Safe, intelligent elevator delivery when commercial power is lost

MCE’s **Traction Auxiliary Power Supply (TAPS)** for VVVF Controllers provides backup power when commercial power is lost, safely delivering the elevator car to a landing and maintaining door power so passengers can exit. During normal operation, TAPS builds and maintains reserve energy while continuously monitoring commercial power. TAPS determines the optimum travel direction (next landing up or down) without requiring a load weighing system, ensuring that energy use is minimized and battery power is conserved for as long as possible.

**Applications**
- Traction elevators with VVVF drives

**Benefits**
- Prevents passenger entrapments caused by commercial power loss
- Determines load direction without requiring a load weighing system
- Monitors UPS battery status and alerts building monitoring system (dry contact output)
- 1**, 3, and 6kVA units
- Batteries typically last 3 to 5 years
- Default backup run time: 8 minutes

**Features**
- On board controller provides intelligent operation
- Restart input from COP Door Open Button
- Test button to simulate power loss
- Battery saving, rescue complete input shuts off backup power when rescue is complete
- User adjustable parameters
- UPS bypass control
- Monitors disconnect switch
- Lockable shut-off switch for additional safety while working on the elevator
- 1kVA** unit: up to 5HP motor
  3kVA unit: up to 20HP motor
  6kVA unit: up to 40HP motor
- Battery level LED indicator

****1kVA unit orders must be carefully qualified for adequate capacity by MCE Engineering.

*Patent pending*
TAPS functional description

- UPS: Supplies backup power. Recharges automatically when commercial power is present.
- UPS Controller: Monitors commercial power, controls UPS function, informs elevator of emergency power status, determines elevator load direction and communicates it to elevator controller.

Specifications

- Input: Three-phase, 208/480VAC, 50/60Hz
- Output: Single-phase, 208/480VAC
- Lockable switch: Allows UPS to be sidelined when it is necessary to shut down the elevator controller and backup power is not desired.
- Bypass switch: Allows power to the elevator when the TAPS system is shut off.
- Dimensions: 1kVA, 3kVA, 6kVA: 19” h x 24” w x 24” d
  6kVA only: 34” h x 18” w x 32” d (Second enclosure)

Functional diagram

Functional diagram showing the connection between the main line disconnect, Traction Auxiliary Power Supply (TAPS™), and the elevator controller. The diagram includes a lockable switch and a bypass switch for power control. It also shows the backup power source and the status of the system. The diagram is annotated with notes for proper operation and compliance with standards such as CSA B44.1-04/ASME A17.5-2004, EN 12015 and 12016, and State of California regulations.