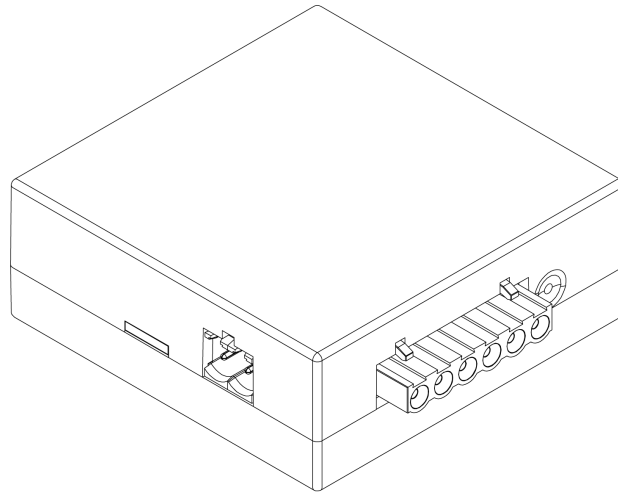




PXLNET TRANSMITTER MANUAL



Product number: 20342
v1.8 - November 2021



THANK YOU FOR CHOOSING DIGIDOT!

DiGidot offers powerful products and solutions to control LED pixels. The DiGidot C4 is the heart of our control system and offers great flexibility and easy infrastructures. In order to benefit from all our system advantages, we offer some innovative accessories like range extending equipment. These products allow you to send PxLNet, which is a high speed and long range SPI protocol. Install the DiGidot C4 controllers and PxLNet Transceivers in a central place for easy access and maintainability.

Have fun creating mesmerizing lighting installations!

Your DiGidot team

TABLE OF CONTENTS

THANK YOU FOR CHOOSING DIGIDOT!	2
TABLE OF CONTENTS	3
INTRODUCTION	4
CONTENTS	4
FEATURE LIST PXLNET TRANSMITTER	4
TECHNICAL DRAWINGS	5
PRODUCT DESCRIPTION	6
TECHNICAL SPECIFICATIONS	7
BEFORE INSTALLATION	8
Safety instructions	8
INSTALLATION & WIRING	9
Wiring	9
Mounting	10
Power supply	11
Connecting power	11
WIRING SCHEMES	12
OPERATION	14
SPI	14
DMX	14
TIPS & TROUBLESHOOTING	15
Standard troubleshooting checklist	15
GENERAL INFORMATION	15
Online resources	15
Remarks	15
Compliances & EU declaration of Conformity	16
CE-Marking	16
Warranty	16
Disposal and recycling	16
Feedback	17
Imprint	17
Copyright	17
Disclaimer	17

INTRODUCTION

SPI protocols are sensitive to data distortion and often only work safely up to 2 meters (6.5 ft) of cable distance. The DiGidot PxLNet Transmitter is a small extension module that can be connected to the DiGidot C4 outputs. It converts SPI or DMX TTL signals to PxLNet in order to send them across large distance. Any industry standard SPI protocol that can be outputted from an SPI controller, can be converted.

Output the same amount of universes with this transmitter as sent from the SPI controllers output port(s). This product can not only convert SPI protocols but it also converts DMX TTL signals to standard DMX512. The PxLNet Transmitter can therefore be used to connect four differential DMX signals up to 500 meters away.

The onboard voltage regulator accepts voltages ranging from 12 V_{DC} up to 24 V_{DC}.

Installation is very easy thanks to the RJ45 outputs, which can be connected conveniently to our DiGidot PxLNet Transceiver modules.

CONTENTS

- 1 x DiGidot PxLNet Transmitter
- 1 x 2 pin header, DC power terminal connector (already inserted)
- Quick start instruction card

NOTE

We put great care in our products and have a high quality control standard. Nonetheless we advise to double check for missing or damaged items.

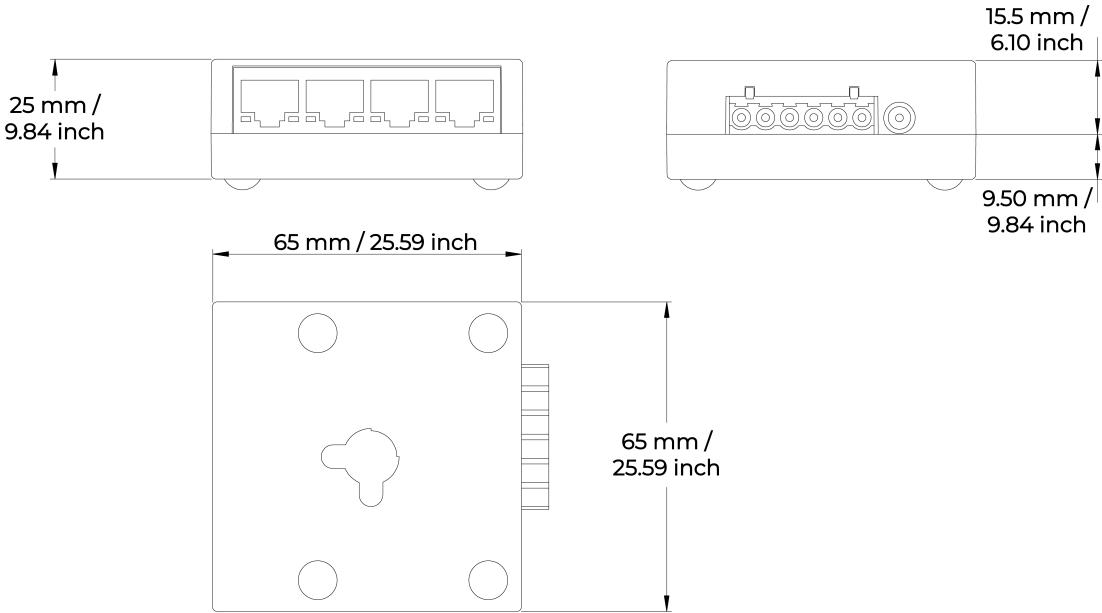
In case of any missing or damaged items, please contact your supplier immediately.

Never use damaged products!

FEATURE LIST PXLNET TRANSMITTER

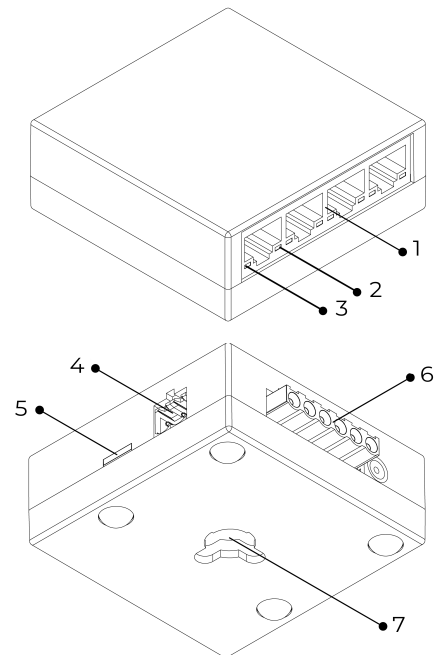
- Connects directly to DiGidot C4 IO port
- Converts SPI and DMX TTL to PxLNet and DMX respectively
- Flexible operating voltage from 12 to 24 V_{DC}
- 4 isolated RJ45 bus ports for PxLNet
- Built in power supply for DiGidot C4
- Can be used with any third-party SPI controller

TECHNICAL DRAWINGS

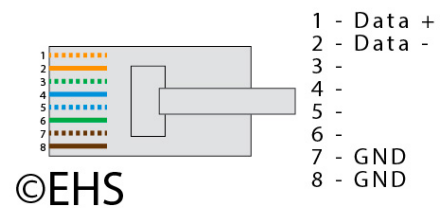


PRODUCT DESCRIPTION

No.	Description
1	4x PxLNet RJ45 output ports
2	Status led power on (green)
3	Status led transmitting data (yellow)
4	Power input Left = DC- (GND) Right = DC+
5	Power indicator LED (blue)
6	I/O Connector to DiGidot C4
7	Mounting hole



Pin 1	orange/white = (DMX) Data +
Pin 2	orange = (DMX) Data -
Pin 7	brown/white = (DMX) GND/DC-
Pin 8	brown = (DMX) GND/DC-



ANSI-EXTA E1-11 standard

TECHNICAL SPECIFICATIONS

Electrical

Input Voltage:	12-24 VDC
Max. power consumption:	1 Watt

Mechanical

Dimensions:	65 x 65 x 25 mm 2.56 x 2.56 x 0.98" (L x W x H)
Net weight:	74gr 2.61oz

Environmental

Operation Temperature (Tc):	0 to 50°C 32 to 122°F
Max. ambient Temp. (Ta ^{max}):	40°C 104°F
Storage temperature:	-20 to 50°C -4 to 122°F
Max. operating relative humidity:	90% (indoor use only)

Protection

IP rating:	IP40 (indoor use only)
DC input:	Overvoltage protection (max. 24VDC)
Reverse polarity protection:	Yes

Connectivity

Power wiring:	Recommended: max. 2,5 mm ² 14 AWG
---------------	--

Quality

Warranty:	5 years carry in factory warranty
Components:	RU Certified
Compliances:	CE, RoHs, ETL pending
Applied standards:	EN60950-1:2006 +A11:2009 + A1:2010 + A12:2011 + A2:2013, IEC60950-1 / EN60950-1, EN61006-6-3, EN55032

BEFORE INSTALLATION

Before installing DiGidot products it's important to take notice of following safety and installation instructions.

Safety instructions

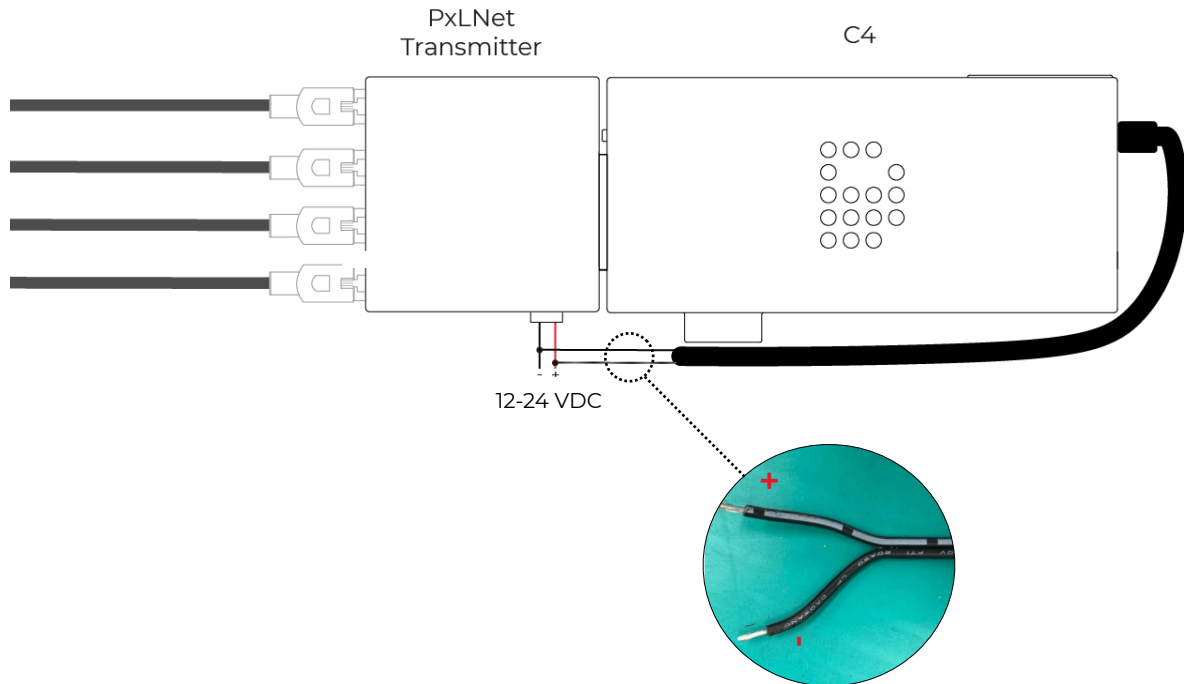
- Before installation and use of this product, read this manual carefully.
- Make sure that these instructions are handed over to the end-user and those responsible for installation, use and maintenance.
- Local electrical and safety rules and guidelines always overrule this manual.
- Installation should only be carried out by a professional and certified installer that is qualified to work on the electric installation.
- Do not conduct any repairs of the device (there are no user serviceable parts inside). Any unapproved repairs and/or product modifications will void product warranty. DiGidot Technologies B.V. cannot be held liable for any consequences.
- Repairs of this product may only be carried out by the manufacturer DiGidot Technologies B.V.
- Repairs and maintenance on the installation may only be carried out by qualified technicians.
- Always disconnect the mains power when working on a high voltage electric installation, not doing so may result in product damage and/or personal injuries.
- Do not connect or modify this product other than described in this manual.
- Never use a product that is damaged or does not work correctly or when the product starts to smoke, or when a crackling/sizzling noise is audible. If this is the case in any way, disconnect power and please contact your supplier immediately.
- The only way to power off this product is to disconnect it from the power source.
- The product is designed for indoor use (dry locations) only.

INSTALLATION & WIRING

Wiring

Please follow these instructions when connecting your DiGidot System. Make sure to power the DiGidot C4 and PxLNet Transmitter individually.

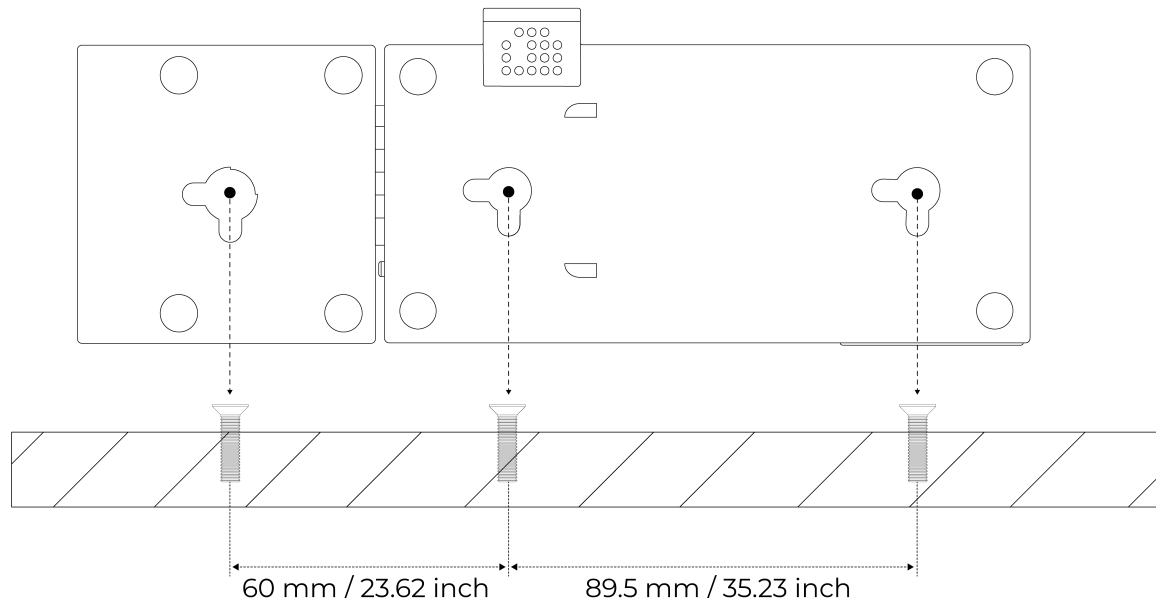
Use the supplied Power Jack cable to power the DiGidot C4.



Mounting

Before mounting and connecting power to the PxLNet Transmitter, make sure to follow these steps:

1. Disconnect power from the DiGidot C4
2. Remove the terminal connector from the DiGidot C4 I/O port
3. Connect the I/O connector of the DiGidot PxLNet Transmitter to the I/O port of the DiGidot C4 controller in upright position and push the connector in straight and firmly.
4. Install the DiGidot C4 and PxLNet Transmitter by inserting flat hat screws, spaced according to the drawing down below, in the mounting surface. Leave 4-5 mm between the surface and underside of the screw heads.



5. Position the mounting holes of both devices over the screws and slide them in place.

WARNING!

- This product should not be subjected to high temperatures (risk of fatal damage)
- Keep this product away from direct sunlight, rain or other moisture (risk of fatal damage)
- Do not use this product outdoors or in humid environments (short circuit risk)

Power supply

To power this product, the DC+ and DC- (GND) of the terminal connector must be connected to a SELV rated power supply that provides appropriate power at the required supply voltage; 12-24 VDC.

Connecting power

Connect the power supply, DC+ and DC- (GND) to the corresponding power inputs of the DiGidot PxLNet Transmitter terminal connector.

When the Transmitter is powered and started up, the status light next to the power input will show a blue light.

IMPORTANT: Make sure to equalise ground potentials.

Always connect ground (DC-) of DiGidot C4 controller/PxLNet Transmitter to every power supply, connected to every product that is controlled by a single DiGidot C4 controller.

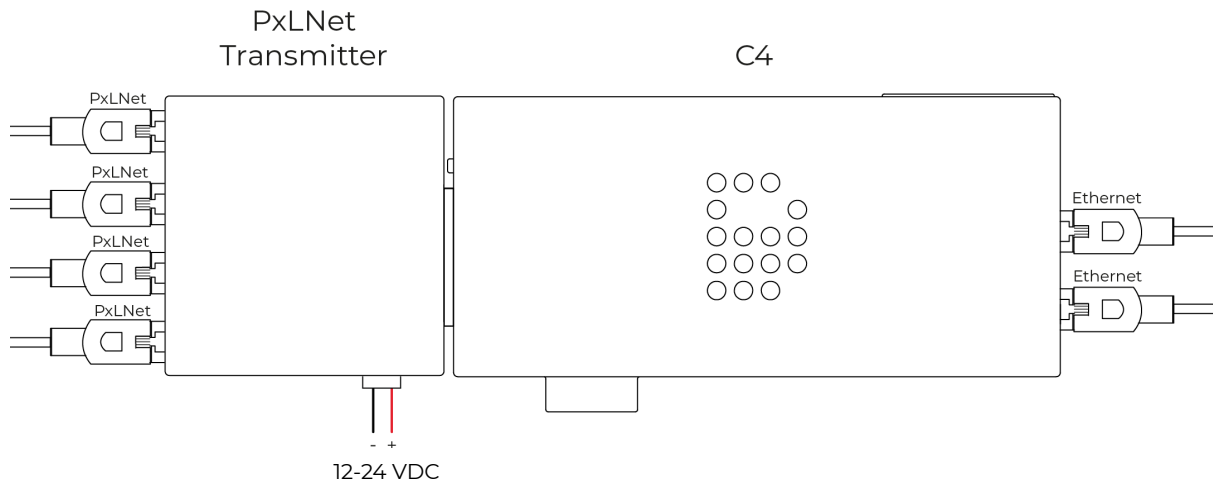
If the grounds are not connected, this may cause malfunctioning.

WIRING SCHEMES

Following wiring schemes show various options to connect the PxLNet Transmitter.

Wiring scheme 1: Connect Transmitter to C4

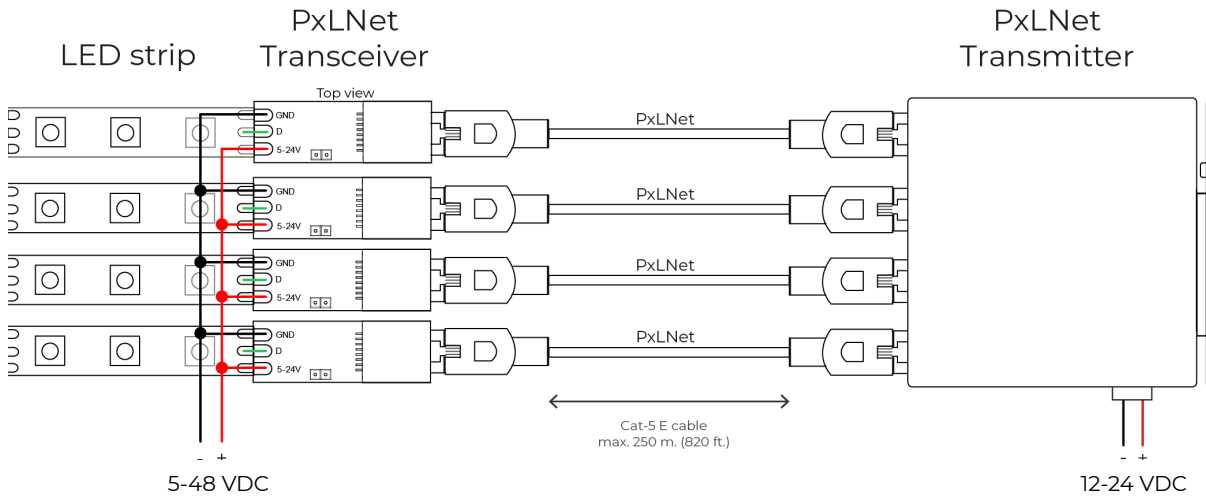
The PxLNet Transmitter connects directly to the DiGidot C4. In case of third party SPI controllers a PxLNet Transceiver Bus Adapter (sold separately) must be placed on the terminal connector.



IMPORTANT: The DiGidot C4 controller needs power separately. This is done with a separate DC-Jack power cable. See chapter '**Installation & Wiring**' for more information about power distribution.

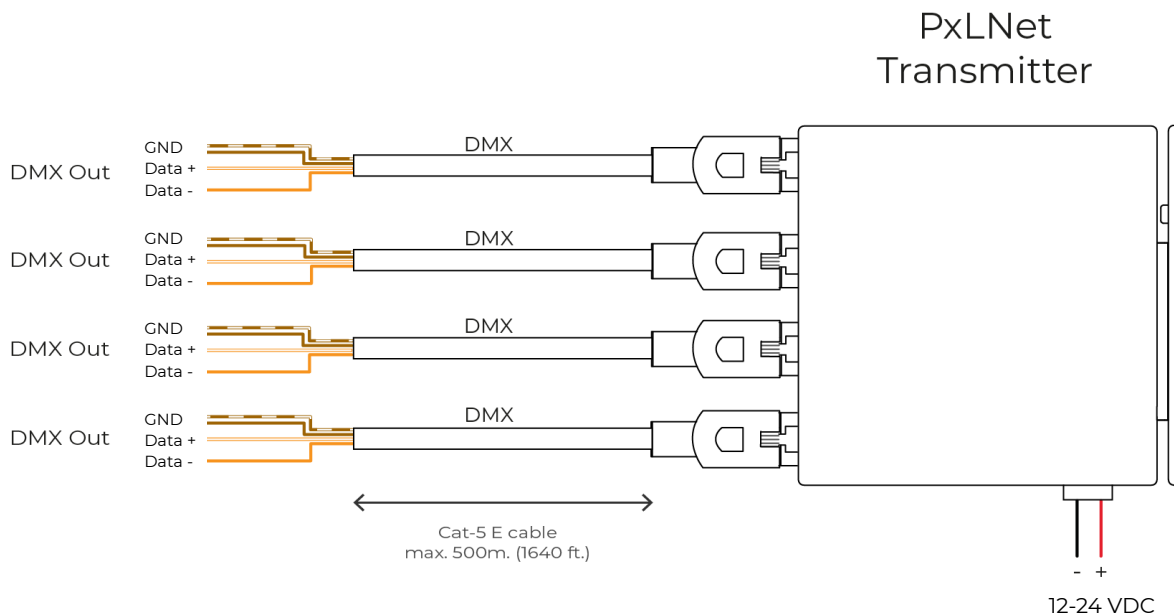
Wiring scheme 2: Connecting to PxLNet Transceiver

The PxLNet Transmitter can be connected to a PxLNet Transceiver to send signals across large distances. For more wiring options, please refer to the PxLNet Transceiver manual.



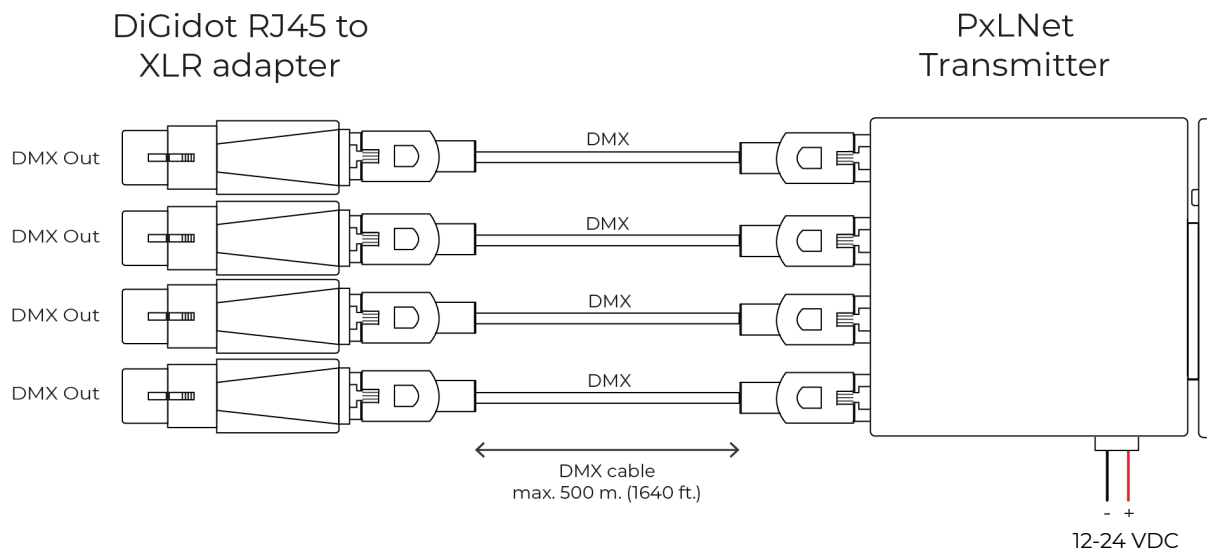
Wiring scheme 3: Connecting to DMX products

When connecting a DMX product where the wires need to be inserted in wire terminals or if they need to be soldered, the network cable must be stripped and wires must be connected as shown below. The indicated wire colors are according to the T-568B and ANSI ESTA E1-11 standard.



Wiring scheme 4: Connecting to DMX adapters

DiGidot offers RJ45 to XLR adapters to connect to any DMX controlled device with a 3-pin XLR connector. The RJ45 pinout is according to the ANSI ESTA E1-11 standard and can also be inserted directly in any DMX device with RJ45 input.



OPERATION

SPI

The DiGidot PxlNet Transmitter automatically converts any SPI output protocol to PxlNet and sends it up to 250 meters (820 ft) away to a PxlNet Transceiver, where it will be converted to the original protocol.

DMX

In order to transmit the DMX protocol directly from the PxlNet Transmitter, select 'DMX TTL' as output protocol in the DiGidot C4 interface.

The RJ45 pinout is according to ANSI ESTA E1-11 standard, which means the RJ45 connector can be plugged in directly into DMX device inputs or use a DMX XLR adapter. For the exact pinout, check product description above.

TIPS & TROUBLESHOOTING

In case you run into any trouble, please check your setup according to following checklist.

Standard troubleshooting checklist

1. Double check all cables and connections.
2. Double check any soldered connections
3. Double check Network cable pinout and crimped connectors
4. Is the DiGidot C4 powered correctly?
5. Are the LEDs powered correctly?
6. Are all power supplies connected correctly to your mains power supply?
7. Is your network setup done correctly?
 - Prevent IP Address conflicts
 - Make sure that the subnet mask is set correctly and that all IP Address are set within the appropriate range.
 - Refer to further trouble shooting tips in the DiGidot C4 user manual.
8. Are the DiGidot C4 inputs and outputs configured correctly?
 - Make sure that the correct IC/SPI protocol is configured.
 - Make sure that input and output matches the system setup.Use the highlight option to test the outputs.
9. Double check if all grounds (DC-) from all power supplies that are connected to all lighting products which are controlled from one DiGidot C4 and PxLNet Transmitter, are connected.

GENERAL INFORMATION

Online resources

For technical specifications, latest documentation, manuals, product information and further support please visit www.digidot.eu.

Remarks

We've put great care in writing this manual. However in case you encounter any discrepancies or unclarities, please contact us.

Compliances & EU declaration of Conformity

This product is designed and produced by DiGidot Technologies B.V., Amsterdam, The Netherlands.

CE-Marking



Hereby, DiGidot Technologies BV declares that this product complies with and was tested according to, all essential requirements of all relevant CE directives.

Warranty



This product is covered by a carry-in manufacturer's warranty of 5 years which covers any design faults, production faults and component failures. Warranty voids if the product was installed or used incorrectly or not in accordance with this manual, and/or if the product was damaged due to external factors, modified or electrically overloaded. Warranty conditions of DiGidot Technologies B.V. apply. Warranty claims have to be issued by email: support@digidot.eu.

Disposal and recycling



This product should not be disposed with other household waste. When you decide to dispose this product and/or its battery, do so in accordance with local environmental and recycling regulations.

Feedback

Tell us all about your experience with DiGidot!

The continuous development of the DiGidot control platform is only possible thanks to feedback from our users. If you have any suggestions, please contact us by email: info@digidot.eu.

Imprint

DiGidot Technologies B.V.
Valschermkade 27-28
1059 CD Amsterdam
Netherlands

Chamber of commerce registration: 67637825
VAT identification no.: NL857103581B01
Managing director: Stefan Verhoef

Phone: +31 (0)20 820 1849
info@digidot.eu
www.digidot.eu

Copyright

© 2021 DiGidot Technologies B.V. All rights reserved.

Errors and omissions excepted. The information in this document is subject to change at any time without prior notice. Visit our website www.digidot.eu for the most recent version of this document. It's not allowed to copy or reproduce, translate or publish the information within this document without prior written approval from DiGidot Technologies B.V.

Disclaimer

DiGidot Technologies B.V. cannot be held liable for improper handling, product installation, usage or storage. DiGidot Technologies B.V. explicitly rejects any form of liability claims in advance, whether it concerns direct or indirect disadvantages, damage, injuries, loss of income or other financial, materialistic or personal consequences that are directly or indirectly caused by use of this product or it's owner or user. Any form of unintended or misuse of this information and/or DiGidot products indemnifies DiGidot Technologies B.V. from liability and warranty obligations.