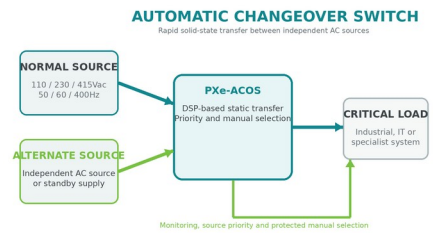


PXe-ACOS Automatic Changeover Switch

DSP-controlled static transfer switch for critical AC loads

The PXe-ACOS is a DSP-based static transfer switch designed to transfer a connected load between two independent AC power sources. A three-source configuration is available as an option.

When the preferred source becomes unsuitable, the unit transfers the load to the alternate source. In synchronised operation, the source brochure specifies a changeover time of less than 30ms, with faster transfer available as a load-dependent option.



Functional arrangement for two independent AC sources and one critical load.

Where this product fits

Designed for critical industrial, IT and specialist electrical systems where short-duration supply disturbances or loss of one source must be managed by rapid transfer to an independent alternate source.

Critical infrastructure

Data centres, telecommunications, network operations, airport security and power-generation sites.

Industrial systems

Process control, automated manufacturing, semiconductor facilities and power-quality installations.

Specialist projects

R&D laboratories and military-grade configurations with project-specific enclosure and EMC arrangements.

Source arrangement

Two inputs standard; three optional

Frequency

50Hz, 60Hz or 400Hz

Transfer time

<30ms in synchronised mode

Technology

DSP-based static switching

Priority control

AUTO, normal-source or alternate-source operation

Manual selection

Lockable maintenance changeover switch

Protection

Input and output supervision with MCCBs

Local indication

Source, output and operating-mode status

Selection starting point

Confirm the number of sources, source and load voltage, phase arrangement, operating frequency, synchronisation conditions, overload duty, enclosure rating, interface requirements and any military or EMC specification.

System configuration and controls

Source selection, transfer logic, protection and local indication

1. Normal source Preferred source selected for automatic operation	2. Alternate source Independent standby or secondary AC supply	3. Static transfer DSP-controlled source supervision and switching	4. Critical load Single- or three-phase load at the selected voltage
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Controls, protection and indication

Control / protection	Source specification	Control / indication	Source specification
Priority selector	AUTO / NORMAL SOURCE / ALTERNATE SOURCE selection at the output	Manual / maintenance switch	AUTO / NORMAL / ALTERNATE source selection with lock key
MCCBs	Separate protection for normal source, alternate source and output	Normal-source indication	R/Y/B source-available indication
Input protection	Input overvoltage, undervoltage, phase failure and wrong phase sequence	Alternate-source indication	R/Y/B source-available indication
Output protection	Output overvoltage, undervoltage, overload, short circuit and overheat	Output indication	R/Y/B output-ON indication
Operating modes	Automatic, priority-normal, priority-alternate and manual bypass	LCD status	Normal mains, alternate mains, auto mode, priority modes, overload and manual bypass
Voltage / phase	110V, 230V or 415Vac; single phase or three phase	Frequency	50Hz, 60Hz or 400Hz
Source count	Two input sources standard; three-source option available	User interface	Optional RS232, RS485, USB or LAN for monitoring and priority selection

Transfer operation

The switch supervises the available sources and transfers the connected load according to the selected priority and operating mode. In synchronised mode the specified changeover time is less than 30ms. Faster transfer is available as an option, subject to the connected load.

Configuration note

The source document states voltage regulation of $\pm 1\%$ with respect to the input. Final source limits, transfer conditions and the exact control philosophy should be confirmed for the selected ACOS configuration.

Technical specification

Values below are taken from the original ACOS source brochure. Final configuration is confirmed at quotation stage.

1. General and construction		2. Electrical performance	
Type	Static type, DSP-based	Input / output voltage	110V, 230V or 415Vac; single phase or three phase
Reference standard	IEC 62040-3	Nominal frequency	50Hz, 60Hz or 400Hz
Source configuration	Two input sources; three-source option available	Voltage regulation	±1% with respect to input
Overall dimensions	Refer to the project general-arrangement drawing	Transfer time	Less than 30ms in synchronised mode
Construction option	19-inch rack-mount format available on request	Faster transfer	Optional, depending on the connected load
Enclosure colour	Black	Overload capacity	110% for 10 minutes; 125% for 1 minute
3. Controls and protection		4. Indication and interfaces	
Priority selection	AUTO / NORMAL SOURCE / ALTERNATE SOURCE	Source indications	Normal and alternate source available, R/Y/B
Manual switch	AUTO / NORMAL / ALTERNATE with lock key	Output indication	Output ON, R/Y/B
MCCBs	Normal-source input, alternate-source input and output	LCD indications	Normal mains, alternate mains, auto mode, priority modes, overload and manual bypass
Input protection	Overvoltage, undervoltage, phase failure and wrong phase sequence	User interfaces	Optional RS232, RS485, USB and LAN
Output protection	Overvoltage, undervoltage, overload, short circuit and overheat	Operating temperature	-10°C to +55°C maximum
Enclosure protection	IP42 standard; other ratings optional	Storage temperature	-10°C to +70°C maximum
Environment		Military / EMC options	
Relative humidity up to 95% RH, non-condensing. Maximum altitude 1000m, with derating above 1000m.		The source brochure references military-grade configurations with JSS5555 N1 and MIL-STD-461E/F, together with mil-grade connectors, shock mounts, EMI filter, EMI gasket and heater unit.	
		The original source states that specifications and front-panel control positions may change as part of continuous product development. Final values and drawings are confirmed for the supplied configuration.	

Options, applications and configuration information

Available arrangements are selected around the sources, connected load, environment and interface requirements.

Source and transfer options

Three-source configuration, faster load-dependent transfer, priority-normal or priority-alternate operation and protected manual selection.

Mechanical construction

IP42 standard enclosure, other enclosure ratings, 19-inch rack-mount format and project-specific general-arrangement drawings.

Interfaces and monitoring

RS232, RS485, USB or LAN for monitoring and priority selection.

Military-grade configuration

Mil-grade connectors, suitable shock mounts, EMI filter, EMI gasket and heater unit, with JSS55555 and MIL-STD-461E/F references in the source brochure.

Typical applications

Critical IT

Data centres, e-commerce and network operations

Telecommunications

Telecom centres and fibre network infrastructure

Industrial control

Process control, manufacturing and semiconductor sites

Infrastructure

Airport security, power generation and commercial buildings

Information required to configure the ACOS

Sources

Number of sources, phase, voltage and frequency

Load

Load rating, phase arrangement and overload duty

Transfer

Synchronisation conditions and required transfer time

Control

Automatic priority and manual-selection requirements

Installation

Enclosure, rack mounting, altitude and temperature

Compliance

Interfaces, connectors and military / EMC requirements

Documentation and confirmation

The final PXe-ACOS specification, source limits, transfer logic, enclosure arrangement and drawings are confirmed for the selected project configuration.

Discuss your requirement

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