

ASCO® 7000 Series Ordering Information

➔ Cross Reference RA Part PP8170

To order an ASCO 7000 Series Automatic Transfer Switch, complete the following catalog number:

➔ Mfr. Part Number 7ATSA3260R5

7 **A** **TS** + **A** + **3** + **400** + **N** + **5X** + **C**

| | | Product | | Neutral Code | | Phase Poles | Amperes | | Voltage Code | | Grp Code | Cabinet | | |
|----------|---------------|------------|---------------------------|--------------|---------------|---------------------|---------|------------|--------------|-----|----------------|----------|-------------------|-------------------------------------|
| A | Automatic | TS | Conventional 2-Position | --- | No Neutral | 2 | 30 | 1000 | A | 115 | 5 5X | --- | No Cabinet | |
| | | TB | Open Transition Bypass | A | Solid Neutral | 3 | 70 | 1200 | B | 120 | | | | |
| N | Non-Automatic | CTS | Closed Transition | | | | 100 | 1600 | C | 208 | | C | Type 1 enclosure | |
| | | CTB | Closed Transition Bypass | | B | Switched Neutral | | 150 | 2000 | D | 220 | | D | Type 1 gasketed |
| | | DTS | Delayed Transition | | C | Overlapping Neutral | | 260 | 3000 | E | 230 | | E | Type 2 enclosure |
| | | DTB | Delayed Transition Bypass | | | | | 400 | 4000 | F | 240 | | F | Type 3R enclosure |
| | | | | | | | | 600 | | G | 277 | | G | Type 4 enclosure |
| | | | | | | | | 800 | | H | 380 | | H | Type 4X enclosure (stainless steel) |
| | | | | | | | | I | 400 | | | I | Type 7 enclosure | |
| | | | | | | | | J | 415 | | | J | Type 12 enclosure | |
| | | | | | | | | K | 440 | | | | | |
| | | | | | | | | L | 460 | | | | | |
| | | | | | | | | M | 480 | | | | | |
| | | | | | | | | N | 550 | | | | | |
| | | | | | | | | O | 575 | | | | | |
| | | | | | | | | R | 600 | | | | | |

Note: Switches rated 30-150, 600-2000 amps available with 2, 3 or either switched neutral (4 poles) or overlapping neutral (optional).
 For 4 pole applications on switches rated 260 to 400 amps and 3000 to 4000 amps specify overlapping switched neutral (optional).
 Overlapping neutral is not available on delayed transition transfer products.

**The Example Catalog Number above is 7ATSA3400N5XC
 (X could be for Accessory 85L ASCO Data Monitor connected to load).**

7A TS, 7N TS, 7A DTS, 7A CTS, 7N DTS, 7N CTS

7A TB, 7N TB, 7A DTB, 7A CTB, 7N DTB, 7N CTB

Sizes of UL-Listed Solderless Screw-Type Terminals for External Power Connections

Sizes of UL-Listed Solderless Screw-Type Terminal for External Power Connections

| Switch Rating amps | Max # of Conductors per Terminal | Range of AL-CU Conductor Sizes |
|------------------------|----------------------------------|--------------------------------|
| 30, 70, 100 | One | # 14 to 2/0 AWG |
| 150 | One | #8 to 3/0 AWG |
| 240-400 | One | #4 AWG to 600 MCM |
| | Two | #1/0 AWG to 250 MCM |
| 600-800 | Three | #2 AWG to 600 MCM |
| 1000-1200 ¹ | Four | #1/0 AWG to 750 MCM |
| 1600-2000 | Six | #1/0 AWG to 750 MCM |
| 3000-4000 ² | Suitable for Bus Bar Connection | |

| Switch Rating amps | Max # of Conductors per Terminal | Range of AL-CU Conductor Sizes |
|------------------------|----------------------------------|--------------------------------|
| 150,260,400 | One | # 4 AWG to 600 MCM |
| | Two | # 1/0 AWG to 250 MCM |
| 600-800 | Three | # 2 AWG to 600 MCM |
| 1000-1200 ¹ | Four | # 1/0 AWG to 750 MCM |
| 1600-2000 ¹ | Six | # 1/0 AWG to 750 MCM |
| 3000 ¹ | Eight | # 2 AWG to 600 MCM |
| 4000 ¹ | Twelve | # 2 AWG to 600 MCM |

Notes: 1. All main terminals are rear connected.

- Notes:
- Unit is designed for top cable entry of emergency and load and bottom entry of normal. Optionally, the switch may be supplied with reverse source and/or bottom entry load. A cable pull box is also available for all top or bottom cable access (optional).
 - All main terminals are rear connected. 3000 and 4000 amp switches are arranged for bus bar connection. Contact ASCO if provisions for cable connection are required.

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

7000 Series

ASCO Automatic Transfer Switches are the standard of the industry. High speed transfer of loads between alternate sources of power, regardless of ampacity size, is achieved by a reliable, field proven solenoid operating mechanism. When combined with a programmable microprocessor controller with keypad and LCD display, it offers the most advanced method of transferring all types of loads, such as, motors, electronic drives, UPS's and microprocessor based systems. It is the only true double throw, inherently interlocked transfer switch in the industry and is available in ampacity sizes from 30 through 4000 amperes. 7000 Series automatic transfer switches are available open or enclosed, with the largest selection of optional accessories offered anywhere.



Fig. 1 7000 Series Automatic Transfer Switch rated 3 pole 1200 amperes (shown with optional data monitor).

7000 Series Automatic Transfer Switches Product Features

- Conventional two-position transfer configuration, plus closed and delayed transition modes of operation. All configurations available with either automatic or non-automatic control.
- Qualified and listed to UL 1008 and CSA automatic transfer equipment standards.
- Independently qualified and listed to IEC 60947-6-1, CE and Kema Keur marked (optional).
- Rated up to 600 VAC, 30 through 4000 amperes.
- Reliable and field proven solenoid operating mechanism.
- High withstand and close-on ratings including 30 cycle withstand current rating for optimum flexibility in circuit breaker coordination (1000-4000 amperes).
- Solid, switched, or overlapping neutral conductor options.
- Front replaceable main and arcing contacts (600-4000 amperes).
- Programmable microprocessor controller with keypad and LCD display.
- Centrally located terminal block for customer control connections (260-4000 amperes).
- Heavy-duty, 16mm, industrial grade control switches and indicating lights.
- Switch position indicators and true source acceptability lights.
- Standard ground lug or ground bus connection.
- Four auxiliary contacts, two contacts closed when switch is in normal position and two contacts closed when switch is in emergency position.
- Local/remote serial communications capability for interfacing with ASCO PowerQuest products.

ASCO® 7000 Series Switching Solutions



Fig. 2 Closed-Transition Bypass Transfer Switch rated 4 pole 800 amperes.

Closed-Transition Transfer Switching

ASCO Automatic Closed-Transition Transfer Switches feature main contacts that overlap, permitting the transfer of electrical loads without power interruption. The switch transfers in a make-before-break mode if both sources are within acceptable parameters. Control logic continuously monitors source conditions and automatically determines whether the load transfer should be open (conventional non-overlap mode) or closed transition. Available 150 through 4000 amperes.

Closed-Transition Transfer within 5 electrical degrees is achieved passively. Active control of the engine generator is not required. Therefore, no additional control wire runs are required between the ATS and engine generator set governor. Plus, protective relaying may not be required under normal operation since the contact overlap time is less than 100 milliseconds (consult your local utility on protective relay requirements).

Failure to synchronize annunciation and extended parallel time protection is built-in to all 7000 Series closed transition controls to prevent abnormal operation.

Delayed Transition Transfer Switching

ASCO Delayed Transition Transfer Switches are designed to provide transfer of loads between power sources with an intentional load disconnect position for an adjustable period of time. Applications include older style variable frequency drives, rectifier banks, and specialized medical equipment.

- Available 150 through 4000 amperes.
- Utilizes reliable, field proven solenoid operating mechanisms.
- Mechanical interlocks to prevent direct connection of both sources.
- Indicator light (16mm, industrial grade type LED) for load disconnect position.
- Adjustable time delay for load disconnect position.



Fig. 3 Delayed Transition Transfer Switch rated 4 pole 1200 amperes.

ASCO® 7000 Series Switching Solutions

Non-Automatic Transfer Switching

ASCO Non-Automatic Transfer Switches are electrically operated units which are operated with manual control switches mounted locally or at remote locations.

- Sizes from 30 through 4000 amperes.
- Microprocessor based controller provides for addition of optional accessories.
- Controller prevents inadvertent operation under low voltage conditions.
- Low control circuit operating currents allow for long line runs between remotely mounted manual control switches and the transfer switch.
- Source acceptability lights inform operator if sources are available to accept load.
- Standard inphase monitor can be activated for transferring motor loads.



Fig. 4 Non-Automatic operated, electrically operated 400 ampere switch shown in Type 1 enclosure.

Withstand and Close-On Ratings for all 7000 Series Products

| Switch Rating amps | UL 1008 Withstand and Close-On Ratings at 480 Volts AC | | | | | 30 Cycles Long Time Withstand Ratings |
|-----------------------|--|----------------|-------|----------------------------|-------------------------|--|
| | Current-Limiting Fuse Rating | Max. Fuse Size | | Specific Breaker Rating | "Any" Breaker Rating | |
| | | amps | types | | | |
| 30 | 100,000 | 60 | J | 10,000 | 10,000 | N/A |
| 70, 100, 150 | 200,000 | 200 | J | 22,000 | 10,000 | N/A |
| 150*, 260, 400 | 200,000 | 600 | J | 42,000 | 35,000 | N/A |
| 600, 800 | 200,000 | 1200 | L | 65,000 | 50,000 | N/A |
| 1000, 1200 | 200,000 | 2000 | L | 85,000 | 85,000 | 65,000 |
| 1600, 2000 | 200,000 | 3000 | L | 100,000 | 100,000 | 65,000 |
| 3000, 4000 | 200,000 | 6000 | L | 100,000 | 100,000 | 65,000 |

Notes: All values are available symmetrical RMS amperes and tested in accordance with the withstand and close-on requirements of UL 1008. See publication 1128 for more information on withstand and close-on ratings for ASCO transfer switches. Application requirements may permit higher withstand ratings for certain size switches (Contact ASCO).

* 150 amp 7000 Series in bypass-isolation configurations have higher WCR as indicated.

ASCO® 7000 Series Switching Solutions

Automatic Transfer Bypass-Isolation Switching

ASCO Automatic Transfer & Bypass-Isolation Switches are available in open transition, closed transition and delayed transition designs. The bypass and isolation features allow power transfer switches to be inspected, tested, and maintained without any interruption of power to the load.



Fig. 5 Bypass-Isolation Transfer Switch rated 4 pole 2000 Amperes.

- Available 150 to 4000 amperes.
- Bypass switch and transfer switch have identical electrical ratings.
- Heavy duty mechanical interlocks prevent undesirable operation.
- Bypass contacts carry current only during bypass mode.
- Allows bypass-isolation without load interruption.
- Transfer switch is drawout design for ease of maintenance.
- Bypass and isolation handles are permanently mounted. The bypass switch has dead front quick-make, quick-break operation for transferring of loads between live sources.
- Bypass switch is fully rated for use as a manual 3-position transfer switch.
- Bypass and isolation functions are simple, requiring a total of two operating handles.
- No toggle switches, push buttons, selector switches or levers are required for bypass-isolation operation.
- Mechanical flag indicators show bypass and transfer switch positions.

Transfer Switch Drawout Features (1000-2000 amperes)

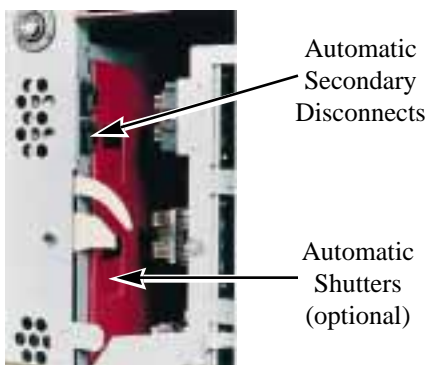


Fig. 6 Bypass-Isolation Transfer Switch secondary disconnects and optional automatic shutters.

- Automatic secondary disconnects remove all control power as switch is withdrawn.
- Drawout carriage provides for easy transfer switch maintenance and/or removal via commercially available breaker hoists.
- For optional transfer switch lifting yoke, specify accessory 82B.
- For optional automatic shutters which close when the transfer switch is withdrawn to provide bus isolation, specify accessory 82C.

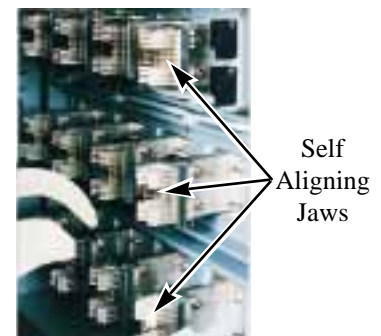


Fig. 7 Bypass-Isolation Transfer Switch Self Aligning power Jaws.

ASCO® 7000 Series Switching Solutions

Bypass and Isolation Handles - Simple as 1, 2, 3



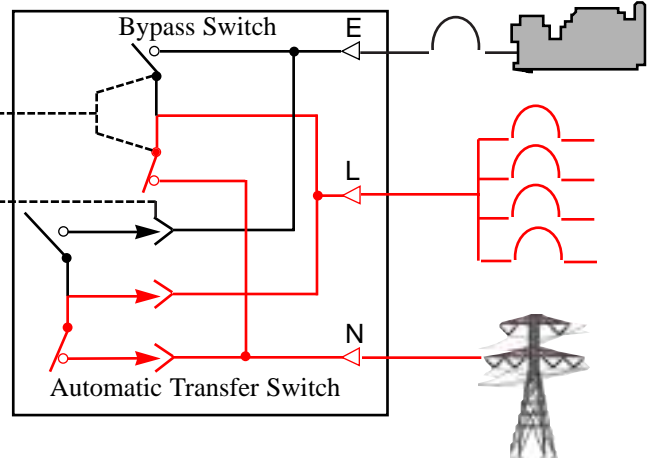
Fig. 8 Bypass-Isolation Switch user interface (1000-2000 amperes shown).

Bypass to Normal

Push in bypass handle and turn it clockwise

Bypass Handle
Isolation Handle

1

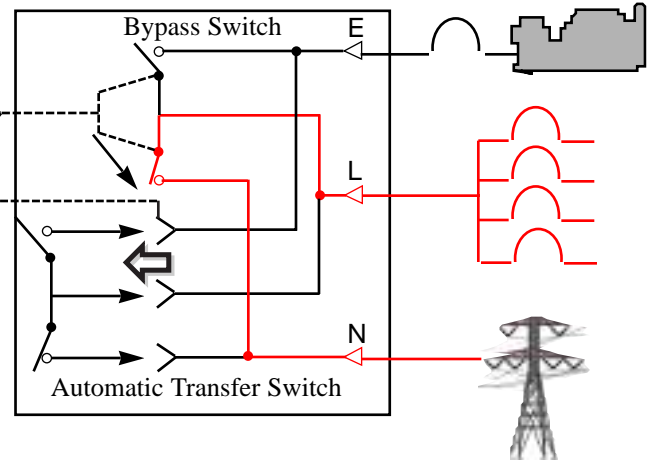


Test Position

Turn isolation handle counter clockwise until window shows "Test"

Isolation Handle

2



Isolation Position

Turn isolation handle counter clockwise until window shows "Isolate"

Isolation Handle

3

