

SD854

ABB Ability™ System 800xA® hardware selector



The SD85x Power supply units are designed for high efficiency, electronic inrush current limitation, wide operating temperature range, and extraordinarily small size. The lowest power losses and high lifetime expectancy deliver the lowest cost of ownership.

The SD85x series complies for use in potentially explosive atmospheres (IECEx Zone 2 and ATEX Zone 2). The SD85x series has a built-in power reserve and can easy breaking fuses due to high overload peak current capability.

Features and benefits

- DIN-rail mounting, width 48 mm
- Efficiency up to 95.6%
- 20% Output Power Reserves
- Easy Fuse Breaking – 3 times nominal current for 12ms
- Active Power Factor Correction (PFC)
- Minimal Inrush Current Surge
- Temperature range -25°C and +70°C (derating 12W / °C between 60°C - 70°C)
- DC-OK Relay Contact
- Current Sharing Feature for Parallel Use
- IECEx Zone 2 and ATEX Zone 2

| General info | |
|------------------------------|-------------------------------|
| Article number | 3BSE088189R1 |
| Type | Power supply |
| Rated output current | 20 A |
| Rated output power | 480 W |
| Rated output voltage | 24 V d.c. |
| Mains/input voltage, nominal | 100-240 V a.c. 110-150 V d.c. |
| Applications | SELV and PELV |
| Efficiency | 92.4/95.6 % @120/230 V a.c. |

| Detailed data | |
|---|---------------------------------|
| Mains frequency | 50 - 60 HZ +/- 6% |
| Primary peak inrush current at power on | < 10 A |
| Load sharing | Parallell connection |
| Supervision relay | Yes |
| Power Factor (at rated output power) | 0.99/0.95 |
| Heat dissipation | 29.6 W / 22.1 W, 120/230 V a.c. |
| Output voltage regulation at max. current | 100 mV |
| Secondary voltage holdup time at mains blackout | 32 ms |
| Maximum ambient temperature | 70 °C |
| Primary: Recommended external fuse | 10-20 A |
| Secondary: Short circuit | Hiccup (2s on 18s off) |
| Output over voltage protection | max 32 V DC |
| AC input current | 4.26 A / 2.23 A |
| AC inrush current | 10 A / 4.5 A peak |

| Environment and certification | |
|-----------------------------------|--|
| CE mark | Yes |
| Electrical safety | IEC 60950-1 |
| ATEX Zone 2 | Yes |
| IECEX Zone 2 | Yes |
| Hazardous Location, Class 1 Div 2 | Yes |
| Hazardous Location | ATEX Zone 2: EN 60079-0, EN 60079-15; IECEX Zone 2: IEC 60079-0, IEC 60079-15. UL Class I Div 2, Groups A, B, C, D: UL 121201, CSA C22.2 NO. 213 |
| Protection rating | IP20 according to IEC/EN 60529 |
| Corrosive atmosphere ISA-S71.04 | G3 |
| Pollution degree | Degree 2, IEC 62477-1 |
| Mechanical operating conditions | IEC 61131-2 |
| EMC | EN 61000-6-4 and EN 61000-6-2 |
| Overvoltage Categories | Category III (IEC 62477-1 for altitudes up to 2000 m) |
| Equipment class | I PE (Protection Earth) connection required |
| Max ambient temperature | -25 °C (-13 °F) to +70 °C (158 °F), derating 12W / °C between 60 °C -70 °C |
| RoHS compliance | DIRECTIVE/2011/65/EU (EN 50581:2012) |
| WEEE compliance | DIRECTIVE/2012/19/EU |

| Dimensions | |
|-----------------------|-------------------|
| Width | 48 mm (1.88") |
| Depth | 127 mm (5.00") |
| Height | 124 mm (4.88") |
| Weight (lbs.) | 830 g (1.83 lbs.) |
| Mounting spacing W mm | 15 mm (0.59") |
| Mounting spacing H mm | 40 mm (1.57") |

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