Nidec

Drives

5 YEAR WARRANTY

Elevator Drive E300

Dedicated drives for class-leading ride comfort

Specialist Drive

A level above throughout
The lifetime of your application

Freedom to design

For every project

Optimised and efficient for new elevators, truly comprehensive when it comes to the wide spectrum of requirements at retrofit projects.

Broad power range, compact form factor

A full range of some of the smallest drives in the industry per kW rating. Perfect for MRL systems where space is at a premium, and just as capable as a full cabinet, offering 10 m/s speeds in high rise buildings.

Match any control interface, any protocol

Velocity or position control through any common method, including analogue speed reference, digital I/O, or digital comms via Modbus, CANopen, CANopen-Lift, DCP or Ethernet.

Work with any motor, any feedback device

Perfect control over any asynchronous or synchronous motor. Support for 17 different feedback types as standard, without the need for additional interface cards.

Multiple mounting options

Flexible drive mounting options are available to optimise space, either in a cabinet or inside the elevator shaft.

Dynamic braking & regen solutions

All drives are fitted with a dynamic braking transistor as standard. Braking energy can also be recuperated when using one of our regen solutions together with the drive.

Back-up power connectivity & rescue mode

After connecting a UPS or battery to the terminals of the drive, low voltage mode can keep the drive running and perform a rescue even at 24 Vdc.

Effortless installation and commissioning

Pluggable drive terminals

Control terminal connections are pluggable across the full range and biased to ensure correct connection. Supply and motor power terminal connections are pluggable up to 22 kW.

Robust cable management

Our standard accessories help keep things tidy and provide grounding points for shielded control and power cables.

Elevator specific menu structure

Designed to be intuitive, everything is described clearly using familiar language and common units.

Stationary autotune

Encoder offset detection and optimum current loop configuration without the need to lift the mechanical brakes or to de-rope the system.

Parameter storage, cloning & security

Quickly back-up drive parameter configurations to an SD card or Smartcard, or clone them over multiple drives.

Create secure cards with pre-configured parameter sets and lock them to your specific units.

Keypad with backlit LCD display

The Remote Keypad RTC helps make adjustments to drive settings rapidly. Mount it directly on the drive or remotely with an RS485 lead.

Virtual terminal

Take advantage of advanced industry-specific comms protocols and set everything up through the elevator controller without direct interaction with the drive, especially if it's physically difficult to access.

PC tools

Manage everything related to your elevator drive in our Connect software. Set up, fine tune or troubleshoot with just a few clicks.

Class-leading performance

Creep-to-floor or Direct-to-floor operation

Get class-leading ride performance either in traditional creep-to-floor operation or with our highly accurate direct-to-floor positioning mode, greatly improving travel times.

Selectable gains

Choose separate variable speed loop and current loop gains as needed for start, run and stopping, and have perfect ride comfort at each section of the travel profile.

Load cell compensation & Start locking

Prevent roll-back of the elevator car when the brakes are released, with or without a load cell fitted in the system.

Start optimiser

Use the Start optimiser function to overcome stiction during start in either the motor gearbox or guide rail pads.

Fast start

Speed up the starting sequence for every travel, allowing the brakes to release as the elevator doors are closing and for the car to move as soon as it can safely do so.

Floor sensor correction

If your site has floor sensors or limit switches set up in the elevator shaft, FSC helps compensate for rope slip, rope stretch or any mechanical offset, achieving perfectly accurate positioning every time.

Short floor landing

Where the garage or lobby has an odd height compared to other floors in the building, you can rely on Short floor landing for the elevator car to travel a fixed distance and get into position.

Sleep mode

Turns off non-essential circuits to minimise energy consumption. Quick wake up times ensure the drive is ready to go when it's needed.

Maintenance and diagnostics support

Selectable status parameters

Two status parameters can be freely selected to be displayed on the attached drive keypad as default, and help monitor the drive during normal operation or maintenance.

Diagnostics

The simple trip code system makes it easy to diagnose drive errors. The last 10 trip codes are recorded within the drive to aid troubleshooting.

With the KI-Keypad Plus attached, the diagnostic records also receive time and date stamps as they are generated.

Data logger

All drives have a built-in data logger that can monitor any parameter, recording events such as drive trips. Records can be written onto a media card or retrieved by the elevator controller via the comms link.

Normal Terminal Stopping Device

The NTSD function is intended to bring the elevator car to a controlled, limited speed if the car ever approaches the bounds of the shaft or the controller detects overspeed.

Fast stop

When a technician is manually controlling the elevator car during maintenance, the Fast stop feature can bring the car to a rapid but controlled halt as needed.

Low voltage rescue mode

Whenever the main power is down, the drive can perform a rescue of an unbalanced car to the nearest floor by sequencing the brakes. In systems with a synchronous machine, the drive can also utilise the braking energy generated by the motor and generate the rescue profile for improved comfort.

Blocked elevator car release

The drive can undo the elevator's safety gear after it has been deployed and return the blocked car to normal operation, without the need for a technician to climb into the shaft.

Travel counter

The built-in travel counter helps keep track of rope lifetime when plastic ropes are used in the elevator system. The drive warns when critical thresholds have been reached, and maintenance is necessary.

Elevator Drive E300

State-of-the-art solutions in support of system safety

Above all else, safety is the number one priority in any elevator application. We at Control Techniques are rigorous in achieving the highest attainable safety levels, and assist our partners in doing the same, with pre-engineered features already built-in into our products.

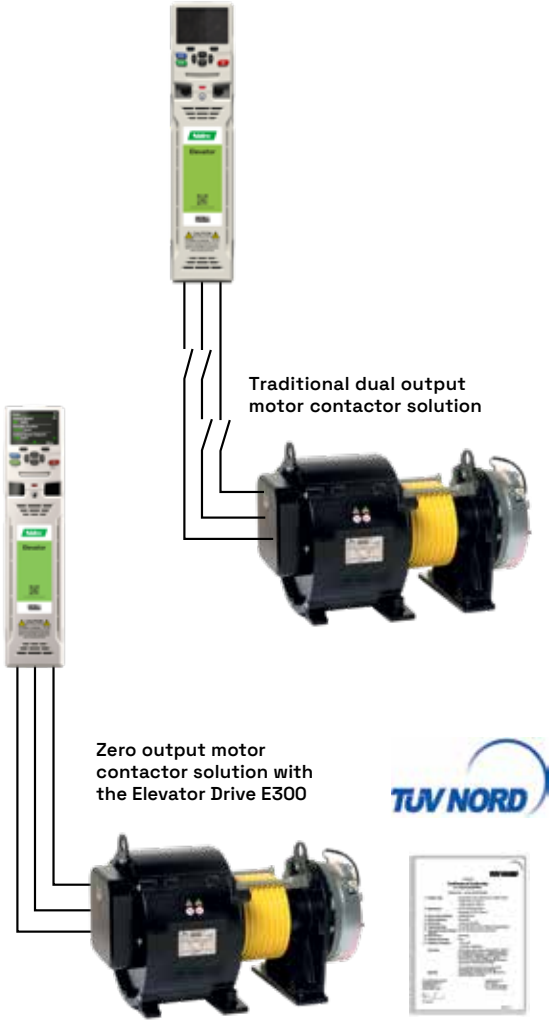
Zero motor contactor operation

Control Techniques' drive range enables contactorless operation in elevator applications.

Our EN81-20, EN81-50 TÜV certified Safe Torque Off (STO) function provides an exceedingly dependable method for preventing the motor from being driven. This removes the need for both output motor contactors, a standard but burdensome feature of traditional elevator systems.

The benefits of switching to a contactorless solution include:

- Simplified electrical installation
- Improved system reliability
- Reduced EMC issues
- Reduced acoustic noise
- Improved system costs
- Minimised cabinet space allowing machine room-less (MRL) installations installation



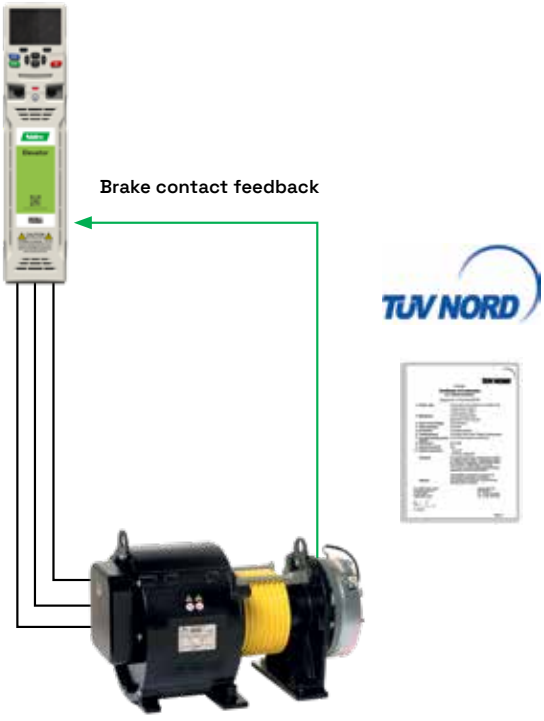
Optimum brake control

Control Techniques' Elevator Drive E300 can manage the control signals of the mechanical brakes, allowing for the smoothest transition of load during start and stop, or leave it up to the elevator controller, depending on the customers' preferences in system design.

Brake contact monitoring

The Elevator Drive E300 comes with Brake Contact Monitoring (BCM) as standard; an advanced feature set that improves overall system safety and supports even legacy elevator systems to meet the requirements of EN81-20, EN81-50 for Unintended Car Movement (UCM).

Our TÜV certified solution provides a flexible and simple addition to any existing or new project, managing brake contact feedback for motors with one to four motor brakes.



TÜV certified Brake Contact Monitoring functions on the Elevator Drive E300

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All for dreams

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CONTROL TECHNIQUES

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