



DYCON
power solutions

**Installation Manual for
D1800 Series
High Power PoE Midspan
Power Supply**

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1 Package Contents

- D18XX PoE Mid-span unit
- Mains cable
- Four M4 x 8mm Philips flat head screws
- Dycon warranty statement
- D1800 series manual

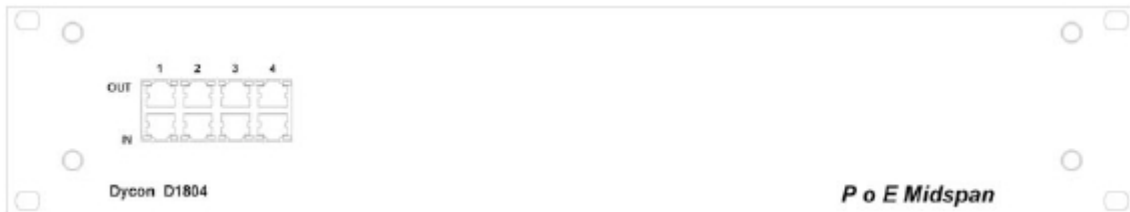
2 Description

The D1800 PoE Midspan Series is powered by one or more highly efficient switched mode power supplies that reduce rack cabinet heat and user running costs. The unit is designed for simplicity and true “Plug and Play” system integration. The unit will simultaneously supply over 30 watts to each connected powered device and individual ports are over-current protected according to the class of the connected device.

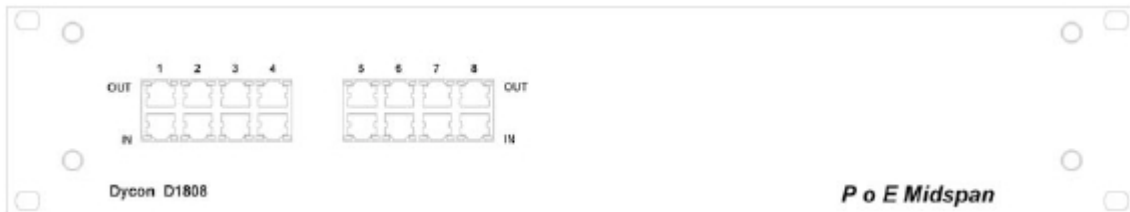
2.1 Features

- IEEE 802-af and IEEE 802-at Type 1 and Type 2 compliant
- Power supply better than 85% efficient at full load
- Genuine full power available simultaneously across all ports
- Fully automatic powered device signature detection and power limiting
- 4 to 16 port model variants available
- 3U 19 inch rack mounted and desk mounted versions
- Simple “Plug and Play” system integration
- Full thermal and over-current protection
- Power outputs transient protected
- Power supply failure redundancy limited to multiples of 4 ports

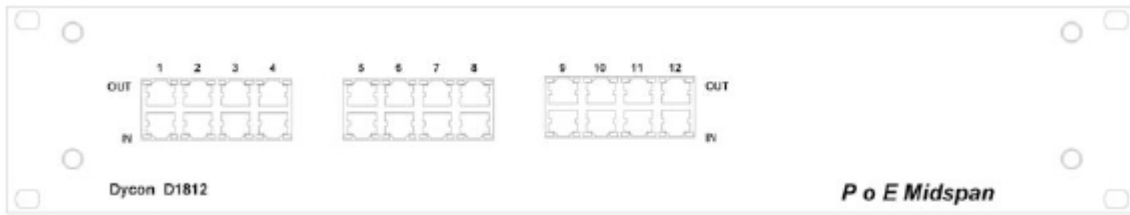
3 Installation



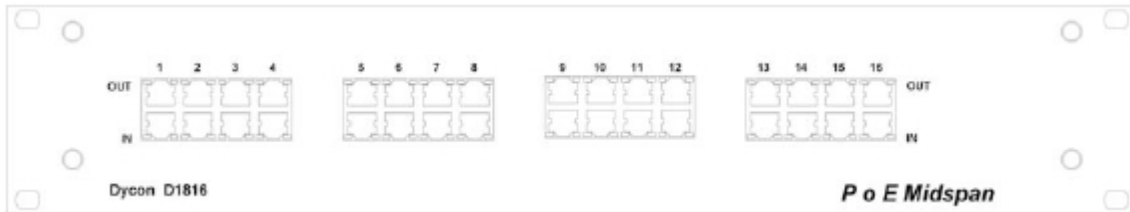
D1804 – 4 ports – front plate



D1808 – 8 ports – front plate



D1812 – 12 ports – front plate



D1816 – 16 ports – front plate

3.1 Power Cable Connection

The AC power cable is connected to the switched IEC power inlet located at the rear of the Dycon PoE Midspan unit. The power cord must be plugged into an earthed 230V nominal power outlet, with a minimum current rating of 10A.

3.2 Ethernet Connection

Category 5e cables using 10BASE-T and 100BASE-T Ethernet 8P8C modular connections can be used with this PoE midspan power injector. The unit can provide nominal maximum of ~34W (measured at the midspan output depending on the class of the powered device) at ~54V (~630mA) per port and is IEEE 802-af compliant and backwards compatible with IEEE 802-af.

The Ethernet ports are organised in multiples of 4 pairs of 8P8C modular connectors (RJ45). Depending on the model a maximum of 16 ports are available. The Ethernet data input (from an Ethernet switch etc.) is connected to the lower data input connectors and the output with injected power is connected to the corresponding upper data and power output connector.

1. Check the unit is plugged in and switched on at the rear of the unit. The yellow standby LEDs on the front modular connectors will be illuminated indicating that power is available.
2. Connect the Ethernet data cables to the bottom row data inputs.
3. Connect the cable to the powered device to the corresponding upper data and power output modular connector.
4. Wait for a few seconds and check that the Green LED illuminates indicating that a valid power signature has been detected from the powered device and output power has been successfully applied.

3.3 LED Indicators

INDICATORS	OFF	ON
YELLOW	Port power not available, unit switched off ¹	Port power available
GREEN	Powered device disconnected or invalid device plugged in	Powered device signature successfully detected and power applied over Ethernet

Notes: Each 4 pairs of modular connectors are powered by an individual power supply. Should an individual power supply fault develop or the power supply temporarily close down after a thermal overload, only four out of a potential 16 ports will be affected.

4 Technical Specifications

Part Number	D1804 - 4 ports	D1808 - 8 ports	D1812 - 12 ports	D1816 - 16 ports
Power Available	Max. 120 watts	Max. 240 watts	Max. 360 watts	Max. 480 watts
Max. Input Current at 230V	0.65A	1.3A	1.95A	2.6A
AC Power Supply Voltage	207V to 253V			
AC Input	49Hz to 61Hz			
Network Inputs	10/100 Base-T			
Outputs	54V nominal, +/- 3%			
Port Power Output	35W (630mA at 55.5V) maximum			
Fuse Rating	Time delay T6.3A 20mm fuse, 250 V			
Operating Temperature Range	-10°C to +40°C			
Size (L x W x D)	485mm x 285mm x 90mm			
Weight	4kg	4.3kg	4.6kg	4.9kg

5 Safety and environmental Information

5.1 Equipment Modifications

This equipment must be installed and used in strict accordance with the instructions given in this manual. This equipment contains no user-serviceable components. Unauthorised changes or modifications to this equipment will invalidate all applicable regulatory certifications and approvals.

Every care has been taken in the preparation of this manual. Please inform us of any inaccuracy or omission. Dycon Ltd cannot be held responsible for any technical or typographical errors and reserves the right to make changes to the product and manuals without prior notice.

Dycon Ltd makes no warranty of any kind with regard to the material contained within this document including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Dycon Ltd shall not be liable nor responsible for incidental or consequential damages in connection with the furnishing, performance or use of this material.

5.2 Power Cord Requirements

Power cords must meet the requirements for the country they are used in.

- The Dycon PoE Midspan must have access to a power outlet. Disconnect the power cord from the outlet, to eliminate power from the device.
- The flexible cord that connects to the Dycon PoE Midspan must have a configuration to connect with an EN60320/IEC320 inlet connector.
- According to the EN60950/IEC 950 specifications, this device functions under Safety Extra Low Voltage (SELV) conditions. The conditions are true if the equipment and the connected device function under SELV conditions.
- The Dycon PoE Midspans meet EN60950 safety standards (displayed in the back of the product).

Europe and South America

Switzerland	The supply plug must comply with SEV/ASE 1011.
Denmark	The supply plug must comply with section 107-2-D1, standard DK2-1a or DK2-5a.
United Kingdom	The Dycon PoE Midspan is covered by General Approval (section 1.16.060), NS/G/12345/J100003, for indirect connection to a public telecommunication system.
France/Peru	IT equipment cannot power this device. In the case of an IT-powered device, the unit needs to be powered by 230V through an isolation transformer with a ratio of 1:1 and the secondary connection (Neutral) is properly grounded.

5.3 Precautions

Please read the following carefully before installing and connecting the system to a power source.

1. Only qualified and trained service personnel (in accordance with IEC 60950 and AS/NZS 3260) should install, replace, or service the equipment. Install the system in accordance with country or national codes.
2. The building where this product is used, requires a fuse or circuit breaker no larger than 10A, 230 VAC. The building facility must protect the Dycon PoE Midspan from over-current or short-circuits.
3. Read the Hardware Setup procedure before connecting the Dycon PoE Midspan to a power source (this includes power cord requirements).
4. Do not operate the product in an area that exceeds the maximum recommended ambient temperature of 40°C to avoid overheating the Dycon PoE Midspan. Allow at least between 7.5 and 10.5cm clearance around all ventilation openings.
5. Do not stack the chassis on any other equipment to support its weight. Shelf-mounted equipment requires a stable and durable surface. Do not push or pull on the Dycon PoE Midspan while installing.
6. The Dycon PoE Midspan consists of two (2) rows of "Data" and "Data and Power" ports. The ports use 8P8C modular data sockets.
7. Connect only 8P8C modular cables to these sockets: do not connect telephone cables in these ports.
8. Do not work on the Dycon PoE Midspan equipment, connect or disconnect cables when there is lightning.

9. The AC plug/socket combination must be accessible at all times, as it is the main disconnection device to the product.
10. Follow appropriate national laws and regulations when discarding this product.

5.4 RoHS

This product complies with the European RoHS directive 2002/95/EC.

5.5 WEEE

This product complies with the WEEE (Waste Electrical and Electronic Equipment) directive.

5.6 Electromagnetic Compatibility (EMC)

This digital equipment fulfils the requirements for radiated emission according to limit B of EN55022/1998, and the requirements for immunity according to EN55024/1998 residential, commercial and light industry.

6 Support / Trouble-shooting

In case you require any technical assistance, please contact Dycon Technical Support on +44 (0)1443 471 900 or email technical@dyconpower.com.

From our website www.dyconpower.com, you can download the product datasheet and user manual.