

# Static Transfer Switch MODEL B2



This three-phase, four-pole, rack-mount Static Transfer Switch is a new implementation of our mature and proven control electronics system, made possible using new manufacturing SMT techniques, (Surface Mount Technologies) and new SCR/Thyristor packaging technology.

Fully digital, these units employ robust SCR/Thyristor technology to provide a more reliable and robust Static Transfer Switch. The Model B2 is a two part design; comprising a segregated fixed termination module incorporating a 4-pole single operation, 3 position Maintenance Bypass Switch and a removable hot-socket power module.

The Model B2 i-STS is a true point-of-distribution Static Transfer Switch, rated up to 63 Amperes per phase.



The Model B2 provides uninterrupted power to your critical equipment by automatically switching between two independent power sources upon detection of a supply source problem. To avoid the dangers of paralleling power sources, all switching is break-before-make (except neutral, which is overlapping) and is transparent to the load. Even under worst case conditions the transfer is completed in less than 5 milliseconds, ensuring no disruption to the operation of your equipment. These units are extra rugged and contain high fault capacity solid state thyristors and are suitable and safe for installations with fault capacities up to 20kA.

### The Range:

Rated typically from 10 to 63 Amperes in either 3 phase, 3 or 4 pole configurations complete with integrated maintenance bypass and power isolation facilities.

Screw cage terminals at the rear of the fixed portion (incorporating the maintenance bypass switch) enable connection of input and output cables of up to 10mm<sup>2</sup>, providing flexible connection to your PDU or load distribution infrastructure.

### Simplicity Is The Key:

A colour touch screen LCD provides the user with an easy to navigate hierarchical real time information and control interface. The LCD provides a full-color mimic, alarm / status indication and audible alarm to provide instant recognition of the STS state. The backlit LCD provides further real-time information such as supply variables, power quality, event log via a 100 deep, real time, easily understandable event log to provide the user with informed operational information displays. In addition the control interface provides access to all essential parameters and set-up information for the time, Modbus & LAN.

### Communication:

The standard Model B2 STS is fitted with seven discrete voltage-free contacts and three remote inputs. If you require a more advanced HLI monitoring solution, Modbus - as well as a web browser interface and SNMP - are incorporated to monitor and if needed, control the STS. Setting of all of the STS parameters is performed via the LCD and can also be performed using the web browser interface.

### Maximum Reliability:

The Model B2 Static Transfer Switch features a high reliability, low maintenance, robust design with redundant detection circuitry and power supplies. The units use Digital Signal Processing and high speed digital sampling for stable, reliable and predictable operation. A long life, monitored, rear mounted modular fan assembly provides redundant field exchangeable cooling module.



We are so confident of the reliability of our equipment, we offer the industry's longest warranty period.

B2 Features	Benefits
Industry's Smallest Size Static Transfer Switch	Bring Uninterrupted 3 phase power to your rack
Fully Redundant Low noise Fans	Low noise and maximum reliability
Break Before Make Transfers	Prevent paralleling of input sources
Large Overload and Fault Capacity	Suitable for installations with fault capacity up to 20kA
Guaranteed Load Fault Transfer Lock-out	Will not transfer faults to alternative source
Synchronous and Non-Synchronous Transfers	Transfer at safely even if sources are asynchronous
SCR Open and Short Circuit Protection	No overlapping or loss of supply due to SCR or control failures
LAN Web Server Option Built Into Hardware	Monitor and control STS through Web Browser software
Redundant Controls and Redundant Power Supply	More secure higher MTBF /Redundant power monitoring

# Specifications

Rating, 3-Phase /phase incl. Neutral	20/32/40/63 Amperes RMS
Voltage Rating	400/230 V $\pm$ 20%
Permissible Voltage Distortion	15 % THDV
Frequency	50/60 Hz $\pm$ 5%
Type	3 + N (3-phase, 4-pole)
Efficiency	98.6%
Transfer Type	Thyristor (break-before-make, no source overlap, zero current)
Detection Digital	< 1 msec
Transfer Time	< 5 msec
dV/dt	>1000 V/ $\mu$ sec
MTBF	> 800,000 Hrs
Device Ratings	120 Amperes RMS, 1600 Volts, 2 kA 10msec, I <sup>2</sup> t 2800
Fault rating	20 kA
Fault Current Setting	150 Amps peak (transfer lock-out)
Protection	Internal 100 Ampere fuses
Overload Capacity	Up to 120% for 30 seconds 100A for 0.5 second 400A Amperes for 100 msec 1500A Amperes for 10 msec
Minimum Operating Current	0 Amperes
Maintenance Bypass	YES, 3-position CAM Operated, 4-Pole, overlapping Electrical Interlocked
Isolation	4-pole front mounted 1 ea for S1 and S2
Display / Control Panel	Hierarchical, Colour, backlit, touch screen real-time monitoring
User Manual Controls	Preferred Source Selection. Controls Override
Remote I/O	5 x Voltage free contacts (50 V DC, 1 Ampere, N/C) 2x Transfer
LAN Browser	Included
SNMP	Included
Operating Temperature	0 – 45°C
Cooling Fan	forced, redundant (user replaceable fan module), 5 year life
Noise	< 60 dB(A) typically
Physical Size	2RU (88mm) high x 19" wide x 450mm deep
Cable Entry	Screw Cage terminals (Up to 10mm <sup>2</sup> )
IP Rating	IP41
Weight	15kG (approx.)
Colour	Black
Compliance	AS3100 & I (for STSs), IEC 62310-1 & 2 & 3

## Static Transfer Switches

*i* - STS Manufacturing is a subsidiary of  
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