

LEITNER Drive Electronics

Intelligent solutions for ultimate comfort

Perfect interplay between motor, inverter, and mechanics is an essential element in passenger comfort. Intelligent drive solutions are needed to ensure that the rope moves smoothly and reliably in every operating and load scenario.

LEITNER's variable speed drives are based mainly on three-phase AC technology with modern IGBT frequency inverters. Our classic DC drive is also used for certain projects. Outputs ranging from a few kW to large drives in the 2-4 MW range are precisely and powerfully harnessed by our control algorithms to meet the requirements of the mechanical system. LEITNER's exclusive DirectDrive is also powered using this frequency inverter technology. This innovative concept, based on a permanently excited synchronous motor, requires no gearing and is a ground-breaking approach to energy-efficient, low-maintenance drives. The slow-running direct drive principle is used successfully in wind turbines (LEITWIND) for generating alternative energy on the world market at outputs of up to 3 MW.

The precise control dynamics of the latest generation of inverters optimize the kinematics of haul rope drives and station conveyors. Intelligent LEITNER software modules make the ride more comfortable by starting and stopping the system gently and without jerking. Frequency inverters featuring active infeed technology increase system availability. The motor is decoupled from the supply grid, making the entire drive system less vulnerable to voltage fluctuations and grid outages. When systems with active infeed are in braking mode, there is no conducting-through at the inverter, even if the grid supply is interrupted briefly, so there are none of the associated interruptions in operation. LEITNER drive electronics with AC technology are particularly energy-efficient and power-grid-compatible. The harmonic load on transformers and cables is very low. The grid power factor is 1.0, so only active power is taken from the grid and existing medium-voltage systems can be better utilized.

AC motors are ideally suited to the changing load conditions and climatic constraints of ropeways. An AC drive requires very little maintenance, and in this respect it is also economically superior to a DC drive solution, considering costs over the entire life cycle.

