CANopen Lift updated and released

CAN in Automation (CiA) has updated the CANopen application profile for lift/elevator control systems. The released version of the CiA 417 series introduces some new functions.

(Photo: Adobe Stock)

CANopen Lift is the trade name of the CANopen application profile lift control systems published as CiA 417 series. The application profile specifies controllers (e.g. call, drive, and car controllers) and units (e.g. input and output panels, drives, car doors, power meters as well as positioning sensors). The nonprofit CiA association developing and maintaining the CiA 417 series has released already the version 2.3. The SIG (special interest group) Lift Control, which improves the specification since the very first version, harmonized terms and definitions and fixed some issues of the previous version.

Beside that, CiA 417 introduces (authors note: cloud-ready, cloud-able, ready for collecting into the cloud) condition monitoring for lift components and position supervising functionality. New functions of the version 2.3 include the position supervisor and the monitoring units. Additional parameters for the call controller and the load-measuring unit have been introduced. It also specifies set of parameters for cloud-ready condition monitoring and position supervising. Lift controller and I/O functionality is further expanded.

Condition monitoring includes setting of maintenance modes, collecting component condition data such as (lift) trip counter, life cycle of the door drive, device travel quality, and others as well as indicating the maintenance status of the component.

The position supervising allows collection of the data necessary to assess the safety of the lift position and speed. Many European lift control suppliers have implemented this CANopen profile.

The CiA 417 version 2.3 is still based on the Classic CANopen application layer as specified in CiA 301. The specification series has four parts. Part 1 provides general definitions and part 2 describes in detail the functionality of the virtual devices (controllers and units). Part 3-1 specifies the TPDO as well as RPDO messages containing the process data exchanged between the virtual devices. The application parameters, process data and configuration data, are defined in detail in part 4.

“CANopen Lift originally released in 2003 has gained significant market acceptance,” said Holger Zeltwanger, CiA Managing Director. “The new version of the application profile also specifies a boot-loader mode and the program download handling.” These improvements simplify the system integration.

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