

**STATIC  
POWER**  
SMART | SOLID | SAFE



**iSTS**

**iSTS Model G**  
2018

## About Static Power

Static Power was formed in 2002 and is based in Melbourne, Australia. We serve clients in over 50 countries with 85% of our products heading overseas.

### Our mission

Our mission is to lead in the manufacture of high-quality and reliable Static Transfer Switches, and to offer unique client focused solutions globally.

### Static Transfer Switch Experts

Our product range has grown to include unique rack mount, wall mount and freestanding models. Using our standard product models as a base, we engineer unique customisations so that complete integration compatibility can be achieved.

The design philosophy of our i-STS products emphasises ruggedness, practicality and reliability. We understand critical power and have equipped i-STS switches with the latest supervisory and data acquisition controls to enable easy and straight-forward integration and operation. We proudly design and manufacture the smallest footprint, highest-MTBF, fully featured products in their respective classes.

### Quality Products

We strive to provide the highest quality products that meet the requirements of local and international standards. Our units are manufactured to comply with all of the applicable STS standards; 62310-1, 2, & 3 safety and regulatory standards. Our units are tested to comply with CBEMA/ITIC & SEMI power quality standards. Standards to which conformity is declared: CE, RCM and UL and CSA.

### Contact Us

Static Power Pty Ltd  
sales@staticpower.com.au  
www.staticpower.com.au

Tel. +61 3 9437 0494

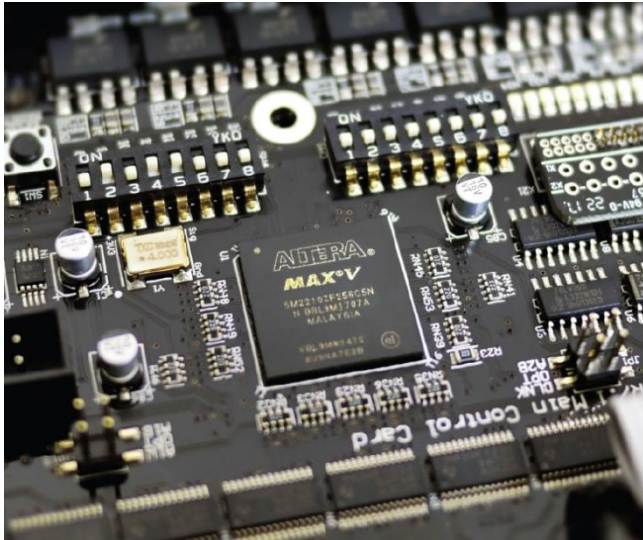
5 Candlebark Court  
Research, 3095 Victoria, Australia



## What is a Static Transfer Switch

Static Transfer Switches (STSs) are a type of electrical switch that can perform automatic and manual transfers of electrical loads between two AC power sources.

The STS monitors the incoming sources and will transfer the load to an alternate power source when failure or degradation is detected.



### Solid-State Components

iSTS switches use robust Thyristors, otherwise known as Silicon-Controlled Rectifiers - SCR, as well as generously overrated internal components to provide fast and reliable switching under the most arduous power conditions.

Performing seamless transfers makes iSTS suitable switchgear for even the most sensitive equipment.

Unlike relay-based switching components, thyristors have no moving parts. In comparison, thyristors perform faster and do not sustain any wear from use, making them significantly more reliable.



### Easily integrated

iSTS devices are fully compatible with all sine wave sources, including load side transformers, green energy offline UPS systems, grid power and generators.

iSTS devices are globally compatible with all region-specific frequencies and voltages.

Input and output configurations are customisable to allow for complete compatibility.

iSTS supports remote control and data acquisition. Connect via LAN to use the web browser interface and enable email alerts and clock synchronisation using Network Time Protocol (NTP).

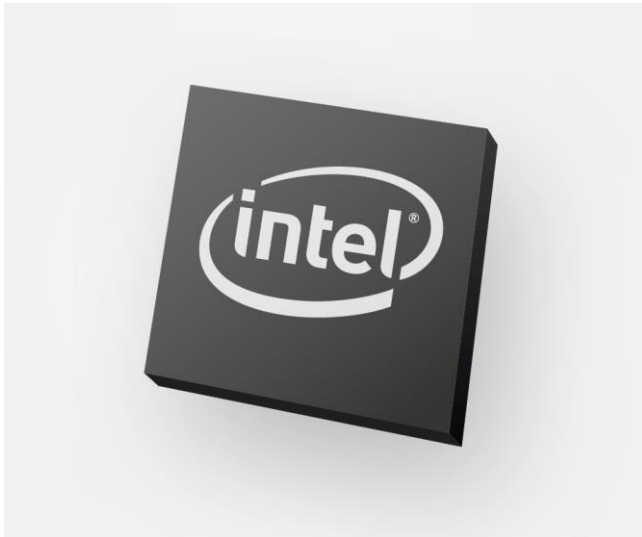
iSTS supports integration into Building Monitoring Systems using communication protocols including SNMP, Modbus TCP, Modbus RS-232 and RS-485.

All models (except Model A1) incorporate a maintenance bypass allowing for continuous power during servicing in the field.

## Protect your investment with iSTS

Static Power iSTS units are protecting mission-critical equipment all around the world in diverse applications:

- Retail distribution centres
- Power generation plants
- Airfield systems control
- Railway signalling
- Building security
- Hospitals
- Data centres
- Telecommunications
- Critical IT operations
- Manufacturing
- Universities
- Road infrastructure



### Intelligent Control

Intuitive on-board User interfaces feature one-touch transfer and preferred source selections.

The graphic display provides a clear overview of the integration environment, statuses, settings and event history.

The two incoming sources and STS output are constantly monitored, if power degradation is detected on the active source the STS will automatically transfer the load to the stable alternate source and prevent all transfers back to the unstable source.

The internal power quality monitoring circuits are double redundant.

The system keeps the User informed of fault conditions with audible and visual alarms, and email alerts.

All events are recorded in real-time with synchronisation available via NTP.



### Rugged Design

iSTS switches are equipped to endure poor power quality conditions, with generously overrated components for high fault current tolerance.

The switching circuits are segregated and run independently of the logic components. This means there are no single points for failure and switching functionality will be preserved even if the system is affected by extreme power faults.

Reliability is further increased with double and triple redundant power supplies and segregated buses for all models.

With large operating temperature and high ingress protection against dust and moisture, iSTS are built to last in tough environmental conditions.

**High Power Density**

The Model G static transfer switch is available as 3-phase 3 or 4-pole. With switching capacity of up to 1600 Amps and fault current rating of 50 kA, this robust unit caters for demanding installations.

Maintenance bypass is standard via a mechanical interlock mechanism

**Key Features**

- Fuse-less design
- Built-in transient voltage protection
- UPS Eco-Mode compatible
- Safe asynchronous source transfers
- Very high MTBF (> 1,000,000 hours)
- LED mimic decal with graphic LCD interface
- One touch transfers
- Visual and sound alarm
- Integrated web server
- Remote operation
- High-level interface - MODBUS, SNMP
- Email alerts
- Clock synchronisation with NTP
- Maintenance bypass with mechanically interlocked 5 x circuit breakers
- Redundant fan cooling
- High fault current capacity
- 5 x voltage free contacts & remote inputs
- Australian designed & manufactured

**Available Options**

- Top entry

**INTERNAL VIEW**

<b>Power</b>	
Type	Pole or 3-Phase/3-Pole or 3-Phase/4-Pole – <i>3Ph models are 4-wire + earth unless otherwise stated</i>
Current rating	200A to 1600A
Voltage rating	All region-specific voltages selectable from 1ph: 100V to 277V, 3Ph: 180V to 480V, $\pm 10\%$
Safe install environment	36kA for 20ms, fuse-less design
Frequency	50Hz and 60Hz, $\pm 10\%$ - <i>Auto detection</i>
Max THDV	15% - <i>Max allowable source voltage distortion</i>
Power factor	No practical limit
Crest factor	3.5 : 1
Loading	0 - 100% @45°C ambient
Overload capacity	@45°C ambient: 125% for 1h 150% for 30s 35kA for 1 cycle
Input options	Fixed wiring to M10/M16 lugs to terminals cables via glands
Output options	Fixed wiring to M10/M16 lugs to terminals cables via glands
Maintenance bypass	5 Mechanically interlocked circuit breakers
Isolation	Incoming source isolator switches, front mounted behind door
<b>Switching</b>	
Transfer type	Transfer at zero current by break-before-make by Thyristors / SCR
Detection	Digital: <1ms
Break time	<1ms to ¼ cycle
Asynchronous break time	Settable from 0ms to 150ms or $V_t$ proportional - <i>Default</i>
dV/dt max	800V/ $\mu$ s
MTBF	800,000 hours @25°C ambient - <i>Recommend Routine Preventative Maintenance @200,000h</i>
Device ratings	1200A <sub>RMS</sub> - 36kA for 1 cycle
Fault current setting	300% peak with load fault transfer inhibit
Protection	Circuit breakers
<b>Communication and Control</b>	
User interface	Bi-colour LED mimic decal with graphic OLED display and information interface Preferred supply selection, source transfer selection Controls override & transfer inhibit switches Alarm cancellation pushbutton
Contact	In: 2 Self wetting transfer control inputs and Emergency fire stop Out: 5 Voltage free change-over status indicators, Form C
Ethernet	HTTP - <i>Web browser interface for reporting &amp; control</i> SNMP - <i>120 unique reports &amp; transfer control</i> MODBUS TCP - <i>120 unique reports &amp; transfer control</i> EMAIL – <i>User configurable alerts</i> NTP - <i>Clock synchronisation</i>
MODBUS RTU Optional	RS232 or RS485 with third party adapter
<b>Environmental</b>	
Dimensions H x W x D	1900 x 800 x 400mm
Weight	295kg – 355kg typically
Temperature	0 – 45°C
Cooling	Redundant fans
Humidity	5 – 90% non-condensing
IP rating	IP21
<b>Compliance</b>	
Regulatory approvals	IEC 62310-1,2,3 - IEC 60950 - IEC 61000-6-1,2,3,4 – CE – RCM - RoHS
Standard warranty	24 months offsite repair or replacement policy

*Specifications are subject to change without notice.*

iSTS Model		A	B1	B2	B4	W	C	H	K	G
CURRENT CAPACITY	16A	Available								
	20A	Available								
	32A	Available	Available	Available		Available				
	63A			Available	Available	Available	Available	Available		
	80A				Available	Available	Available	Available		
	100A				Available	Available	Available	Available		
	125A				Available		Available	Available		
	160A				Available		Available	Available		
	200A							Available		Available
	250A							Available	Available	Available
	300A								Available	Available
	400A								Available	Available
	630A								Available	Available
	Up to 1600A									Available
	FAULT CURRENT – 20ms	1kA	Available							
2kA			Available	Available		Available				
10kA					Available					
20kA							Available	Available	Available	
36kA							Available	Available	Available	Available
50kA										Available
COMMUNICATION & CONTROL	Ethernet	Option	Available	Available	Available	Available	Available	Available	Available	Available
	MODBUS TCP/IP	Option	Available	Available	Available	Available	Available	Available	Available	Available
	Alarm remote contact	Available	Available							
	Status remote contacts		Available	Available	Available	Available	Available	Available	Available	Available
	LED mimic	Available	Available	Available	Available	Available	Available	Available	Available	Available
	Graphic display interface		Available	Available	Available	Available	Available	Available	Available	Available
	Colour touch LCD interface			Option	Option	Option				

## Contact us

**Static Power Pty Ltd**  
ABN 42 101 765 913  
ACN 101 765 913

**Tel +61 3 9437 0494**  
**[sales@i-sts.com.au](mailto:sales@i-sts.com.au)**  
**[www.i-sts.com.au](http://www.i-sts.com.au)**

**5, Candlebark Court**  
**Research 3095**  
**Victoria - Australia**

