

**STATIC  
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## iSTS 19" MODELS

**Benefits & Key  
Differentiators**

October 18

# iSTS 19" MODEL BENEFITS & KEY DIFFERENTIATORS



#	Features	Advantages	Benefit	Differentiator	Evidence
1	<b>Safe Automatic &amp; Manual transfer functions</b>	Safeguard your mission critical equipment by automatically and seamlessly switching to an alternative supply	Reduce Risk, iSTS is more reliable at seamlessly switching to backup power	None, This is the aim of and the same as other automatic transfer switches, but we do it more reliably	Very high MTBF, experienced and proven product. Approved and used by all major UPS vendors
2	<b>Fully digital fault detection and protection</b>	Provide reliable continuous power, protect against infrastructure failures, surges, human error	We will not drop the load redundant back-up circuitry. No single points of failure	Some supplies only look for supply source failures to initiate transfers, we look at both inputs and the output	Expertly designed by an experienced designer & manufacturer that specializes in only STS
3	<b>Fully solid-state switching components</b>	iSTS technology uses solid state switches to achieve the most rapid and dependable transfer process, suitable for even the most sensitive equipment	No moving parts unlike mechanical relay based switches. Thus you get Seamless power switching	Others use electromechanical/relays which have limited life time and fault handling capacity & longer break times	Power Thyristors/SCRs as used in our iSTS are the true power switching component are have the highest reliability and ruggedness
4	<b>Experienced Designer &amp; Manufacturer</b>	We specialize in only STS, that means we have more experience . Experience means know how	You can be confident that our products are fully supported and reliable.	Other competitors have STS as an adjunct only for their UPS many badge and are 3rd party not manufacturers & designers	Riello, Emerson, Eaton, Powerware, Socomec ... Have no or limited own product & buy from others
5	<b>Our products are the most Rugged</b>	No field failures due to external load fault or overload	Long term investment with highest reliability and longest service life	Minimum of 200 to 500% device over-rating to increase reliability, internals are reinforced	Oversizing of internal components, meets all safety standards, High Reliability product design & manufacture
6	<b>Highest MTBF</b>	Having a reliable proven product means there will be no in-service failures	Guaranteed security for your critical loads. The most reliable power item within your power distribution system	Other ATS/STS are known to fail whilst in service or when needed most costing your organization \$1,000's	Highest true MTBF of 800,000hours Proven field service analysis

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7	<b>Industries longest Warranty</b>	If a manufacturer stands behind their product you can be assured of quality product offerings	Security & confidence in your decision with fully supported replacement policy	Other STS Suppliers provide a limited 12 month warranty	24 or 36 months with extended warranties to 5 years available
8	<b>Industries Smallest Size for highest rating</b>	We can be accommodated more easily, less real-estate	Minimal rack space, and large units have small depth and footprint for hallways & corridors & computer rooms	Minimal depth and height. Highest power density in industry, 16A to 160A in a 19" Rack Mount	1RU up to 32A 2RU to 63A 4RU to 160A
9	<b>Designed &amp; made in Australia</b>	We know the product and can answer any queries. Easy support direct from OEM	Quality Assured Product	We don't re-badge. We design and manufacture all our products ourselves. Not made Overseas	No inferior parts, parts substitutions, variations in manufacturing or shortcuts
10	<b>All parameters are user settable</b>	No drift or calibration issues with time. All parameters are user settable & allows for customisation.	Password protected easy to use guided parameters to future proof and allow for atypical usage	Most other STS suppliers have factory default settings and if they're not usable for you then you have no recourse	Analogue systems change & drift with time reducing longevity and reliability.
11	<b>24 hours - 365 days Support</b>	Any question, anytime, because we have the answers. We're the OEM and expertise always at hand	We fully qualify our products before dispatch so can be started up with confidence by electrical installer	Most STSs are supplied to you via re-seller or integrator with limited knowledge and expertise and a long wait	We're here for you if you need us. On site, via telephone or email. We have the answers
12	<b>Any voltage &amp; Frequency any STS</b>	User or re-sellers can select voltage and frequency means lower inventory	No one else has this		
13	<b>20 kA Safe install</b>	Protected against risk of fire due to inadequate upstream protection or internal ruggedness	Safe and easy to install without special considerations	No one else has this. Most are limited to between 1kA and 6kA, but they won't mention this	Consideration and internal bracing, Fuses inside ensure safe to 20kA install environment



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14	<b>Long Service Life</b>	Design life is 10 years, however, service life can be in excess of 20 years	The last item you need to worry about in your computer/data centre	Most equipment life cycles are now 5 years with 10 year max support life	Philosophies for other is Any site we wide upgrade you replace. If it breaks throw it out
15	<b>Max THDV 15%</b>	Sometimes due to the source or the cabling the voltage is no longer perfect we can cope with it	Suitable for any sinusoidal sources (UPS, Generator, Mains etc.)	Most other supplied STS start to misbehave when voltage waveform becomes distorted	Even if the waveshape isn't a sine wave we can cope with it. Others may start to malfunction for 5%. Some have no protection for your load
16	<b>Highest Overload Capacity</b>	lots of additional capacity for high demand loads such as motors and transformers	No careful determination and load matching required by end user	We have Higher transient and surge capacity than any opposition	Large Devices & fuses allow typically 400% to 2000% overcapacity for start-up of equipment and surges
17	<b>Fast Digital Detection &amp; Transfer time</b>	Fast digital detection with worst case 1/4 cycle change-over time	All Transfers are transparent to the customers critical loads	Better than relay or hybrid based units that have 1/2 to 2 cycle transfer times	Customers have experienced first opposition product then have come to us
18	<b>Asynchronous Transfers are not a problem</b>	Able to safely transfer even when supplies are not in synchronism	Suitable for asynchronous sources	Others either ignore or have long breaks, both approaches will cause issues with some loads	Optimized asynchronous transfers, safe for any load type.
19	<b>Safe load FAULT Current Operation</b>	Even if the load has a fault the iSTS will not transfer the fault to the alternate source. Otherwise both sources could be lost.	Your whole data centre could be affected if the fault causes the source to fail and then the second source also.	Most other ATS and STS & Hybrid units suppliers don't monitor their load currents and would transfer on voltage sag	Relay & Hybrid customers complain of welded contacts, failed contacts & componentry
20	<b>All Regulatory &amp; Safety Approvals</b>	Manufactured & tested to: IEC/AS/NZ 62310-1,2,3 IEC60950, RCM, EC, RoHS UL capable	Safe install guaranteed	Some opposition units have UL, but are not made compliant to CE or IEC standards	Certifications are available



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21	<b>RCD Optimized &amp; Back feed protection</b>	Suitable for installation into RCD in source environment. Back feed safety relays employed	Safe and trouble free regulatory installation within your data centre	Most ATS & Hybrid types need long breaks for compatibility	Complies with RCD data centre equipment installation rules
22	<b>Zero Current/Zero Power Transfers</b>	Because all transfers occur at zero current there is never any affect on the load	Because all transfers occur at zero current there is never any affect on the load	Relays will open at any point in the waveform and so can affect the load and the wear on the relays	Relays will open at any point in the waveform and so can affect the load and the wear on the relays
23	<b>All transfers are Break-Before Make</b>	No interaction between the sources. One source can never affect the other as they are never interconnected	No overlap keeps sources truly independent and redundant	This may not be the case for when relays are used as contacts could weld and this is not monitored	Customers have show us units with output has been lost because relays have blown open
24	<b>Large Safety Margins Rugged by device Overrating</b>	Between 200 and 500% device overrating for higher ruggedness and reliability	Higher Reliability and ruggedness by generous overrating of componentry	Hybrid and relay types are constrained by cost and physical size. Some items are short time rated	Hybrid units use very small SCRs and try to have them on for a short time bridging them out with equally small relays
25	<b>High Efficiency &amp; Low heat dissipation</b>	High operational efficiency. Doesn't need much cooling.	Very low losses & no install limitations	Hybrid or relay types have lower loss but at cost of additional complexity and electromechanical wear-out	More than 99% efficiency SCRs have no wear-out and life time and reliability is measured in 100's of years
26	<b>Wide operating temperature range</b>	Our products are made for high reliability in industrial environments. You can put us anywhere in your racks	The last item you need to worry about in your computer / data centre	Some manufacturers de-rate at what should be the nominal operating current for temperatures above 25°C	All units 0-45°C & Qualified to operate to 55°C. Extended Operating range and IP rated products available
27	<b>Maintenance Bypass &amp; Hot Socket Replaceable Power Module</b>	Redundant power path with fast recovery. Replace or repair without loss of power	Easily plan your change-over without affecting your load. Can remove & reinstall without affecting the load	Most competitors don't have this feature	Option for iSTS B1 Standard for iSTS B2 and iSTS B4 Available on all other models



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28	<b>High Level Interface &amp; discrete inputs &amp; outputs</b>	Monitor without proprietary software. 5 off volt free c/o contacts & 3 control inputs	Comes standard included with all units. No additional modules or expense. Monitoring and control	Some manufactures have some of these but we have more	SNMP, HTTP, Modbus, Email Alert, NTP Enables HLI remote monitoring and control – Option for A1
29	<b>Flexible international power inlets/outlet arrangements</b>	less customer reliance on secondary PDU and distribution ad-ons'	Connect more items of equipment without additional distribution PDU's - outlets vary as per model	All other manufacturers have less outlets	Output PDU allows for more than 10 I/O configurations with up to 10 outlets per STS - Model B1
30	<b>Front panel diagnostics any time</b>	Comprehensive, Easy to see easy to operate and interpret status, events and variables & self test & diagnostics	Comprehensive self check and diagnostics ensure correct operation	On competitors units you will never know if the unit has performed correctly or is faulty without extra testing removal	Clear precise mnemonics time stamped, chronological
31	<b>Easy to install &amp; commission</b>	No specialized knowledge required	lower install cost	Some manufacturers force you to use their installers and charge accordingly	100% qualified product
32	<b>Various display interface options</b>	LCD, touch screen, colour, monochrome, bi-colour LED, Decal - some models may have physical limitations	Allows for distributor custom inventory. Allows customer to choose appropriate interface for application	Other manufacturers may only provide for minimal user interface to save cost	See brochure of display interfaces for each model. Also see comparison table
33	<b>Bespoke, adaptations for IP rating, colour, temperature &amp; function</b>	Bespoke options such as extended temperature, IP, frame size etc. IP up to 54	Experienced and Available & Adaptable partner	Most other manufacturers may allow 3rd part vendor re-badging only	Because we engineer and manufacture, if our standard units don't meet with your requirements we will customise
34	<b>Preferred Source Selection</b>	Allows 1 critical and 1 stand-by alternative source selection or none.	Can have no preferred of source or 1 or source 2 preferred - Front panel settable	Some opposition units have pre-set or no preferred source - Delta - or it is pre-set or hidden, can bounce	No bounce between sources as delay before returning to preferred and number of times is set by user



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35	<b>SCRs fully protected against voltage spikes and surges</b>	SCR Short or open detection assures user that load and sources are protected and STS operation is not compromised	No internal switching device failures that may compromise operation	Relay units suffer from arcing contacts, break-down. Hybrid units SCRS may fail and go unnoticed by bridging relay until called upon where it will fail	No voltage break-down due to spikes b/c of large margins, dv/dt protection, transient absorbers and snubbers
36	<b>VT optimized transfers</b>	Optimizes turn-on so can feed transformers, inductors and capacitors that have high inrush currents	Any load with optimized asynchronous transfers using Volt-Time optimization technique	Relay & Hybrid types transfer at any point in the waveform and have long breaks, arching & welding of contacts	Optimized transfer for asynchronous supplies assures minimal break and no damage to equipment



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