

# STATIC TRANSFER SWITCH



## STS-I

### PRODUCT DESCRIPTION

The STS-I is one in a family of L-3 Power Paragon's High Speed Digital Static Transfer Switches (Series STS-I). This STS automatically transfers critical loads from a primary power source to an alternate power source in the event of interruption or abnormal conditions.

Designed using Silicon-Controlled Rectifier (SCR) power-switching elements, the STS-I transfers the critical load between power sources in less than 1/4 cycle upon loss of source – more than 10 times faster than traditional electromechanical switches – appearing seamless to even the most critical loads.

Accomplishing rapid transfer without cross-connecting power sources, the STS-I ensures that no damage can occur to either power source. This also allows for transfer between two dissimilar power sources – a feature far superior to mechanical closed-transition automatic transfer switches.

The STS-I has precision digital sense and control circuits that do not require calibration or adjustments (no potentiometers).

The sensed analog signals are converted to digital format before being interpreted. All operational parameters are set digitally.

The STS-I has dedicated logic for the critical interpretation and switching operations. This dedicated logic ensures fast and predictable operation at all times. A microcontroller performs the system level functions such as operator interface (control panel), operating parameter setup, and remote monitoring and control.

The construction of the STS-I maximizes reliability and maintainability by separating the power electronics from the bypass system.

### FEATURES

- Automatic/manual transfer control
- Fault tolerant transfer logic (no single point of failure)
- Redundant logic power
- 1/4 cycle transfer without cross connection
- Selectable time delay for out of phase transfers
- Transfer between dissimilar sources of power
- Automatic retransfer with adjustable time delay
- Open- and shorted-SCR detection that does not cross connect the sources
- All parameters set digitally
- Parameter settings may be password protected
- Large 12" high resolution, color LCD panel with touch screen
- Data logger
- Small footprint
- Plug-in circuit breakers



Series STS-I High Speed Digital Static Transfer Switch (FAA CLIN 0028)

- Manual bypass/isolation
- UL-1008 listed and rated fault current tested
- Demonstrated reliability > 10,000,000 hours
- Extensive self-monitoring capabilities
- Remote control and monitoring

### APPLICATIONS

- Data centers
- Internet centers
- Communications centers
- Computer centers
- ATC facilities

### OPTIONS

- Installation & start ups
- Site testing & training
- Spare parts
- Maintenance contracts
- Load test connector

# STATIC TRANSFER SWITCH



## STS-I

### ELECTRICAL CHARACTERISTICS

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

Current Rating  
 150, 250, 400, 600A

Efficiency  
 98% nominal

### OPERATIONAL CHARACTERISTICS

Sense Time  
 less than 2 ms upon loss of source

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

RS-485 Port  
 Offers remote status and operation access

User Adjustable Settings:  
 Select preferred source  
 Overvoltage  
 Undervoltage  
 Retransfer ON/OFF  
 Retransfer delay time  
 Phase angle error  
 Transfer delay  
 Over load & peak overload  
 Transfer inhibit (overload)

Panel Indicators:  
 Summary Alarm/Audible  
 Source 1 Active  
 Source 2 Active  
 Source 1 Preferred  
 Source 2 Preferred  
 Source 1 Power  
 Source 2 Power  
 Input Avail Source 1  
 Input Avail Source 2  
 Phase Status  
 Auto Retransfer On  
 Auto Retransfer Off  
 Load Power On  
 Breaker Status

Panel Controls:  
 Fault Reset  
 Lamp Test  
 Auto Retransfer On  
 Auto Retransfer Off  
 Select Source 1  
 Select Source 2  
 Control Enable  
 Audible Alarm Reset

Metering:  
 Input V,I, kVA  
 Output V,I, kVA,

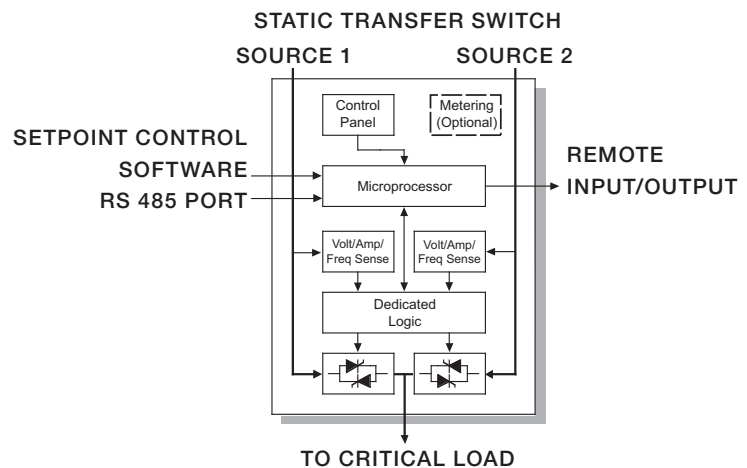
### ENVIRONMENTAL SPECIFICATIONS

Operating Temperature Range 0°C to 40°C  
 Relative Humidity 0% to 95% noncondensing

### PHYSICAL SPECIFICATIONS

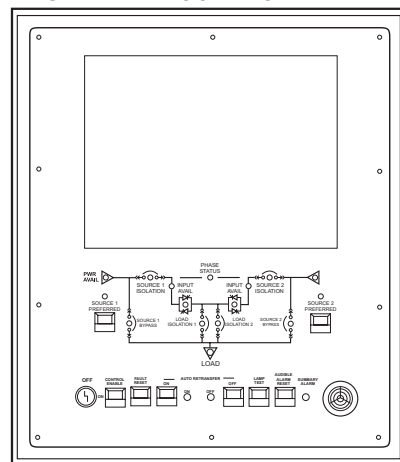
Weight 740 lbs /336 kg (150A/250A/400A)  
 975 lbs /443 kg (600A)

Dimensions H 86.0 in. /218.4 cm  
 W 34.0 in. /86.4 cm  
 D 34.0 in. /86.4 cm



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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