

# SD831

## ABB Ability™ System 800xA® 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	EU RoHS, UAE RoHS, CN RoHS
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/800xA](http://solutions.abb/800xA)  
[solutions.abb/controlsystems](http://solutions.abb/controlsystems)

---

800xA and Symphony Plus is a registered trademark of ABB. All rights to other trademarks reside with their respective owners.

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© 2026 ABB All rights reserved