



DYCON
power solutions

D2401-AA



**24VDC 1 Ampere Switched-mode power supply,
ideal for powering magnetic fire door retainers and
general 24VDC applications**

Installation Manual

Overview

The Dycon D2401 power supply is a switched-mode power supply with a normally closed, voltage-free output for signalling status and serviceability of the unit. It is ideal for powering magnetic door retainers, door locking devices that do not require battery back-up, and general 24VDC applications.

The D2401 power supply provide a nominal 24VDC when powered from a 230V AC supply and has the following features:

- **Power OK ON LED, indicating normal operation**
- **Remote LED indicator output**
- **Voltage free contact for signalling PSU fault**
- **Electronic overload protection with automatic reset**
- **Highly efficient power conversion**

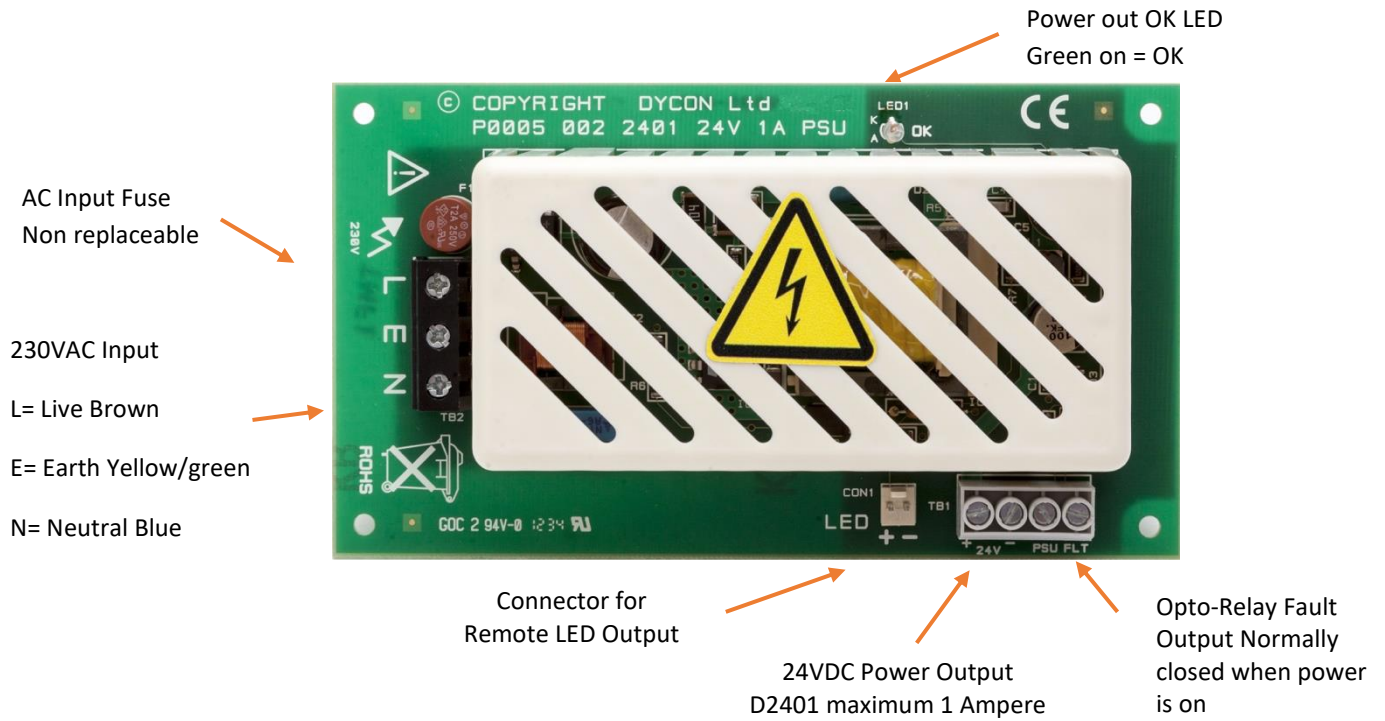


Dycon Power Solutions Ltd

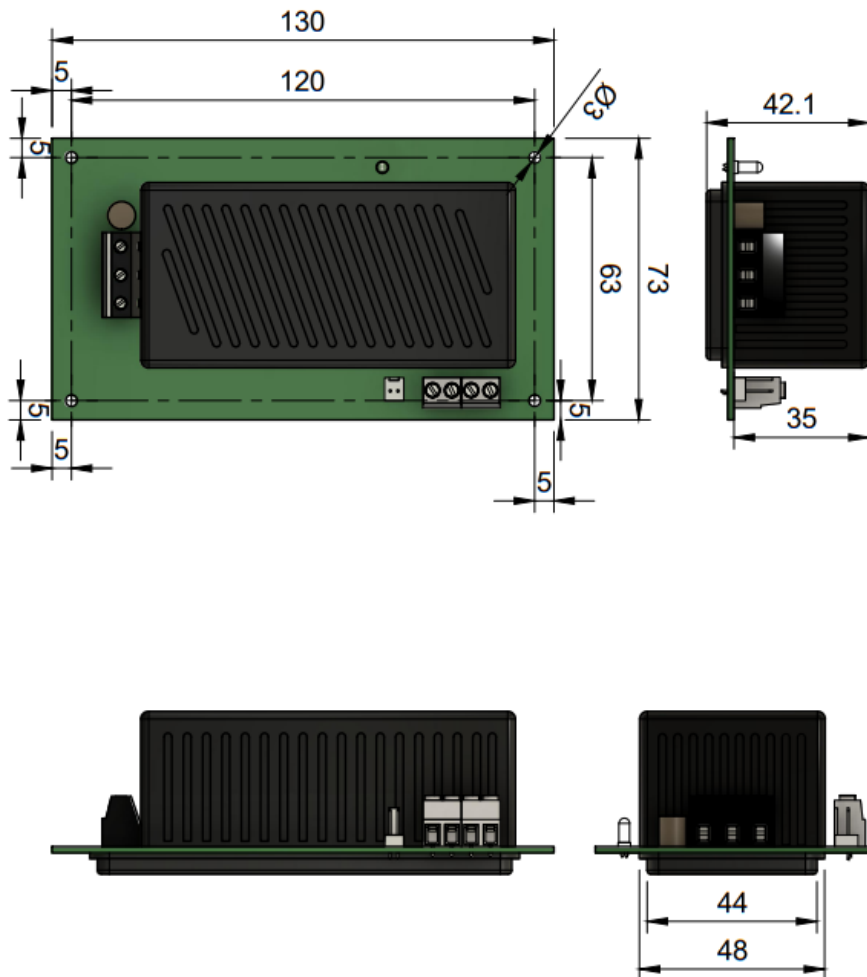
Unit A Cwm Cynon Business Park – Mountain Ash – CF45 4ER - UK

Tel: +44 (0)1443 471 900 Website: www.dyconpower.com Email: sales@dyconpower.com

Layout and connections D2401-AA



Mounting Dimensions and Layout - D2401-AA



D2401-AA

The Dycon D2401-AA power supply unit is a 24VDC switched-mode 1A power supply specially designed to power magnetic fire alarm door retainers and general 24 Volt DC applications. It is supplied in a very compact, attractive, but tough, steel housing with an externally visible status LED and a single screw lid fixing. The 24VDC output is designed for the highly inductive loads that magnetic door retainers present, eliminating the need for additional control relays and reducing the chance of an 'electrical spike' causing problems, which is a frequent cause of personnel delays and expensive engineer call outs. In addition, it has a normally closed (NC) volt-free, opto-relay output for remotely signalling its status and serviceability. This output can be used to indicate problems either locally or remotely to a Fire Alarm panel or to a suitable signalling device. The D2401 is protected by Dycon's intelligent electronic fuse technology with automatic reset to reduce system downtime and it features Dycon's unique protective technology, includes intelligent and capacitive load switching, surge protection and snubbing. The D2401-AA can handle up to 8 double doors with 16 magnetic door retainers, based on 50 mA each.

Installation

Mount the housing onto the wall or secure the PCB module in to an appropriate housing.

Connect the Live, Earth and Neutral terminals to an un-switched fused spur.

Connect the Normally Closed opto-relay output to the monitoring equipment used to report and signal equipment faults or to a suitable visual warning device.

Connect the 24v power output to the system.

Switch on the AC supply and confirm that the **Power OK** green LED is lit.

External Power Supply (AC Supply)

The power supply has a three-way terminal block for Live, Earth and Neutral connections. When supplied boxed, earth is connected to the metal enclosure and the lid earthed with a flying push-fit lead.

24V Power Output

Terminal blocks are provided to connect to systems. The output is floating and can be referenced to earth, if required. It is short circuit and overload electronically protected and is suitable for switching highly inductive loads.

PSU Fault

The PSU fault opto-relay will open when there is no 24VDC power available, including:

- Thermal shutdown due to overload
- AC power is not present or fuse fault.
- 24VDC output is switched on but is shorted out

The relay contacts are voltage-free and floating.

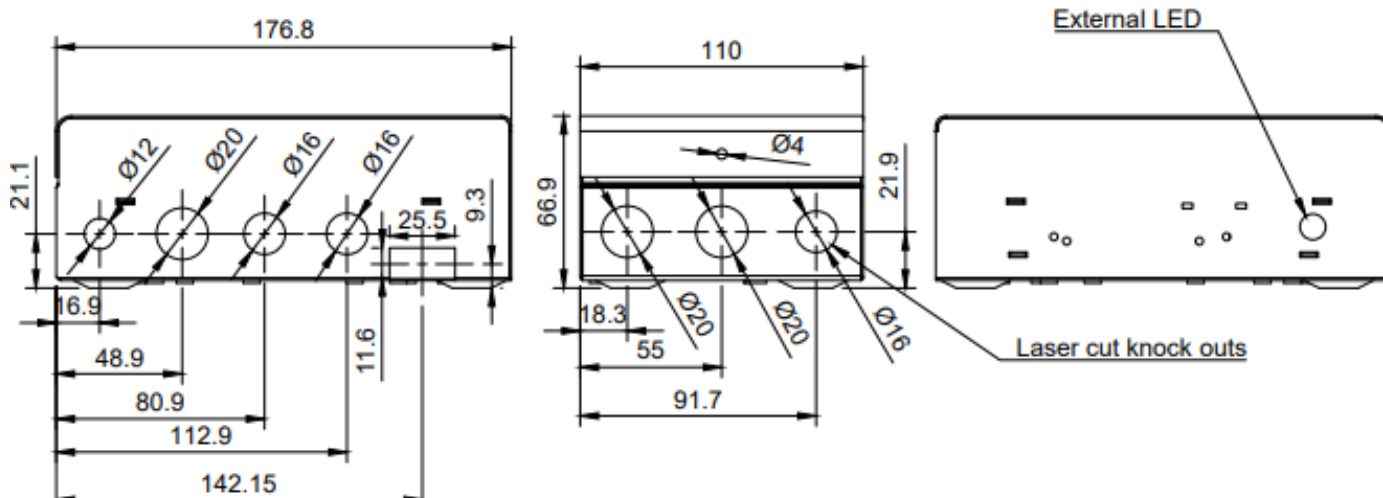
'OK ON' LED

The **green OK** LED will indicate if the mains voltage and the 24VDC output are both present. Lit when on.

Maintenance

There are no serviceable parts. No maintenance is required other than routine periodic testing.

Please note that high voltage is present under the cage – handle with care. Do NOT touch. Do NOT remove the cage.



Specification

Power Supply Classification	Type A, Ungraded, Environmental Class 2
Voltage Input	195VAC - 265VAC@ 50-60Hz
AC Input Fuse	T3.15 Ampere non-replaceable
AC input current	200 mA
Maximum Power input at full load	30 Watt
Output Voltage with AC Power	24VDC nominal;
Output Ripple	< 100mV peak-to-peak @full rated output
Max. Output Current at Full Load	1 Ampere
AC Fault Will Indicate	If the input voltage falls below 175VAC \pm 25V or no 24 VDC
Visible Indication	1 x green LED visible from outside the box, '230 VAC & 24VDC power OK'
Fault Opto-Relay Rating	60V @100mA, contact resistance of 16 ohms
Automatic Output reset time	10mS to 18s (depends on type and duration of fault)
Construction	1.5mm mild steel. tough, powder-coated, spray paint, heat-treated to provide a durable, wipe-clean surface. Hinged lid with a single fixing screw.
Standard Paint Colour	White (RAL9003)
Operating temperature range	-10°C to +50°C
Humidity	95% non-condensing
PCB size	D2401 = 130 x 73 x 43 mm
PCB weight (kg)	D2401 = 0.152kg
AA Housing size	178 x 110 x 68 mm (H x W x D)
AA Housing weight including PCB	1.09 kg

* Larger size housings are available, for details see: <https://www.dyconpower.com/product/dycon-housings.php>

Dycon Power Solutions Ltd

Unit A, Cwm Cynon Business Park, Mountain Ash,
CF45 4ER, United Kingdom.

For more information about the Dycon products

website: www.dyconpower.com

email: sales@dyconpower.com

Or to discuss your specific needs:

+44 (0)1443 471 900



Dycon leads the security and associated power supply markets, with UK design and manufacture of advanced power products, engineered to provide high quality, cost-effective solutions to meet current regulations and the specific needs of system integrators and end-users.

D2401-AA /INST/05112021/V4