e-Switch

STATIC TRANSFER SWITCH 16A, 32A AND 50A

EPI e-Switch static transfer switches are available in single-phase double-pole 16A, 32A and 50A versions. e-Switch ensures maximum reliability to critical loads by eliminating system failures caused by problems in distribution rather than by the failure of the power source itself. Double-pole operations ensure optimal flexibility for all the different types of electrical distributions.

FLEXIBILITY FOR CUSTOMIZED SOLUTIONS

e-Switch has been designed to allow the hot swapping of all the solid-state components (power and control), dramatically reducing repair times while keeping the load powered. e-Switch flexibility allows complete compatibility with customers' load and environment requirements. Standard features include priority mode operation allowing users to select the preferred power source.

e-Switch features a fully redundant forced ventilation system with fan failure alarm, allowing mission-critical reliability whilst taking up a minimum amount of rack space (2 HU). Front-to-back ventilation ensures perfect compatibility with state-of-the-art cooling systems for Data Centers.

LEADING TECHNOLOGY

A crucial function of e-Switch is the Break Before Make (BBM) transfer. This ensures that the two live feeds are never connected in parallel. The e-Switch also ensures that switching between the two power supplies occurs safely under both synchronous and asynchronous conditions relative to input waveforms.

RELIABILITY

Having an e-Switch adds another layer of security for mission critical loads. Ensure a redundant power supply by enabling controlled switching between two independent AC power supply sources. Switching is performed whenever the line that supplies power to the load goes out of tolerance. The distribution downstream from an e-Switch is not only protected against the failure of the sources, but also against any failure in upstream lines.

COMMUNICATION

Voltage free contact ports are available in standard assembly versions and facilitate communication with installed power protection equipment. LED displays offer complete and easy interaction with e-Switch and provide detailed reports on the operational status of your equipment.

APPLICATIONS

e-Switch provides additional security for a wide range of mission critical applications including:

- Data centers/ISPs
- Call Centers
- Manufacturing Process Control
- Transportation Signaling Systems
- Health Care.

PROTECTION AGAINST POWER SUPPLY FAILURES

If one of the two power sources fails or falls outside specification, Multi-Switch will transfer the connected loads to the second power source (switching is instantaneous even if the two sources are in phase). The EPI e-Switch is an efficient and competitive solution that manages two redundant sources to provide absolute power protection.

Technical Specifications:

e-Switch rating(A)	16	32	50
Number of switching poles	2		
Nominal Voltage (V)	230 (220/240 selectable)		
Input phases	1 + N		
Nominal frequency (Hz)	50		
Input voltage range (tolerance ± 2) %	± 12		
Nominal current (A)	16	32	50
Input power ports	2		
Output power port	1		
Efficiency at nominal power (%)	› 98		
Overload capacity (min)			
125% load	10		
150% load	1		
700% load	0.6 seconds		
SCR Characteristics			
I^2T @ T_{vj} = 125°C (As)	15000		
I_{TSM} @ T_{vj} = 125°C (A)	1750		
Fuses	660 Vac, 100 A fast		
Pre-arching I^2T (A^2s)	2050		
Total I^2T @ 230V (A^2s)	3740		
Temperature range (°C)	0° – 40° C		
Synchronization range	10° (7.5°– 15° selectable)		
Cooling	Front to back, Forced, Fully redundant		
Transfer Mode	Break-Before- Making Switching (No source overlap)		
Transfer Time	CBEMA - ITIC compliant		
Worst case zero voltage source failure (ms)	≤ 6		
Typical zero voltage source failure (ms)	≤ 4		
Additional transfer delay time for non-synchronous transitions (ms)	10 ±2 (0 – 20 selectable)		
Re-transfer time (s)	5		
Instant Overcurrent Threshold	3 In		
Dimensions:			
Width	19”		
Height	2U		
Depth (w/o handles)	700 mm		
Weight (kg)	23		
Safety	CE marking, IEC/EN 62310-1		
EMC Compatibility	IEC/EN 62040-2, class C2		
Protection degree	IP21		
Acoustic Noise (dBA)	‹ 45		
MTBF	› 800,000 hrs		
MTTR	‹ 1 min		