

D1632



Versatile, Advanced Technology, Switched-Mode, 3A Power Supplies,
also compliant with EN50131/PD6662 Grades 1, 2, 2X and 3 for Intrusion Systems



- 90-264VAC inputs
- 12VDC 3 Ampere power supply with battery charging
- Smart battery charging with full protection
- Processor monitored and controlled
- 3 x opto-relay fault outputs
- 2 x external LED outputs
- UART interface for easy integration
- Remote switching capability

The D1632 features Dycon's unique, advanced, power technology utilises the latest on-demand battery charging and dynamic load output current sharing (DLS) to ensure that the system's battery is never over-stressed, thus prolonging its life and its ability to respond when needed. Additional battery health impedance checks, battery presence detection, deep discharge battery protection, and battery over-voltage shutdown protection all go to ensure that a system always functions at an optimum level. The unit is ideal for demanding applications such as access control and Building Management Systems, IoT devices, and communicators. It also meets the requirements of EN50131/PD6662 Grade 3 for intruder alarm systems and can also be used in Grade1, 2, and 2X systems where additional power is required to drive peripheral devices such as large sirens, external detectors, access control systems, and door releases

A versatile solution to reliably powering EN50131 graded intruder alarm systems, access control / Building Management and CCTV systems.

Protection against electrical spikes and surges

Featuring Dycon's unique protective technology with intelligent and capacitive load switching, surge protection, and snubbing, the Dycon D1632's switched outputs are designed for highly inductive loads such as door strikes and locks electric 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.

Full range of suitable housings including climate versions

These units' versatility is matched by an extensive range of steel and ABS housings to protect their operation. The larger units are capable of holding two 17Ah 12V VRLA batteries boosting the potential standby capacity to cover most requirements under EN50131. For the ever-increasing number of external applications, Dycon's D1632-W units provide full IP65 weather-proof protection, enabling an installer to fit 'smart' 12VDC power adjacent to where it is needed without the need for long cable runs.

Integral data port to simplify system integration

An integral RJ45 data-port and onboard UART circuitry simplify data integration with other systems and communication networks. This data can include the operational status of the unit including output voltage and current, battery charge rates/ voltages, battery impedance, and ambient temperature. This information can easily be transmitted to a remote service centre so that prompt intervention can be actioned and, thus, avert potential costly system shutdowns.

Remote switching capability

Using the programmable SW output control input, both units can have the 12VDC output remotely switched ON and OFF. This option allows connected doors or devices to be controlled manually or by timers, especially useful when there is a need to urgently lock down an access control system or, in an emergency release all doors. This output is fully protected against switching transients and is suitable for switching highly inductive loads such as door strikes and magnets.

Full EN50131-compliance for intruder alarm systems

The D1632 is also fully compliant to EN50131/PD6662 Security Grades 3 and Environmental Class 2. It can be used in the lower Grades 1, 2, and 2X to provide additional power to drive peripheral devices such as CCTV, access control systems, large sirens, external fence detection systems, and locking devices.

Dual redundancy capability

A practical solution to the problem of maintaining the 12VDC supply to secure infrastructure systems where the unforeseen failure of a single power supply unit would seriously damage the operation of that system, the D2500 Dual Power Supply Redundancy unit is unique. This unit, simply fitted between 2 x Dycon D1632 switched-mode power supply units, combines their two outputs into a single output and, in the unlikely event of the failure of one unit, the other, automatically, and seamlessly, takes over.

Dycon D1632

The professional's reliable power solution.

D1632 - 90-264VAC Input - 12VDC, 3 Ampere Output

SPECIFICATIONS

EN50131/PD6662 Classification	Security: Grade 3, Environmental: Class 2
Mains Input Voltage	90-264VAC $\pm 10\%$, 50Hz.
SMPS PSU Protection	Hysteric Over-Temperature & Over-Voltage Protection
Maximum Input Continuous Current	300mA@230VAC
Peak Inrush Current Limit	20A Maximum.
Recommended Mains Input Fuse	250V T1A 1.5KA Breaking
Voltage Output AC Present	Min. 13.6Vdc, Max. 13.9Vdc No Load. Min. 13.4 at 2A Load
Voltage Output Standby	Min. 10.5Vdc, 12Vdc Nominal No Load. Min 9.5Vdc, @ 2A Load
Continuous Output Current With 24AH Battery	2A
Peak Output Current	3A
On-Board AC Power Input Fuse	20mm x 5mm, 250V, T1A, 1.5KA Break Ceramic
Recommended Battery Type & Capacity	Sealed Lead-Acid Type; 7, 17, 24 or 38 Ah Capacity
Battery Connectors Supplied	2 x Faston 4.75; 2 x M5 Optional For 17, 24 & 38Ah Batteries
24AH Battery Recharge Time	24 Hours for 80% Charge Capacity
Battery Charging Current	On-Demand Load Sharing. Maximum 3A
Battery Low Voltage Fault	<11V $\pm 2\%$, Low Voltage Restore, >11.5V $\pm 2\%$.
Battery Deep Discharge Disconnection	10.5V $\pm 2\%$
Output Monitoring Threshold	Battery Charging Voltage <2V $\pm 2\%$.
Battery Fuse	PTC, Self-Resetting, Non-Replaceable
SW Control Input	Low <1V, High >4V, 30V Tolerant, 100K Pull-Up/Down
Fault Opto-Relays for faults with EPS (AC power), APS (Battery), and PSU (Power Supply Unit)	Normally Closed, 100mA at 60V, 16 Ohms Maximum, 1500VRMS Isolation Voltage
Fault Outputs: - Battery fault, FLT (Generic Fault), AC fault	Open Collectors, Normally Off, 100mA at 50V
Battery current drawn by power supply without mains	Maximum 90mA (Depending On PSU Status)
Maximum Ripple Voltage	0.7V Peak-to-Peak.
Operating Temperature and Humidity Range	-10°C to +40°C, 75% Maximum Humidity, Non-Condensing

Part Numbers and Ordering Information

PCB only	A box 235 x 170 x 85mm	B box 260 x 320 x 90mm	XLB box 400 x 290 x 90mm	C box 345 x 430 x 90mm	E box 495 x 410 x 90mm	W box (IP65) 245 x 195 x 90mm
D1632-P	D1632-A *	D1632-B	D1632-XLB	D1632-C	D1632-E	D1632-W*

Notes: * Requires a separate battery box to house sufficient batteries to comply with EN50131 Grade 3

6. Declared performance



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Harmonised Technical Specification		BS EN 50131-6:2008+A1:2014
Essential Characteristics	Performance	Clause
Performance of power supply		
- General requirements	Pass	4
- Functions	Pass	5
- Materials, design, and manufacture	Pass	6
Operational reliability		
- General requirements	Pass	4
- Functions	Pass	5
- Materials, design, and manufacture	Pass	6
- Documentation	Pass	7
- Marking	Pass	8
The durability of operational reliability (temperature resistance)		
- Cold (operational)	Pass	9.5
The durability of operational reliability (vibration resistance)		
- Impact (operational)	Pass	9.7
- Vibration, sinusoidal (operational)	Pass	9.8
- Vibration, sinusoidal (endurance)	Pass	9.15
The durability of operational reliability (electrical stability)		
- Electrical Compatibility (EMC), - Immunity tests (operational)	Pass	9.9
The durability of operational reliability (humidity resistance)		
- Damp heat, steady-state (operational)	Pass	9.6
- Damp heat, steady-state (endurance)	Pass	9.14

Dycon Power Solutions Ltd

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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.

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