Converter AC/DC
Instruction for use of Converter AC/DC
Model: KYT50

Application:
The Converter AC/DC is exclusively designed to use with electronic transformer (11,5 VAC) for LED strips and LED lamps (12 VDC). In the case of use Converter AC/DC there is also a possibility to connect the LED sources with a rated voltage 12 VAC.

Attention:
The Converter AC/DC should be connected only with Govena's electronic transformers YT50/YT60, YT70 and YT105. It is possible to use Converter AC/DC with YT150, YT210 and YT250 by connecting several converters in parallel to the electronic transformer output (with uniform load per converter).

Auto-Recovering Protection:
Protection devices: overload circuit, temperature and short-circuit (YT electronic transformers).

Specification:

Input voltage:	11,5 VAC +/-10%, 0-35 kHz
Input current:	≤ 4,5 A
Output voltage:	11,1 VDC +/- 10%
Rated power:	50 W
Nominal output current:	≤ 4,5 A
Output current range:	0 - 4,5 A
Protection degree:	IP20
Ambient temperature **ta**:	max. 40 ºC
Case temperature **tc**:	max. 75 ºC
Dimensions:	72x36x26 mm
Input wires:	min. 2x1,0 mm^2
Output wires:	min. 2x1,0 mm^2

Recommended load:

Type of YT Govena's electronic transformer	Max. number of Converters AC/DC connected to the YT	Max. load per one Converter AC/DC for LED strips application	Max. load per one Converter AC/DC for LED lamps application
YT50/YT60	1	**30 W** (e.g. LED strip 3528/120LED/9,6 W – length 3 m or 5050/60LED/14,4 W – length 2 m)	**20 W** (e.g. LED lamp MR16/ 12V/ GU5.3/ 7,0 W - quantity x3)
YT70	1	**40 W** (e.g. LED strip 3528/120LED/9,6 W – length 4 m or 5050/60LED/14,4 W – length 2,5 m)	**30 W** (e.g. LED lamp MR16/ 12V/ GU5.3/ 7,0 W - quantity x4)
YT105	1	**50 W** (e.g. LED strip 3528/120LED/9,6 W – length 5 m or 5050/60LED/14,4 W – length 3,5 m)	**40 W** (e.g. LED lamp MR16/ 12V/ GU5.3/ 7,0 W - quantity x6)
YT150	2	**50 W** (e.g. LED strip 3528/120LED/9,6 W – length 5 m or 5050/60LED/14,4 W – length 3,5 m)	**40 W** (e.g. LED lamp MR16/ 12V/ GU5.3/ 7,0 W - quantity x6)
YT210	3	**50 W** (e.g. LED strip 3528/120LED/9,6 W – length 5 m or 5050/60LED/14,4 W – length 3,5 m)	**40 W** (e.g. LED lamp MR16/ 12V/ GU5.3/ 7,0 W - quantity x6)
YT250	3	**50 W** (e.g. LED strip 3528/120LED/9,6 W – length 5 m or 5050/60LED/14,4 W – length 3,5 m)	**40 W** (e.g. LED lamp MR16/ 12V/ GU5.3/ 7,0 W - quantity x6)

LED Strip Installation:
Please observe the following:
1) 12VDC LED strips should be supplied by the YT electronic transformer only with the Converter AC/DC
2) Number of YT electronic transformers and Converters AC/DC should be matched to the power of LED strips you want to connect
3) It is not recommended to power more than 5 m sections of LED strip connected in series
4) Combining sections of more than 5 m from a single source can be realized only in a parallel configuration (Figure No. 1), or according to Figure No. 2

Recommended wiring diagrams below:
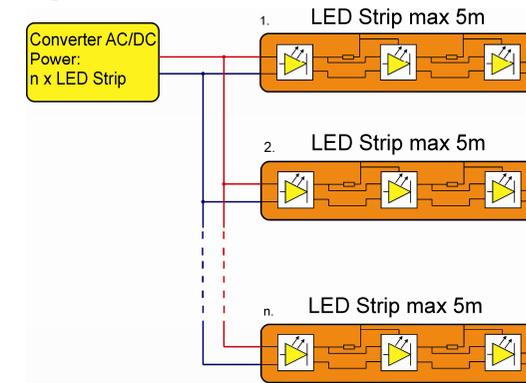
Figure No 1
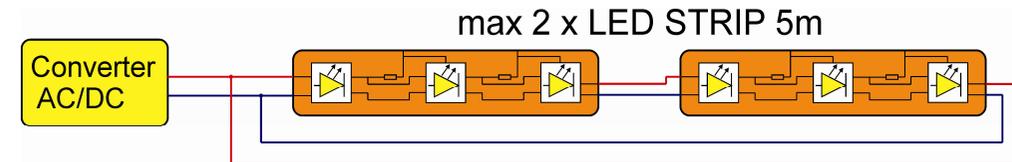
Figure No 2

Cooperation with light dimmers:
GOVENA's electronic transformer YT with the Converter AC/DC can by used for the adjustment of the LED light intensity by applying light dimmer. For best compatibility use intelligent transistor dimmers which cut off the mains voltage towards the end of sine wave (trailing edge dimmers).

Recommended light dimmers:
GOVENA's Light Dimmers:

Ś-Z+T401MSC-EMC-UR
Ś-Z+T601MSC-EMC-URUC-LF
Ś-Z+I401MSC-V2-UR-C
Ś-Z+I601MSC-EMC-UR
Ś-PROPI315U-MO-L-20MM
METPROI4
METPROI6
METPROT4
METPROT6

Maximal, theoretically allowed load which will work with dimmers of given maximum wattage (dimmer+YT+KYT50+LED strip):

Type of GOVENA's Light Dimmer	Max. permitted load per dimmer (Power of LED strip)	Applied load power (Power of LED strip)	Example
Ś-Z+T401MSC-EMC-UR METPROT4 (400 W)	50% of dimmer nominal load	30 W - 200 W	Max. 5 x YT70 with one Converter AC/DC per transformer (load according to table of recommended load)
Ś-Z+T601MSC-EMC-URUC-LF METPROT6 (600 W)	50% of dimmer nominal load	40 W - 300 W	Max. 10 x YT50/YT60 with one Converter AC/DC per transformer (load according to table of recommended load)
Ś-Z+I401MSC-V2-UR-C METPROI4 (400 W)	50% of dimmer nominal load	30 W - 200 W	Max. 4 x YT105 with one Converter AC/DC per transformer (load according to table of recommended load)
Ś-Z+I601MSC-EMC-UR METPROI6 (600 W)	50% of dimmer nominal load	40 W - 300 W	Max. 3 x YT150 with two Converters AC/DC per transformer (load according to table of recommended load)
Ś-PROPI315U-MO-L-20MM (315 W)	50% of dimmer nominal load	30 W - 157,5 W	Max 1 x YT210 with three Converters AC/DC per transformer (load according to table of recommended load)

In the case of use dimmable LED lamps do not exceed 30% of dimmer nominal load.

Important remarks:

■ Disconnect from mains before fitting the unit.
■ This Converter AC/DC is suitable only for indoor use. Protect it against excessive heat (permissible max. operating temperature: +40 ºC).
■ Connect LED light to the Converter AC/DC with correct polarity.
■ Input / Output line min. – 2x1,0 mm^2.
■ Use of the installation switch instead of dimmer is allowed.
■ The Converter AC/DC doesn't change the Power Factor.
■ If the Converter AC/DC is used for purposes other than originally intended, or it is connected in a wrong way, no liability will be assumed for possible damages.

Installation layout:

1) Option with dimmer
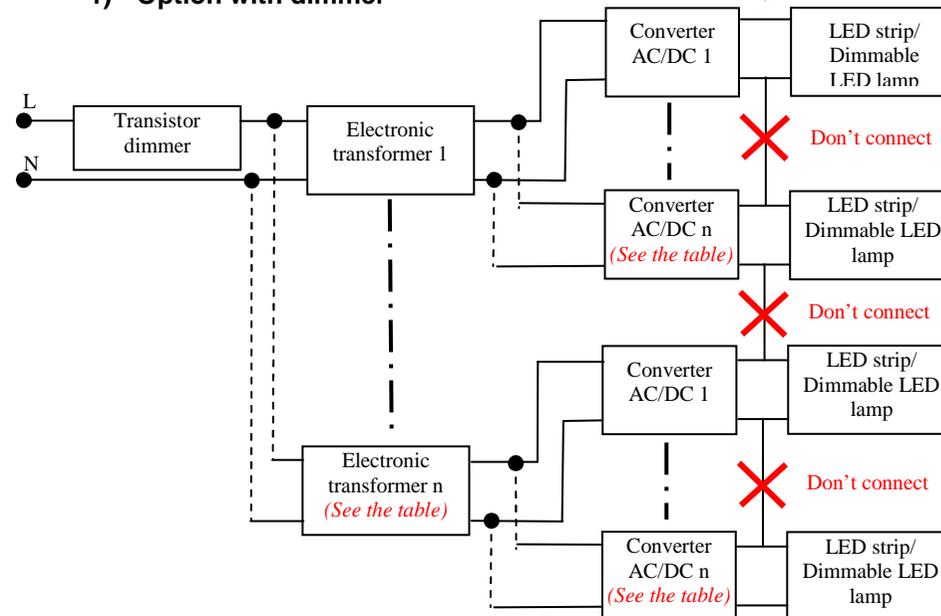
2) Option without dimmer
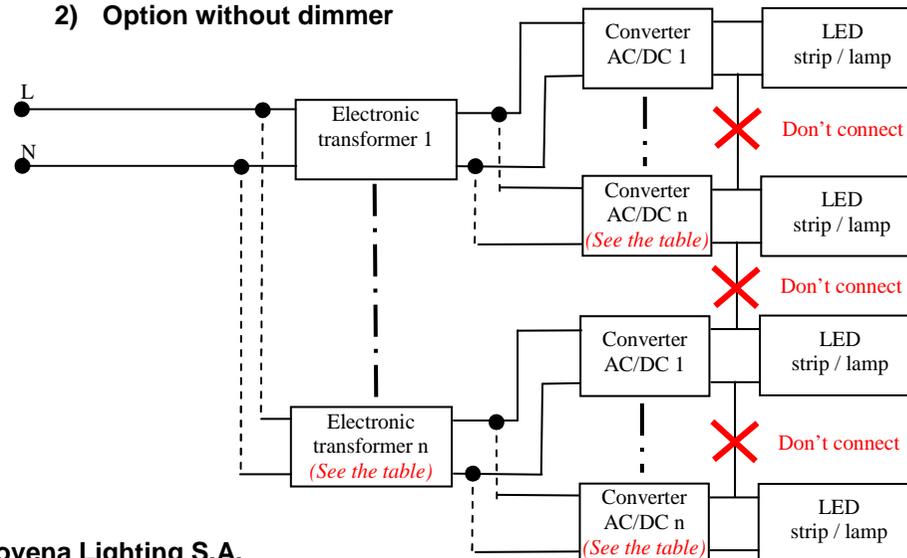
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