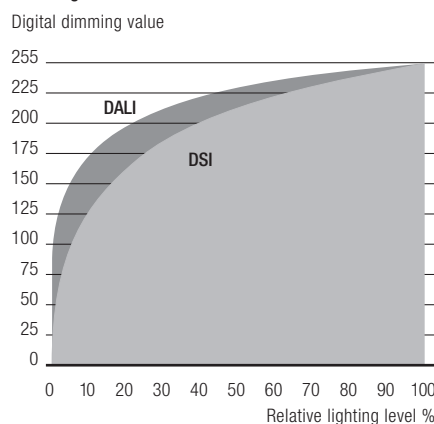
Integrated switchDIM function allows a direct connection of a push to make switch for dimming and switching. Brief push (< 0.6 s) switches converter ON and OFF. The converters switch-ON at light level set at switch-OFF. When the push to make switch is held, LED modules are dimmed. After repush the LED modules are dimmed in the opposite direction. In installations with converters with different dimming levels or opposite dimming directions (e.g. after a system extension), all converters can be synchronized to 50 % dimming level by a 10 s push. Use of push to make switch with indicator lamp is not permitted.

**Dimming**

Dimming range 1 % to 100 %  
 Digital control with:  
 • DSI signal: 8 bit Manchester Code  
 Speed 1 % to 100 % in 1.4 s  
 • DALI signal: 16 bit Manchester Code  
 Speed 1 % to 100 % in 0.5 s  
 Programmable parameter:  
 Minimum dimming level  
 Maximum dimming level  
 Default minimum = 1 %  
 Programmable range 1 % ≤ MIN ≤ 49 %  
 Default maximum = 100 %  
 Programmable range 100 % ≥ MAX ≥ 50 %

Dimming curve is adapted to the eye sensitiveness.

**Dimming characteristics**



Dimming characteristics as seen by the human eye

**Temperature sensor NTC**

The temperature sensor (NTC) must be connected to TALEXconverter 0030 K500 one4all. If the NTC falls below a resistance of 2.2 kΩ the LED modules are switched off. If the recommended NTC is used this corresponds to around 90 °C. The modules are switched on again as soon as the temperature falls below 65 °C. This corresponds to a resistance of 5.6 kΩ. If a fault is detected at the NTC the converter switches off. The limit values here are 700 Ω for a short-circuit and 1.9 MΩ for a break.

If the temperature control is not required, the temperature sensor (NTC) has to be replaced with a 33 kΩ resistor. To ensure the correct operation of the converter, either a NTC or a 33 kΩ resistor has to be connected to the NTC output terminals.

**Thermal protection of the unit**

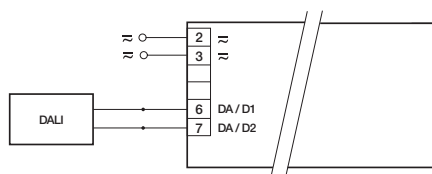
The unit also has an ITG (Intelligent Temperature Guard). This protects it from overheating. If the unit is operated at too high a temperature the output is reduced to as little as 70 %.

**Reference type NTC**

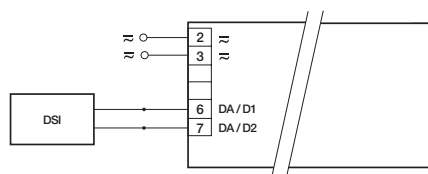
05505099 NTC SMD 33.00K 0.210 W 5.00 %  
 4390K 0805  
 Manufacturer: Epcos  
 Ordering Code: B57431V2333J062

**Active cooling**

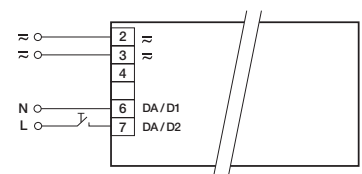
A voltage of 12 V is applied if DALI > 0 and switches off with a delay of 10 s if the luminaire is placed in standby mode (DALI = 0). The maximum current for the cooling output is 250 mA (corresponding to 3 W).



DALI TALEXconverter 0030 K500 one4all



DSI TALEXconverter 0030 K500 one4all



switchDIM TALEXconverter 0030 K500 one4all

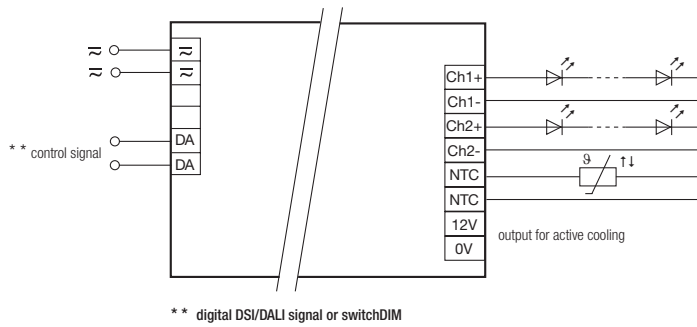
**Loading of automatic circuit breakers**

Automatic circuit breaker type	C10	C13	C16	C20	B10	B13	B16	B20
Installation Ø	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>
0030 K500 one4all	50	65	80	100	50	65	80	100

**Wiring guidelines**

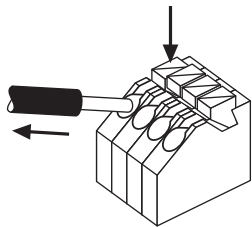
- the cables should be run separately from the mains connections and mains cables to ensure good EMC
- the LED wiring should be kept as short as possible to ensure good EMC
- the TALEXeos modules must be operated in series on constant current converter TALEXeos 0030 K500 one4all
- the converter does 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.
- the device has 2 channels of 500 mA each. These can be loaded with 7–30 V. Both channels must be loaded. Asymmetrical load is possible.

**Circuit diagram**



**Release of the wiring**

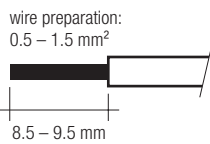
Press down the "push button" and remove the cable from front.



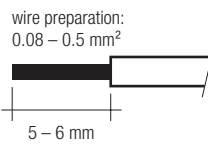
**Wiring type and cross section**

The wiring can be in flexible cable with ferules or solid. For perfect function of the push-wire terminals the strip length should be 8.5–9.5 mm for the input terminal and 5–6 mm for the output terminal.

**Input terminal**



**Output terminal**



Information about the correct handling of LEDs can be found in the TALEX brochure "Installation instructions and Guidelines" → [www.tridonic.com](http://www.tridonic.com)