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Scan the code to download the full manual, or go to: http://luminex.be/support.php?prod=0100042

Ethernet-DinMX4 Installation Instructions

This equipment is intended to be used in a Restricted Access Location only.
Access can only be gained by SERVICE PERSONS or by USERS who have been instructed about the fact that, when the top cover is removed, bare parts at hazardous energy levels are accessible.
Access should be controlled with lock and key, or a security identity system controlled by the authority responsible for the location. Only authorized, well-trained professionals should be allowed to access the restricted access location.

The Ethernet-DinMX4 can be installed on any compliant omega rail (EN60715 (35/7.5 rail).
Simply insert the Ethernet-DinMX4 from the top to the bottom , until your hear the bottom clip connection.

To remove the unit from the rail, use a sharp tool, and insert it in the hole of the bottom clip. Slightly push the clip to the bottom , in order to release the Ethernet-DinMX4 from the rail.

The unit is 100% solid state and has been qualified to operate in a dry environment within a temperature range of 0°C to 50°C (32°F to 122°F) and a relative humidity range of 5% to 95% (no codensation).

Since the unit requires no user intervention once installed, it is suitable for remote installation with all configuration and management taking place over an Ethernet network.
However it is recommended that access can be gained in the unlikely event of a hardware failure.

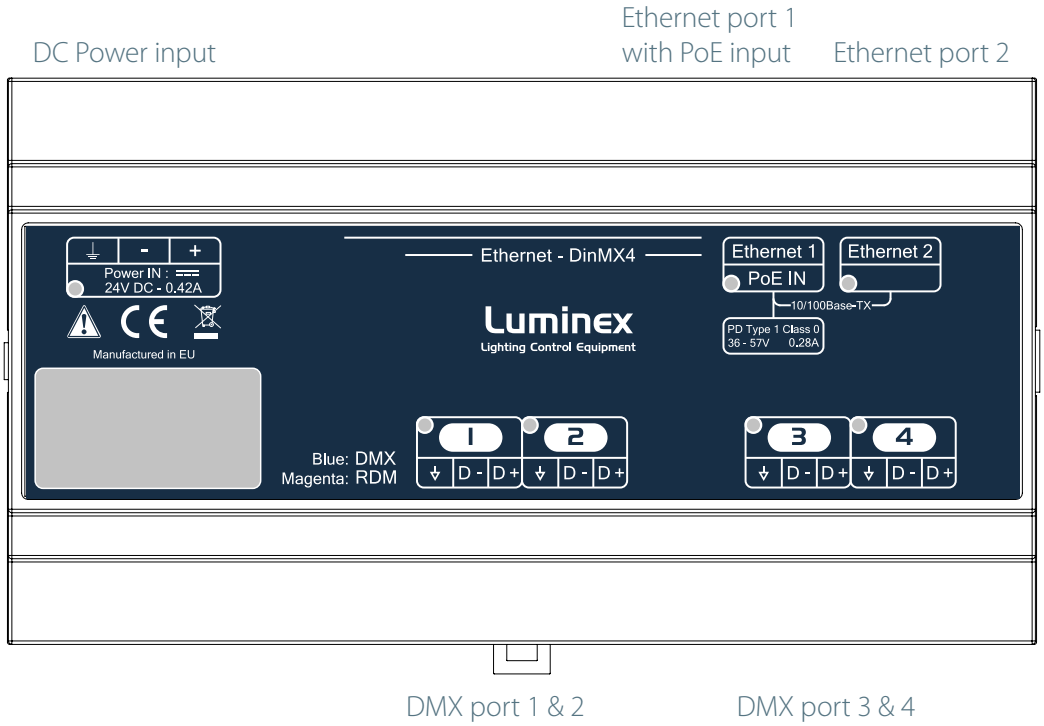
Version

There are two versions of Ethernet-DinMX4 : Terminal block version and RJ45 version. The main difference resides in the DMX port type.

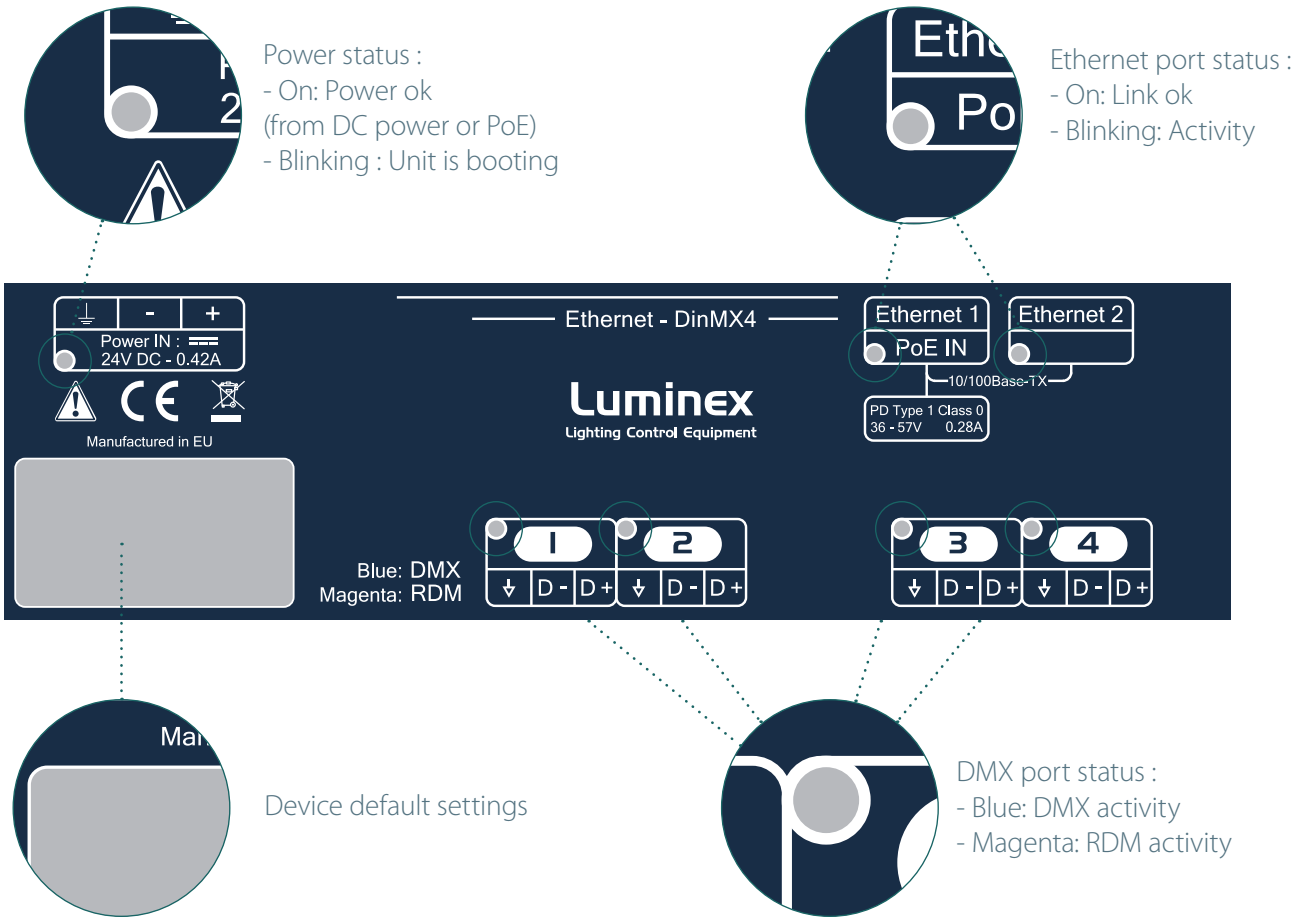
Ordering info :

- Terminal block version : LU 01 00042-TB
- RJ45 version : LU 01 00042-RJ45
- RJ45 Philips version : LU 01 00042-RJ45PHIL

Layout



Front panel



- 1 x Green LED for power status
- 2 x Green LED for Ethernet port status
- 4 x Blue / Magenta LED for DMX / RDM port activity
- 1 x Sticker with default settings (MAC and IP addresses, subnet mask, serial number)

Power

The Ethernet-DinMX4 can be powered in two different ways :

DC Power (24V)

A LPS (Limited Power Source) compliant with IEC 60950-1, EN 60950-1, UL 60950-1 or any equivalent national standard MUST be used, with an output voltage of 24V DC and a minimum output current of 0,42A (10 Watts). Such a power supply can be connected directly to the Ethernet-DinMX4 using the DC Input connector.
The pins on this connector are marked as follow:

⏚ Earth (functional ground)

\- Power input ground (0v)

\+ Power input 24V ⎓

Luminex recommends to use the DSP10-24 power supply unit from TDK Lambda, or equivalent. Follow the installation instructions of the PSU.
The power supply should be connected to the Positive and Signal ground inputs, ensuring the polarity is correct.
The Ethernet-DinMX4 will typically consume 5W.

Grounding

The Ethernet-DinMX4 has a dedicated functional earth terminal which should be connected to a suitable earth.

PoE (Power over Ethernet)

The Ethernet-DinMX4 complies with the 802.1af standard. The units is a Class 0 Type 1 device (from 0 to 12.94 Watts), and can receive a voltage from 36 to 57V. Current consumption of the unit is 0.28A.
To power up the unit from PoE (PoE switch, PoE injector, PoE midspan...), the units needs to be connected to power source equipment through its left Ethernet port (indicated with PoE IN label) with a network cable (Category 5 minimum). The network cable should be AWG 24 minimum.

Power must not be disconnected during firmware updates to the Ethernet-DinMX4 as corruption of the data or firmware may occur, perhaps even rendering the unit inoperable.

Power redundancy

Because the Ethernet-DinMX4 can support two power sources (DC power or PoE), user can create a redundancy scheme, and thus provide a fault tolerant power architecture to the converter.

Power Redundancy			
First powered	Second powered	Result	Notice
PoE	DC	DC is backup	If PoE fails, DC will takeover, seamlessly.
DC	PoE	PoE is backup	PoE is backup but when DC fails, the PoE takes some time to start up which causes a power dip and the DinMX4 to reboot.

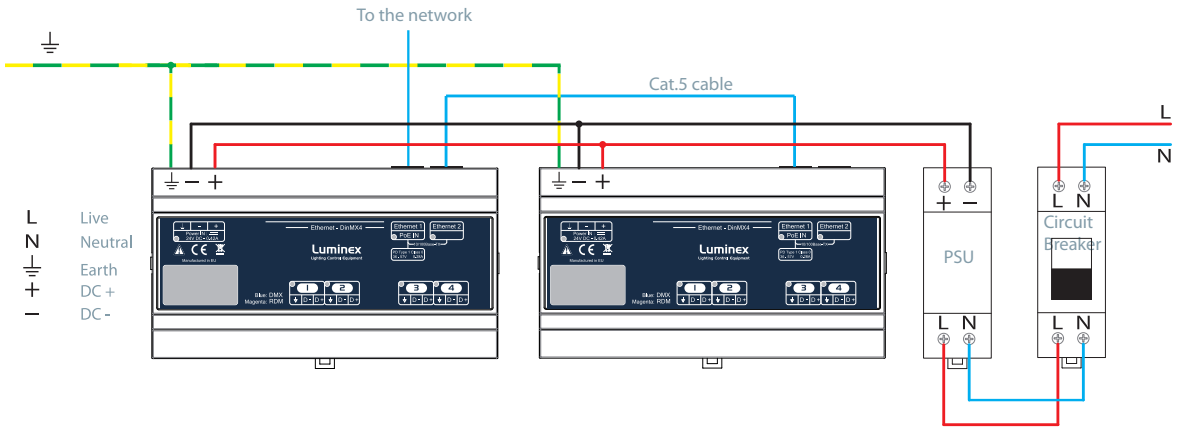
Disconnection

The Ethernet-DinMX4 can be powered through two power sources (PoE and DC power). It is thus important to disconnect both DC power and network to service the unit.

Data

Ethernet

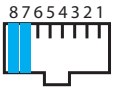
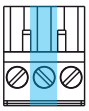
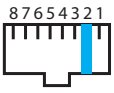
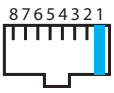
Unit can be connected to an Ethernet network through its two Ethernet ports. However, if PoE is used to power up the unit, left hand side port must be used to provide both power and data to the unit.
The secondary port is then used to connect any other Ethernet device. Installer can use the Ethernet-DinMX4 to daisy chain another device to the unit (computer, or another Ethernet-DinMX4).
Mind the secondary Ethernet port of the Ethernet-DinMX4 DO NOT provide any power to the connected device. The daisy chained device should be powered through another source.



The above illustration shows an example of two daisy chained Ethernet-DinMX4. Both units are powered through DC power. Mind the power supply should be selected accordingly, to provide sufficient power to both units but still honoring the requirement of the PSU being a Limited Power Source.

DMX / RDM

The Ethernet-DinMX4 is fitted with 4 DMX / RDM ports. All outlets are compliant with the DMX512-A timing specification and are terminated and rebiased. Depending on the model, DMX ports can be either 3 poles terminal blocks, or RJ45 socket.
To connect your DMX cable to the connectors, simply check the labels located on the front stickers.
Connect the wires as follow :

Icon	Three pole connector	RJ45	EIA/TIA Color	Function
⏚		Pin 7&8 	White / Brown Brown	Ground
D-		Pin 2 	Orange	DMX Data -
D+		Pin 1 	White /Orange	DMX Data +

The Ethernet-DinmX4 complies with the ESTA wiring scheme.

ESTA Wiring Scheme		
Pin	Wire color	DMX 512 function
1	White / Orange	Data 1 +
2	Orange	Data 1 -
3	White / Green	Data 2 + (Optional)
6	Green	Data 2 - (Optional)
4	Blue	Not assigned
5	White /Blue	Not assigned
7	White / Brown	Common reference for Data 1 (0v)
8	Brown	Common reference for Data 2 (0v)
	Drain	

In the case you don't use the second DMX line, Luminex recommends to still connect common reference for Data 2 to Pin 8, to avoid interferences.