STATIC POWER

SMART | SOLID | SAFE

iSTS C3 vs iSTS W

October 18

iSTS C3

iSTS

Key Features

- Fuse-less
- Space saving wall-mount design
- Built-in transient voltage protection
- UPS Eco-Mode compatible
- Safe asynchronous source transfers
- Very high MTBF (>800,000 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
- 5 x voltage free contacts & remote inputs
- Easy access for maintenance
- Australian designed & manufactured

Available Options

- Top entry

iSTS W

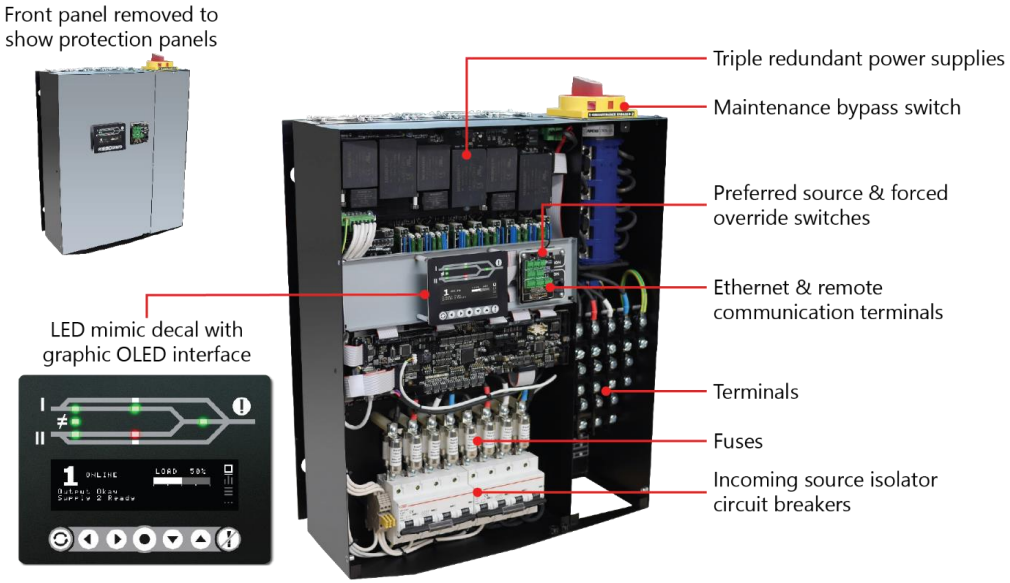
iSTS

Key Features

- Space saving wall-mount design
- Built-in transient voltage protection
- UPS Eco-Mode compatible
- Safe asynchronous source transfers
- Very high MTBF (>800,000 hours)
- LED mimic decal with graphic OLED interface
- One touch transfers
- Visual and sound alarm
- Integrated web server
- Remote operation
- High-level interface - MODBUS, SNMP
- Email alerts
- Clock synchronisation with NTP
- Incoming source isolator switches
- Integrated maintenance bypass
- Redundant fan cooling
- 5 x voltage free contacts & remote inputs
- Easy access for maintenance
- Australian designed & manufactured

Available Options

- Colour touch LCD interface optional
- Top entry



iSTS C3 vs iSTS W

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iSTS C

POWER	
Type	1-Phase/2-Pole or 3-Phase/3-Pole or 3-Phase/4-Pole – *3Ph models are 4-wire + earth unless otherwise stated*
Current rating	63A to 160A
Voltage rating	All region-specific voltages selectable ±10%
Safe install environment	20kA for 1 cycle
Frequency	50Hz and 60Hz, ±10% - *Auto detection*
Max THDV	15% - *Max allowable source voltage distortion*
Power factor	No practical limit
Crest factor	3.5 : 1
Loading	0 - 100% @45°C ambient
Overload capacity @45°C ambient	500A for 30s 1kA for 1s 20kA for 1 cycle
Input options	Fixed wiring to M10 lugs to terminals for up to 95mm² cables via gland plate
Output options	Fixed wiring to M10 lugs to terminals for up to 95mm² cables via gland plate
Maintenance bypass	5 Mechanically interlocked circuit breakers
Isolation	incoming sources and output isolator switches, front mounted behind door
SWITCHING	
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 Vt proportional - *Default*
dV/dt max	800V/µs
MTBF	800,000 hours @25ºC ambient - *Recommend Routine Preventative Maintenance @200,000h*
Device ratings	600A_{RMS}, 1800V, 20kA 1 cycle
Fault current setting	>350% peak with load fault transfer inhibit
Protection	Circuit breakers

iSTS W

POWER	
Type	1-Phase/2-Pole or 3-Phase/3-Pole or 3-Phase/4-Pole – *3Ph models are 4-wire + earth unless otherwise stated*
Current rating	32A to 100A
Voltage rating	All region-specific voltages selectable ±10%
Safe install environment	20kA, 100A/200A internally fused
Frequency	50Hz and 60Hz, ±10% - *Auto detection*
Max THDV	15% - *Max allowable source voltage distortion*
Power factor	No practical limit
Crest factor	3.5 : 1
Loading	0 - 100% @45°C ambient
Overload capacity @45°C ambient	125A for 30s 140A for 1s 250A for 0.1 s
Input options	Fixed wiring to M8 lugs to terminals for up to 70mm² cables via gland plate
Output options	Fixed wiring to M8 lugs to terminals for up to 70mm² cables via gland plate
Maintenance bypass	3-position overlapping CAM switch
Isolation	Incoming source isolator switches, front mounted behind easy-off panel
SWITCHING	
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 Vt proportional - *Default*
dV/dt max	800V/µs
MTBF	800,000 hours @25ºC ambient - *Recommend Routine Preventative Maintenance @200,000h*
Device ratings	134A_{RMS}, 1600V, 2kA 1 cycle
Fault current setting	>350% peak with load fault transfer inhibit
Protection	100A/200A fuses – FE/FEE BS88

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iSTS C

COMMUNICATION AND CONTROL	
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 - *Web browser interface for reporting & control* SNMP - *120 unique reports & transfer control* MODBUS TCP - *120 unique reports & transfer control* EMAIL – *User configurable alerts* NTP - *Clock synchronisation*
MODBUS RTU Optional	RS232 or RS485 with third party adapter
ENVIRONMENTAL	
Dimensions H x W x D	800 x 600 x 400mm
Weight	60kg - 97kg typically
Temperature	0 – 45°C
Cooling	Redundant fans
Humidity	5 – 95% non-condensing
IP rating	IP20 - *Higher IP rating on request*
COMPLIANCE	
Regulatory approvals	IEC 62310-1,2,3 - IEC 60950 - IEC 61000-6-1,2,3,4 – CE – RCM - RoHS - UL Capable
Standard warranty	24 months offsite repair or replacement policy

iSTS W

COMMUNICATION AND CONTROL	
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
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MODBUS RTU Optional	RS232 or RS485 with third party adapter
ENVIRONMENTAL	
Dimensions H x W x D	550 x 460 x 260mm
Weight	25kg typically
Temperature	0 – 45°C
Cooling	Redundant fans
Humidity	5 – 95% non-condensing
IP rating	IP20 – *Higher IP rating on request*
COMPLIANCE	
Regulatory approvals	IEC 62310-1,2,3 - IEC 60950 - IEC 61000-6-1,2,3,4 – CE – RCM - RoHS - UL Capable
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#	C3 Features	Advantages	Benefit	W Differentiator	Evidence
1	**Industrial Ruggedness**	Reinforced construction & bracing and larger power componentry makes for more robust implementation	This unit will survive industrial applications like motor starting, mains generator change-overs	This product is aimed at IT and is a "Point of distribution" type STS, placed close to the load	Bigger power componentry, enclosure is industrial 1.6mm steel welded construction
2	**Higher Overload Capacity**	Will survive system faults with up to 10 times larger than iSTS W	More reliable operation with more demanding loads	iSTS W is made to be placed close to the load and feed lots of smaller individual loads	SCRs - Thyristors are 5 times the size as used in the iSTS W
3	**No Fuses**	Over sizing of SCRs - Thyristors and internals provides	Do not need to hold spare fuses, and iSTS C has additional ruggedness to handle overloads & faults	iSTS W uses fuses to protect against discrimination issues between source and load	Fuses operate faster than circuit breakers and are better suited to small SCR - Thyristor implementations
4	**Feature Higher kA Rating**	Can be placed anywhere within the distribution system - as long as fault current is less than 20kA	Simplified installation points within the power distribution network	Due to its small compact dimensions, bracing is more difficult to achieve in iSTS W	Will survive system faults with up to 10 times larger than iSTS W
5	**Circuit Breakers for integrated Maintenance Bypass**	Simple mechanical interlock provides for no-break maintenance bypass to either source - *behind panel*		iSTS W uses a 3 position, overlapping CAM switch to change-over to maintenance bypass	For iSTS C load remains protected by circuit breakers in case of load fault
6	**Higher IP Rating**	With IP rating of up to IP55 protect from dust and plant room environments	Ideal for equipment, plant rooms and bus ways, cupboards and switch rooms	iSTS W is primarily designed to replace rack-mount applications in clean environmental installs	Max Ingress Protection for iSTS W is IP44

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#	C3 Features	Advantages	Benefit	W Differentiator	Evidence
7	**Large SCRs-Thyristors Higher Reliability**	More robust because is built to withstand high overloads and possible faults without damage to STS	Better fit for industrial & power distribution applications	iSTS W uses 132A rated SCRs - Thyristors which will enable current up to 2kA without failure	iSTS C uses 600A SCRs - Thyristors for 160A rating with 20kA, capacity 5 X Model W
8	**Independent cooling & power paths**	Redundant fans and independent cooling for each power path improves reliability and provides redundancy	Longer operating time with improved security	iSTS W has redundant fans and a common heatsink for both power paths	Built in redundancy and independence improves reliability
9	**Larger power capacity**	Has higher fault current handling, overload and inrush current handling capability	The iSTS C is a more rugged and industrial	Not limited to 100A, iSTS C up to 160A	iSTS W was designed for an IT environment up to 100A
10	**Larger cable - Lug terminations**	8mm bolted - lug connections with 200A terminals to allow for 95mm^2 cable connections	Often oversized cables are required to accommodate for reduced volt drop on long runs	iSTS W has 100A terminals for bolt-in or clamp bare cable ends to 35 mm^2 cable	iSTS C can also accommodate an additional termination enclosure - header box on top or bottom
11	**Low Smoke Zero Halogen & Silicon Cables**	All cabling is LSZH sheathing that emits low smoke & levels of toxic material in the event of a fire	OH&S safe for personnel. Won't produce dangerous gas when exposed to high sources of heat	iSTS W also uses LSZH cables but of smaller cross section so there isn't as much over-sizing of the cables	Zero-halogen cable does not contain any of the elements - fluorine, chlorine, bromine, iodine and astatine
12	**Optional Terminal extension enclosure**	iSTS C can also accommodate an additional termination enclosure - header box on top or bottom	Lower installation cost with easier installation of cables. Can accommodate bend radius for larger cables and pyro	iSTS W can also accommodate an additional termination enclosure - header box on top or bottom	30% more space for break-out of individual cores, pyrotanix or XLPE via glands and aluminium gland plate

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#	Features	Advantages	Benefit	W Differentiator	Evidence
13	**Both iSTS W and iSTS C have extremely small footprint and size for their rating**	This enables them to be installed where space is limited and can overrate without having to suffer a size penalty	Better space utilization in switch rooms, corridors and plant rooms. Easier installation	Some manufactures don't care about your space restrictive issues. You get what you get and no consideration is given	Compare sizes of equivalent ratings with other manufacturers
14	**Both iSTS W and iSTS C can operate in 50Hz or 60Hz supply systems - *Auto detect***	Integrators and re-sellers need keep less product variations. We work anywhere on any voltage	Just one more variable you don't have to remember to specify from the manufacturer	Other manufactures have different models some don't even cater for the 50Hz and others don't cater for 60Hz markets	See specs on opposition products and compare
15	**iSTS W is smaller and cheaper than iSTS C**	True the iSTS W is a better fit for some applications then the iSTS C	The price is soon forgotten, however, the wrong choice for the application lingers long in the memories of the client.	iSTS W is a "point of distribution type static transfer switch", where the STS remains close to the loads and many small loads are connected	The iSTS W is a wall mount version of the rack mounted iSTS - *e.g. equivalent is iSTS B2*. No other supplier can match
16	**Both iSTS W and iSTS C have the same front control panel, information available and HLI options**	Consistent and comprehensive status, real time monitoring and information displays and easy to operate controls	Password protected operation with control key lock-out. Simple to interpret time stamped 200 deep event list	Some manufactures have very basic information available for the user. Whenever there is an exception they want you to call them to service it and diagnose	We've optimized and simplified the operator interface to provide the user with everything required to operate and inform

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#	Features	Advantages	Benefit	W Differentiator	Evidence
17	**No proprietary software to undertake remote HLI monitoring**	Neither the iSTS W or the iSTS C require proprietary software to undertake remote HLI monitoring	Save on monitoring software costs, OS change restrictions and updates. Our HTTP and industry standard interfaces are already incorporated as standard	Some manufacturers have some of these but it's standard on all our iSTS	HTTP, SNMP, Modbus, NTP, Email Alerts, 5 off voltage free change-over contacts, 3 off remote control discrete inputs
18	**Both iSTS have triple redundant power supplies with operation between 90VAC to 305VAC** - *or 150 to 480VAC phase to phase* - **with no setting**	Extended operating range ensures a more reliable control system and maximizes system availability	More reliable, no need to change power supplies for different operating voltages	Other manufacturers only allow a ±10% from the nominal voltage - 230V/400V. We allow a full +20% and -60% and still operational	See specs on opposition products and compare

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