

MPK Green

Energy-saving lift control



MPKGreen

Energy Saving
Lift Control Systems

In the context of ongoing debates about sky-rocketing energy prices and accelerating climate change, transport systems, including lift control systems are becoming subjected to increased pressure regarding their energy saving potential.

Naturally, the potential energy-saving benefits vary widely according to individual technical requirements and associated traffic conditions of each lift installation.

As a leader of technical innovation, Kollmorgen has subsequently looked into several possibilities and assembled a hardware / software package with special attention paid to energy-saving possibilities. The concept is that "MPK Green" can, as proven in numerous tests, reduce power consumption monumental.

To this end, consumer loads can be switched off selectively and modularly, with these functions being configurable mostly

by simple software parameter adjustment. A currently non-active (non-running) lift control system can go through two stages of energy-saving control. While the system takes only a few seconds to awake from stage 1, stage 2 requires a system check of up to 30 s to be performed prior to become operational again.

“Non-active” (non-running) control system:

“Active” (running) control system:

Stage I

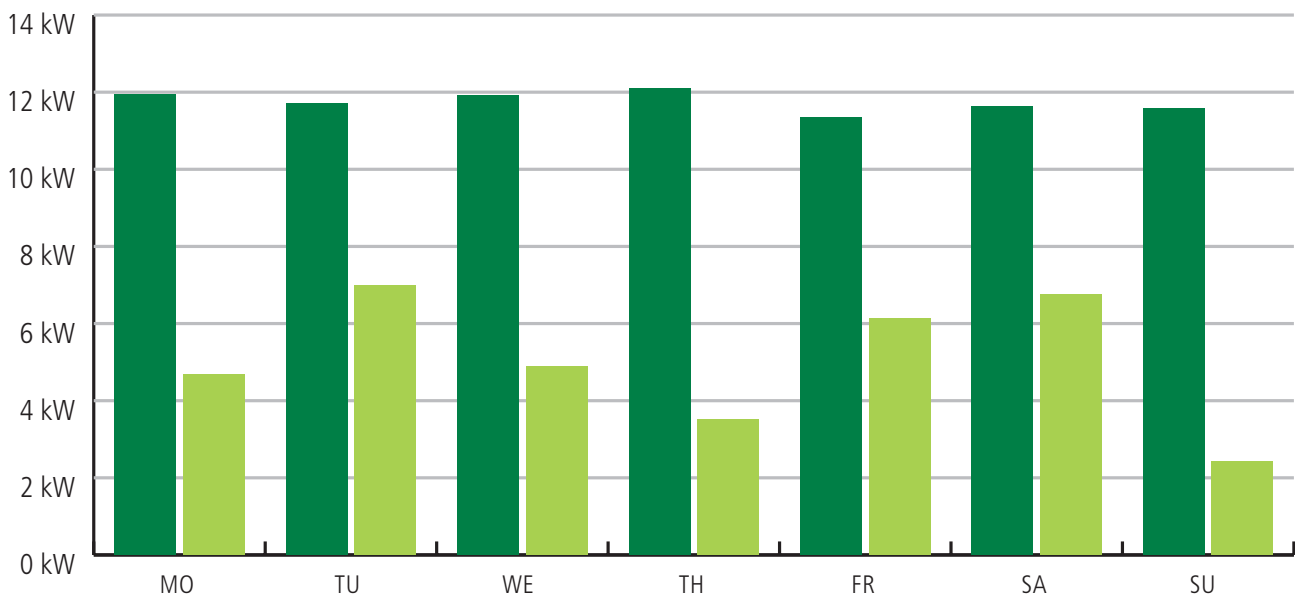
- Floor:** The ability to switch off floor level and directional arrows after an adjustable time interval; the system can additionally be disconnected from the power supply feed.
- Car:** The ability to switch off floor level and directional arrows after an adjustable time interval; this system can additionally be disconnected from the power supply feed.
Switching off dual illumination for car calls.
Dimming of the car light.

- A reduced travelling speed, equates to less motor current and increased energy savings. DCP4 “direct-to-floor” approach further eliminates wasteful “levelling speed” currents.
- Optional regenerative power feedback front ends reduce the amount of wasted energy, at the same time reducing unwanted mains harmonic currents.
- “Cross-call cancellation” ensures that both old & new lift controllers working together throughout a modernisation project do not chase calls, further removing the risk of unwanted energy wastage.
- Anti inferior-load functionality
 - Door hold option
 - Lobby supervision
 - Deactivation of group members

Stage II

- Floor:** Switching off dual-illumination for hall calls.
- Car:** Switching off the door control in an energy-saving stop.
Switching off the car electronics in an energy-saving stop.
- Control:** Switching off the Inverter Drive Unit.

Our aim as Kollmorgen is to find the optimal balance in the conflicting areas of energy-saving and travelling comfort for each individual building.



After modification of the Elevator in our office building we made extensive test series with very positive results. As the diagram shows, we could reduce through the use of MPK Green concept the average power consumption for almost 50%.

