

STATIC TRANSFER

Seamless Power Switching for Mission-Critical Applications

What is a Static Transfer Switch?

A Static Transfer Switch (STS) is a high-speed switching device that transfers power from a preferred source to an alternate source without interrupting the load. **KOIRI** Static Transfer Switches are built to maximize uptime requirements for data centres, AI clusters, semiconductor manufacturing, and mission-critical environments. At the core of the STS is a proprietary upgrade to Dynamic Phase Compensation — a precision timing algorithm unique to **KOIRI**. Paired with silicon-controlled rectifiers (SCRs), this system achieves sub-4 millisecond transfers with exceptional accuracy, even in the presence of voltage imbalances and phase shifts.



Why Use a Static Transfer Switch?

- ❖ Prevents Downtime: Automatically switches between multiple power sources during utility failures or power quality fluctuations.
- ❖ Protects Sensitive, Critical Loads: Protects sensitive equipment such as servers and industrial equipment from power disruptions and quality issues.
- ❖ Perform Maintenance: Dual-source architecture allows planned maintenance without shutting down the load.
- ❖ Improve Power Reliability: Strengthens the reliability of your electrical infrastructure by providing redundancy and power path diversity.

Technical Overview of Static Transfer Switches

Ratings

Available from 250 A to 4000 A, with 2-source or 3-source input and 3-Pole or 4-Pole configurations.

No Single Point of Failure

Designed with full redundancy across control logic, power supplies, and gate drives to ensure continuous uptime, even during component failure.

Sub-Cycle Transfer Speeds

Transfers typically occur in less than 4 ms.

Advanced Dynamic Phase Compensation

KOIRI's proprietary algorithm precisely times source transfers to eliminate transformer inrush - even during 180° out-of-phase conditions—while staying within ITIC curve limits.

Convection-Cooled Design

Up to and including 1200 A, STS units use natural convection cooling—no fans, filters, or fuses, for maintenance-free, long-term operation.

Sectionalized Design

Power, control, and interface sections are isolated to allow safe service while energized. All maintenance is performed from the front—no side or rear access needed.



Application



Data Centre



AI Clusters



Banking & Finance



Education & Research



Healthcare



Energy Sector



I.T



Retail



Transportation



Key Features

- ❖ High-speed transfer (<4ms)
- ❖ Microprocessor-based intelligent control
- ❖ True-RMS sensing for accurate monitoring
- ❖ Manual & automatic transfer modes
- ❖ Hot swappable modules
- ❖ Built-in overload & short-circuit protection
- ❖ Compatible with UPS, DG, and Mains
- ❖ Rack & floor mount design options



Static Transfer

Parameter	Specifications
Nominal Input Voltage	220V, 230V, or 240V (Single Phase, 50 Hz)
Maximum Continuous Source	16 A / 30 A / 60 A / 80 A (50 Hz)
Load Power Factor	0.8 to Unity (Leading or Lagging)
Source Voltage THD	≤ 10%
Transfer Time	≤ 6 ms
Operating Temperature	0C to 45C
Audible Noise	≤ 45 dB at 1.5 meters
Relative Humidity	0% to 95% (non-condensing)

Manufactured by:-

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