

# HIGH SPEED DIGITAL FOUR POLE STATIC TRANSFER SWITCH (STS)



## STS-SP-120/208Y-150/150

The STS-SP-120/208Y-150/150 is one in a family of L-3 Power Paragon's High Speed Digital Transfer Switches. This four pole (switched neutral) is designed to automatically transfer critical loads between two separate power sources whose neutrals are grounded as a separately derived system.

Designed using fully rated Silicon-Controlled Rectifiers (SCR) as switching elements, the STS-SP-120/208Y-150/150 transfers the critical load between sources in less than a ¼ cycle upon loss of source. This is more than 10 times faster than traditional electromechanical switches appearing seamless to even the most sophisticated loads. The neutral between the sources are switched with a brief overlap.

The STS-SP-120/208Y-150/150 has precision digital sense and control circuits that do not require calibration or adjustments. The sensed analog signals are converted to digital format before being processed. All operational parameters are set digitally.

The STS-SP-120/208Y-150/150 has dedicated logic for all the critical sensing, processing and switching operations which ensures fast, reliable, and predictable operations at all times. A micro-controller performs the system level functions such as operator interface (HMI), operating parameters setup, and status monitoring for reporting.



High Speed Digital  
Static Transfer Switch  
(FAA CLIN 0002)

### FEATURES

- Continuous monitoring of both sources
- Static neutral switching
- Transfers between dissimilar sources of power
- ¼ cycle transfer time on loss of power
- Fault tolerant digital logic-no single point of failure
- Manual transfer controls
- Remote monitoring/controls-RS485 ModBus Comm
- 100% rated robust power train
- Redundant fans
- Logic interface for bypass/isolation

### OPTIONS

- Installation and start-up
- Site testing and training programs
- Maintenance contracts
- Spare parts
- Floor mounted unit with input/output & bypass isolation 4 pole circuit breakers

### COMPLIANCE

- UL 1008 – recognized
- FCC Part 15 Class A
- IEEE C62.41(BI)

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## STS-SP-120/208Y-150/150

### ELECTRICAL CHARACTERISTICS

Voltage/Frequency  
120/208 VAC, 3-PH, 4W, 60Hz

Current Rating  
150 A

Efficiency  
98% nominal

### ENVIRONMENTAL SPECIFICATIONS

Operating  
Temperature Range 0°C to 40°C

Relative Humidity 0% to 95% noncondensing

### PHYSICAL SPECIFICATIONS

Weight 230 lbs /105 kg

Dimensions  
H 35.0 in. /89 cm  
W 21.0 in. /53.3 cm  
D 12.7 in. /32.3 cm

### OPERATIONAL CHARACTERISTICS

Sense Time  
less than 2 ms upon loss of source

Sense & Transfer Time  
1/4 cycle upon loss of source

### REMOTE COMMUNICATIONS

RS-485 Port  
Offers remote status and operation access

### USER ADJUSTABLE SETTINGS

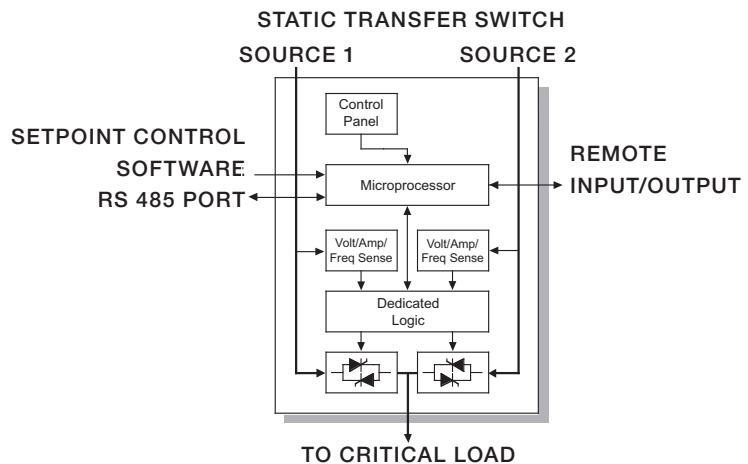
- Overvoltage
- Undervoltage
- Retransfer ON/OFF
- Retransfer delay time
- Phase angle error
- Transfer delay
- Transfer inhibit (overload)

### PANEL INDICATORS

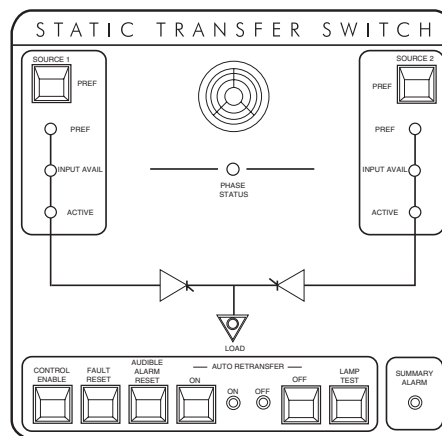
- Summary Alarm/Audible
- Source 1 Active
- Source 2 Active
- Source 1 Preferred
- Source 2 Preferred
- Auto Retransfer On
- Auto Retransfer Off
- Load Power On
- Input Avail-Source 1
- Input Avail-Source 2
- Phase Status

### PANEL CONTROLS

- Fault Reset
- Lamp Test
- Auto Retransfer On
- Auto Retransfer Off
- Select Source 1
- Select Source 2
- Control Enable (keylock)
- Audible Alarm Reset



Dedicated logic provides the fastest and most reliable operation for the critical switching functions, while the microprocessor attends to system level functions.



STANDARD CONTROL PANEL



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