KONE ReResolve™ with Unity Drive

ELEVATOR CONTROL SYSTEM MODERNIZATION SOLUTION

KONE ReResolve with Unity Drive is a modernization solution for elevator electrification, designed specifically for buildings with existing DC gearless elevators.

This solution replaces outdated technology such as relays and older electronic systems, improving an elevator’s performance, reliability, safety and energy efficiency. Energy consumption is reduced with low harmonic distortion and a near-unity power factor capability. Full line regeneration of energy provides a high-performance elevator solution with a significantly lower level of energy consumption. The modular structure of KONE ReResolve with Unity Drive is designed to correctly interface with many types of existing elevator components, ensuring swift, trouble-free installation.

For existing buildings over forty years old, KONE ReResolve with Unity Drive provides a much-needed performance and efficiency improvement.

Key benefits

**Eco-efficient**
- Low energy consumption
- High power factor, near 1.0
- Minimal harmonic distortion
- Full recovery of regenerated energy

**Safe and convenient**
- Minimized building disturbance with fast installation
- Safety assured, compliance with latest local, state and elevator codes
- Accurate stopping at floor level ensured by closed-loop drive control

**Reliable**
- Comfortable and efficient travel for passengers
- Optimum reliability achieved with the latest control technology

**Versatile**
- Available for both passenger and freight applications
Energy efficiency
KONE ReSolve with Unity Drive reduces energy consumption by 40% compared with Motor Generator (MG) sets and by 25% compared with DC-SCR (6 pulse) drives.

Full line regeneration provides a high-performance elevator solution with significantly lower energy consumption. The line regeneration feature enables the elevators to regenerate almost as much power when they descend as they consume when they ascend. This regenerative feature saves considerable energy (up to 50%), substantially cutting the building owner’s operating costs and reducing the environmental footprint.

High power factor
The high power factor (P.F. >0.95) minimizes the consumed power supply kVA compared to lifting power. A high power factor minimizes the stress on the building’s electrical supply system. This makes it possible to use smaller fuses and eliminates the need to upgrade the building supply cables to the elevators as part of the modernization.

Low harmonics distortion
Low harmonics distortion is built into the drive, eliminating the need for additional filtering solutions. The low harmonics distortion (THDI < 8%) eliminates interference with other electrical equipment, and reduces the stress on the building’s electrical system. The harmonics level meets the requirement of IEEE 519 at the drive terminals.

### KONE ReSolve™ with Unity Drive

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<th>Specification</th>
<th>Value</th>
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| Total harmonics distortion %  | <5 (125 A)  
<8 (200 A, 250 A) |
| Power factor                  | >0.95 |
| Speed                         | up to 1400 fpm |
| Max travel                    | 820 ft |
| Max floors                    | 63    |
| Max elevators in group        | 8     |
| Leveling accuracy             | +/- 1/8 inch |
| Typical lifetime of electrical components | 25 years |

**U.S. Operations Center**
One KONE Court  
Moline, Illinois 61265  
1-800-956-KONE (5663)

**Canadian Operations Centre**
6696 Financial Drive, Unit 2  
Mississauga, Ontario L5N 7J6  
1-905-858-8383

**KONE Mexico, S.A. de C.V.**
Av. Coyoacán 1622 Ed. 1 PB  
Col. Del Valle Sur  
México City, D.F. CP 03100  
+52.55.1946.0100

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