

# Transfer Switches

## LT III Series - Automatic

30 to 260 Amps



### Description

The LT III Automatic Transfer Switch combines reliability and flexibility in a small, economical package for transferring loads between a utility and a generator set. Available in 3-pole models.

The control monitors utility and emergency standby generator set power. When utility power fails or is unsatisfactory, the control starts the generator set and transfers the load from the utility to the generator set. Once utility power returns, the switch automatically transfers the load back to the utility.

High pressure silver alloy contacts withstand thousands of switching cycles without burning, pitting or welding. They require no routine contact maintenance and provide 100% continuous current ratings.

### Features

**Transfer Action** - Independent break-before-make action positively prevents dangerous source-to-source connections.

**Positive Interlocking** - Mechanical and electrical contactor interlocking prevents source-to-source connection through power or control wiring.

**Auxiliary Contacts** - One Form A and one Form B contact (for each source) are provided for customer use. Rated at 10 A continuous and 600 VAC maximum.

**Electronic Control** - Reliable digital electronic control system with surge voltage isolation, under-voltage monitoring on each power source, four standard normal/emergency source time delays, and diagnostic LEDs. Two control packages are available.

**Easy Service/Access** - The unit is equipped for ease of service and accessibility. These features include convenient plug connections, door mounted controls, ample access space and compatible terminal markings

**Certifications** - Onan LT III Transfer Switches are certified to a wide variety of industry standards.

**Warranty** - Onan offers single-source responsibility at both the factory and distribution levels for warranty, service and parts support.

## Control Packages

A choice of two control packages allows flexibility for determining the most suitable level of control for a given application:

Package A Control	Package B Control
<b>Time Delay Start:</b> 3 sec (fixed)	<b>Time Delay Start:</b> 0 -15 sec (adjustable)
<b>Transfer Time Delay:</b> 3 sec (fixed)	<b>Transfer Time Delay:</b> 2 - 120 sec (adjustable)
<b>Retransfer Time Delay:</b> 5 min (fixed)	<b>Retransfer Time Delay:</b> 6 sec to 30 min (adjustable)
<b>Stop Delay:</b> 5 min (fixed)	<b>Stop Delay:</b> 2 sec to 10 min (adjustable)
<b>Undervoltage Sensing:</b> Single Phase on Normal and Emergency -Pickup 85% of Nominal -Dropout 75% of Pickup	<b>Undervoltage Sensing:</b> Three Phase Differential Sensing on Normal, Single Phase on Emergency - Pickup: 85 - 100% of Nominal (adjustable) - Dropout: 75 - 98% of Pickup (adjustable)
<b>Remote Test Terminals</b>	LED status indicators for Source Available and Switch Position on Normal and Emergency Remote Test Terminals Momentary Test Switch Retransfer Bypass Switch 7-day Exerciser Clock with or without Load Auto/Manual retransfer

## Time-Delay Functions

**Start** - Prevents nuisance generator set starts in the event of momentary power system variation or loss.

**Transfer** - Allows generator set to stabilize before application of load. Prevents needless power interruption if normal source variation or loss is momentary.

**Retransfer** - Allows the utility to stabilize before retransfer of the load. Prevents needless power interruption if return of normal source is momentary.

**Stop** - Maintains availability of generator set for immediate reconnection in the event the normal source fails shortly after retransfer. Allows gradual generator set cool down by running unloaded.

## Control Options

### Programmed Transition

Available on switches rated from 100 to 260 Amps, this option helps prevent fuse blowing and circuit breaker tripping when transferring inductive loads such as large motors and transformers. Extends transfer time of the transfer switch mechanism to allow load induced voltages to decay prior to connection to the oncoming source.

### Battery Chargers

2-amp or 10-amp battery chargers are available as factory-installed options to reduce field wiring expense.

### Three-Wire Start Module

This option modifies the standard LT III two-wire start circuit to a three-wire start system required by some generator sets.

### Manual Override Switch

This key selector switch provides a manual transfer capability. The manual override switch uses the power from the source to which the switch will transfer, in order to bypass the control and transfer load.

## Enclosures

The transfer switch and control are mounted in a single-door enclosure.

- Key locking cabinet, UL tested and Type Rated
- Wire bend space complies with 1999 NEC.

### Enclosure Dimensions - Transfer Switch in U.L. Type 1 Enclosure

Amp Rating	Height		Width		Door Closed		Door Open		Weight		Outline Drawing
	in	mm	in	mm	in	mm	in	mm	lb	kg	
30	29.0	735	18.0	455	11.3	285	28.1	715	120	55	310-0924
60	29.0	735	18.0	455	11.3	285	28.1	715	120	55	310-0924
100	29.0	735	18.0	455	11.3	285	28.1	715	120	55	310-0924
150	29.0	735	18.0	455	11.3	285	28.1	715	120	55	310-0924
200	34.0	865	21.5	545	11.3	285	31.6	805	155	70	310-0925
260	34.0	865	21.5	545	11.3	285	31.6	805	155	70	310-0925

Note: Add 1.75 in (44.45 mm) to 'Door Closed' dimension for handle clearance.

### Transfer Switch Lug Capacities

Amp Rating	Size
30	10 to 3 AWG CU
60	10 to 2 AWG CU
100	14 AWG to 2/0 CU/AL
150	6 AWG to 3/0 CU/AL
200	6 AWG to 300 MCM CU/AL
260	6 AWG to 400 MCM CU/AL

### UL Withstand and Closing Ratings

The LT III Transfer Switch must be protected by an overcurrent device, of the type and size specified, which will protect the switch when used on a circuit capable of delivering not more than the symmetrical RMS amperes listed in the table.

Transfer Switch Ampere	Fuse Protection	
	WCR @ Volts Max. with Current Limiting Fuses	Drawing Reference
30 A	100,000 A (600 VAC)	60 A, Class J or T
60 A	100,000 A (600 VAC)	100 A, Class J or T
100 A	100,000 A (600 VAC)	225 A, Class J or T
150 A	100,000 A (600 VAC)	250 A, Class J or T
200 A	100,000 A (600 VAC)	400 A, Class J or T
260 A	100,000 A (600 VAC)	450 A, Class J or T

# Submittal Detail

## Automatic Transfer Switch Options

### Current Ratings

- S061 30 A
- S062 60 A
- S063 100 A
- S049 150 A
- S064 200 A
- S051 260 A

### Mechanical Latching

- A005 Mechanically Held Line Side
- A007 Mechanically Held Normal and Emergency Sides

### Voltage (Line - Line) Ratings

- R020 120 VAC\*
- R021 208 VAC
- R022 220 VAC
- R023 240 VAC
- R024 380 VAC
- R025 416 VAC
- R026 480 VAC
- R27 600 VAC
- R35 440 VAC

\*L-N Voltage

### Frequency

- A045 50 Hz
- A044 60 Hz

### Enclosure

- B001 UL Type 1: General purpose indoor (similar to IEC type IP30)
- B004 Open Construction: No enclosure - Includes Automatic Transfer Switch and Controls

### System Options

- A041 Single phase, 2 wire or 3 wire
- A042 Three phase, 3 wire or 4 wire

### Control Package

- C021 Control Package A
- C022 Control Package B

### Programmed Transition

- J027 Programmed Transition 0.1-3 Sec
- J028 Programmed Transition 0.1-30 Sec

### Agency Certifications

- A046 UL 1008 listing/CSA

### Shipping Configuration

- A051 Export Box

## Options and Accessories

### Battery Chargers

- K001 2 A, 12/24 VDC
- KB59 15 A, 12 VDC
- KB60 12 A, 24 VDC

### Application Modules

- M002 3 Wire start Module
- N002 Terminal Block: Battery Charger Alarm (10 A Charger Only)
- N014 Manual Override Switch

### Warranty

- G002 One Yr Basic
- G004 Two Yr Comprehensive
- G006 Five Yr Basic
- G007 Five Yr Comprehensive
- G008 Ten Yr Major components

## **Available Products and Services**

A wide range of products and services is available to match your power generation system requirements. Cummins Onan products and services include:

- Diesel and Spark-Ignited Generator Sets
- Transfer Switches
- Bypass Switches
- Parallel Load Transfer Equipment
- Digital Paralleling Switchgear
- PowerCommand Network and Software
- Distributor Application Support
- Planned Maintenance Agreements

## **Warranty**

All components and subsystems are covered by an express limited one-year warranty. Extended factory warranties and local distributor maintenance agreements are also available.

## Certifications



Transfer switches meet or exceed leading code requirements:

**NEMA** - All switches comply with NEMA ICS 10



**UL** - All switches are UL 1008 Listed, and factory or field installed switch accessories comply with UL Listing; UL Type Rated cabinets; UL Listed CU-AL terminals



**ISO9001** - This transfer switch was designed and manufactured in facilities certified to ISO9001



**NFPA Testing** - A complete representative prototype transfer switch has been subjected to a number of demanding tests to verify the design integrity and performance under both normal and abnormal operating conditions per the requirements of NFPA 70, 99, and 110



**CSA** - All switches are CSA certified up to 600 VAC

## See your distributor for more information



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**Warning:** Backfeed to a utility system can cause electrocution and/or property damage. Do not connect to any building's electrical system except through an approved device or after building main switch is open.