

Maximum Reliability & Excellent Value

With a SERIES 300 Transfer Switch, you get a product backed by ASCO Power Technologies, the industry leader responsible for virtually every major technological advance in the Transfer Switch industry.

The ASCO SERIES 300 was designed for one purpose—to automatically transfer critical loads in the event of a power outage. Each and every standard component was designed by ASCO engineers for this purpose.

The rugged construction and proven performance of the ASCO SERIES 300 assure the user of many years of complete reliability. The SERIES 300 is even designed to handle the extraordinary demands placed on the switch when starting or restarting stalled motors and switching high inrush loads.

ASCO's SERIES 300 modular, compact design makes it easy to install, inspect and maintain. All parts are accessible from the front so switch contacts can be easily inspected.

Features

- The SERIES 300 is listed to UL 1008 standard for Transfer Switch Equipment and CSA standard C22.2 for automatic transfer switches.
- Meets NFPA 110 for Emergency and Standby Power Systems and the National Electrical Code (NEC) Articles 700, 701 and 702.
- 30 through 3000 amps in a compact design.
- Available to 600 VAC, single or three phase.
- True double-throw operation: The single solenoid design is inherently interlocked and prevents contacts from stopping between sources or from being in contact with both sources at the same time.

UL Listed Withstand & Close-On Ratings

Switch Ratings amps	Available Symmetrical Amperes RMS		
	When Used With Current Limiting Fuses	Maximum Voltage	When Used With Specific Circuit Breakers
30	100,000	480v/60Hz	10,000
70 - 200	200,000	480v/60Hz	22,000
230	100,000	480v/60Hz	22,000
260, 400	200,000	480v/60Hz	42,000
600	200,000	600v/60Hz	42,000
600	200,000	480v/60Hz	50,000
600	200,000	240v/60Hz	65,000
800,1000,1200	200,000	600v/60Hz	65,000
1600, 2000	200,000	600v/60Hz	85,000
2600, 3000	200,000	600v/60Hz	100,000

Notes: 1. Current – limiting fuse should be Class J type through 400 amps: use Class L type above 400 - amp fuse rating
2. Refer to publication 1128 for specific manufacturer's breakers



Fig. 1: ASCO Power Transfer Switch rated 200 amperes shown in Type 3R enclosure

- There's no danger of the SERIES 300 ATS transferring loads to a dead source because the unique ASCO single-solenoid operator derives power to operate from the source to which the load is being transferred.
- Easy-to-read flush-mounted control and display panel provides LED indicators for switch position and source availability. It also includes test and time-delay bypass switches as standard features.
- Standard engine exerciser for weekly automatic testing of engine generator set with or without load.
- Adjustable time-delay feature prevents switch from being activated due to momentary utility power outages and generator dips.
- Supplied with solid neutral termination.
- Optional switched neutral pole available.
- Accessory kits available.
- Available for immediate delivery.
- Now available for service entrance applications. Contact ASCO for assistance.

ASCO[®] SERIES 300 Power Transfer Switches

Designed to Fit Anywhere

The ASCO SERIES 300 product line represents the most compact design of automatic power transfer switches in the industry. With space in electrical closets being at a premium, the use of wall or floor-mounted ASCO Power Transfer Switches assures designers optimum utilization of space.

All transfer switches through 2000 amps are designed to be completely front accessible. This permits the enclosures to be installed flush to the wall and still allows installation of all power cabling and connections from the front of the switch. Cable entrance plates are also standard on the 1600 and 2000 amp units to install optional side-mounted pull boxes for additional cable bending space.



Fig. 2: ASCO Power Transfer Switch rated 200 amperes



Fig. 3: ASCO Power Transfer Switch rated 400 amperes



Fig. 4: ASCO Power Transfer Switch rated 600 Amperes



Fig. 5: ASCO Power Transfer Switch rated 1000 amperes



Fig. 6: ASCO Power Transfer Switch rated 2000 amperes shown in Type 3R enclosure



Fig. 7: ASCO Power Transfer Switch rated 3000 amperes

ASCO[®] SERIES 300 Microprocessor Controller

The ASCO Microprocessor Controller is used with all sizes of Power Transfer Switches. It represents the most reliable microprocessor controller in the industry and includes, as standard, all of the voltage, frequency, control, timing and connectivity functions required for most emergency and standby power applications.



Fig. 8: ASCO SERIES 300 Microprocessor Controller

Voltage & Frequency Sensing

- Adjustable three-phase, close-differential voltage sensing on normal source.
- Normal source pickup voltage is adjustable to 95% of nominal; drop-out is adjustable from 70% to 90% of nominal.
- Frequency sensing on emergency source. Pickup at 95% and dropout at 85% of nominal.

Time Delays

- Adjustable time delay to override momentary normal source outages to delay all transfer switch and engine-starting signals.
- Transfer to emergency time delay—Adjustable from 0 to 5 minutes for controlled timing of load transfer to emergency.
- Retransfer to normal time delay—Adjustable to 30 minutes.
- Five-minute unloaded running time delay for emergency engine generator cool down.
- Four-second time delay to ignore momentary voltage and frequency transients during initial genset loading.

Standard Selectable Features

- Inphase monitor to transfer motor loads, without any intentional off time, to prevent inrush currents from exceeding normal starting levels.
- Engine exerciser to automatically test backup generator each week—Includes control switch for testing with or without load.
- Selective load disconnect, double-throw contact to operate at an adjustable 0 to 20 second adjustable time delay prior to transfer and reset 0 to 20 seconds after transfer.
- 60 Hz or 50 Hz selectable switch.
Three-phase/single-phase selectable switch.

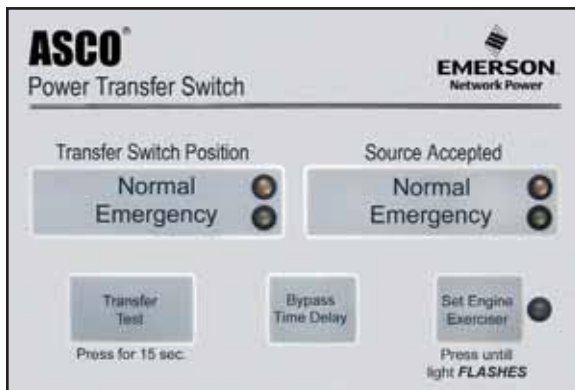


Fig. 9: Door-Mounted Control & Display Panel

Control and Display Panel

- Easy-to-read flush-mounted control and display panel provides LED indicators for switch position and source availability. It also includes test and time-delay bypass switches.

Remote Control Features

Terminal provisions for connecting:

- Remote test switch.
- Remote contact for test or for peak shaving applications. Circuit will be automatically bypassed if emergency source fails.
 - Inhibit transfer to emergency.
 - Remote time-delay bypass switch.

ASCO[®] SERIES 300 Microprocessor Controller

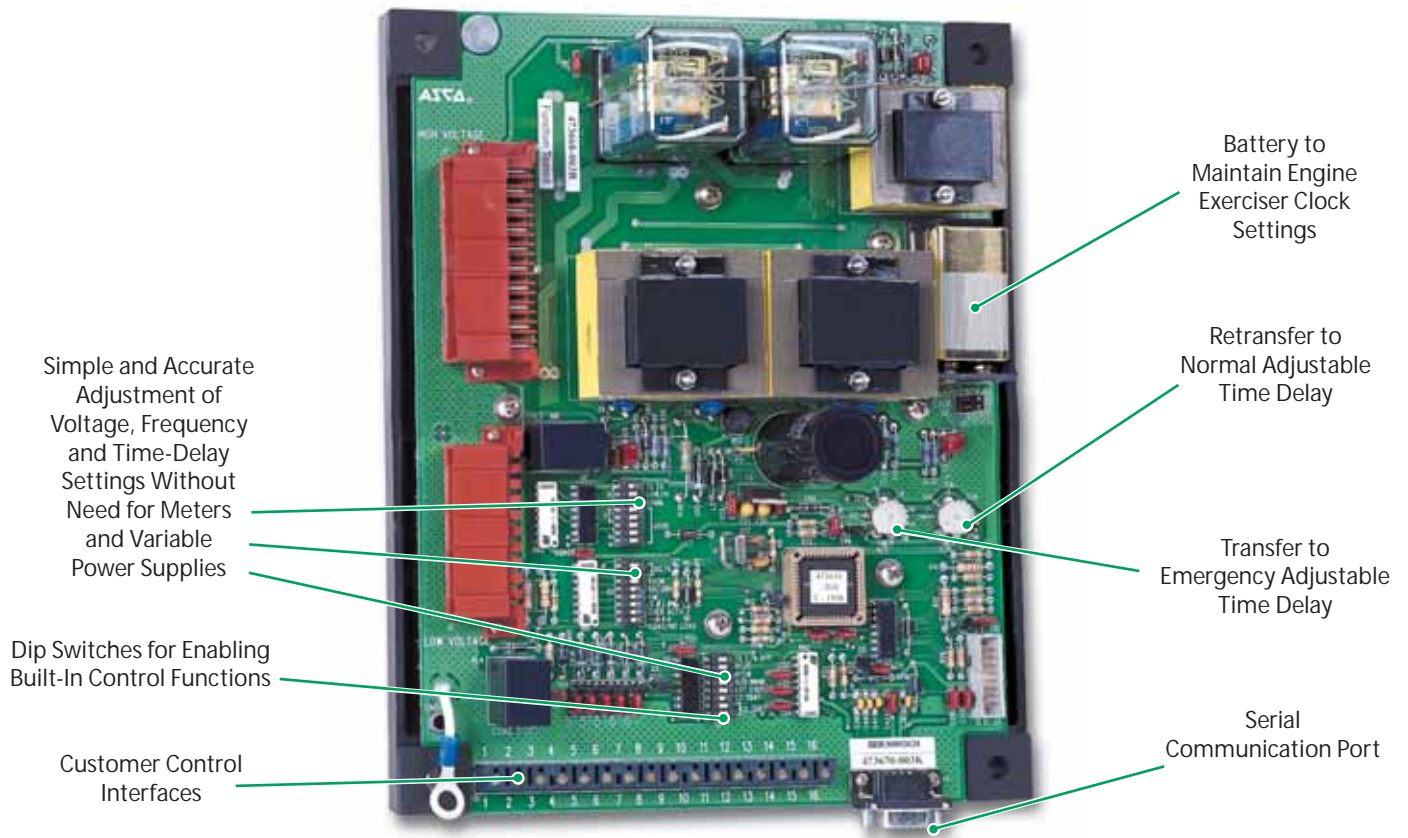


Fig. 10: Microprocessor Controller

Performance Features

- 600 volt spacing per UL and CSA standards.
- Interfacing relays are industrial grade, plug-in type with dust covers.
- Meets or exceeds the requirements for Electromagnetic Compatibility (EMC).
 - ANSI C37.90A/IEEE472 Voltage Surge Test
 - NEMA ICS-109.21 Impulse Withstand Test
 - Digital circuitry isolated from line voltages
 - IEC 801-2 Electrostatic discharge (ESD) immunity
 - ENV50140 and IEC 803-1: Radiated electromagnetic field immunity
 - IEC 801-4 Electrical fast transient (EFT) immunity
 - ENV50142 Surge transient immunity
 - ENV50141: Conducted radio-frequency field immunity
 - EN55011: Group 1, Class A conducted and radiated emissions
 - Optically isolated RS-485 Serial Port
 - EN61000- 4-11 voltage dips and interruptions immunity

ASCO[®] SERIES 386 Non-Automatic Power Transfer Switches

User-Initiated Control

ASCO 386 non-automatic transfer switches are generally used in applications where operating personnel are available and the load is not an emergency type requiring automatic transfer of power. The power-switching mechanism and controller is the same hardware used on the highly reliable ASCO SERIES 300 transfer switches. ASCO 386s are furnished as standard with a momentary-type selector switch to initiate transfer and retransfer. They can also be arranged for remote control via ASCO's connectivity products.



Fig. 14: ASCO 386 400 Amp Type 1 Enclosure w/Optional Accessories 9C, 9D Source Availability Lights

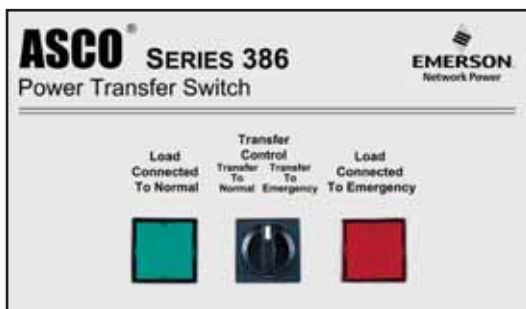


Fig. 15: Control and Display Panel

Electrical Features:

- Listed under UL 1008, CSA certified:
 - UL listed through 480 VAC.
 - CSA certified through 600 VAC.
- Door-mounted selector switch for local, manually initiated electrical control.
- Sizes from 30 through 3000 amps. Available to 600 VAC, 50 or 60 Hz.
- Rated for all classes of load transfer. 100% tungsten load ratings through 400 amps.
- Designed for emergency and standby applications.
- Same withstand and close-on rating as SERIES 300.

Standard Selectable Control Features:

- Inphase monitor to transfer motor loads between live sources, without any intentional off time, to prevent inrush currents from exceeding normal starting levels.
- Selective load disconnect, double-throw contact to operate at an adjustable 0 to 20 second time delay prior to transfer and reset 0 to 20 seconds after transfer.
- High/Low nominal voltage setting. Allows user to adjust for source low reduced voltage conditions in remote areas.
- 60 Hz or 50 Hz selectable switch.
- Single/Three-phase selectable switch.

Control Features:

- Switch position indicating signal lights.
- One auxiliary contact closed when transfer switch is connected to normal and one closed on emergency, standard feature 14A/14B.

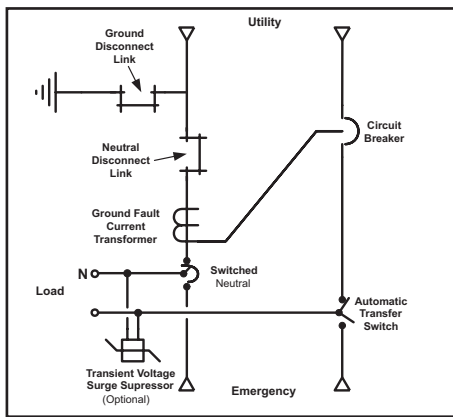
Optional Accessories:

- 6Q Key-operated, momentary source selector switch furnished instead of the standard selector switch.
- 9C, 9D Source availability lights to provide operator with a local indication of power source availability.
- Accessory 14AA/14BA auxiliary contacts to indicate position of main contacts. Two (2) for normal position and two (2) for emergency position (one set is standard).
- 72A Serial module (5110) is used to allow local or remote communications with ASCO PowerQuest[®] VPi or SiteWeb[™] connectivity products.
- Special Enclosures (Specify by appropriate code in catalog number):
 - Type 3R: Raintight
 - Type 4: Weatherproof
 - Type 12: Oil Tight
- 72E Connectivity Module 5150 is used to bring several different serial devices that communicate at different baud rates and with different protocols to a common Ethernet media.

ASCO[®] SERIES 300SE Power Transfer Switch



Fig. 16: ASCO Service Entrance Power Transfer Switch rated 3 Pole 800 amperes shown in Type 3R enclosure



One line diagram of a typical service entrance rated transfer switch available in Solid or Switched Neutral. *Ground fault trip protection provided on sizes of 1000 amperes and above

The ASCO Service Entrance Power Transfer Switch

Combines automatic power switching with a utility circuit breaker as a disconnect device. The power transfer switch meets all National Electrical Code requirements for installation as service entrance equipment.

Service entrance rated transfer switches generally are installed at facilities that have a single utility feed and a single emergency power source. A circuit breaker serves as the utility disconnect and links are provided to connect both neutral and ground conductors.

The ASCO 300SE Service Entrance Automatic Transfer Switch uses the same reliable transfer switching mechanism and controller as the SERIES 300 product platform, and also includes a utility circuit breaker as a disconnect device.

Product Features:

- Suitable for use as service entrance equipment.
- The ASCO SERIES 300SE is listed to UL 891 standard for Dead-Front Switchboards, and meets all NEC requirements for service entrance equipment.
- Automatic Transfer Switch is listed to UL 1008 for total system loads.
- Sizes available from 70 through 3000 amps. Available to 600 VAC, 50 or 60Hz, single or three phase.
- Circuit Breaker disconnect on the normal for isolation of transfer switch and other electrical equipment.
- Disconnect link on Neutral and Ground. Silver plated copper ground and neutral bus.
- Solderless screw type terminals for External Power Connections.
- Ground fault trip protection provided on sizes of 1000 amperes and above.
- UL approved Type 1 enclosure.
- UL approved Type 3R secure enclosure.
- Available with solid or switched neutral.
- Optional TVSS Available on Normal, Emergency and/or Load.



Fig. 17: ASCO Service Entrance Power Transfer Switch rated 2 pole 200 amperes shown in reduced type 3R enclosure where space is limited

ASCO[®] SERIES 300SE Transfer Switch Ordering Information

To order an ASCO SERIES 300SE Power Transfer Switch, complete the following catalog number:

3AUS + B + 3 + 400 + N + 1 + X + C + 11CD + 240V/60											
Product	Neutral Code	Phase Poles	Amperes Continuous Rating	Voltage Code		Controller	Options	Enclosure		Optional Accessories	Specific Volt & Freq
				A ³	B ³			Blank	Open Type		
3AUS	B ¹ Switched Neutral	2 poles, 1Ø 3 poles, 3Ø	70, 100, 150, 200 ⁹ , 225 ⁹ , 250, 400, 600, 800, 1000, 1200, 1600, 2000 2500, 3000	A ³	115	1	Insert "X" If optional accessories are required	C	Type 1 (Standard)	11BG Programmable Engine Exerciser	This information is necessary to allow correct control settings prior to shipment
				B ³	120			M	Type 3R Secured Enclosure	14AA/14BA Auxiliary Contacts (2 sets)	
				C	208			N	Type 4 Secured Enclosure ²	44G Strip Heater w/Thermostat	
				D	220			Q	Type 12 Secured Enclosure ²	72A Serial Module	
				E	230					72E Connectivity Module	
				F	240					73A Surge Suppressor	
				H	380					42TH ⁵ Reduced Type 3R Secured	
				J	400						
				K	415						
				L	440						
				M	460						
				N	480						
				Q	575						
				R	600						

Notes: 1. Specify neutral code "C" for 250 and 400 amperes only.
 2. Available 70-1000 ampacity. Use Type 3R for 1200-3000 amp applications.
 3. 115-120 volt available 150-400 amps only.
 4. A solid neutral is standard on 3AUS.
 5. For switch sizes 70 - 225 amperes only
 6. 200, 225 amp rated switch suitable for use with copper cable only.



Fig. 18: SERIES 300 L Power Transfer Load Center

The ASCO Power Transfer Load Center

Everything that is needed to protect sensitive loads from power outages and transients is in one package, the ASCO SERIES 300 Automatic Power Transfer Switch with microprocessor digital controller. Versatile Square D Load Distribution Panel, and protective transient voltage surge suppression for normal and emergency.

ASCO Automatic Transfer Switches are the standard of the industry and represent the most advanced technology in transferring loads between two power sources.

Available with 200 or 400 Amp rating, 120/240 VAC 60 hz single phase, 3 wire or 120/208 VAC, 60 hz three phase, 4 wire.

The PTLC includes a 42-position load distribution panel. Main circuit breakers provide overcurrent protection and disconnect for convenient and safe serviceability. The shallow profile facilitates installation.

When power fails, the automatic transfer switch follows user-set time delays to start the generator, transfer the load to the generator, reconnect to utility power and shut down the generator after generator cool down.

Features

- Power Transfer Load Center is Service Entrance Rated and listed to UL67
- Automatic Transfer Switch is listed to UL1008, the standard for Transfer Switch Equipment, and meets NFPA 110 for Emergency and Standby Power Systems and the National Electrical Code (NEC) articles 700, 701 and 702. Also CSA certified to CSA 22.2 No. 178-1978
- True double-throw contacts eliminate simultaneous connection to utility and generator
- Adjustable close differential voltage sensing on the normal source
- Automatic engine exerciser to test the generator with or without loads. This is optional accessory 11BG on standard SERIES 300 products
- Pre-wired and factory tested for easy installation
- Space saving modular design provides easy access and serviceability
- Convenient terminals for connecting neutral and ground conductors
- Available in Type 1 (indoor) or Type 3R (non-secure outdoor) enclosures

Transient Voltage Surge Suppression (TVSS)

Technology

Parallel Arrayed Metal Oxide Varistors

Maximum continuous operating voltage (MCOV)

125 Percent of Line Voltage

Mode Protection

All mode protection (L-N, L-G, L-L, N-G)

Surge Current

90kA (8/20us) Transient waveform for category C

Surge Voltage Rating

(8/20us), 400v (L-N, L-G, N-G, 700volts (L-L)

OverCurrent Protection

200 amps

400 amps

Alarming

Remote - Two (2) Form C contacts rated 5 amps at 120 vac

Visual - LED protection indicators for each phase

Optional Features

- Three source arrangement (stationary and portable generators)
- Generator single pole receptacles
- Generator multipole receptacle