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# *Art-Switch PoE4*

User Guide



Please read these instructions before using the product.

This product has been designed & manufactured for professional use only. It should only be installed by a suitably qualified technician and in accordance with electrical regulations in the country of use.

Unless directed in the instructions there are no user serviceable parts inside the outer case of this product.

Always disconnect from the power supply when not in use.

Any specific IP rating, where appropriate, is given in the instructions. Unless otherwise stated this product is designed for indoor use only. If used outdoors it **MUST** be installed in an appropriate IP rated cabinet. Do not allow this product to be exposed to rain or moisture. Do not allow liquid to penetrate the product.

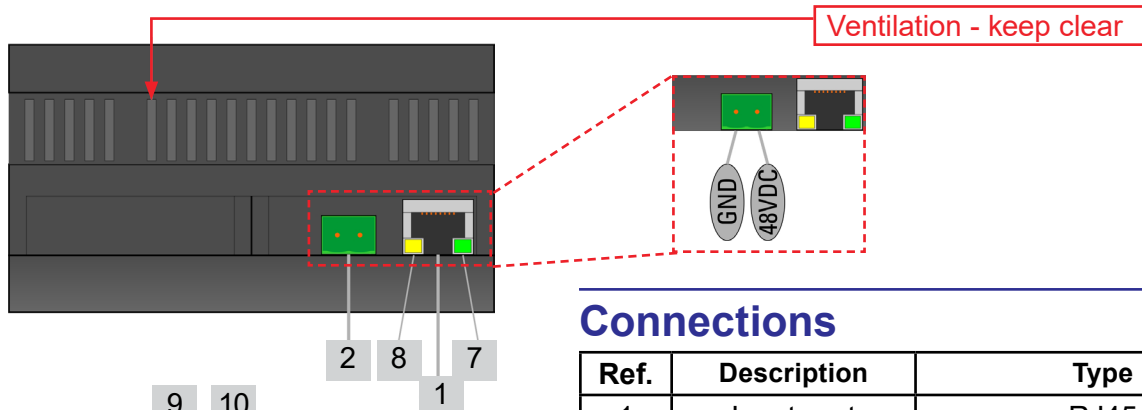
Please recycle all packaging.

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# Connections & LED Indicators



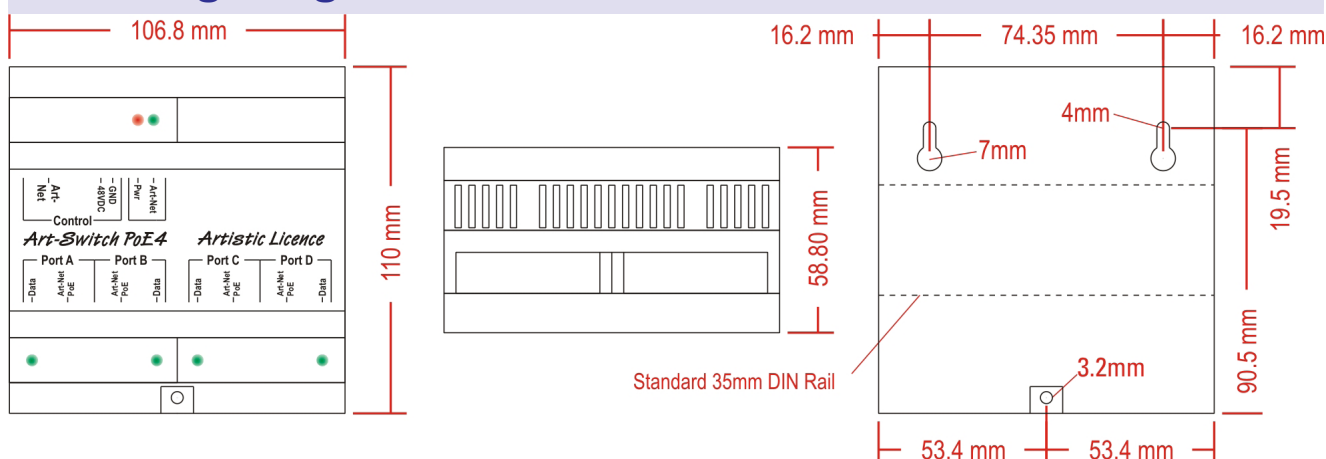
## Connections

Ref.	Description	Type
1	Input port	RJ45
2	DC power	2-pin screw terminal
3	Output Port A	RJ45
4	Output Port B	RJ45
5	Output Port C	RJ45
6	Output Port D	RJ45

## LED Indicators

Ref.	Description	Colour	Operation
7	Duplex status	Green	On = Full, Off = Half
8	Input Speed	Yellow	On = 100BaseT Off = 10Base T
9	Power	Red	On = Correct Off = Error
10	Input Data Activity	Yellow	On = Link Flash = Activity Off = No connection
11-14	Data Activity (Ports A-D)	Green	On = Link Flash = Activity Off = No connection
15-18	Data Speed (Ports A-D)	Green	On = 100BaseT Off = 10Base T
19-22	PoE status (Ports A-D)	Yellow	On = Not Active Off = Active

## Mounting Diagram



## Product Overview

Art-Switch PoE4 is a DIN-Rail ethernet switch. It features five 10/100BaseT Ethernet ports: one for the input connection, and four outputs that support Power over Ethernet (PoE).

Art-Switch PoE4 is housed in a small robust DIN-Rail case that can also be surface mounted. All ethernet connections are made via RJ45s. Each port has individual indicators to show speed of connection, PoE use and data activity.

Art-Switch PoE4 features auto configuration per port, including speed, duplex and cable type.

The PoE output on the four ports complies with the IEEE802.3af standard. Art-Switch PoE4 is capable of providing power and data to four other products in the Art-Range such as Art-Lynx O/P or Art-Relay. It can also be used with any PoE or ethernet compatible nodes.

## Summary of Key Features

- 5 port ethernet switch
- 10BaseT, 100BaseT, Half/Full Duplex
- IEEE802.3af PoE capable (4 ports)
- DMX data activity indicators
- DIN rail or surface mount
- Art-Net compatible
- Individual port speed, data activity and PoE indicators
- Auto-sensing per port
- Auto-uplink detection (cable type)
- Powered Device (PD) detection and classification

## Power & Earthing

Art-Switch PoE4 requires 48 VDC input power. The connector is a pluggable 2-pin screw terminal.

The red LED (see 'Connections & LED Indicators') is on when the unit is powered.

In some circumstances Art-Switch may need to be connected to mains Earth. Under the top left terminal guard there is a connection to the cable shield that can be connected to mains Earth.

The cable shield is referenced to logic ground by a capacitor / resistor network as specified in the ethernet standard.

## Operation

Art-Switch PoE4 is used to connect ethernet/ Art-Net nodes together. It provides data communication and power for up to four devices.

All settings are factory configured. Art-Switch PoE4 has been set up as an unmanaged ethernet switch.

There are some settings that are configured automatically:

### Auto-Negotiate

When a new connection is made, Art-Switch PoE4 will auto detect the speed for each port individually. It will always default to the highest speed.

### Auto Cable Detection

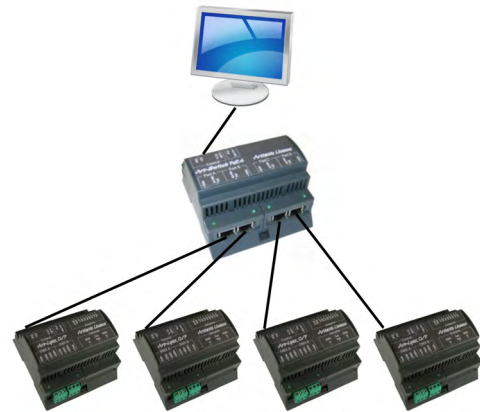
There are two types of ethernet cables that are used to connect equipment together: patch and cross-over. Art-Switch PoE4 has auto cable detection so either type can be used to connect any type of ethernet device.

Connecting Art-Switch to:	Cable to be used:
Ethernet Switch	Cross-Over Cable
Computer or Node	Patch/Straight Cable

## Application Diagrams

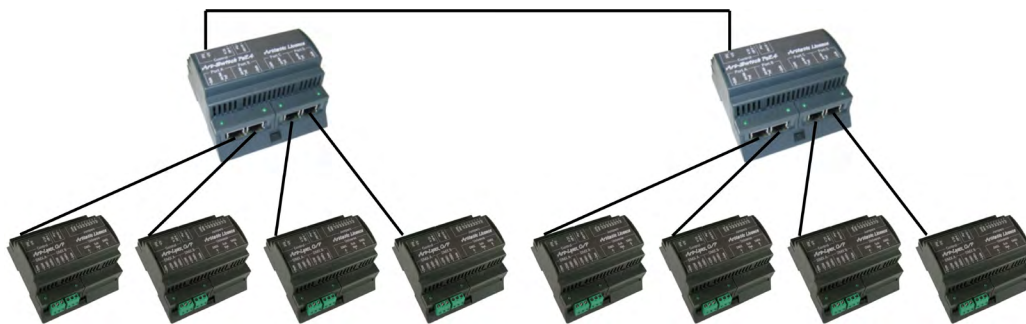
### Example 1: Conventional (one controller, four nodes)

This is a standard network configuration. Most networks are based on this model. Art-Switch PoE4 provides power and data to each of the four nodes.



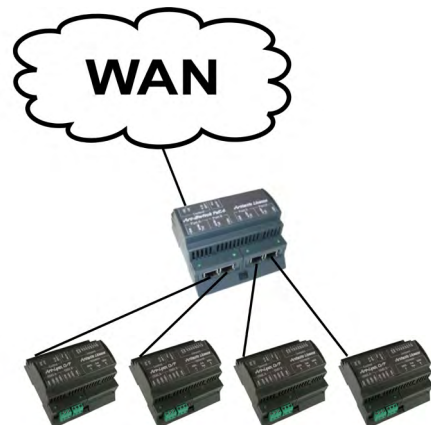
### Example 2: Multiple Switches (no controller, eight nodes)

Two Art-Switch PoE4 units can be connected together with a cross-over cable to extend the number of ports.

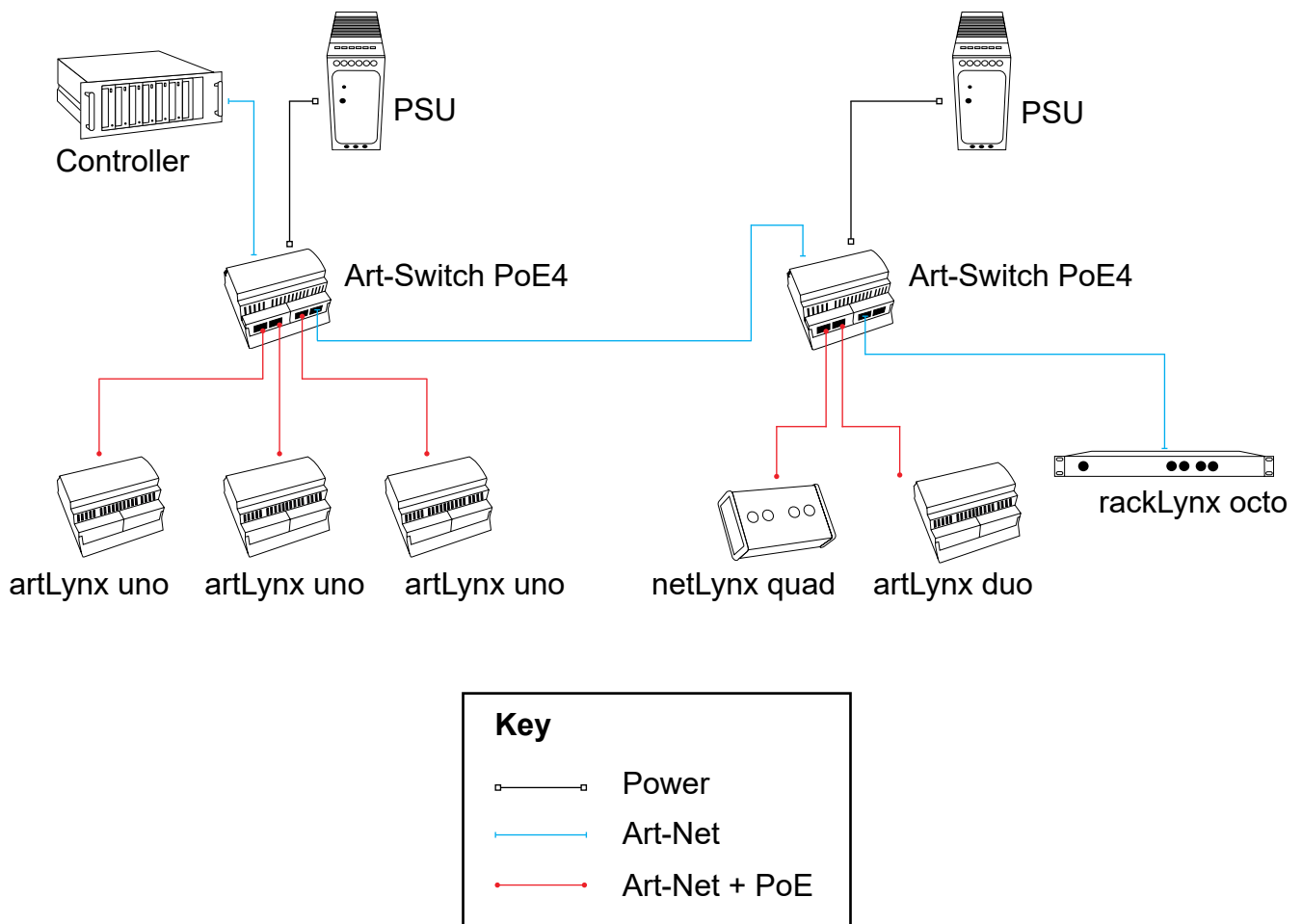


### Example 3: Subset of a network (multi-zone installation)

In big installations there may be a central controller that needs to get to multiple zones via standard copper or fibre mediums. Art-Switch PoE4 can be used for local switching and power distribution while being connected to the network backbone.



## Wiring Example



In this example, four different types of Art-Net nodes are used to convert Art-Net into DMX512. artLynx uno and duo are DIN rail products, netLynx quad is surface/truss mounted and rackLynx octo is rack mounted.

The Art-Switch PoE4 units distribute power (PoE) and data (Art-Net) to all the nodes except rackLynx octo, which receives the data only and is powered separately by a mains connection.

# Art-Switch PoE4 Specification

## Mechanical

- Housing: DIN rail case
- Material: Polycarbonate Plastic - UL94-V0 rated
- Overall dimensions: 160 mm (W) x 110 mm (H) x 62 mm (D)
- Weight: 0.5 kg
- Mounting: 35 mm DIN Rail or Surface Mount
- Country of manufacture: UK

## Environmental

- Operating temperature: 0°C to 40°C
- Storage temperature: -10°C to +50°C
- Operating relative humidity (max): 80% non-condensing
- IP rating: IP20 indoor use only
- Certification: CE, FCC, WEEE, RoHS
- Warranty: 2-year (return to base)

## Power & Electrical

- Input voltage: 48 VDC
- Input connector: 2-pin pluggable screw terminal
- Input power (max): 48 W
- Output voltage: 48 VDC via PoE ports
- Duty cycle: 100% @ 25°C
- PoE Output ports: Class 0 to Class 4 support with auto detection (802.3af)

## Control / Data Connections

- Control: IEEE 802.3 ethernet: auto-detect (speed & cable type)
- Input port: (1) 10/100BaseT (Half/Full Duplex)
- Output ports: (4) 10/100BaseT (Half/Full Duplex) with 802.3af
- Connectors: (5) RJ45, isolated to 2 kV

## LED Indication

- Power
- Input Port: Duplex status & Speed (10/100BaseT)
- Output Ports: Speed (10/100BaseT) & PoE activity

## Package Contents

- Art-Switch PoE4

## Ordering Info

- Product code: Art-Switch PoE4

## Accessories (not included)

- PSU-48-1-DR (powers 1 x Art-Switch PoE4)



Compliance



Art-Switch PoE4 is CE & UKCA compliant

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