



Type(s)

Project

Date

Notes

## GENERAL INFORMATION

ETC's Emergency Lighting Transfer System (ELTS2) is designed to switch one or more lighting loads from one power source to another when there is a power failure or other emergency situation present.

### APPLICATIONS

- Emergency lighting applications in cULus markets
- School auditoriums
- Theaters and concert halls
- Themed retail or casino spaces
- Houses of worship

### GENERAL

- Self-contained and separate from normal power or control wiring
- Continuous monitoring of normal and emergency power
- NEMA 1 rated cabinet (optional NEMA 4 cabinet)
- Seismic certified

### ELECTRICAL

- Connect up to 24 – 20 A circuits
- Single or three phase power:
  - 120/208 V
  - 120/240 V
- Three phase power:
  - 230/400 V
  - 240/415 V
  - 277/480 V
- Optional discrete circuit feeds or main feed with branch circuit distribution
- Contractor connections are convenient and clearly marked

### ACCESSORIES

- Remote Control Keyswitch Station
- Mounting Kit – horizontal tab option

## ORDERING INFORMATION

### ELTS2

	ENCLOSURE	EMERGENCY FEED INPUTS	VOLTAGE OPTIONS	CIRCUITS
ELTS2	1 = NEMA 1	D = Discrete Inputs	120 = 120 VAC circuits @ 20 A	2–12 in small enclosure
			277 = 277 VAC circuits @ 20 A	
			3P = 120/208 VAC (3Ø 4-wire)	
	4 = NEMA 4	M = Main Feed	1P = 120/240 VAC (1Ø 3-wire)	14–24 in large enclosure
			3P240 = 230/400 VAC (3Ø 4-wire)	
			277 = 277/480 VAC (3Ø 4-wire)	

### BASIC MODEL NUMBERING: ELTS2-1-M-3P-6

This is the basic form of the model number. It reads:

ELTS2- 1 - Type of Enclosure; M - Type of Emergency Feed Inputs; 3P - Voltage Option; 6 - Quantity of circuits (even numbers only, max. 24)

The units are available with even number circuits only. The number of circuits determines the size of the unit:

- Small Unit: 2, 4, 6, 8, 10, 12
- Large Unit: 14, 16, 18, 20, 22, 24

Note: Mixed voltages are not allowed in the same unit and require two separate units.

## SPECIFICATIONS

## REGULATORY AND COMPLIANCE

- UL and cUL Listing
  - ANSI/UL 1008 Automatic Transfer Switch for use in emergency systems (category code WPWR)
  - UL File # E157852
- Complies with ANSI/NFPA 110, Standard for Emergency and Standby Power Systems
- Satisfies requirements of the National Electric Code (NFPA 70):
  - Article 700 – Emergency Systems
  - Article 701 – Legally Required Standby Systems
  - Article 702 – Optional Standby Systems
  - Section 518.3C – Assembly Occupancies
  - Section 520.8 – Theatres and Similar Locations
  - Section 540.11C – Motion Picture Projection Rooms
- Self-contained system for up to 24 circuits
- Short Circuit Current Rating (SCCR): 65,000 A RMS symmetrical at 277 VAC
- Standard enclosure is NEMA 1; optional enclosure is NEMA 4
- Seismic certification: Independent lab certification and third-party testing complies with the US seismic requirements of the International Building Code (IBC) for equipment in the emergency life-safety chain
  - IBC 2000 – referencing ASCE 7-98 and ICC AC-156
  - IBC 2003 – referencing ASCE 7-02 and ICC AC-156
  - IBC 2006 – referencing ASCE 7-05 and ICC AC-156
  - IBC 2009 – referencing ASCE 7-05 and ICC AC-156

## MECHANICAL

- Wall mount unit with vertical mounting tab kit, alternative (horizontal) mounting tab kit available
- 14 gauge welded steel cabinet, rated NEMA 1 or optional NEMA 4 cabinet
- One-point (small unit) or three-point (large unit) door latch with key lock
- Fine-textured scratch resistant epoxy paint
- Hinged front access to wiring space for easy contractor connections – clearly marked termination strips and phase voltage lugs
- Conduit entry via top, bottom, or from any side (see manual)
- Control wiring separated from the higher voltage wires to avoid contact during installation

## OPERATION

- Monitors normal power, and upon the detection of power failure with presence of an emergency source, the ELTS2 disconnects normal source and connects emergency source
- When normal power is restored, the emergency source is disconnected from the loads and normal source is connected to the loads
- Monitors voltage on all normal phases
- Field-adjustable delay after a loss of normal power before switching to the emergency source – adjustable from 0 to 10 seconds
- Field-adjustable delay after the restoration of normal power before switching to normal source – adjustable from 0 to 60 seconds
- Emergency state control priority:
  - 1 – Power fail
  - 2 – Fire alarm activation
  - 3 – Local and/or remote activation

## SPECIFICATIONS

## ELECTRICAL

## NORMAL SENSE FEED INPUT

- AC circuits with neutral to provide power to the normal side of the electronics and for sensing a power fail
  - 120 V Discrete Feed – Three phase, 4 wire
  - 277 V Discrete Feed – Three phase, 4 wire
  - 120/208 V Main Feed – Three phase, 4 wire
  - 120/240 V Main Feed – Single phase, 3 wire
  - 230/400 V Main Feed – Three phase, 4 wire
  - 277/480 V Main Feed – Three phase, 4 wire
- Terminals sized for up to 8 AWG wire
- Separate units required for mixed voltages

## EMERGENCY SOURCE FEED

- **Type D:** Each circuit discretely fed from a remote breaker panel (supplied by others)
- Available in the following configurations:
  - 20 A 120 V circuits
  - 20 A 230 and 240 V circuits
  - 20 A 277 V circuits
- **Type M:** Single feed main lugs provided to distribute emergency power to all circuits
- Available in the following configurations:
  - 120/208 V – Three phase, 4 wire, 80 A for 12 circuits / 160 A for 24 circuits
  - 120/240 V – Single phase, 3 wire, 120 A for 12 circuits / 240 A for 24 circuits
  - 230/400 V – Three phase, 4 wire, 80 A for 12 circuits / 160 A for 24 circuits
  - 277/480 V – Three phase, 4 wire, 80 A for 12 circuits / 160 A for 24 circuits
- For both types: input lug wire range of 14 AWG – 2/0 for 12 circuits (small) or 6 AWG – 350 kcmil for 24 circuits (large)
- For both types: fuse protection to allow listed use with any circuit breaker brand
  - Class G SCCR protection
  - Located on load side of contactor and protects both normal and emergency source feeds

## MAXIMUM CONTINUOUS LOAD CONTACTORS

- 20 A circuits are rated for a continuous load of 1920 W per circuit at 120 V, 3680 W at 230 V, and 4432 W per circuit at 277 V
- A single contactor set controls no more than 2 circuits
- Switches both hot and neutral conductors
- Mechanically interlocked to ensure a break before make
- Rated for mixed loads: resistive, tungsten and discharge lamps
- Mechanically maintained (held)

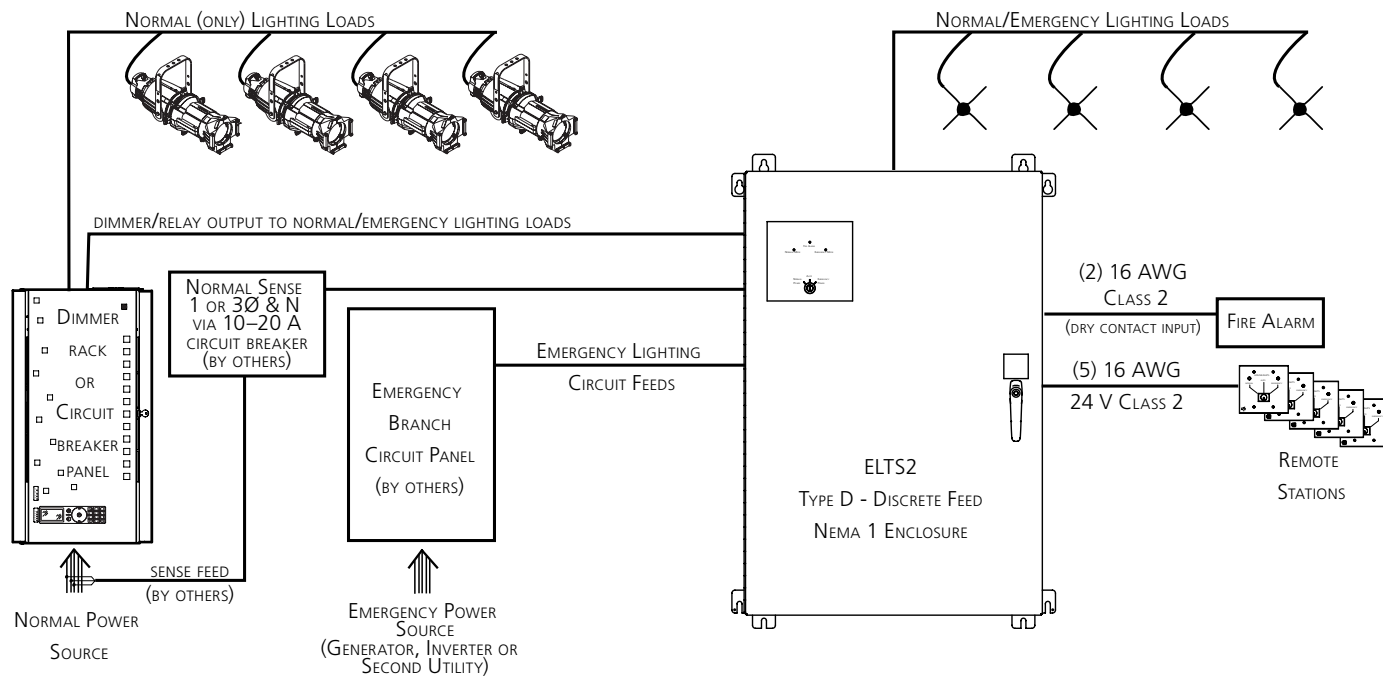
## FIRE ALARM INPUT

- Normally closed dry contact closure
- Input terminals accept 10–22 AWG class 2, two-wire from alarm panel

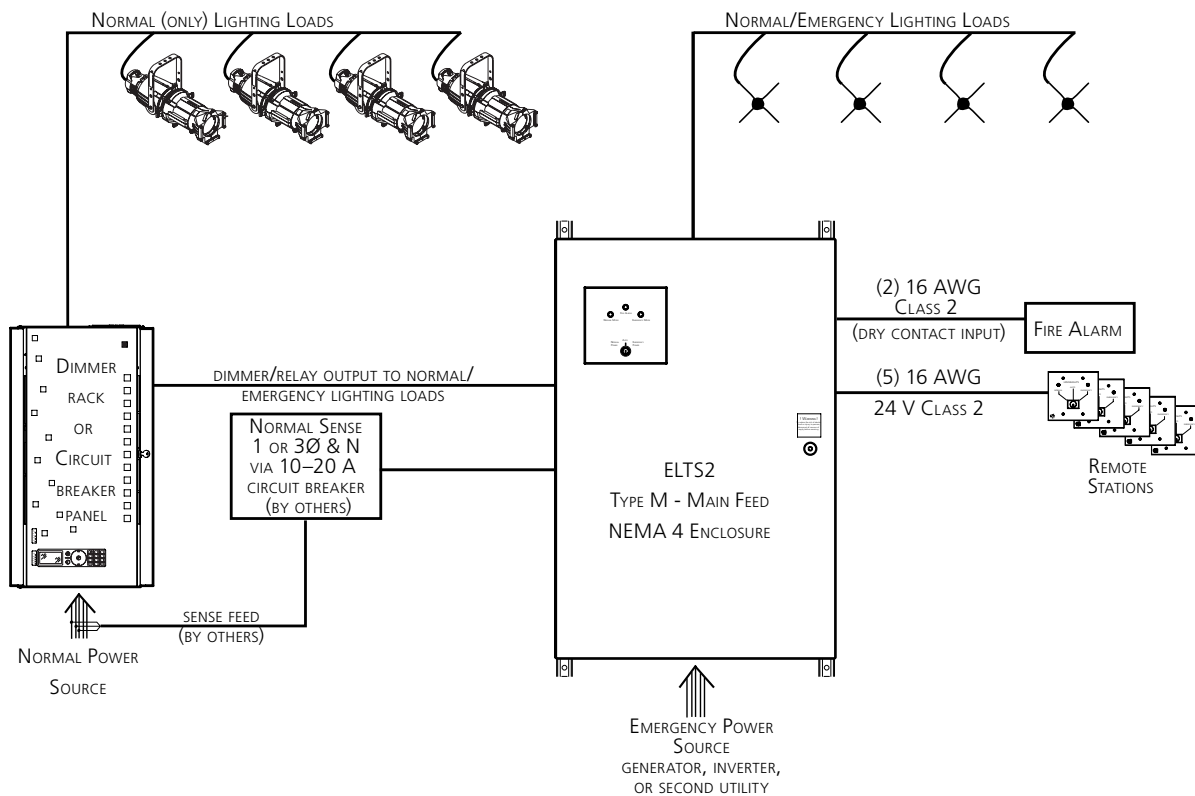
## USER CONTROLS

- Front panel local control includes a test key switch and 3 indicators
- Test key switch – three-position momentary key switch
  - Normal Mode with indicator
  - Emergency Mode with indicator
  - Fire Alarm with indicator
- Allows connection of up to five remote control stations (5-wire, 24 V Class 2, tested 16 AWG up to 1,000 ft)

## ELTS2 TYPE D TYPICAL RISER



## ELTS2 TYPE M TYPICAL RISER



## PHYSICAL

## ELTS2 Overall Dimensions

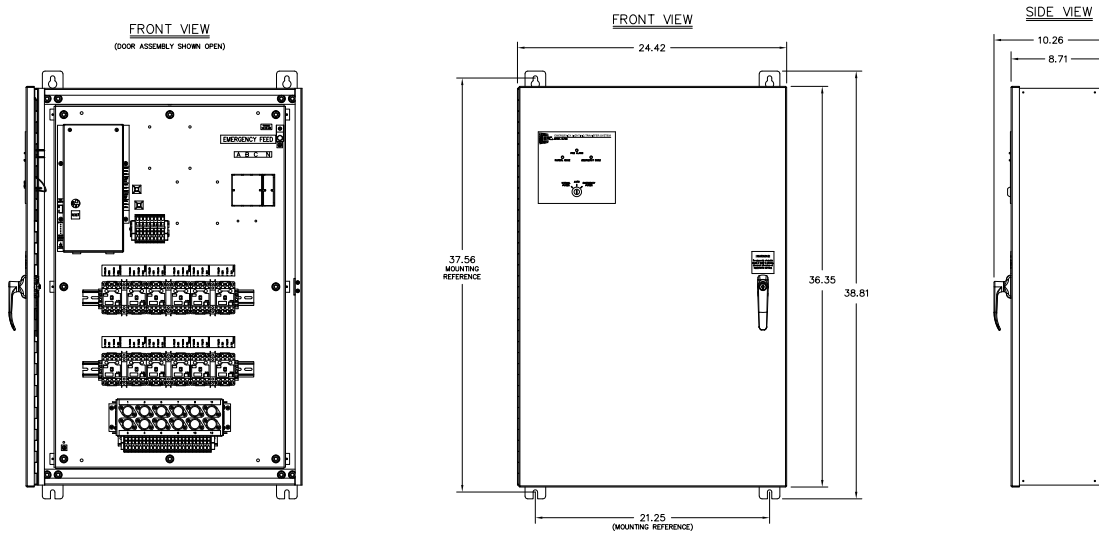
MODEL	HEIGHT		WIDTH		DEPTH	
	in	mm	in	mm	in	mm
Large unit	50.8	1290	30.4	795	10.3	262
Small unit	38.8	986	24.4	643	10.3	262

## ELTS2 Weights

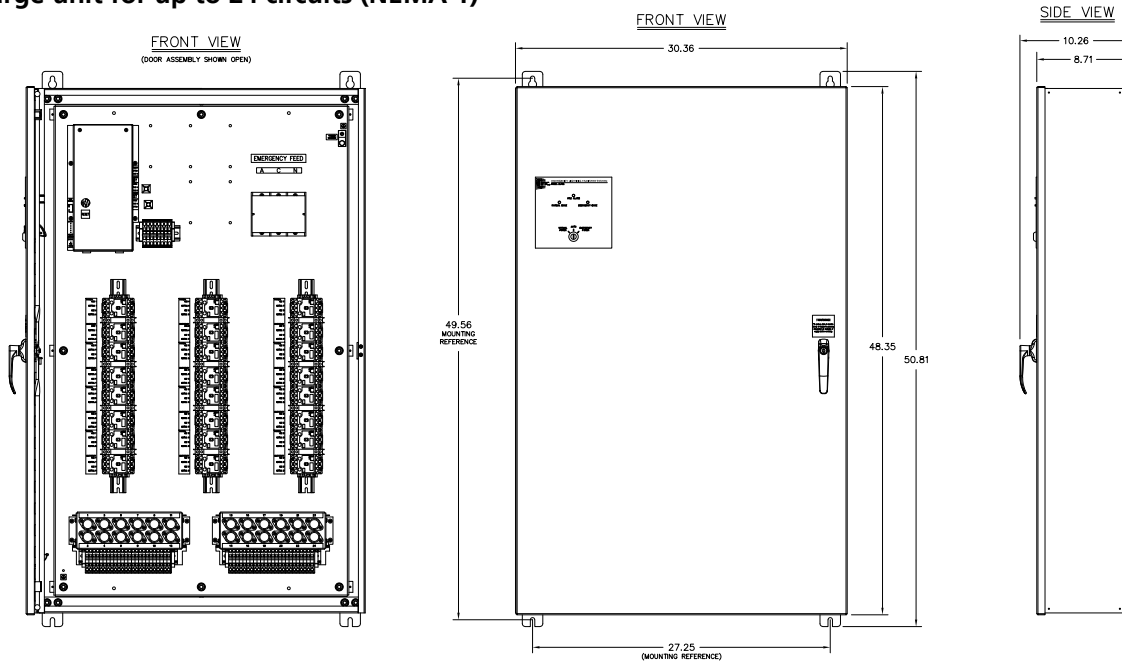
MODEL	WEIGHT		SHIPPING WEIGHT*	
	lb	kg	lb	kg
Large unit	119	54	169	77
Small unit	99	45	149	67

\*Shipped on pallet

## ELTS2 Small unit for up to 12 circuits (NEMA 1)



## ELTS2 Large unit for up to 24 circuits (NEMA 1)



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