

D1460



Advanced Technology, BS EN 60839-compliant, 10A Switched-Mode Power Supplies with 9 Programmable, Switched, 1A Outputs and a Range of Housings Designed to Accept Lenel™, Mercury™, Vanderbilt™, Paxton™, or similar, Controllers.



Specially designed for larger system applications, the **BS EN 60839-6.9-compliant** Dycon D1460 features an advanced technology 10A switched-mode power supply module designed to be used singly or in pairs and fitted into a range of housings or control. Featuring Dycon's unique protective technology with intelligent and capacitive load switching surge protection and snubbing and the switched outputs are designed for highly inductive loads (door strikes and locks) removing the chance of an 'electrical spike' or transient causing a door to remain closed or open, a frequent cause of personnel delays and expensive engineer call outs.

Each module has 9 x switched and programmable 12VDC x 1A outputs which can be divided into two separate switched groups, an 'always-on' group and individual outputs, switching can be selected by jumper link. Using other links, two or three Individual outputs can be connected in parallel to create 2A or 3A high current outputs making the D1460 a highly flexible, single, power solution. Master/Slave ganging allows the connection of 2 x D1460's together to provide the formidable 20A solution. Additionally, 3 x normally closed (NC) volt-free 'fault' outputs are provided for remotely signalling the status and serviceability of each unit. These fault outputs can be used to indicate problems either locally or remotely via a suitable signalling device.

Battery-health impedance checks and battery presence checks, over-voltage shutdown protection and a 16-LED status display all go to ensure that an access control, BMS or other major system, functions continuously and that security is always at an optimum level. Several different housings are available including two G-box units that are specially designed to accept six or nine Lenel™/Mercury™/Vanderbilt™ door or system controllers and supplied with cable trunking and fixings to simplify installation. A PCB-only version lets you install a D1460 in existing housings or controller units, a useful feature when removal of existing housings on-site might prove difficult.

The integral UART data-port can be used transmit to a remote service or monitoring centre, the operational status of the unit including output voltages and current, battery charge rates/ voltages, battery impedance, ambient temperature, in addition, it can display if there any current faults. This port can also be used on site by suitable Data Loggers that can access the same data and can re-programme variable parameters, this facility is available to OEM customers on request.



DYCON
power solutions

D1460-P Power Module Feature List

- **BS EN 60839-compliant**
- 9A maximum output
- 1A constant current battery charging
- 9 switched 1A outputs protected by PTC resettable fuses with fuse monitoring
- Outputs can be connected in parallel for higher current loads
- Individual output switching selected by jumper link
- Outputs can be divided into two separate switched groups and an 'always-on' group
- Group switching by applying a positive voltage to three control inputs
- Group 1 and group 2 can be switched individually with an 'all groups switched-off' override
- All outputs protected from inductive load transients
- Current limited 1A constant current battery charging
- Fully protected battery charging circuit
- Battery health impedance testing and reporting
- Battery presence detection
- PSU operation and status monitoring
- Over-voltage shutdown protection
- Individual PSU fault, Battery fault and AC power fault outputs
- On board 16-LED status display
- External LED \ OK indicator

Battery Charging Output

The battery charging circuit provides a 1A constant current output designed to charge a battery of 24AH or smaller to 80% of its charge capacity within 24 hours. The output is short circuit, overload and reverse polarity connected.

PSU OK Indicator and AC Fault Relay

When the green LED is ON, it indicates that the PSU is in a normal state, when OFF it indicates any of the following PSU faults:

- Internal switch mode PSU fault
- Over-temperature fault
- Low-voltage power rail fault
- Over-voltage fault

Battery OK Indicator and AC Fault Relay

When the green LED is on, it indicates that the battery is in a normal condition, when OFF it indicates any of the following battery faults:

- Battery connection fault
- Low battery voltage fault
- High battery impedance fault

The associated fault relay will be energised when the green LED is ON, indicating the battery power is OK and will be OFF, if a battery fault is present.

D1460-Range Major System Power Solutions

Typical Configuration and Housing options

D1460-C

Single 10A module applications + space for a single 7Ah or 17Ah battery

- Dycon 'C-box' is 345 (h) x 430 (w) x 90mm (d).

There is limited additional space available to fit a single controller or other 3rd Party module.

D1460-E

Single 10A module + space several controllers or other 3rd Party devices and/or a second 7Ah or 17Ah battery

- Dycon 'E-box' is 500 (h) x 400 (w) x 90mm (d).
- Sufficient space to enable a variety of different control or other function modules.
- Space for 2 x 7Ah or 17 Ah standby batteries.

D1460-G6

Single 10A module + space for 6 Mercury™, Lenel™ or Vanderbilt™ controllers + batteries

- 690 (h) x 455 (w) x 165mm (d)
- Space and fixings for 6 x Lenel™, Mercury™ or Vanderbilt™ or similar door controllers.
- Grey closed-slot or white feather cable-trunking can be supplied and fitted
- Additional space for suitable standby batteries.

D1460+D2435-G

1 x 13.8VDC 10A module + 1 x 27.6VDC 5A modules

- 690 (h) x 455 (w) x 165mm (d).
- The D1460 module provides 9 x 1A electronically fused outputs to drive 12VDC devices and the D2435 module drives 24VDC peripherals.
- Both modules have battery back-up and recharging capabilities and the housing has physical space for up to 4 x 7Ah or 2 x 17Ah batteries. The actual configuration depends on what back-up is required for both the 12VDC and 24VDC operations.
- The D2435 27.6VDC module is also compliant with the requirements of EN54-2 and EN54-4 and requires a minimum of 2 x 7Ah batteries when used in this unit.

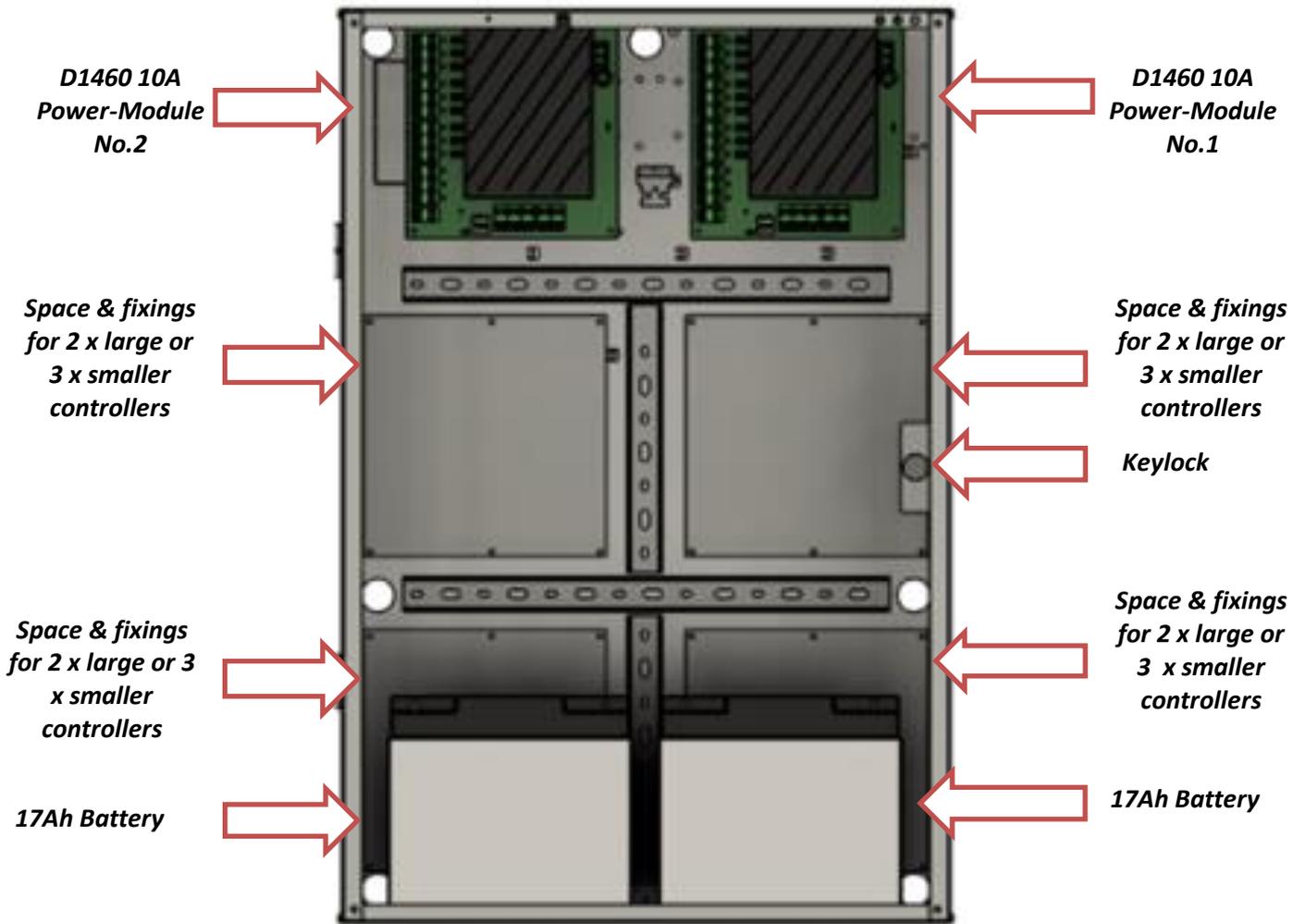
Common features/options for D1460 'G-Box'

- Hinged, solid steel door with Key-Lock security.
- Standard finish is powder-coated white gloss, heat-treated to provide a durable, wipe-clean surface.
- Subject to a minimum order quantity, custom paint colours can be accommodated if that colour is available in the type of paint used by our manufacturing process, contact Dycon for more information and prices.
- Grey closed-slot or white feather cable-trunking can be supplied and fitted

Additional Optional Features

- Front and back anti-tamper switches, which operate if the lid is removed and can detect removal from the wall, may be fitted to any unit either as a factory-fit or supplied for retrofitting on-site.
- Standard NS32-G 7.5mm or N35 15mm DIN-Rail can be supplied in these boxes to facilitate the rapid installation of DIN-rail mounted devices

A D1460-G9-T system during installation



A D1460-G9 12VDC 18A example with 2 x 12VDC 9A PSUs and 2 x 17Ah batteries. This version still has ample space for 4 x large access controllers, or 6, if the hinged module platform is used. Even more smaller controllers can be fitted, please contact Dycon for details which modules and how many can be accommodated.

Part No.	Power Outputs	Housing Type	Housing Size (h x w x d)	Battery Capacity needed to enable full recharge within 24 hrs
D1460-C	9 x 1A + 1A battery charging	C-Box	345 x 430 x 90mm	24Ah
D1460-E	9 x 1A + 1A battery charging	E-Box	500 x 405 x 90mm	24Ah
D1460-G6	9 x 1A + 1A battery charging	G-Box	690 x 455 x 165mm	24Ah
D1460/D2435-G	9 x 13.8VDC 1A + 1 x 27.6VDC 5A, both with battery charging	G-Box	690 x 455 x 165mm	Maximum physical battery capacity is 4 X 7Ah or 2 x 17Ah
D1460-P	9 x 1A + 1A battery charging	PCB-only	170 x 157 x 66mm	24Ah

Note: If you require front and back anti-tamper switches to be fitted, please add -T to any of the above part numbers

D1460 BS EN 60839-Compliant Power Solutions

D1460-P 12VDC 10A (9A + 1A) Switched-Mode Power Supply Module

BASIC POWER MODULE SPECIFICATIONS	
BS EN 60839-6.9 Electronic access control systems components	Compliant
AC Input Voltage	230VAC ±10%, 50Hz.
SMPS PSU protection	Hysteric over-temperature and over-voltage protection
Maximum Input Continuous Current	1A @ 230Vac
Peak inrush current limit	20A (maximum) @12Vdc
Recommended Switched Spur Input Fuses	250V T3.15A 1.5KA breaking
Voltage Output AC Present	Minimum 13Vdc, Maximum 13.9Vdc, Load Dependant
Voltage Output Standby	Minimum 10Vdc, 12 V Nominal, Load Dependant
Current output with battery charging	10A
Battery Charging Current	Constant current, low impedance, 1A minimum
Low Voltage detection thresholds	<11V ±2%, low voltage restore, >11.5V ±2%.
Battery Fault Circuit Impedance Threshold	>0.18 Ohm ±5%, at a nominal test current of 5A.
Deep Discharge Disconnection Threshold	<10.5V ±2%.
Overvoltage Detection Shutdown Threshold	>15V ±2%.
Output Monitoring Threshold	Battery charging voltage <2V ±2%.
On-Board AC Power Input Fuse	1A timed, 1.5KA breaking, ceramic
Battery Fuse	PTC, self-resetting, non-replaceable
Switched Output Fuses 1 to 9	1.1A PTC, self-resetting, non-replaceable
Switches SW1 and SW2, control all Inputs or a selection	Logical 0 <1V, Logical 1 >4V, 30V tolerant, 100K pull-down
Fault Outputs = 3 x Opto-relays for AC, battery and PSU fault	Normally closed, 100mA at 60V. On-Resistance 16 ohms maximum, 1500VRMS Isolation voltage
Battery current drawn by power supply without AC supply	Maximum 90mA (Depending on PSU status)
Maximum Ripple Voltage	100mV peak to peak noise and ripple
Recommended Battery Type	Sealed Lead Acid Gel, 12V 24AH maximum for 24-hour charging
PCB Footprint Dimensions (<i>h x w x d</i>)	170mm x 157mm x 66mm
Operating Temperature/Humidity	-10°C to +50°C, 95% maximum humidity, non-condensing

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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.

D1460/2 data sheet 12022025 V15