DATA SHEET

SD834

ABB Ability™ Symphony® Plus 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)
- SD834 can be connected in parallel to increase output power
- Both a.c. and d.c. input at SD831 and SD834
- Floating DC-OK relay contact at SD834

General info	
Article number	3BSC610067R1
Type	Power supply
Rated output current	20 A
Rated output power	480 W
Rated output voltage	d.c. 24 V
Rated input power	547/568 VA
Mains/input voltage, nominal	100-240 V a.c. 110-150 V d.c.
Applications	SELV and PELV
Efficiency	92.4/93.9 %

Detailed data	
Mains voltage variation allowed	85-276 V a.c. 88-187 V d.c.
Mains frequency	50-60 Hz +- 6%
Primary peak inrush current at power on	<13 A
Load sharing	Parallell connection
Supervision relay	Yes
Power Factor (at rated output power)	0.95/0.90
Heat dissipation	40/31 W
Output voltage regulation at max. current	< 10 mV / <100 mV
Ripple (peak to peak)	< 100 mV
Secondary voltage holdup time at mains blackout	230V/10A min 77ms 230V/10A typ 100ms 230V/20A min 36ms 230V/20A typ 51ms 120V/10A min 51ms 120V/10A typ 62ms 120V/20A min 22ms 120V/20A typ 32 ms
Maximum output current	30 A < 4 s
Maximum ambient temperature	55 °C
Primary: Recommended external fuse	10-20 A
Secondary: Short circuit	Hiccup (2s on 17s off)
Output over voltage protection	< 37 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	Yes
Hazardous Location	C1 Div 2 cULus
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	82 mm(3.23")
Depth	127 mm(5.0")
Height	124 mm (4.88")
Weight (lbs.)	1200 g (2.6 lbs.)
Mounting spacing W mm	15 mm (0.59")
Mounting spacing H mm	40 mm (1.57")

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