

SD831

Compact Product Suite hardware selector



The SD83x Power Supply Units are designed to meet all the applicable electrical safety data stated by the EN 50178 harmonized European Standard Publication and the additional safety and function data required by EN 61131-2 and UL 508.

The secondary output circuitry is accepted for SELV or PELV applications. They are switch-mode Power Supply Units that convert the mains voltage to 24 volts d.c. These power supplies can be utilized for non-redundant and redundant applications.

Redundant applications require diode voting units SS823 or SS832. With the type SD83x series Power Supply Units, there is no requirement for the installation of a mains filter. They provide a soft start feature; power-on of an SD83x will not trip fuses or earth-fault circuit breakers.

Features and benefits

- Simple DIN-rail mounting
- Class I Equipment, (when connected to Protective Earth, (PE))
- Over-voltage Category III for connection to primary main TN network
- Protective separation of secondary circuit from primary circuit
- Accepted for SELV and PELV applications
- The output of the units is protected against over current (current limit) and over-voltage (OVP)
- Both a.c. and d.c. input at SD831 and SD834

| General info | |
|------------------------------|-------------------------------|
| Article number | 3BSC610064R1 |
| Type | Power supply |
| Rated output current | 3 A |
| Rated output power | 72 W |
| Rated output voltage | d.c. 24 V |
| Rated input power | 134/143 VA |
| Mains/input voltage, nominal | 100-240 V a.c. 110-300 V d.c. |
| Applications | SELV and PELV |
| Efficiency | 88/89.8 % |

| Detailed data | |
|---|---|
| Mains voltage variation allowed | 100-240 V a.c. +-10 %. 110-300 V d.c. -20 % / +25 % |
| Mains frequency | 50-60 Hz +-6 % |
| Primary peak inrush current at power on | <28/<54 A |
| Load sharing | - |
| Supervision relay | No |
| Power Factor (at rated output power) | 0.61/0.56 |
| Heat dissipation | 10/8 W |
| Output voltage regulation at max. current | < 50 mV / < 100 mV |
| Ripple (peak to peak) | < 50 mV |
| Secondary voltage holdup time at mains blackout | 29/120 ms |
| Maximum output current | 3.3 A |
| Maximum ambient temperature | 55 °C |
| Primary: Recommended external fuse | 10-20 A |
| Secondary: Short circuit | 4-8 A |
| Output over voltage protection | < 39 V |

| Environment and certification | |
|--------------------------------------|--|
| CE mark | Yes |
| Electrical safety | IEC 61131-2, UL 508, EN 50178 |
| ATEX Zone 2 | No |
| IECEx Zone 2 | No |
| Hazardous Location, Class 1 Div 2 | No |
| Marine certification | ABS, BV, DNV-GL, LR |
| Protection rating | IP20 according to IEC 60529 |
| Corrosive atmosphere ISA-S71.04 | G2 |
| Pollution degree | Degree 2, IEC 60664-1 |
| Mechanical operating conditions | IEC 61131-2 |
| EMC | EN 61000-6-4 and EN 61000-6-2 |
| Overvoltage Categories | Over-voltage Category III (IEC/EN 60664-1) |
| Equipment class | Class 1 according to EN 50718; 3.56 |
| RoHS compliance | DIRECTIVE/2011/65/EU (EN 50581:2012) |
| WEEE compliance | DIRECTIVE/2012/19/EU |

| Dimensions | |
|-----------------------|------------------|
| Width | 32 mm (1.26") |
| Depth | 102 mm (4.02") |
| Height | 124 mm (4.88") |
| Weight (lbs.) | 430 g (0.9 lbs.) |
| Mounting spacing W mm | 15 mm (0.59") |
| Mounting spacing H mm | 40 mm (1.57") |

—
solutions.abb/compactproductsuite
solutions.abb/controlsystems

—
We reserve the right to make technical changes to the products or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB does not assume any responsibility for any errors or incomplete information in this document.

We reserve all rights to this document and the items and images it contains. The reproduction, disclosure to third parties or the use of the content of this document – including parts thereof – are prohibited without ABB's prior written permission.

Copyright© 2025 ABB All rights reserved