



DYCON
power solutions

Dycon 24VDC Range

Installation Manual

For D2401, D2402 & D2403

**24VDC Switched-mode power supplies ideal
for powering magnetic fire door retainers
and general 24VDC applications**

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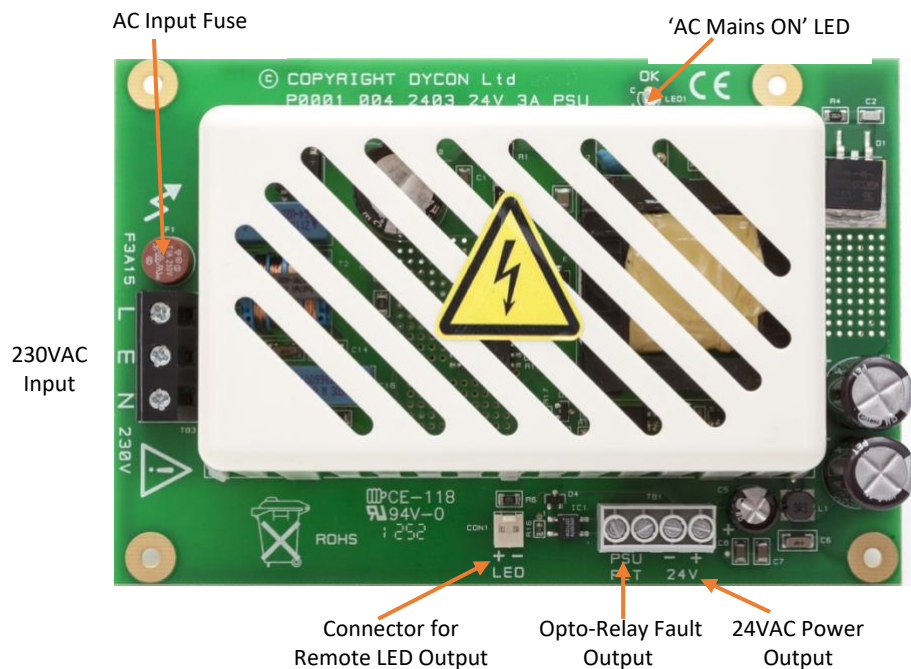
Overview

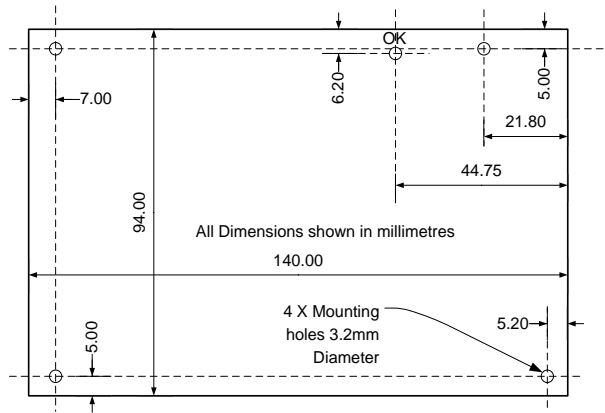
The Dycon D2401, D2402 and D2403 power supplies are switched-mode power supplies with a normally closed, voltage-free output for signalling status and serviceability of the unit. They are ideal for powering magnetic door retainers, door locking devices which do not require battery back-up, and general 24VDC applications.

The D2401, D2402 and D2403 power supplies provide a nominal 24VDC when powered from a 230V AC supply and they all have the following features:

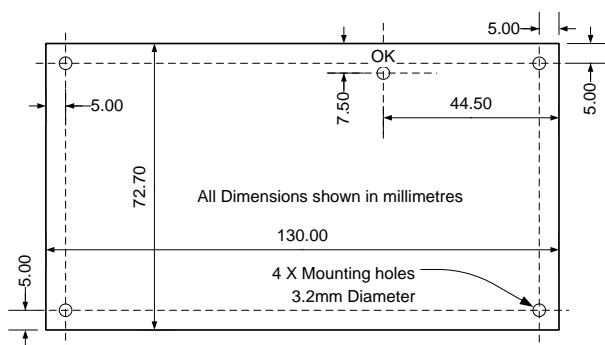
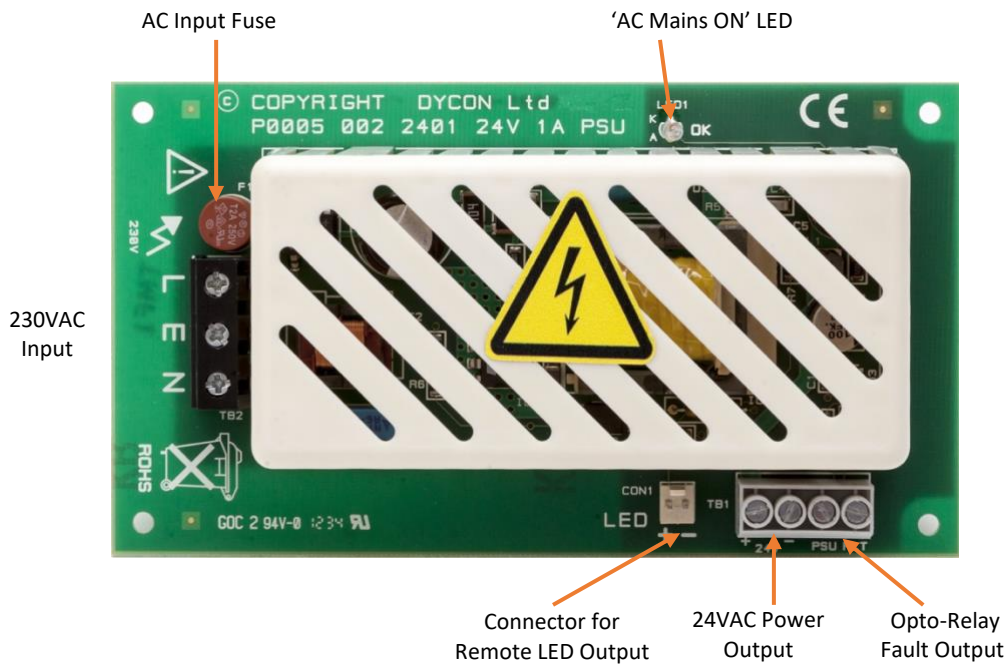
- **AC Mains ON LED display, indicating normal operation**
- **Remote LED indicator output**
- **Voltage free contacts for signalling PSU status**
- **Electronic overload protection with automatic reset**
- **Highly efficient power conversion**
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Mounting Dimensions and Layout - D2402 & D2403





Mounting Dimensions and Layout - D2401



Installation

Mount the metal housing onto the wall or secure the PCB module 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 **AC Mains ON** 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 the 24VDC power supply is not available, including:

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

The relay contacts are voltage-free and floating.

'AC Mains ON ' LED

The **AC Mains ON** LED will indicate if the mains voltage and the 24VDC output are both present.

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.

Specifications

Power supply type	Type A, Ungraded, Environmental Class 2
Voltage input	195VAC – 265VAC at 50 – 60Hz
AC input current	D2401 – 200mA; D2402 – 350mA; D2403 – 500mA
AC input fuse	D2401 – 1A; D2402 – 1A; D2403 – 1A
Output voltage	Maximum 24.5V, minimum 23.5V
Output ripple	Less than 0.6V peak to peak at full rated output
Maximum output current at full load	D2401 – 1A; D2402 -2A; D2403 – 3A
Maximum Power input at full load	D2401 – 30W; D2402 - 50W; D2403 – 72W
Fault Opto-Relay rating	60V at 100mA, 14Ω closed
Operating temperature range	-10°C to +40°C
Humidity	95% non-condensing
PCB size (h x w x d) mm	D2401 - 130 x 73 x 43mm; D2402/3 – 140 x 94 x 46mm
PCB weight (kg)	D2401 – 0.152kg; D2402/3 – 0.236kg

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

Product Description	PCB only	AA box (h x w x d) 178 x 110 x 68	A box (h x w x d) 235 x 170 x 85mm	B box (h x w x d) 260 x 320 x 90mm	XLB box (h x w x d) 295 x 415 x 90mm	IP65 W box (h x w x d) 345 x 430 x 90mm
D2401-1 Amp - 24VDC	D2401-P	D2401-AA	D2401-A	D2401-B	D2401-XLB	D2401-W

D2402-2 Amp - 24VDC	D2402-P		D2402-A	D2402-B	D2402-XLB	D2402-W
D2403 -3 Amp - 24VDC	D2403-P		D2403-A	D2403-B	D2403-XLB	D2403-W

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For more information about the Dycon products

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Or to discuss your specific needs:

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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-D2402-D2403/INST/26102021/V22