The New Era in Door Restrictor Technology

ElectroLock™ is the only lift door restrictor that offers flawless operation under any conditions. Unlike complex mechanical and photoelectric systems, ElectroLock uses rock-solid RFID-based electrosensor technology to accurately signal its magnalatch door-locking mechanism. Passenger safety is never compromised thanks to ElectroLock’s magnalatch, which maintains its last position without batteries in the event of power loss.

The ElectroLock Door Restrictor is designed to fit most car doors and provide a durable method of restricting their operation between unlocking zones.

The “A” Model uses RFID technology to detect when the car is level with the landing by sensing the presence of a target no bigger than a credit card. The RFID reader will sense the target even in thick smoke and dust.

The “B” Model interfaces to the controller and unlocks when a “Door Zone” signal is received. Due to both units’ unique design, installation time is reduced and there is no need for maintenance. When a target is detected or controller signal received, the locking bolt is retracted unlocking the car door. The locking bolt will not be returned to the locked position until the door is closed and the car has moved away from the landing. This unit is unique in that it does not require a battery to maintain its functionality. Once initiated, it remains in its last position if power is lost.

ElectroLock™ Fully code compliant to the American code ASME and maintenance free, ElectroLock installs quickly on any door operator and operates silently and reliably, year after year. A clear solution for meeting EN81-80-5.11.2 requirements for car door security in existing lifts. No wonder so many building owners are saying, “I want ElectroLock!”

Patent Pending
ElectroLock Door Restrictor F.A.Q

What is a door restrictor?
A door restrictor is a device, attached to the outside of an lift car, which secures the car doors when the car is in transit between safe landing zones.

What is a safe landing zone?
Also referred to as the unlocking zone, the area within a landing floor zone upon which it is safe for the lift doors to open.

Why are door restrictors necessary?
When a passenger lift is outside the unlocking zone it is unsafe for a passenger to try to exit through the lift entrance unassisted . . . In fact, there have been many reports of fatalities due to this condition. A person inside the car should not be able to accomplish their own emergency evacuation through a hoistway door when the car is located outside of the unlocking zone. This requirement may be met by restricting the opening of the car door or the hoistway door.

Industry and safety experts have reached a broad consensus that during emergencies and power-loss events, the safest place for lift passengers is inside the car until they can be rescued by persons trained to release them.

Lift safety codes EN81 /EN81-80(Safety rules for the construction and installation of lifts — Existing lifts —Part 80: Rules for the improvement of safety of existing passenger and goods passenger lifts) require maximum distances between the car door and the lift shaft wall and recommend the use of door restrictors as a safety measure when this distance is in excess of the standard. Modern lifts fitted to EN81 standards require this compliance as part of the installation design , older lifts currently in service do not have this safe design and as such a high risk danger is present should a passenger force the car doors open outside the unlocking zone.

Why is Electrodyn introducing a new type of door restrictor?
To date, manufacturers have explored two approaches to door restrictor design—mechanical and electromagnetic. The first type, mechanical door restrictors, is problematic because they tend to be noisy and are difficult to align and repair. The second type, electromagnetic door restrictors, uses photoelectric sensors instead of metal-to-metal contact. However, calibrating the electric eyes and target strips used by these devices is time-consuming, and the functionality of these systems is degraded in the presence of dust, smoke, grime, and ambient light. Both types of door restrictors are subject to failure in an unsafe position.
ElectroLock™ was designed to address all known problems with mechanical and electromagnetic door restrictors, even to the point that should the system fail for any reason; it will fail in the safe position. Its versatility is unmatched since it can unlock the car door from either a signal of target acquisition or a signal from the controller that the car is in the safe unlocking zone. It can also utilize a wide range of voltage sources for power thus allowing the controller voltage to be used for power as opposed to bring an external power source to the car top.

**Is ElectroLock an electromagnetic device?**

ElectroLock uses RFID (radio frequency identification) technology instead of photoelectric beams and targets. However, ElectroLock can also use the lifts “Door Zone” signal for activation. This makes the ElectroLock more versatile than similar devices. ElectroLock uses an electronic pulse to power a locking plunger to secure the lift car doors when the lift leaves the safe landing zone.

**Does ElectroLock require regular maintenance?**

Once installed, ElectroLock should require no maintenance whatsoever. The Magnalatch locking solenoid is the system’s only moving part. The bolt is permanently lubricated and the solenoid is powered with micro pulses of electricity, not continuous current as seen in other systems. Timing logic in the controller prevents Magnalatch from cycling until arriving at destination landings, further extending system longevity. ElectroLock is engineered to be more durable and reliable than any other door restrictor available.

**Does ElectroLock require specialist fitting?**

Any reputable lift companies competent lift engineer can install the system.

**What happens if the door operator activates while ElectroLock is engaged?**

We strongly recommend an arrangement called “doorsaver,” whereby ElectroLock is wired into an lift door operator's door-open limit circuit or an alternative circuit, as this allows the system to interact intelligently with the door operator and prevent door motor burnout should the motor malfunctions. That is, “doorsaver” will not allow the door operator to open or close car doors if the Magnalatch locking plunger is in position.