

Technical Data Sheet

# Cyberex® SuperSwitch®4 DSTS

## 2000A



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# About This document

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## Document information

<b>File name</b>	:	ABB_STS_TDS_SS4_2000A
<b>Model</b>	:	2000A SS4 - UL
<b>Date of issue</b>	:	05-24-2022
<b>Issued by (department)</b>	:	Product Marketing
<b>Checked by (department)</b>	:	R&D Engineering
<b>Article number</b>	:	...
<b>Document number</b>	:	TDS-STS-MK-0186
<b>Revision</b>	:	REV-A
<b>Revision date</b>	:	05-24-2022

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# 1 Introduction

ABB Cyberex SuperSwitch4 (SS4) DSTS is a three-phase, semiconductor-based switching device used for sub-cycle transferring of critical loads between two input sources. Designed with state-of-the-art controls, redundant logic, and compartmentalized design, the SS4 provides unrivalled performance and safety in a compact frame.

## 1.1 Key features and benefits



### Peak performance and reliability

- $\leq 1/4$  cycle in-phase transfers.
- $\leq 16\text{ms}$  out of phase transfers regardless of phase difference between sources.
- $\leq 1.2\text{x}$  inrush for out of phase transfers.



### Minimize risk of human error

- On-screen software guided bypass operation.
- Dedicated LED indicators coordinate with bypass instructions on HMI to ensure proper bypass sequence.



### Improved safety and serviceability

- Sectionalized design for safety and ease of serviceability enables quicker troubleshooting and time to repair.
- Isolation of consumable components allows for easier replacement without need to de-energize equipment.



### Comprehensive offering

- Covering wide power range from 100A up to 4000A in 208V through 480V.
- Ultra-dense optimized designs for low power applications.
- Optimized front access only designs for higher power ratings.



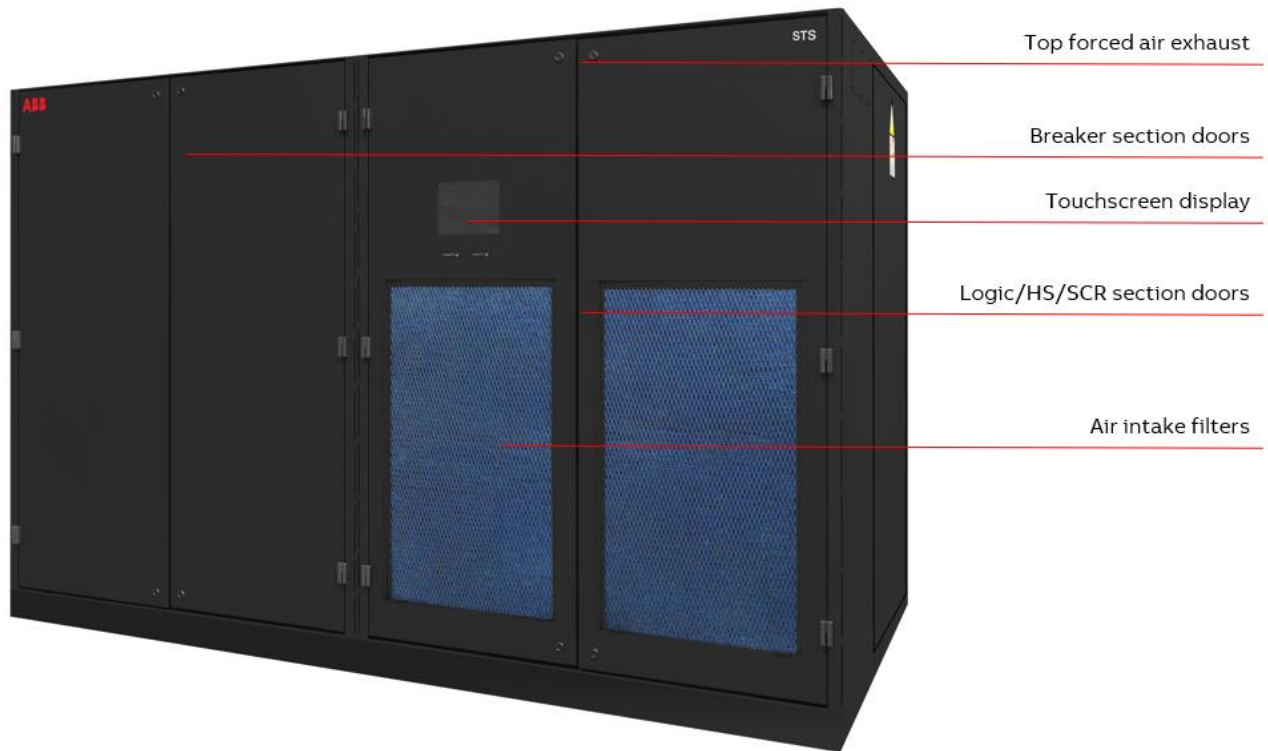
**Improved sustainability** through robust, high efficiency design and minimized usage of consumable components.



### Key applications

- Data centers
- Healthcare facilities
- Financial institutions
- Colleges/Universities

## 1.2 Mechanical characteristics



<b>Dimensions</b> (W x D x H)	120 x 60 x 77 inches / 3048 x 1524 x 1955.8 mm	
<b>Weight</b>	6560 lbs / 2976 kg	
<b>Floor loading</b>	$\leq 132$ lbs/ft <sup>2</sup> / $\leq 641$ kg/m <sup>2</sup>	
<b>Heat output</b>	BTU/Hr at full load	kW
	22900	18.75

## 1.3 General specification

<b>Standards</b>	ETL listed to UL 1008S
<b>Audible noise level</b>	≤84dBA at 1 m
<b>Access requirements</b>	Front only for installation, operation, and maintenance
<b>Degree of protection against hazards and water ingress</b>	IP20
<b>Cooling</b>	Forced air cooling
<b>Ventilation</b>	Front and rear forced air exhaust
<b>Frame color</b>	RAL 9005 (black)
<b>Transport</b>	On pallet Cabinet suitable for handling by forklift
<b>Cable entry/exit</b>	Top and/or bottom

## 1.4 Environmental characteristics

<b>Ambient operating temperature range</b>	[° F/° C]	32 - 104° F / 0 - 40° C
<b>Ambient non-operating temperature range</b>	[° F/° C]	-13 - 131° F / -25 - 55° C
<b>Relative humidity range</b>	[%]	10 - 95%, non-condensing
<b>Altitude without de-rating</b>	[ft/m]	Up to 6000 ft / 1828 m
<b>Seismic rating</b>		N/A

## 2 Electrical characteristics

### 2.1 Electrical ratings

<b>Amp ratings</b>	[A]	2000
<b>Voltage ratings</b>	[V]	480
<b>Neutral</b>		Unswitched
<b>Voltage window</b>		+/-10%
<b>SCCR ratings</b>	[kAIC]	100
<b>Input/output frequency</b>	[Hz]	60 +/-5% (57 – 63Hz)
<b>Overload capability</b>		125% for 30 min 150% for 1 min 200% for 10 sec 1000% for 3 cycles 1500% for 1 cycle

### 2.2 Components

<b>Power semiconductors</b>	100% rated SCRs, type II fuseless design
<b>User interface</b>	10.4" color TFT industrial use VGA LED touchscreen GUI
<b>Cooling</b>	Redundant fans
<b>Power supplies</b>	Triple redundant
<b>Surge protection</b>	40kA SPD on each source
<b>Control logic</b>	Dual redundant
<b>Protection</b>	Insulated case switches
<b>Output load switches</b>	Redundant
<b>Power wire &amp; bus bar</b>	Copper

## 3 Operational characteristics

### 3.1 Operational specifications

<b>Full load efficiency</b>	Up to 99.4% (480V)
<b>Sense + transfer time (in-phase)</b>	< 4ms patented A9 transfer method
<b>Sense + transfer time (out-of-phase)</b>	< 16ms patented Real Time Flux Control™ for DIR method
<b>Downstream transformer inrush<sup>1</sup></b>	< 1.2x nominal transformer rating
<b>Bypass</b>	System guided via local display
<b>MTBDE</b>	1.5 million hours

<sup>1</sup> Based on DIR transfer

### 3.2 Power quality and metering

<b>Loss of source detection</b>	2ms, PLL detection per phase
<b>Voltage</b>	Each source and output. True RMS, up to 13 <sup>th</sup> harmonic
<b>Current</b>	Each source and output. True RMS, up to 13 <sup>th</sup> harmonic
<b>Peak current detection</b>	Each source, resettable
<b>Source reacquisition</b>	3 cycles



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## 4 Control and communications

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### 4.1 Communications interfaces

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Modbus over RTU (via RS485)	Standard
Modbus over TCP (via Ethernet)	Standard
Serial service port (via USB)	Standard
Customer download port (via USB)	Standard
Local EPO	No
Remote EPO - Emergency Power OFF (n/c contact, customer supplied)	Standard
User Interface Board (UIB)	Standard
Alarm relays	16 form "C" relays
Building alarm inputs	10 dry contact inputs

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## 5 Options

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### 5.1 Accessories

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1. N/A

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<https://new.abb.com/ups/static-switches>

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