ABB ABB Series Service Manual

SD834

1. Description

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3. Product Information

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The secondary output circuitry is accepted for SELV or PELV applications. It is switch-mode Power Supply Units that converts 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 SD834 Power Supply Units, it is no requirement for the installation of a mains filter. It provides a soft start feature; power-on of an SD834 will not trip fuse or earth-fault circuit breaker.

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")