



# u::Lux NetInj & u::Lux NetInj Power

## Manual

[www.u-lux.com](http://www.u-lux.com)

[office@u-lux.com](mailto:office@u-lux.com)

Tel: +43/662/450 351-13

Fax: +43/662/450 351-16

u::Lux GmbH

Rechtes Salzachufer 42

5020 Salzburg

Austria



**Contents**

General Information ..... 3  
Mounting ..... 3  
Mounting order ..... 5  
Startup ..... 5  
Startup order ..... 5  
Practical example ..... 5  
Network wiring ..... 7  
Technical Data ..... 8  
Hazard warnings ..... 9  
CE – marking ..... 9  
Guarantee ..... 9  
Ordering Information ..... 9  
Version Management ..... 10



## General Information

The *u::Lux NetInj* or *u::Lux NetInj Power* is used for the energy supply of a maximum of 20 (2 x 10) *u::Lux Switches RJ45*. The Ethernet ports are equipped with RJ45 jacks and have the designation IN1 / OUT1 and IN2 / OUT2. An Ethernet connection (max. 100Mbit) is connected from IN1 (IN2) to OUT1 (OUT2). On ports OUT1 (OUT2) there is also voltage supply for the *u::Lux Switches RJ45* available. The following details apply equally for the *u::Lux NetInj* and *u::Lux NetInj Power*, except in case of an explicit distinction between the models.

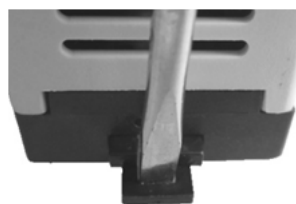
The energy supply of the *u::Lux NetInj* is carried out via direct voltage through the connections -VCC and +VCC. The voltage has to be sufficiently filtered (max. voltage ripples  $2V_{ss}$ ) and it must be within the following range:

<i>u::Lux NetInj</i>	48V DC
<i>u::Lux NetInj Power</i>	22V – 30V DC



## Mounting

The mechanical assembly of the *u::Lux NetInj* is effected on a 35mm top-hat rail which has to be mounted horizontally. Therefore a flap is provided on the bottom part of the housing. If the flap is pulled forwards (screwdriver) the *u::Lux NetInj* can be easily placed on the top-hat rail.

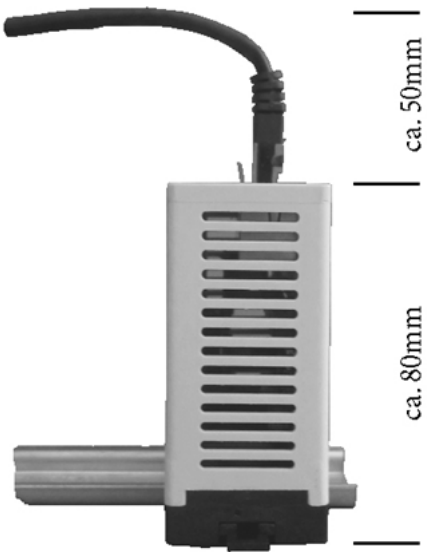




The installation width is 35mm. There are ventilation slots on the top and the bottom of the housing which provide heat exchange. Please note that these vents are not covered and a sufficient distance to adjacent components is kept.



The housing height is approx. 80mm. Please note that for the Ethernet-connections (on the front) there will be added approx. 50mm additionally to the housing depth. Altogether a free installation depth of approx. 130mm is necessary. Please take this into consideration when selecting an appropriate junction box (wall cabinet).





## Mounting order

1. *u::Lux NetInj* or *u::Lux NetInj Power* must snap into place on the top-hat rail.
2. Connect the network cable (not included in the scope of delivery) for the *u::Lux Switch RJ45* to OUT1 or/and OUT2.  
*We recommend the use of a Patchpanel (taking into account the potential equalization) so that a shielded network cable can be lead to ground or to get a better ground-contact from the installation cable to the Patch cable. When indicated, already existing local connecting instructions must absolutely be obeyed.*
3. For the control connect the network cable (not included in the scope of delivery) to IN1 or/and IN2.
4. Connect the energy supply.  
A plug connector (Phoenix – MSTBA 2,5/ 2-ST-5,08) is included in the scope of delivery.  
Connect the negative supply of the energy supply to Pin –VCC and the positive supply voltage to +VCC (see chapter General Information).

## Startup

After connecting the power supply the green LEDs (48V) have to illuminate. With these LEDs the presence of the following voltage is indicated:

1. Internal voltage generation *48 volts* (on ports OUT1 and OUT2)

OUT1: is used exclusively to connect up to 10 *u::Lux Switches RJ45*.

OUT2: is used exclusively to connect up to 10 *u::Lux Switches RJ45*.

IN1: is used to connect a PLC control or to connect an Ethernet Switch.

IN2: is used to connect a PLC control or to connect an Ethernet Switch.

## Startup order

1. Control of the green LED. Both LEDs have to illuminate.

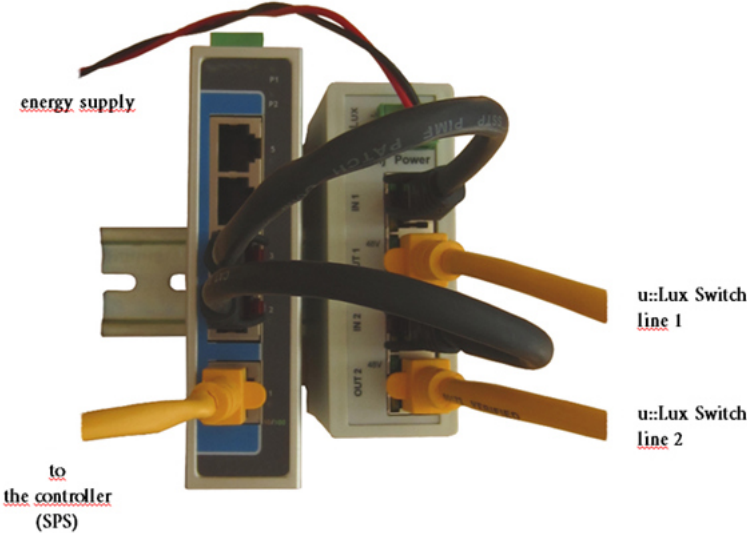
## Practical example

The installation and energy supply of 20 *u::Lux Switches RJ45* is required. All *u::Lux Switches RJ45* shall be connected to a control.

A maximum of 2x10 *u::Lux Switches RJ45* per *u::Lux NetInj Power* can be supplied with energy. Therefore one *u::Lux NetInj Power* is required for the energy supply of all 20 *u::Lux Switches RJ45*.



The *u::Lux Switches RJ45* are connected to the ports OUT1 and OUT2 of the *u::Lux NetInj Power*. The IN ports are connected with an external Ethernet Switch. The connection to the control (PLC) is provided through another port of the Ethernet Switch.

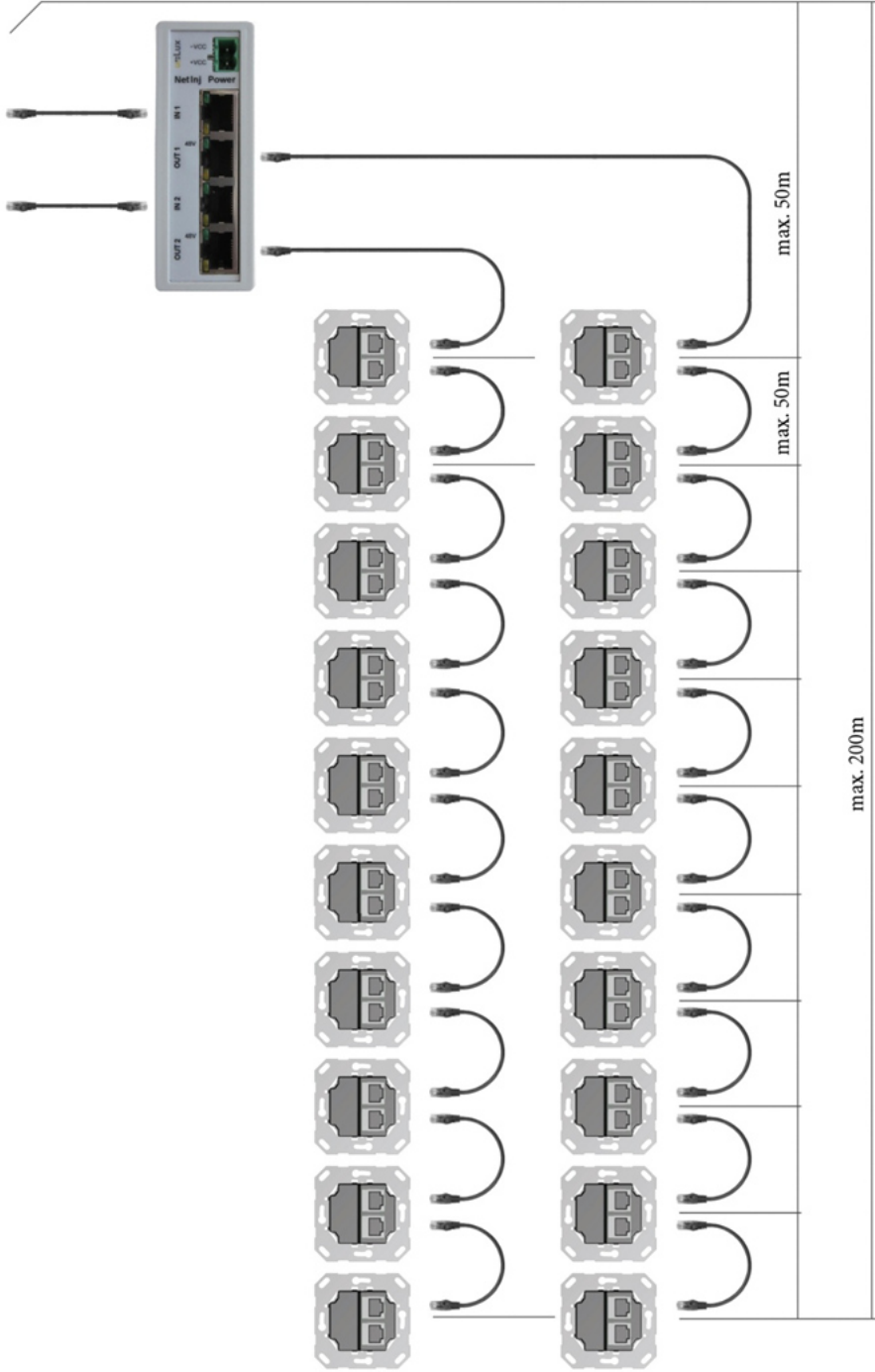


If you use more than 2 *u::Lux NetInj Power* modules, we recommend to wire the supply connections separately to the power supply and not to loop through from one *u::Lux NetInj* to the next one.



### Network wiring

An *u::Lux Switch* line may not exceed the total length of 200 m because of the cable resistance (voltage drop). We recommend not exceeding the max. length of 50 m of a single sub segment.





## Technical Data

**Supply:**

Direct voltage with a ripple of max.  $2V_{SS}$

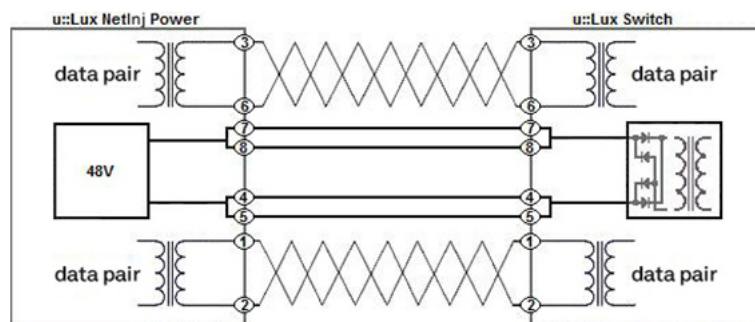
u::Lux NetInj	48V
u::Lux NetInj Power	22V – 30V

**Power consumption:**

max. 0,5W (without connection of u::Lux Switch RJ45)  
 max. 48 W (with connection of 2 x 10 u::Lux Switches RJ45)

**Connections:**

1x supply (+VCC or. -VCC, Phoenix MSTB 2,5/ 2-ST-5,08)  
 2x Ethernet RJ45 jacks with 48V supply (OUT1 and OUT2 -> each via Pins 4+5 [-VCC] and 7+8 [+VCC])



2x Ethernet RJ45 jacks without 48V supply (IN1 and IN2)  
 1x ground connection (via metal bracket on the bottom of the housing)

**Displays:**

At each of the network connections OUT1 and OUT2 there is one green LED for displaying the voltage of 48V.

**Network:**

100BaseT

**Ambient temperature:**

-10 °C to +40°C

**Storage temperature:**

-30 °C to +80°C

**Protection type:**

IP30

**Protection class:**

III

**Assembly type:**

Vertically on horizontal top-hat rail (35mm)

**Installation dimensions:**

95mm x 35mm x 76mm

**Housing materials:**

UPPER PART: synthetic mat. LEXAN UL94-V0, self-extinguishing  
 Colour: RAL 7035 light grey  
 Ambient temperature: to +100°C  
 LOWER PART: synthetic mat. NORYL UL94-V0, self-extinguishing  
 Colour: RAL 7021 black-grey  
 Temperature range: up to +100°C  
 FOIL: made of polyester DIN 42 115, fine grained  
 Foil with sanded look, horizontal sanding direction





## Hazard warnings

Attention! Assembly and installation of electrical devices may only be performed by a qualified electrician. Strictly observe the prevailing accident prevention measures. Failure to observe the installation instructions may result in damage to the device, fire or other dangers.

*u::Lux NetInj* or *u::Lux NetInj Power* are devices which do not correspond to the PoE standard.

## CE – marking

The CE marking is exclusively addressed to the governmental supervising authorities of the Member States and facilitates the free movement of goods. The CE marking does not represent any guarantee of specific features.

## Guarantee

The guarantee complies with the statutory requirements. Technical changes and error reserved.

## Ordering Information

<i>u::Lux NetInj Power</i>	order number 11022
<i>u::Lux NetInj</i>	order number



## Version Management

Version	Date	Name	Notes
1.00	27.02.2012	KH	Creation of the document
1.01	05.03.2013	THSI	Release
1.02	14.01.2014	THSI	Addition new order number
1.03	07.07.2014	KH	u::Lux switch -> u::Lux switch RJ45
1.04	01.10.2014	AK	Contact updated