SmarTraq™ Complete Door Operator

State-of-the-art, limitless "true" closed-loop technology for modernization and repair

MCE applies its expertise in non-proprietary controllers and closed-loop drives to the elevator door operator market with the introduction of **SmarTraq** — an innovative, limitless, closed-loop door operator ideal for new construction or modernization.

Door operation is the most visible aspect of elevator service and the source of the majority of service calls. The SmarTraq universal door operator solution maximizes door performance, reliability, and maintainability — at a fraction of the cost of other system upgrades.

Superior performance, reliability and maintainability

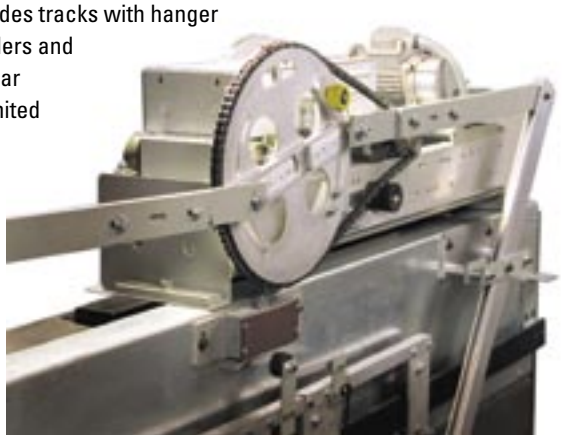
SmarTraq is a closed-loop, limitless door operator. SmarTraq replaces obsolete mechanical circuits, cams, and resistors with digital controls to provide precise door operation and reliable performance.

"Limitless" technology means that limit signals, formerly generated by troublesome switches, are now digital values generated electronically by the drive unit. Limitless technology reduces the need to maintain and adjust mechanical switches and speeds installation and adjustment.

Using the same non-proprietary, closed-loop, drive control philosophy that distinguishes MCE controllers, SmarTraq readily interfaces with most elevator control systems. A powerful permanent magnet, AC brushless motor with integral position encoder and velocity sensor is standard for all applications.

SmarTraq's continuously computed position profile determines the precise force necessary for optimum door operation, ensuring that the heaviest doors will open and close as efficiently and smoothly as the lightest. Easily-set parameters minimize the effect of external influences such as wind loading, temperature extremes, and track debris accumulation.

The SmarTraq Complete Door Operator includes tracks with hanger rollers, door clutches, interlocks, release rollers and more — and is available for harmonic or linear applications — perfectly accommodating limited space requirements.



SmarTraq harmonic door operator

Applications

- New construction or modernization

Benefits

- Superior reliability reduces downtime
- Easy adjustment — no special tools required
- Safety settings maintained
- Widest adaptability to elevator control systems on the market
- Improved performance
- Adjusts for lobby door mass and wind loading

Features/options

- Permanent magnet, brushless AC motor
- Integrated encoder and motor speed sensors
- Inverter drive-based controller
- Built-in short circuit protection
- Cartop controller mount
- Linear or harmonic operation
- A17.1, CSA-B44.1 compliant
- Independent belt and chain adjustments
- Mechanical limit switches not required
- Resistors, cams, and heavy-duty relays not required
- Hold close and Hold open torque
- 10 Amp rated output contacts
- 5/16" heavy duty crank arm and linkage
- 1" jack shaft, dual bearings, full width of operator
- Selectable input voltage (120, 208, 240 VAC 50/60Hz)

www.mceinc.com

800.444.7442
916.463.9200

The leader in non-proprietary controllers, technical services and repair solutions for elevator modernization.

SmarTraq™ Complete Door Operator

SmarTraq specifications

Door operator drive technical data	
Input voltage	120, 208, or 240 VAC, 50/60Hz, single phase
Output voltage	3-phase, 30 VAC, 9A (26A peak)
Power requirement	300 VA
Controller type	Closed-loop, distance and velocity feedback, limitless
Door motor technical data	
Type	Three-phase, synchronous, brushless motor with permanent magnet excitation and built-in digital encoder and motor speed sensors
Motor	0.564 HP, 3-phase AC, 8 pole, 30 volt, 9A (26A peak), 0-2000 RPM, 0-133Hz
Encoder	640 PPR (pulses per motor revolution)
Elevator control interface data	
Input signal level	Isolated 28 VAC sourced from SmarTraq
Output signals	Door close limit Door open limit Limit 1 (software adjustable from closed to 50% of door open position) Limit 2 (software adjustable from open to closed door position)
Output signal level	N.O. / N.C. contact (10 Amp 125 VAC)

Q & A

What is the difference between a SmarTraq Complete Door Operator and SmarTraq Upgrade Kit?

A SmarTraq Complete Door Operator package includes the SmarTraq motor, SmarTraq inverter drive and all necessary track, hanger and operator arm assemblies. SmarTraq Upgrade Kits include the SmarTraq motor and SmarTraq inverter drive to replace those in an existing installation.

When is a SmarTraq Complete Door Operator the recommended solution instead of a SmarTraq Upgrade Kit?

When existing operator hardware is worn, parts are obsolete, or the original design is not well-suited to modernization changes, the complete operator should be replaced.

What is the difference between Harmonic and Linear door operators?

Harmonic operators use levers and pivot point fulcrums to mechanically transmit opening and closing force from the motor to the doors. Linear operator motors engage the doors more directly through gears and a cogged belt.

How does closed-loop technology work?

When SmarTraq is calibrated, an ideal door movement profile is established. During operation, SmarTraq constantly monitors actual door position and compares it to the stored ideal. If the door lags, speed is increased. If the door moves ahead of the ideal, speed is decreased. The result is that the doors actual position is constantly matched to the stored ideal position — the loop between control and actual motion is closed.

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