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# STATIC TRANSFER SWITCH

## Introduction

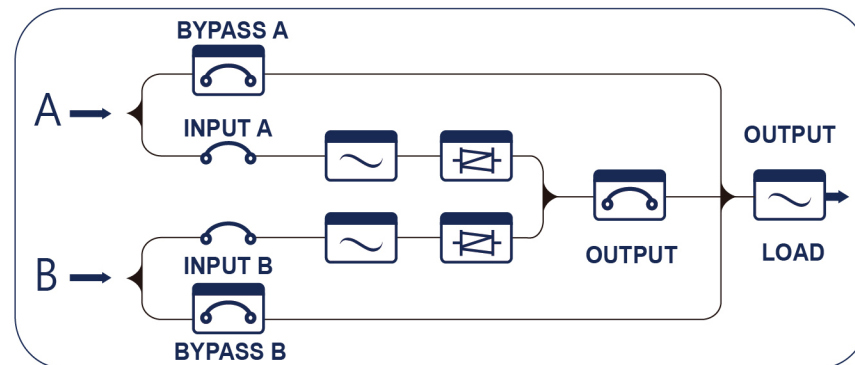
Our STS is an industrial electrical device that uses superfast static switches (SCRs) to transfer instantaneously between two power sources (like AC utility, backup generators or other emergency power sources). One power source will be the default source while the other will be standby. In case of a problem with the default power source, the STS, with high reliability and fast-acting capacity, will switch to standby power source and vice versa so that your load will not experience any power interruptions. Furthermore, the STS also can be specially customized for 3 phase, single phase, and various voltage input from AC power sources.

## Features

- High efficiency >99%
- Accept harsh environment
- Custom design up to 1000A
- Fast repair: plug & play power module
- Protect against incorrect breaker turn on
- Fast transfer(typical): 1.5ms(S1/S2 synchronized)
- Drastically increase in output availability
- Easy start-up : use switch button
- Input phase difference acceptable
- Single/three phase selectable
- Voltage range +/-5,10,15,20% selectable.
- Frequency range +/-0.5,1.0,1.5,2.0,2.5 Hz selectable
- Sensitivity lo/med/hi selectable
- Break before make transfer sequence
- Manual/automatic transfer selectable
- Manual/automatic return selectable
- Manual bypass use breakers (with inter-lock)

## Operation Description

As shown in the topology drawing below, for both (A) and (B) input AC sources our STS system is mainly composed of INPUT/BYPASS breakers, input filters and protection fuses, static switch and control modules, and the OUTPUT breaker to the load.



Under normal operating conditions, the INPUT (A) breaker, INPUT (B) breaker and OUTPUT breaker should be closed (turned ON), and the BYPASS (A) breaker and BYPASS (B) breaker should be opened (turned OFF).

When both AC power sources are operating normally within the preset voltage and frequency range, the static switch for the default power source would supply power to the load.

In case the default AC powers has problems such as power failure or is out of the preset voltage/frequency range, the STS can detect the problem in a fraction of a millisecond. If this happens at the default AC source while the standby source is normal, the default static switch will switch off and the standby static switch will switch on simultaneously to supply the load from the standby source.

Therefore, the load will not be interrupted. Once the default source recovers, the load will transfer back to the default AC source after 3~4 seconds without interruption.

# STATIC TRANSFER SWITCH

## Specification

MODEL	STS50	STS100	STS120	STS150	STS200	STS300	STS400	STS500	STS800	STS1000	
Nominal Current	50A	100A	120A	150A	200A	300A	400A	500A	800A	1000A	
<b>INPUT</b>											
Nominal Voltage	380/400/415Vac, 3 Phase with Neutral or 220/230/240Vac, single Phase with Netral										
Input Voltage Tolerance	± 5/10/15/20% (Selectable)										
Nominal Frequency	50/60Hz										
Input Frequency Tolerance	± 0.5/1/1.5/2/2.5Hz(Selectable)										
<b>OPERATING FEATURES</b>											
Operation Topology	Break before make(No source overlapping)										
Manual(Maintenance)Bypass	Yes										
Sensitivity	Lo/Me/Hi(Selectable)										
Transfer Time for Source Failure	< 3m sec(S1/S2 Synchronised), < 6m sec(S1/S2 not Synchronised)										
Return Time	<0.1ms										
Phase Difference Limit	5/10/15/20deg/**(Don't care)Selectable(Only return is affected)										
Auto-Return	Automatic/Manual(Selectable)										
<b>ENVIRONMENTAL</b>											
Efficiency at Full Load(%)	> 99										
Audible Noise(At 1M)	52 dBA					55 dBA					
Storage Temperature Range	-10°C ~ +50°C										
Ambient Temperature	0°C ~ +40°C										
Relative Humidity	90% (non-condensing)										
Max. Installation Height	1000M at rated power (-1% Power for every 100M above 1000M) - Max 4000M										
Standard Compatibility	EN62310-1(Safty), EN62310-2 (Electromagnetic Compatibility)										
Dimensions(H*W*D)mm	1600*550*800					1600*1100*800			1900x1100x800		
Weight(kg) for 380/400/415V	180	190	200	230	250	320	340	360	420	450	
Colour	Cool gray, customized color is available										
Index of Protection	IP20										

- \* Special specifications can be customized
- \* All specifications mentioned above are subject to change without prior notice

