

SwitchLITE Model EZT

Emergency Zone Transfer Cabinet
For Emergency Lighting

General Specification

PART 1 - GENERAL

1.1 DESCRIPTION

This specification describes the features and performance of the SwitchLITE Model EZT, Emergency Zone Transfer Cabinet, designed to transfer emergency power from a centralized uninterruptible battery back-up system or standby generator to designated emergency lighting circuits. The Model EZT provides automatic transfer of both the hot and neutral legs of each branch circuit from normal to emergency power when normal power fails. The Model EZT automatically reconnects circuits to normal power when normal power has been restored. Automatic transfer to emergency power may be initiated via a remote command transfer (RCT) signal as a part of the life safety system design and automatic system test feature. The front panel of the Model EZT cabinet contains a keyed switch to simulate a power failure for testing purposes, as well as a light to indicate that a voltage source (centralized uninterruptible battery back up system, or a facility's designated normal/emergency power panel) is present on the emergency power input terminals. Status lights are provided to indicate whether the load is being fed from normal or emergency power.

1.2 EZT MODEL NUMBERS

<u>Model Numbers</u>	<u>Voltage</u>	<u>Number of Circuits</u>
EZT-AX-4CKT-*	120 VAC	4
EZT-AX-6CKT-*	120 VAC	6
EZT-AX-8CKT-*	120 VAC	8
EZT-JX-4CKT-*	277 VAC	4
EZT-JX-6CKT-*	277 VAC	6
EZT-JX-8CKT-*	277 VAC	8
EZT-VX-4CKT-*	347 VAC	4
EZT-VX-6CKT-*	347 VAC	6
EZT-VX-8CKT-*	347 VAC	8

* Optional Auxiliary Contacts

0 = No Auxiliary Contacts

1 = Auxiliary Contacts (Form C) included for each circuit to accommodate low voltage or line voltage ballast control signal applications. In emergency mode, auxiliary contacts switch state, and may be used to apply the designated "full on" control signal to each fixture.

1.3 STANDARDS

The system is designed in accordance with applicable portions of the following standards:

- A. American National Standards Institute (ANSI)
- B. National Electrical Manufacturers Association (NEMA PE-1)
- C. National Electric Code (NEC 2005, Articles 702, 701, 700, 540-11c, 520-7, 518-3c)
- D. National Fire Protection Association (NFPA 70)
- E. Complies with ANSI / NFPA 110 Standard for Emergency and Standby Power Systems
- F. Federal Communications Commission (FCC Part 15, Sec. J, Class A)
- G. UL Listed to UL Standard 1008 Transfer Switch Equipment, Automatic Transfer Switch for Emergency Systems; 10,000 amp SCCR
- H. C-UL Listed to CSA Standard 22.2 No. 178.1, Automatic Transfer Switches

PART 2 - PRODUCTS

2.1 Electrical Specifications – Normal Power

- A. Branch Circuit Voltage: 120 VAC or 277 VAC or 347 VAC, 60 hertz.
- B. Branch Circuit Amperage: Rated for 20 amps maximum each circuit, internally fused.
- C. Number of Branch Circuits: 4, 6 or 8 individual circuits.
- D. Branch Circuit Configuration: Standard 2 wire plus ground. Optional 2 wire plus ground with a low voltage or line voltage ballast control signal.
- E. Voltage Sensing of Normal Power Source: Single phase 120 VAC, 277 VAC, or 347 VAC (1 wire plus neutral); 240/120 VAC or 208/120 VAC (2 wire plus neutral). Three phase 208 VAC, 480 VAC, or 600 VAC (3 wire plus neutral).

2.2 Electrical Specifications – Emergency Power

- A. Main and Branch Circuit Voltage: 120 VAC or 277 VAC or 347 VAC, 60 hertz.
- B. Input Circuit Breaker Required: 60 amp maximum, 1 pole (provided by others and field-installed external to EZT enclosure).
- C. Maximum Continuous Current: 48 amps total (dictated by emergency power input circuit breaker).
- D. Branch Circuit Configuration: Normal power circuit configuration is maintained and supplied with emergency power.
- E. Branch Circuit Amperage: Rated for 20 amps maximum each circuit, internally fused.

2.3 Performance

- A. **Compatibility:** The SwitchLITE Model EZT Emergency Zone Transfer system is compatible with all lighting fixture types. Fixture types include, but are not limited to LED, magnetic fluorescent ballasts, incandescent lamps, and electronic and high power factor fluorescent ballasts. Each Model EZT is rated to supply up to 48 amps of continuous emergency power to designated emergency lighting circuits.
- B. **Normal Operation:** 4, 6 or 8 locally controlled, switched or dimmed normal power circuits feed designated lighting fixtures via the EZT cabinet. During normal operation, the EZT status lights will indicate that all circuits are on normal power, and that a voltage source (centralized uninterruptible battery back up system, or a facility's designated normal/emergency power panel) is present on the emergency power input terminals.
- C. **Emergency Power Operation:** The Model EZT allows for single or three phase voltage sensing of the normal power source. If one or more phases drop below a user-selectable level of -20% or -50% of nominal, the EZT will automatically transfer all circuits to emergency power. Upon transfer, the EZT status lights will indicate that all circuits are on emergency power.
- D. **Soft Start Control:** To accommodate the high inrush current associated with energizing some types of emergency lighting fixtures, user-selectable settings from 0 to 2 seconds are provided to ramp on emergency power to all circuits. This control assures compatibility with various lighting fixture types and the emergency power source.
- E. **Adjustable Transfer Delay:** To satisfy various applications, user-adjustable settings are provided to control the transfer time to and from emergency power. The transfer to emergency power is adjustable from 0 to 9 seconds. The transfer from emergency power to normal power is adjustable from 0 to 15 minutes.
- F. **Remote Command Transfer:** The Model EZT includes a remote command transfer (RCT) feature. An automatic transfer from normal to emergency power may be initiated via one or more remote normally open or normally closed isolated dry-type contacts. The contacts will remain open/closed under normal conditions and switch state to initiate the transfer to emergency power. Emergency power will continue to feed lighting circuits until the remote contacts return to their normal state, at which time all circuits will reconnect to normal power. The contacts may be customer supplied as a part of the facility's life safety system design and/or originate from the centralized uninterruptible battery back up system's test circuit.
- G. **Automatic Testing:** To ensure that emergency lighting loads are automatically connected when testing the emergency power system, a normally open/closed contact from the emergency power source test circuit is connected to the Model EZT's remote command transfer (RCT) input. This contact will switch state during NFPA-mandated test periods and the designated emergency lighting circuits will be transferred from normal to emergency power.
- H. **Manual Testing:** A keyed switch is located on the front panel of the Model EZT and is used to simulate a power failure for testing purposes. This allows annual and periodic manual testing of emergency lighting circuits and the Model EZT's front panel status indicators.
- I. **Status Alarm Contacts:** Form C auxiliary alarm contacts (one (1) normally open and one (1) normally closed) are provided to indicate whether the designated emergency lighting circuits are being fed from normal or emergency power. In emergency mode, the alarm contacts switch state. Alarm contacts are rated for 0.5 amps at 125VAC / 30VDC.

2.4 Cabinet

- A. Enclosure: NEMA 1, powder-coat painted steel construction with a hinged, key-lockable, front door.
- B. Dimensions: 20"W x 7.75" D x 31"H
- C. Weights: 4 ckt model at 80 lbs., 6 ckt model at 82 lbs., 8 ckt model at 84 lbs.
- D. Conduit Landing: Wiring knockouts are provided on the sides and top of the Model EZT enclosure, with provisions for class 1 and class 2 wiring requirements.

2.5 Environmental Specifications

- A. Operating Temperature: 0°C to 40°C
- B. Storage Temperature: -20°C to 50°C.
- C. Relative Humidity: 95% non-condensing.
- D. Elevation: 5,000 feet, 1,500 meters maximum, without de-rating.
- E. BTU/HR: 255 maximum.

2.6 Front Panel Display

- A. Emergency Power Connection: Light (green) indicates that a voltage source (centralized uninterruptible battery back up system, or a facility's designated normal/emergency power panel) is present on the emergency power input terminals.
- B. Status Indicator Lights: On Normal Power (green) and On Emergency Power (red). Indicates whether the load is being powered from normal or emergency power.
- C. Keyed Switch: A keyed switch is provided to simulate a power failure for testing purposes. This allows annual and periodic manual testing of emergency lighting circuits and the Model EZT's front panel status indicators.

2.7 Optional Equipment

Form C auxiliary contacts (one (1) normally open and one (1) normally closed) are provided for each branch circuit. Auxiliary contacts may be wired to transfer a line voltage ballast control signal from normal to emergency power, or to override a low voltage ballast control signal. To accommodate line voltage ballast control applications, emergency line voltage is available via a hardwired terminal, located next to each set of auxiliary contacts. Auxiliary contacts are used to override local or remote dimming signals and allow designated fixtures to be fully illuminated when fed by emergency power.

2.8 Warranty

All systems are guaranteed to be free from defects in material and workmanship for a period of two (2) years following shipment from the factory.