ABB SS823

The Voting Units SS823 has 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.

The Voting Units SS822Z, SS823 and SS833 have been specifically designed to be employed as a control unit 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 both inputs. It is also able to detect both short and open circuits in the voting element.

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")