



Overload control

Prevent risk conditions due to overloading.

The overload function prevents mechanical overload for machine safety and durability. Taking into account the weight of the load through the hoisting drive's current level, this function is able to stop the ascending movement in the event of an overload and lowers it until the load reaches the floor.



Benefits

Reduce risks

Prevent the load from falling and/or the crane from toppling over.

Increase equipments protection

Prevents damage to the gearbox and motor.

Save production time

Event reset is automatically generated by torque measurement or by calculation of travel distance.

Easy to install and adjust

No additional sensors or external devices are needed.

Operating principle

The overload function is based on two sub-functions: the first detects the overload and the second resets the alarm. Each time an upward movement is started, the overload supervision function block determines the maximum load limit that corresponds to an equivalent torque level in the hoist drive. When an overload is detected, the reset function is triggered according to the selected reset mode using torque measurement or by calculated travel distance.

Characteristics

- Up movement is disabled until the condition is reset
- Error detection using torque measurement takes into account an adjustable filter time.
- No sensors or external devices are needed
- The reset function is automatically triggered by selecting from one of two reset modes:
 - Torque measurement
 - or
 - Distance travel using an Encoder or Estimating the distance traveled

Typical applications

Construction cranes

- Self-erecting cranes
- Tower cranes

Industrial cranes

- Overhead travelling cranes
- Gantry cranes

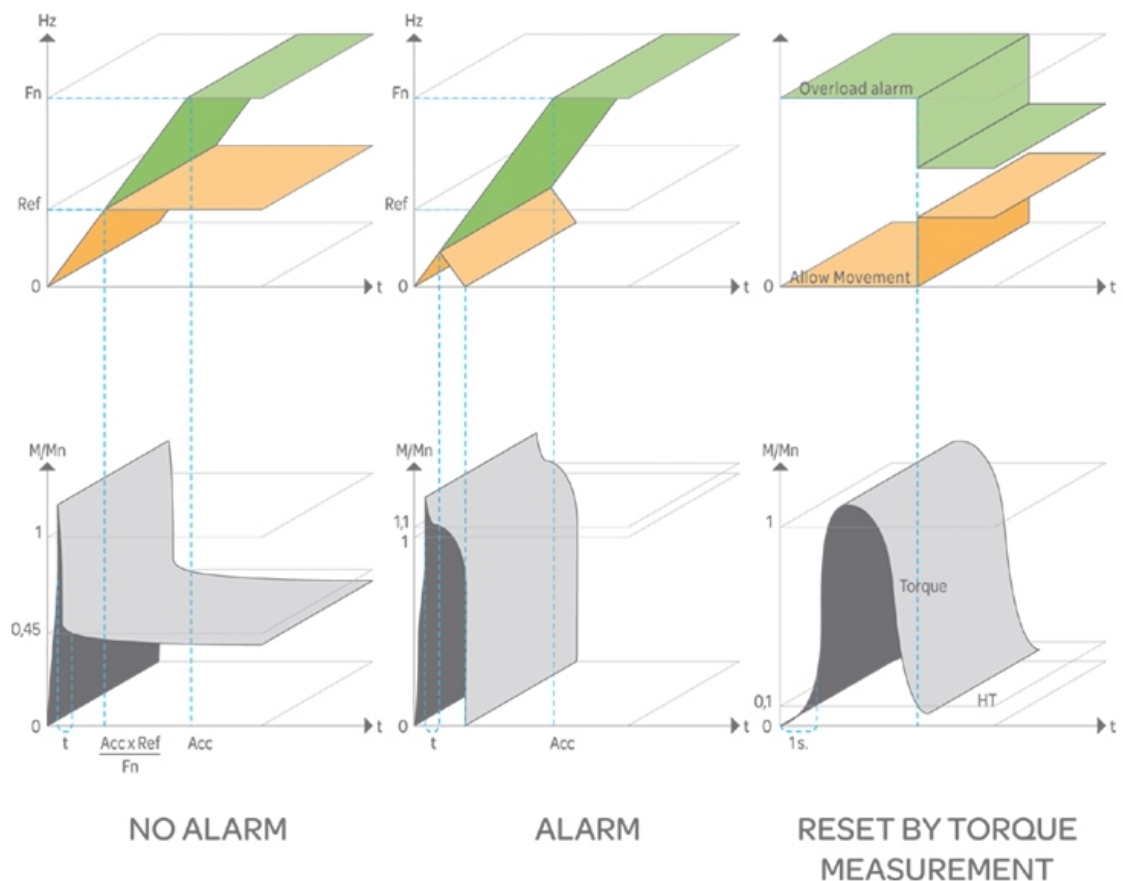
Typical architectures

Construction cranes

- **Simple hoisting**
Compact / Hardwired / Logic controller / Zelio Logic
- **Optimized hoisting**
Compact / CANopen / Drive controller / ATV-IMC

Industrial cranes

- **Simple hoisting**
Compact / Hardwired / Logic controller / Zelio Logic
- **Optimized hoisting**
Compact / CANopen / Drive controller / ATVIMC
- **Optimized hoisting**
Compact / CANopen / Logic controller / M238



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As standards, specifications and designs change from time to time, please ask for confirmation of the information given in this publication.

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