

IP67 SELV         RoHS

TALEXcontrol LNU S 12 – 24 V IP67 G1
TALEXcontrol PWM dimmer

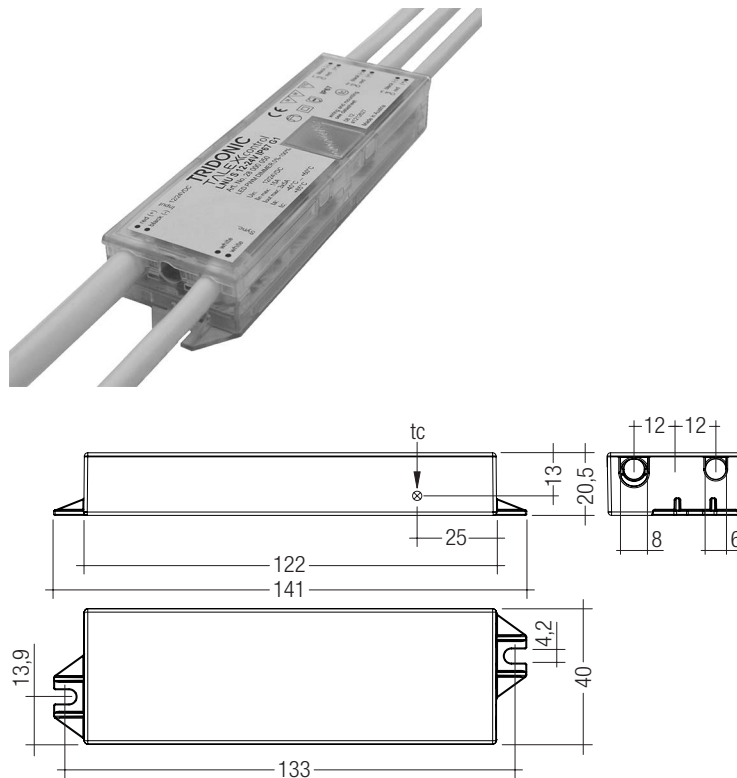
Product description

- Constant voltage 3-channel PWM dimmer extension device for TALEXcontrol LNU M PWM dimmer
- For 12 or 24 VDC LED modules
- Sync. electrically insulated from the supply voltage and output
- Protection class III
- Reverse polarity protection
- Short-circuit and overcurrent protection for output channels
- Automatic shutdown on overheating
- Strain relief connection cable 0.5 m
- Protection type IP67
- Casing: polycarbonate transparent (UV resistant)
- Nominal life of 50,000 h (at ta 55 °C with a failure rate max. 0.1 % per 1,000 h)
- Requires synchronisation with TALEXcontrol LNU M
- 5-year guarantee



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Ordering data

Type	Article number	Packaging	Packaging, carton	Weight per pc.
LNU S 12 – 24 V IP67 G1	28000050	1 pc(s).	10 pc(s).	0.357 kg

Technical data

DC voltage range input	12 / 24 V
Max. DC voltage range input	10 – 28 V
Input reverse polarity protection	yes, reversible
Max. input current	15 A
Sync. short circuit protection	yes, reversible
Sync. voltage output	9 V
Sync. voltage input	5 – 12 V
Sync. frequency	ca. 8 Hz (125 ms)
Number of output channels	3 x PWM
DC voltage range output	12 – 24 V
Output current	max. 5 A / channel
Output overcurrent protection	yes (6 A)
Output short circuit protection	yes, reversible
PWM frequency	495 Hz
Voltage drop	max. 150 mV
Max. loss power ^①	< 2.5 W
Stand-by losses	< 100 mW
Turn on time	< 0.1 s
Turn off time	< 0.1 s
Hold on time	< 100 ms
Ambient temperature t_a	-40 ... +60 °C
Storage temperature	-40 ... +85 °C
Max. casing temperature t_c	70 °C
Dimensions L x W x H	141 x 40 x 20.5 mm
Hole spacing D	133 mm
Dimming range twilightCONTROL ^②	0 – 98 %
Dimming range switchDIM ^②	0% / 0.1 – 100 %

^① At full load and 12 V: 3x5 A load at the output.

^② The extension devices will be controlled from master device LNU M via the synchronisation cable.

Standards

- EN 55015
- EN 61000-3-2 / classe C (only with suitable class C LED control gear)
- EN 61000-3-3
- EN 61347-1
- EN 61347-2-13
- EN 61547
- EN 62384
- EN 60598-1
- EN 60695-2-11
- EN 60529

Device overtemperature protection

Overtemperature protection protects the LNU against excessive thermal loads by reducing the output.

The Temperature Guard therefore protects the LNU beyond the thermal limits. Overtemperature protection becomes active at 5 – 10 °C above the specified tc temperature.

LED overtemperature protection

To protect the connected LED modules against thermal overloads, the controlgear acts as shown in the following table.

The LED overtemperature protection is not enabled by default, but can be enabled via the programming device LNU I.

Temperature behaviour

Device	LED	Function	Error indication
overtemperature protection	overtemperature protection		
tc temperature range increasing			
< 75 °C	< 65 °C	Normal operation	–
75 – 85 °C	65 – 75 °C	Power limited operation	Error 1
> 85 °C	> 75 °C	Device is switching off	–
tc temperatur range decreasing			
85 – 70 °C	75 – 60 °C	Device is switched off	–
< 70 °C	< 60 °C	Normal operation	–

Short-circuit behaviour

In case of a short-circuit on the output side the controlgear is not damaged. In the event of a short-circuit the output it switched off and a check is carried out approximately every second to see whether the short-circuit has been cleared. After 5 retries the output will switch off until the power supply is disconnected and restored.

In case of a short-circuit of Sync. the controlgear is not damaged.

No-load operation of output, Sync.

The controlgear is not damaged in the no-load operation. The max. output voltage can be obtained during no-load operation.

Reverse polarity behaviour

In case of reverse polarity on the input side the controlgear is not damaged. In case of reverse polarity of Sync. the controlgear is not damaged.

Behaviour on overload

If 6 A (-10 / +15 %) is exceeded the output is disconnected (Error 3). The device checks approximately every second whether the load is in the correct range. After 5 retries the output will switch off until the power supply is disconnected and restored.

Behaviour if the input voltage range is exceeded or undershot

The device monitors the correct operation and voltage of the power supply unit (LCU) connected on the input side. If the voltage goes outside the permitted range the device disconnects the output to protect the device and the LED. If the input voltage exceeds 28 V the device also goes into a reversible short-circuit. As a result the automatic cutout disconnects the power supply and the device is not damaged.

Behaviour if the sync and output voltage range is exceeded

The device will be damaged if the permitted voltage is exceeded at sync and output.

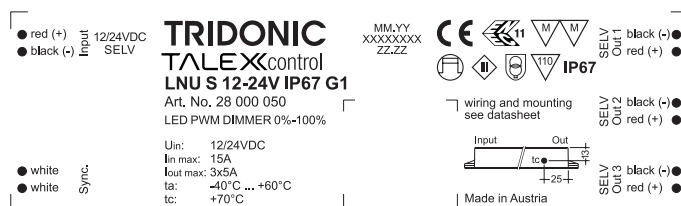
Glow wire test according to IEC 60695-2-11

650 °C, 850 °C and 960 °C passed.

Expected lifetime

Type	tc	ta = 40 °C	ta = 50 °C	ta = 55 °C
LNU S 12 – 24 V IP67 G1	Lifetime	> 100.000	75.000	50.000

Label LNU S 12 – 24 V IP67 G1



MM.YY: month-year
XXXXXXX: production batch
ZZ.ZZ: firmware

Dimming behaviour

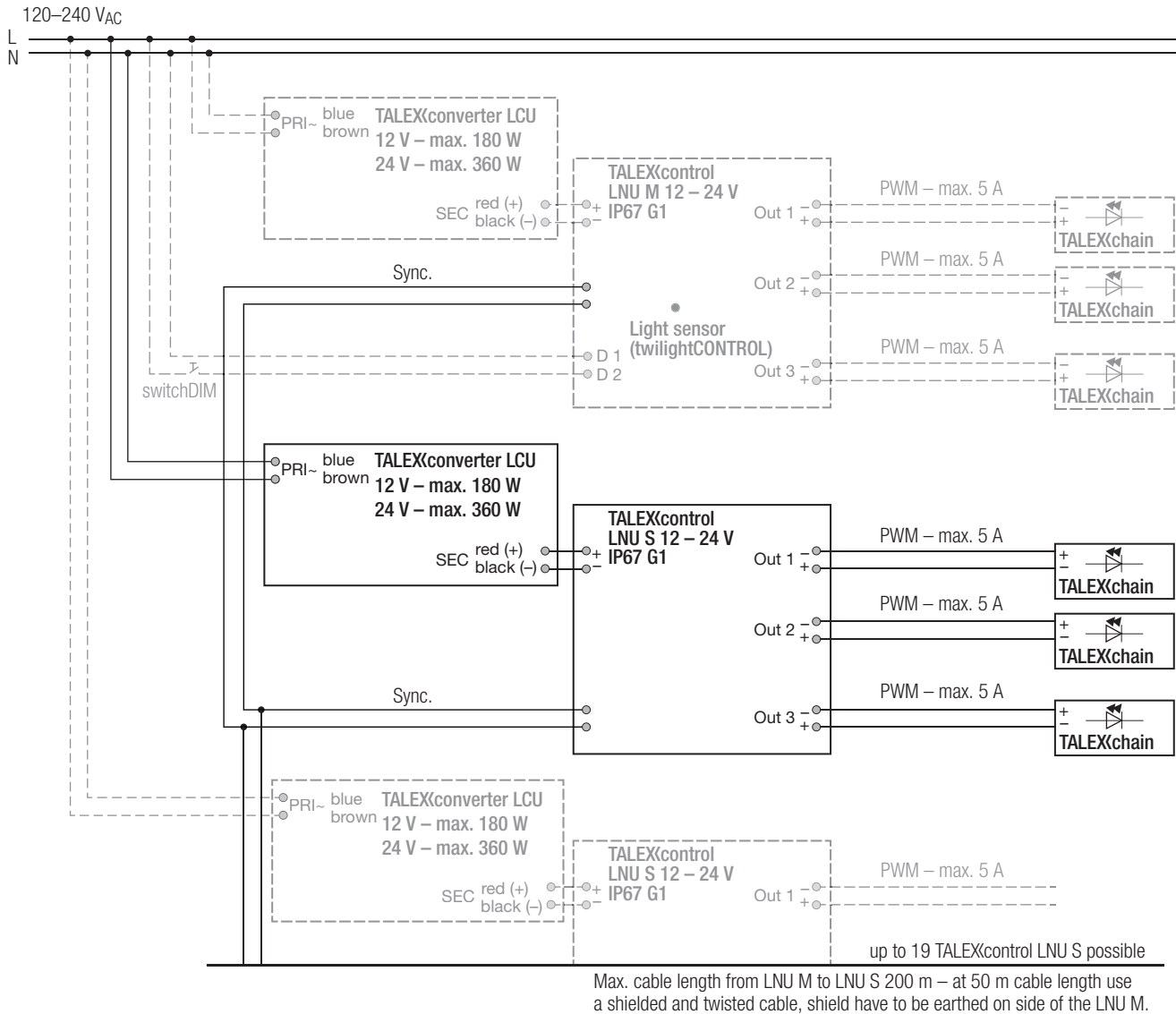
The dimming behaviour, the settings for the minimum and maximum values and the transmission rate of the diffuser material are automatically taken via the sync connection from the TALEXcontrol LNU Master.

Factory settings:
The dimming level is at 100 %.

Customer-specific settings:

The settings could be change via computer interface LNU I.

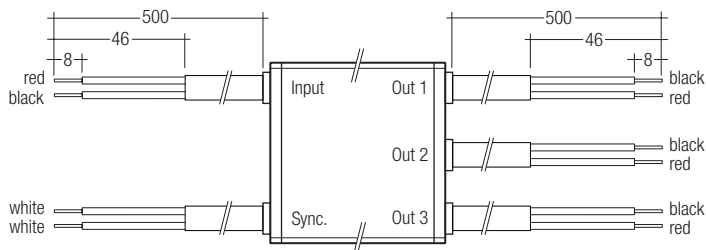
Wiring diagram



Wiring example

Cable input: AWG 14 with end sleeves

Cable Sync. / Ch 1-3: AWG 18 with end sleeves



Note

The EMC requirements must be met by the lighting device, even if more than one LED control gear is used. For a good EMC performance keep the LED wiring as short as possible.

Optimum EMC behavior has been demonstrated with Tridonic LCU LED control gears and TALEXchain CRYSTAL chains.

Installation instructions

Fastening the device: Max. torque 1 Nm / M4 or 1 Nm / ST3.9.

For further information see the installation instructions provided with the product.

Tridonic LCU LED control gears and TALEXchain CRYSTAL modules are recommended for optimum operation of the LNU.