



AUTOMATIC TRANSFER SYSTEMS



The STS series devices are three-phase static transfer switch that can automatically or manually switch between two AC power sources, guaranteeing transfer time less than $\frac{1}{4}$ period. The STS static switches in an energy distribution system provides a safe protection against disturbances of the power sources due to possible discontinuities of the sources themselves or to malfunctions of the distribution line due to environmental phenomena or human errors.

PRINCIPLES OF WORKING

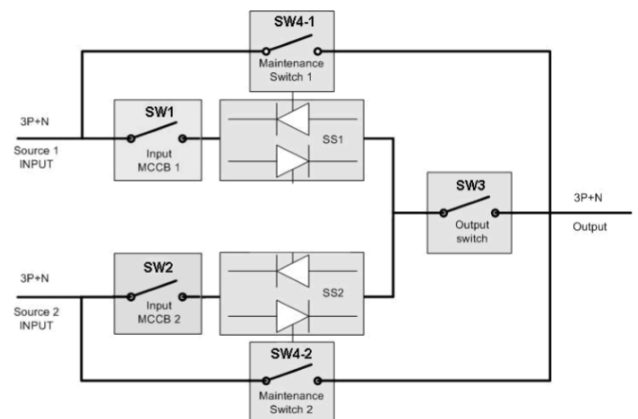
The STS series is available in the 100-150-200-250-300-400A models in both three-pole and four-pole versions (switching between the three phases and neutral).

It is a simple and effective solution to manage the redundancy provided by two independent power sources, synchronous or asynchronous sources, allowing automatic or manual transfer of loads without interrupting the power supply to the load.

One of the two sources can be designated as a primary energy source, while the other becomes the alternative source. In the event of a failure, the transfer from one source to another is automatic and instantaneous. STS provides the possibility to set the values of the sources so that the transfer is done under certain voltage or frequency conditions set via software. The system constantly monitors the 2 power sources; whenever the line feeding the load exits the correct tolerance range (user-definable), the load is automatically transferred to the alternative (secondary) power source. The return to the preferred source is automatic when the voltage returns within the tolerance range. To provide a maximum level of protection for connected equipment, both power sources must be online UPS.

The STS module can also be supplied by a UPS and another type of source, or by two non-UPS sources that provide a sinusoidal output.

The use of the STS series transfer system thus provides a secure protection against potential interference in the source that feeds the load or even in any current interruptions that may occur.

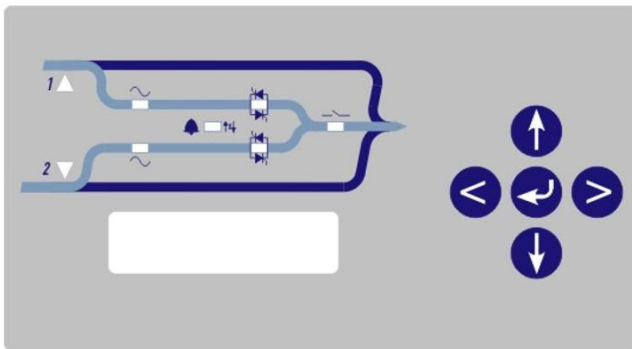


FEATURES

- Microprocessor-controlled control logic
- Redundant power supply circuits
- Protection for output short circuits
- Protection for negative energy
- Redundant ventilation
- Intuitive operation with LCD display
- Maintenance bypass and output isolator for complete isolation in case of maintenance.

CONTROL PANEL

The front panel provides all the major parameters and the operating status of the STS, which includes complete diagnostics and a simple user interface.



Messages on LCD display are available in Italian and English.

The graphic display and the LED flow chart allow you to always have an overview of the STS status.

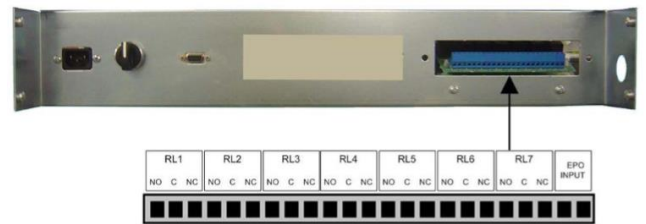
Directly from the control panel the user can turn the STS ON or OFF, consult the electrical measurements of the power sources, the output and perform the main machine settings.

INTERFACES

The front panel allows access to the following communication interfaces:

- Dry contacts

A 7-contact relay communication board is available (4 of which are programmable) with NC and NO contacts.

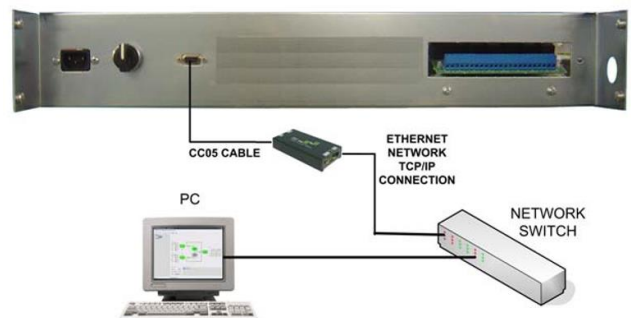


- RS232 serial port

The RS232 interface is a DB9 connector on the front panel. For the connection between STS and PC via RS232 it is necessary to use the supplied cable with a maximum length of 3 meters.

- SNMP interface

The accessory SNMP option allows to display the status of the STS, a graphic representation of the switch isolators, and status of the supply of the load carried out by Source 1 or Source 2. Besides it shows voltage and frequency measurements of the two sources



Model	STS 100	STS 150	STS 200
Phase current range	100 A	150 A	200 A
INPUT			
Nominal voltage	380-400-415Vac 3Ph+N		
Nominal frequency	50/60Hz (48-64Hz)		
THID	15%		
Switched input phases	3+N (4-pole) 3 (3-pole)		
OUTPUT			
Voltage	380-400-415V 3Ph+N		
Available transfer type	Automatic – manual – remote		
Transfer type	Synchronous - asynchronous with settable delay - asynchronous with transfer		
Automatic synchronous transfer control	Zero current mode		
Asynchronous transfer control	Enabled with delay (from 20msec to 255msec) Enabled with zero current mode disabled		
Transfer time following source failure	≤4msec (synchronized sources) 10msec (sources not synchronized)		
Transfer time for manual switching	≤2msec		
Overload 60 min	120%	120%	120%
Overload 10 min	140%	150%	170%
Overload 1 min	180%	200%	250%
PROTECTIONS			
Input	Circuit breaker (optional)		
Output	Circuit breaker		
INTERFACES			
Communication	RS232, dry contacts, and accessory slot for SNMP		
Monitoring and control	Local – remote		
MISCELLANEOUS			
Efficiency	99.5% @ 100% load		
Noise @ 1 mt.	<52dBA	<52dBA	<55dBA
Dimensions	685x530x1500mm	685x700x1500mm	685x580x1770mm
Weight 3 poles configuration	145kgs	165kgs	195kgs
Weight 4 poles configuration	175kgs	190kgs	205kgs
Environmental conditions	from 0°C to + 40°C		
STANDARDS			
Safety	EN 62310-1		
EMC	EN 62310-2		
Marks	CE		

Model	STS 250	STS 300	STS 400
Phase current range	250 A	300 A	400 A
INPUT			
Nominal voltage	380-400-415Vca 3Ph+N		
Nominal frequency	50/60Hz (48-64Hz)		
THID	15%		
Switched input phases	3+N (4-pole) 3 (3-pole)		
OUTPUT			
Voltage	380-400-415V 3Ph+N		
Available transfer type	Automatic – manual – remote		
Transfer type	Synchronous - asynchronous with settable delay - asynchronous with transfer		
Automatic synchronous transfer control	Zero current mode		
Asynchronous transfer control	Enabled with delay (from 20msec to 255msec) Enabled with zero current mode disabled		
Transfer time following source failure	≤4msec (synchronized sources) 10msec (sources not synchronized)		
Transfer time for manual switching	≤2msec		
Overload 60 min	120%	120%	120%
Overload 10 min	140%	160%	160%
Overload 1 min	220%	210%	220%
PROTECTIONS			
Input	Circuit breaker (optional)		
Output	Circuit breaker		
INTERFACES			
Communication	RS232, dry contacts, and accessory slot for SNMP		
Monitoring and control	Local – remote		
MISCELLANEOUS			
Efficiency	99.5% @ 100% load		
Noise @ 1 mt.	<55dBA	<55dBA	<55dBA
Dimensions	685x580x1770mm	685x580x1770mm	685x580x1770mm
Weight 3 poles configuration	205kgs	230kgs	240kgs
Weight 4 poles configuration	235kgs	240kgs	255kgs
Environmental conditions	da 0°C a + 40°C		
STANDARDS			
Safety	EN 62310-1		
EMC	EN 62310-2		
Marks	CE		

Model	STS 600
Phase current range	600 A
INPUT	
Nominal voltage	380-400-415Vca 3Ph+N
Nominal frequency	50/60Hz (48-64Hz)
THID	15%
Switched input phases	3+N (4-pole) 3 (3-pole)
OUTPUT	
Voltage	380-400-415V 3Ph+N
Available transfer type	Automatic – manual – remote
Transfer type	Synchronous - asynchronous with settable delay - asynchronous with transfer
Automatic synchronous transfer control	Zero current mode
Asynchronous transfer control	Enabled with delay (from 20msec to 255msec) Enabled with zero current mode disabled
Transfer time following source failure	≤4msec (synchronized sources) 10msec (sources not synchronized)
Transfer time for manual switching	≤2msec
Overload 60 min	120%
Overload 10 min	160%
Overload 1 min	220%
PROTECTIONS	
Input	Circuit breaker (optional)
Output	Circuit breaker
INTERFACES	
Communication	RS232, dry contacts, and accessory slot for SNMP
Monitoring and control	Local – remote
MISCELLANEOUS	
Efficiency	99.5% @ 100% carico
Noise @ 1 mt.	<60dBA
Dimensions	915x735x1905mm
Weight 3 poles configuration	340kgs
Weight 4 poles configuration	375kgs
Environmental conditions	from 0°C to + 40°C
STANDARDS	
Safety	EN 62310-1
EMC	EN 62310-2
Marks	CE