

# SS823

## ABB Ability™ System 800xA® hardware selector



The Voting Units SS823 and SS832 have been specifically designed to work as control units within a redundant power supply configuration. The output connections from two Power Supply Units are connected to the Voting Unit.

The Voting Unit separates the redundant Power Supply Units, supervises the voltage supplied, and generates supervision signals to be connected to the power consumer. Green LED's, mounted on the front panel of the voting unit, provide a visual indication that the correct output voltage is being delivered. Simultaneously with the green LED illuminating, a voltage-free contact closes the path to the corresponding "OK connector". Voting Unit trip levels are factory preset.

The AC 800M High Integrity and the connected S880 High Integrity I/O system (including field power) shall be supplied from a SELV or PELV power supply (e.g. SD83x) connected through the power voter SS823. The SS823 Voting Unit has a double overvoltage protection circuit on input.

### 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 the secondary circuit from the primary circuit
- Accepted for SELV and PELV applications
- The output of the units is protected against over current (current limit) and over-voltage (OVP)
- Certified for SIL3 according to IEC 61508
- The SS823 unit is also G3 compliant

| General info                 |                                   |
|------------------------------|-----------------------------------|
| Article number               | 3BSE038226R1                      |
| Type                         | Voter and Over Voltage Protection |
| Rated output current         | 20 A                              |
| Rated output power           | -                                 |
| Rated output voltage         | -                                 |
| Rated input power            | 500 W                             |
| Mains/input voltage, nominal | 1x24 V d.c.                       |
| Applications                 | -                                 |
| Efficiency                   | -                                 |
| High integrity               | Yes                               |

**Detailed data**

|   |                             |
|---|-----------------------------|
| Mains voltage variation allowed                 | -                           |
| Mains frequency                                 | 60 V d.c.                   |
| Primary peak inrush current at power on         | -                           |
| Load sharing                                    | Yes                         |
| Supervision relay                               | Yes                         |
| Power Factor (at rated output power)            | -                           |
| Heat dissipation                                | 24 W at 20 A and 6 W at 5 A |
| Output voltage regulation at max. current       | 1.2 V lower than input      |
| Ripple (peak to peak)                           | -                           |
| Secondary voltage holdup time at mains blackout | -                           |
| Maximum output current                          | 35 A (Overload)             |
| Maximum ambient temperature                     | 55 °C                       |
| Primary: Recommended external fuse              | -                           |
| Secondary: Short circuit                        | -                           |
| Output over voltage protection                  | < 30 V                      |

**Environment and certification**

|                                   |                                      |
|-----------------------------------|--------------------------------------|
| CE mark                           | Yes                                  |
| Electrical safety                 | IEC 61131-2, EN 50178                |
| ATEX Zone 2                       | Yes                                  |
| IECEx Zone 2                      | No                                   |
| Hazardous Location, Class 1 Div 2 | No                                   |
| Hazardous Location                | ATEX Zone 2                          |
| Marine certification              | ABS, BV, DNV-GL, LR                  |
| Protection rating                 | IP20 according to IEC 60529          |
| Corrosive atmosphere ISA-S71.04   | G3                                   |
| 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            | -                                    |
| 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                 | 116 mm(4.6")                      |
| Depth                 | 145 mm (5.8") including connector |
| Height                | 132 mm (5.3")                     |
| Weight (lbs.)         | 870 g (1.9 lbs.)                  |
| Mounting spacing W mm | 15 mm (0.59")                     |
| Mounting spacing H mm | 30 mm (1.2")                      |

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