

■ Power Switching & Controls
for *Business-Critical Continuity*™

ASCO Series 230 Automatic Transfer Switch



ASCO


EMERSON.
Network Power

The Recognized Leader in Power Transfer Switch Technology Offers the Most Advanced Transfer Switches in the World.



Product Overview

The Series 230 automatic transfer switch consists of an intelligent controller and a modular load break switch which automatically transfers the load to the emergency power source when it detects under/over voltage, under/over frequency, or phase failure. The switch has three operation positions (source one - center off - source two). The two sources can be isolated in the center off position. A position locking mechanism is also provided.



Application

The Series 230 capacity is up to 400A, available from 220 to 415 volts, 50 and 60Hz, single phase and three phase. Typical applications include office buildings, residential buildings, telecom, hospital, subway, data center, military, transportation, and fire pump applications.

Parameter

Rated Operational Current I _e (A)		32	40	50	63	80	100	125	160	200	225	250	315	400
Rated Insulation Voltage U _i (V)		800									800	800		
Rated Impulse Withstand Voltage U _{imp} (kV)		8									12	12		
Rated Operation Voltage U _e (V)		220, 230, 240, 380, 400, 415												
Rated Frequency (Hz)		50 / 60												
Poles		2, 3, 4												
Rated Short-Time Withstand Current I _{cw} (kA, RMS)		10 (0.1s)									15 (0.1s)	25 (0.1s)		
Rated Short-Circuit Making Capacity I _{cm} (kA, PEAK)		17									31.5	65		
Withstand and Close-On Rating I _q (kA)	When Used With Current Limiting Fuses	65									200	200		
	When Used With Specific Circuit Breakers										150	150		
Making and Breaking Capacity		10 I _e												
Mechanical Operation Performance (cycles)		10,000												
Utilization Category		AC - 33B												
Operation Voltage range (AC)	U _e =220V / 230V / 240V / 380V / 400V	(0.7 ~ 1.2) × U _e												
	U _e = 415V	(0.7 ~ 1.15) × U _e												
EMC Class		Class A												
Wiring Way		Front												
Separate Lock Mechanism		Standard												
Auxiliary Contact		Optional (8 contacts maximum)												



ASCO Series 230 Automatic Transfer Switch Product Features



Performance feature

- Meets or exceeds the requirements of the following regulatory agencies
- EN60947-6-1/IEC60947-6-1: transfer switching
- EN55022: Radiated and Conducted Emission, Class A
- EN61000-3-2: Harmonic Current Emission, Class A
- EN61000-3-3: Limits of Voltage fluctuation and Flicker
- EN 61000-4-5: Immunity to Surge
- EN 61000-4-4: Immunity to Electrical Fast Transient:
- EN61000-4-2: Immunity to Electrostatic Discharge
- EN61000-4-3: Immunity to Radiated Electric Fields
- EN 61000-4-6: Immunity to Continuous Conducted Interference

Structure

- PC Class ATS
- High ability of withstanding lightning strikes (40kA 8/20 μ s)
- Simple reliable mechanism, compact and stylish appearance
- Modular design, convenient operation, easy maintenance
- Three operation positions. Two sources can be isolated in the center-off position

Arc Extinguish

- The utilization category is AC-33B, and the ability of withstand and break is 10 I_e
- Rotating dual contacts design extinguishes the arc quickly and effectively

- Arcing contacts and main contacts are separate, avoids main contacts from being destroyed by an arc
- Clamping contacts are self cleaning wiping action type
- High short-circuit closing ability

Switching Mechanism

- Both automatic and manual operation are available
- Unique contacts design limits contact bounce
- Unique clutch technique makes manual operation easy to do
- Electrical and mechanical interlocks prevent two sources from connecting simultaneously
- Innovative motor circuit protection technique, provides precision control
- Cast steel bevel gear mechanism provides high transmission efficiency, and extends the operation life

Controller

- Different Operating Modes (Source I priority/ No Source priority)
- C2000 has ability to work with external 24VDC power supply
- High frequency switching power supply, and wide power voltage range
- Controller remains operational when power is lost, and avoids data loss
- Diagnosis fault intelligent with self - protection function (Motor-Protection)
- RS485 communication interface is available

ASCO Power Transfer Switch Solutions for
Powerful Peace of Mind



Series 230 Controller Feature Comparisons

C1000 Controller

Voltage and Frequency Sensing

- 3-Phase under and over voltage settings on source I and source II
- Phase lose sensing on source I and source II
- Under and over frequency settings on source I and source II

Time Delays

- Time delay sensing accuracy is $\pm 1\%$
- Transfer time delay can be set manually

Controller Display and Keypad

- LED display
- Touch pad for clearing alarm and manual operation
- Switch position indicator lights
- Source acceptability indicator lights

Operating Modes

- Automatic and manual operation available
- Source I Priority/ No Source Priority

Center-off with time delay and center-off with protection

- The center-off time delay can be set to avoid large current rushes to inductive loads
- Center-off with protection is available to protect critical loads (e.g. Fire Pump)

Remote Control and Communication

- Can control switch remotely (e.g. Position Control, Time Delay, etc.)
- Fire control signal input (24VDC)

Power Supply of Controller

- Operation Voltage (VAC): 220/ 230/ 240/ 380/ 400/ 415

C2000 Controller

Voltage and Frequency Sensing

- 3-Phase under and over voltage settings on source I and source II
- Under and over frequency settings on source I and source II
- Voltage unbalance detection between phases

Time Delays

- Time delay can be set by operating parameter setting menu
- Time delay sensing accuracy is $\pm 1\%$
- Time delay can be set under different working modes
- Transfer time delay can be set manually

Controller Display and Keypad

- LCD display
- Touch pad for programming the features and settings
- Switch position indicator lights
- Source acceptability indicator lights

Operating Modes

- Automatic and manual operation available
- Source I Priority/ No Source Priority

Center-off with time delay and center-off with protection

- The center-off time delay can be set to avoid large current rushes to inductive loads
- Center-off with protection is available to protect critical loads (e.g. Fire Pump)

Events Display

- Event log displays: 100 logged events with time and date of each event, event type and event reason

Remote Control and Communication

- Uses RS485 interface, and supports MODBUS Communication
- Can control switch remotely (e.g. Position Control, Time Delay, etc.)
- Fire control signal input (24VDC)

Power Supply of Controller

- Operation Voltage (VAC): 220/ 230/ 240/ 380/ 400/ 415
- C2000 has ability to work with 24VDC power supply