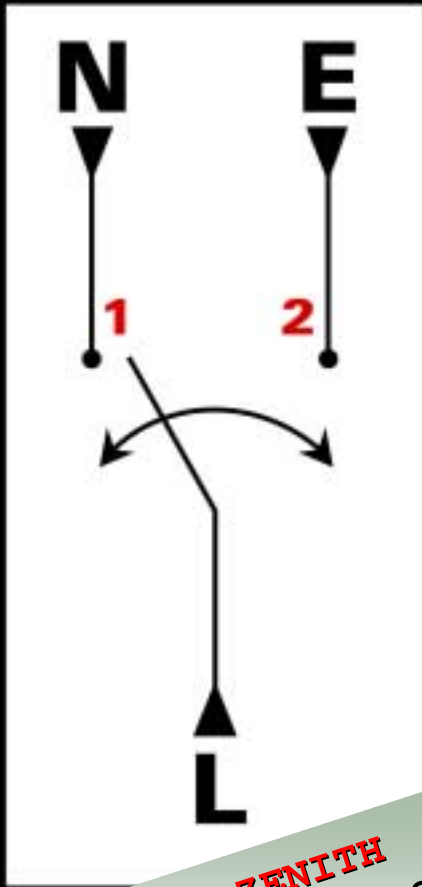


Typical Transfer Switch Types: Power Contactor

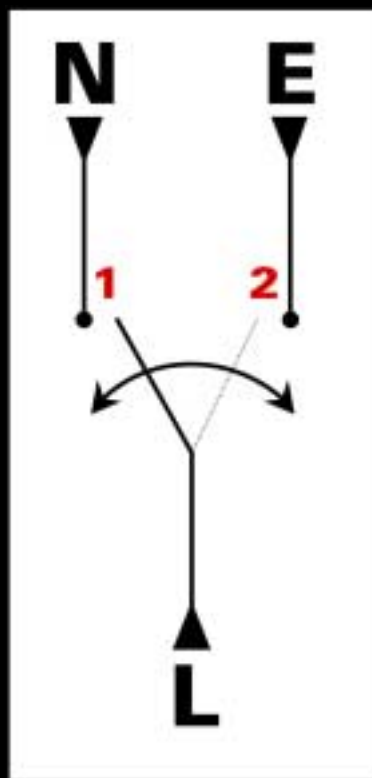


- Newer technology, yet time proven
- Limited to sophisticated controls available
- Standard double-throw type mechanism
- Dedicated design for source switching
- Inherent mechanical interlock
- Usually solenoid operated (fast)
- Low, medium, or high withstand ratings
- Rated for on-load switching in auto mode
- Silver contacts common
 - Silver alloy resists welding
- High endurance ratings
- Available in a number of unique operating modes to better match application needs

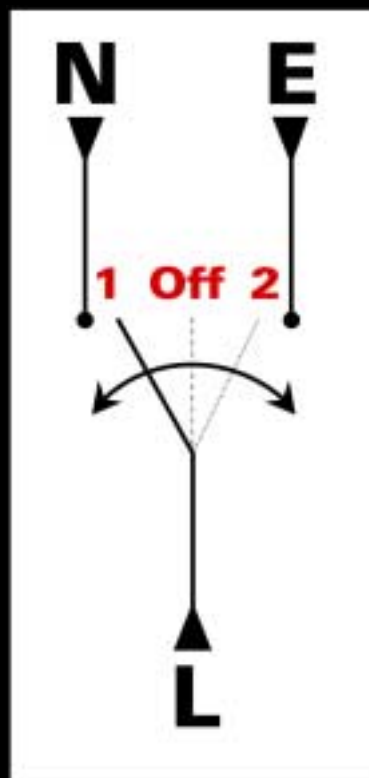
GE ZENITH
40-4000 Amps
UL Listed,



Typical Transfer Switch Types: Power Contactor Style

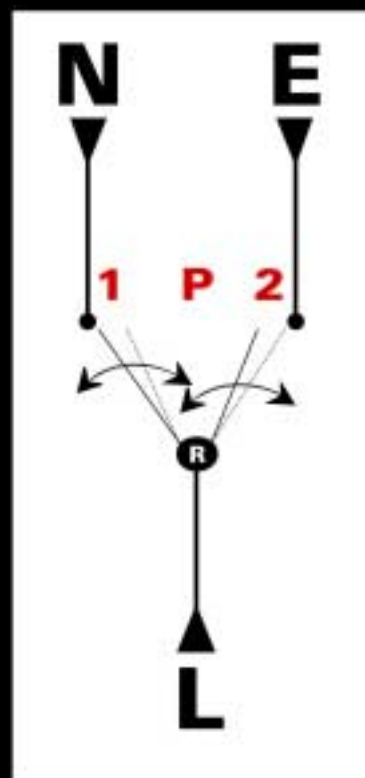


**Standard
Transition**
(No Center
Position)



**Delayed
Transition**
(With Center OFF
Position)

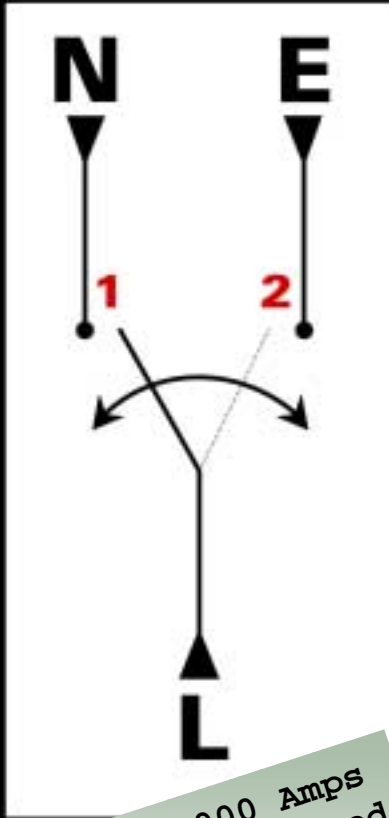
NOTE: "N" Position
indicates
Neither Source



Closed Transition
(Make-Before-Break
Operation)

NOTE: "P" Position
indicates both sources
paralleled for 5 cycles

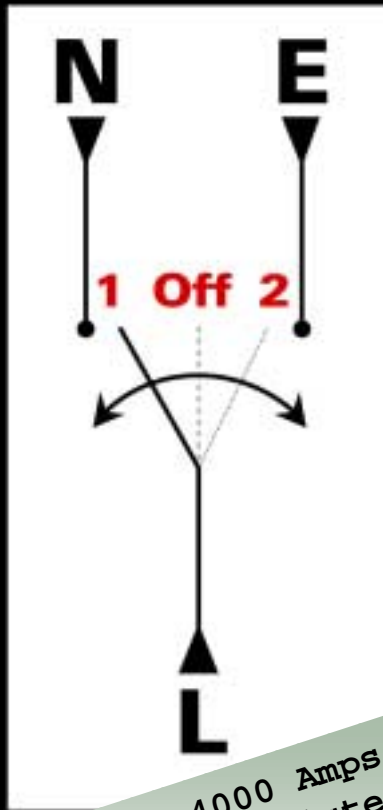
Transfer Modes: Standard Transition



40-4000 Amps
UL 1008 Listed
IEC 60947-6-1
w/EMC

- ∪ Std. double-throw type mechanism with single-stroke action
- ∪ Two position ATS
 - λ Either "Normal" or "Emergency" positions
 - λ No center position
- ∪ Inherent mechanical interlock
- ∪ Contact transfer times are 100 msec = 5 electrical cycles at min. settings
- ∪ General application ATS – multipurpose
 - λ (except large motor load system)

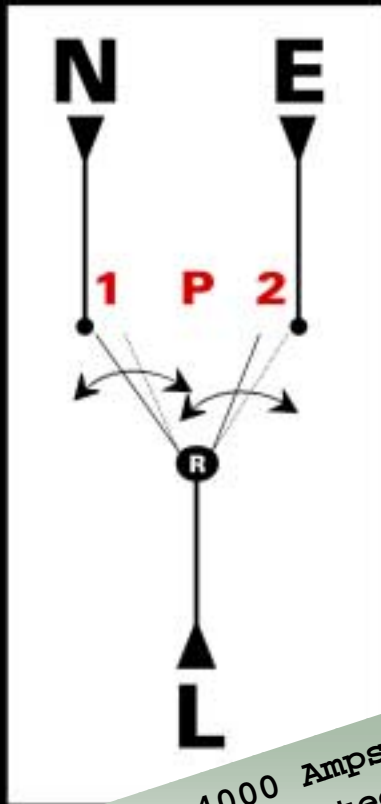
Transfer Modes: Delayed Transition



40-4000 Amps
UL 1008 Listed
IEC 60947-6-1
w/EMC

- Std. double-throw type mechanism
- Three position ATS
 - Either "Normal" or "Emergency" or Center "OFF" position
- Inherent mechanical interlock
- Contact transfer times are adjustable 2 seconds to 2 minutes
- Used primarily with large motor or inductive loads
 - (to allow coast or die-down before transfer)

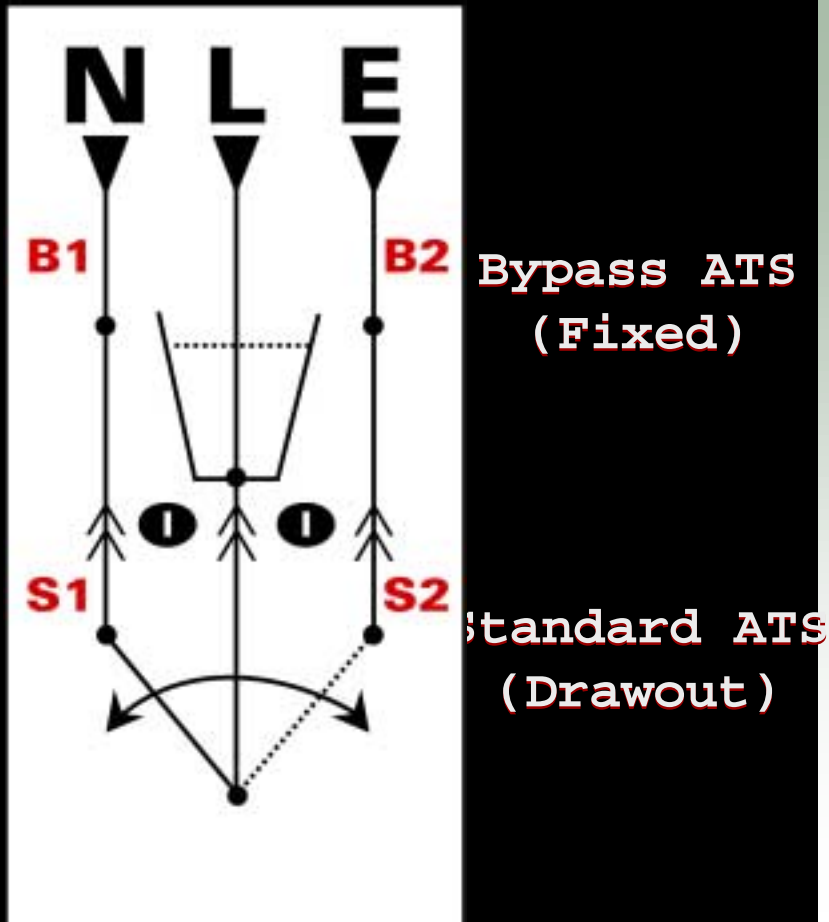
Transfer Modes: Closed Transition



100-4000 Amps
UL 1008 Listed
IEC 60947-6-1
w/EMC

- Complete mechanism and relaying for "Make-Before-Break" operation
- Overlapping mechanism allows new source to close before opening last source (as shown by the "P" position = Paralleled)
- Passive synchronization parallels both sources for 5 cycles (100 msec)
 - R4 synch check relay
- Standard double-throw type mechanism
- Primary uses: critical or electronic loads

What is Bypass / Isolation?



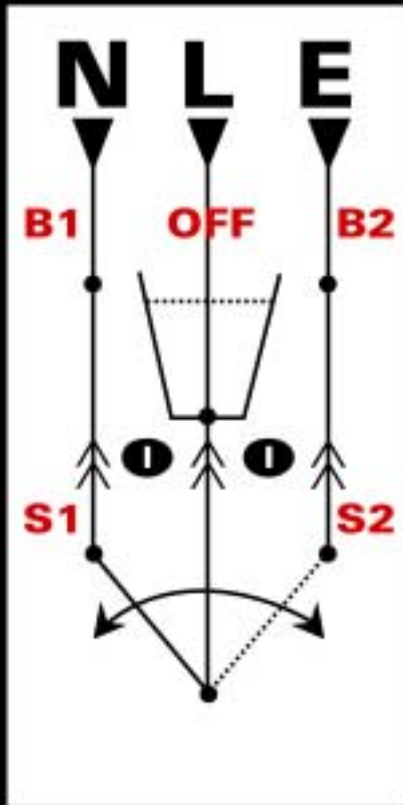
Basically, you have two ATS bussed in Parallel; both are fully functional. One switch is drawout and used for regular operation as a normal ATS. The other switch is fixed and used only as the Bypass ATS when the regular ATS is removed for maintenance. The twin ATS are electrically interlocked to prevent accidental closure of both sources.

Why Bypass / Isolation?

- o Allows you to perform regular maintenance without interrupting service
- o Allows you to remove standard ATS switch for inspection
- o Eases time constraints for maintenance:
 - λ You can work off-line at your convenience

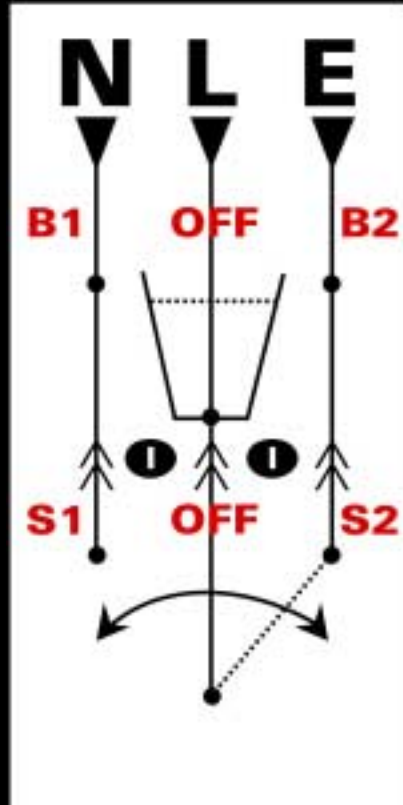
GE Zenith Unique Feature: Only **GE Zenith** supplies two fully functional ATS; in the event of a power failure during bypass, the ZBTS will automatically start the generator and allow you to transfer the load!

Typical Transfer Switch Types: Power Contactor Bypass / Isolation



**Standard
Transition**

(No Center
Position)

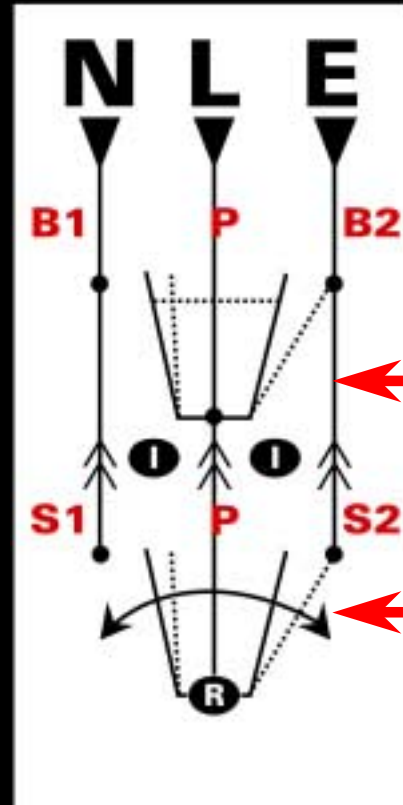


**Delayed
Transition**

(With Center OFF Position)

NOTE: "OFF" Position
indicates

Neither Source connected



Closed Transition

(Make-Before-Break Operation)

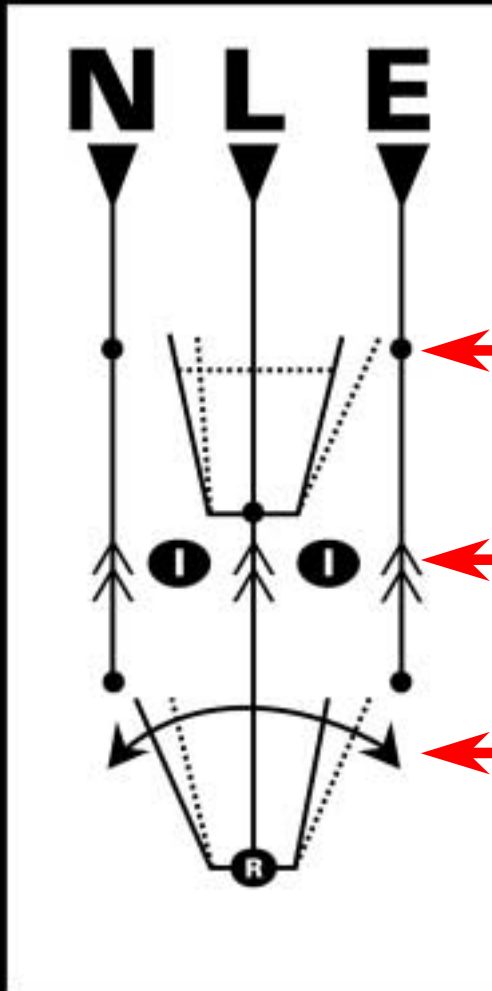
NOTE: "P" Position indicates
both sources paralleled for 5
cycles

GE ZENITH
Bypass ATS
100-4000 Amps
UL 1008 Listed
IEC 60947-6-1
w/EMC

Bypass
ATS

Standard
ATS

Typical Closed Transition: Transfer Bypass / Isolation Switch



Bypass ATS

(used during bypass operation only)

Isolation Contacts

(via typical draw-out construction)

Closed Transition ATS

(used for regular service)