12V 2A EN54-4 Switch Mode PSU

Part No. BF560-12



Overview

- Certified to EN54-4/A2 by the LPCB & VdS (AFNOR pending).
- A powerful switch mode/digital hybrid PSU that can be customised* to suit your exact requirements - see **More Information** tab for details.
- Plastic cover on PSU PCB guards against touching live parts.
- Includes a single-pole voltfree changeover relay that switches for any fault condition.
- Multiple indicators - supply present, general fault, fault type & aux. equipment fault.
- Two selectable battery charge currents.
- Battery fault impedance limits can be optimised to suit load current (helps extend battery life)*.
- Mains fail simulation mode.
- Improved on-board temperature sensor with optional remote sensor.
- Ideal for connecting to 12V security STUs to provide BS5839-1 compliant remote monitoring facilities.
- Electronic functions comply with EN50131-6 grades 1-4 for security applications.
- BF560-12/E Encased PCB version also available.

More Information

PSU CUSTOMISATION The BF560-12 can be customised to suit your exact requirements using a BF423 configurator & PC. Configurable parameters include float voltage temperature compensation, battery charge rate (mA), battery impedance and configurable Input/Output settings. *It is important to note changing the PSU's parameters in this way

is outside the scope of EN54-4 and any changes must be tested by the responsible person for correct operation. **12V SECURITY STU USED PURELY FOR FIRE ALARM SIGNALLING** The BF560-12 can help combat an area of fire alarm system non-compliance that is often overlooked - their connection to remote monitoring centres via 12V security STUs or autodiallers. Fire systems that require such monitoring are typically connected to 12V security STUs. Unfortunately, PSUs used to power these STUs normally only offer 12 hours standby, are not connected to a dedicated mains supply and do not include the features demanded by EN54-4 (such as battery impedance monitoring, temperature compensated charging, CPR compliance, etc). The BF560-12 solves these problems by allowing the use of 12V STUs with a cost-effective EN54-4 compliant PSU thereby facilitating compliance with BS5839-1 (or European equivalents). To further assist this application, an optional STU mounting plate is available for inside the BF560-12 (order code BF360SP). **PSU STATUS LED** (located on the PSU PCB) 1 flash = Mains Failure. 2 flashes = Battery Voltage Low. 3 flashes = Battery Voltage Critical. 4 flashes = Charger Failure. 5 flashes = Charger OK (Battery is either actively charging, or in float charge). 6 flashes = No Batteries Fitted (indicating DIP Switch 4 position). 7 flashes = Battery Resistance Fault (Level set by DIP Switch 2 position). 8 flashes = Output Over Voltage.
BATTERY FAULT MONITORING The BF560-12 complies with EN54-4/A2 and therefore must monitor battery resistance. The fault threshold is directly related to the ability of the battery to deliver the rated current to the load. For example, batteries stored uncharged for long periods, during shipment and/or distribution, degrade leading to increased internal resistance. If a degraded battery is fitted, a fault will be shown by the PSU as mandated by EN54-4/A2. **EN50131-6 (POWER SUPPLIES FOR INTRUSION & HOLD UP ALARMS) CAPABILITY** The power supply inside the BF560-12 has all the electrical functions required to comply with EN50131-6 Grade 4 (which includes Grades 3, 2 and 1). However, the BF560-12's enclosure is not designed to comply with the standard's requirements to trigger an alarm if someone tries to force the box open. OEM security companies interested in utilising the BF560-12's PSU PCB inside their own EN50131-6 compliant tamper-resistant enclosures should contact our marketing department for further details on costs and approvals. **DATA PORT** Data on the BF560-12's status can be extracted from the PSU's bi-directional data port. The data available includes thermistor measurements; battery terminal voltage; system voltage at load terminals; battery charge current; load current; battery impedance and ASCII text string status messages. Extracting this data requires additional equipment and permissions - call C-TEC for details.

Technical Specifications

Approvals/certifications	Certified to EN54-4/A2 by the LPCB & VdS
Application/operation	A boxed Mains to regulated DC switch-mode/digital hybrid power supply providing 2A @ 12V DC. It includes a single pole volt-free changeover relay that switches for any fault condition.
Mains supply	230V 50/60Hz.
Mains rated current	300mA r.m.s.
Total output current limited to	2A (Max. output current).
Output	I max.a: 1.8A or 1.3A selectable. (1.8A not approved to EN54-4/A2). A load greater than I max.a will temporarily reduce batt. charging. I.max.b: 2A, charging turned off via CONN6.
Battery charge capacity	2Ah up to 12Ah (battery charged to 80% capacity in 24 hrs). Max. batt. size/type by cabinet size is 3.2Ah VRLA (with STU plate) or 7Ah (without STU plate). Output is customisable via a BF423.
Max battery size and type	1 x 12V 3.2Ah VRLA (with STU plate fitted); 1 x 12V 7Ah VRLA (without STU plate fitted).
Indicators	3 external – Supply Present (green); General Fault (amber); Auxiliary Fault (amber) and 2 internal – Hazardous Voltages Present (red) and PSU Status (amber).
Connections	Mains Input (CONN1); Supply Output (CONN5); Battery Input (CONN5); Fault Relay (CONN4); BF423 Configurator Connector* (PL2); Remote Thermistor Connector (PL3); Batt. Charger Inhibit & Input/Output
Expansion connections	A remote thermistor can be connected via PL3 terminals.
Product dimensions (mm)	380mm W x 235mm H x 96mm D.
Construction & finish	PVC lid and base; RAL7035 textured.
IP Rating	IP30 (to EN 60529). Designed for indoor use only.
Weight	1.55kg (without batteries).
Operating conditions/temperature	-5ºC to +40ºC. Max relative humidity: 95%.
Notes	*Parameters configurable via a BF423 configurator are: Float voltage temp. compensation; Batt. charge rate (mA); Batt. impedance; Configurable Input/Output settings.

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