

Standards and specifications



This section provides news from standardization bodies and nonprofit associations regarding CAN-related documents. Included are also recommended practices, application notes, implementation guidelines, and technical reports.

Power-operated pedestrian entrance control equipment

The EN 17352 standard specifies requirements and test methods for power operated pedestrian entrance control equipment such as turnstiles, swing lanes, and retractable lanes. Such products can be operated electro-mechanically or electro-hydraulically. They are usually used in order to allow authorized persons to switch from one zone to another zone one at the time. This document covers safety in use of power-operated pedestrian entrance control equipment used for normal access as well as in escape routes and emergency exits. This document does not apply to power-operated pedestrian doors according to EN 16005 and EN 16361, doors according to EN 14351 1 and EN 14351 2, vertically pedestrian entrance control equipment, pedestrian entrance control equipment used in industrial processes as well as for people with special needs, and platform doors for subway as well as railway.

Boon Edam has upgraded its revolving doors, Tourlock 180 (4-winged) and Tourlock 120 (3-winged), to be compliant with EN 17352. The company has not disclosed, if the embedded network is CAN-based. But the CAN in Automation (CiA) member Dunkermotoren, a brand of Ametek, has announced to support EN

17352 in its CANopen-connectable motors. According to the company, it is a market leader in drive solutions for the door automation and is driving more slide and swing doors than any other motor manufacturer. At airports or metro stations for example, entry systems such as access gates ensure that only authorized persons get access to the airport terminal, or that the door to a platform is only released after the metro has stopped. Equipped with brushless DC motors and integrated or external motor control units, those access gates provide additional safety for passengers. Customized and parametrizable motion profiles contribute to smooth and safe airport operation.

Different types of access gates, such as a one-way corridor or automated passport control, provide different ▶



(Source: Adobe Stock)

installation spaces for the drive solution. The option to select from both, planetary as well as angular gearboxes such as worm or bevel gearboxes, allow Dunkermotoren to configure the suitable drive solution for each entrance system no matter the space constraints.

By publishing the EN 17352 standard, suppliers of power-operated access control devices such turnstiles, swing lanes, and retractable lanes have been confronted with additional requirements and test methods. Thus, manufacturers of such products are required to take further safety characteristics into account when designing their product. Additionally, the motor controllers, which are certified to EN ISO 13849-1 for Performance Level d (PL d), can safely switch off the drive torque so that no one is harmed on their escape route. *hz*

Do not double use terms!

A synonym is a word that has the same meaning as another word (or nearly the same meaning). In standards and specifications, which are translated into other languages, this could lead to misunderstandings and misinterpretations. Therefore, as a general rule, it is wise to avoid synonyms. However, there are many standards and specifications using synonyms.

Even more critical is the double-use of terms. They are known as homonyms. In many automotive-related standards and specifications the term “signal” is used. The term “signal” is defined in the online Electropedia electrotechnical vocabulary by the IEC standardization body as “physical phenomenon whose presence, absence, or variation is considered as representing information”. The Oxford Learner’s Dictionary defines that signal is a “movement or sound that you make to give somebody information, instructions, a warning, etc.” In contradiction to these definitions, ISO 23150:2021 (Road vehicles — Data communication between sensors and data fusion unit for automated driving functions — Logical interface) defines “signal” as “entity consisting of one or more values and which is part of a logical interface (3.1.4). “Signal” is laboratory slang in the automotive industry. Synonyms are “parameter”, “suspect parameter”, “process data”, “variables”, etc. In J1939 documents, the term “suspect parameter (SP) is used as well as “parameter group (PG)”. Nevertheless, you find in the J1939 Digital Annex, several hundred times the term “signal”.

Newcomer can be confused, when we use synonyms and double use terms (homonyms). To help to understand more easily standards and specifications released by different authors, we should harmonize terminology. It seems impossible to do this for all technologies. Even in automotive applications we will not achieve this in one step, because there are multiple standardization bodies and industry consortia releasing documents. In a first step, we can try to harmonize terminology within each organization and providing translation tables, if different terms are used. The term “signal” used as synonym for “parameter” should be avoided, because it is also used as a physical layer term. Perhaps, the term “(process) variable” is in the long-term the best choice, “(process) data” is in my opinion also a good option. *hz*

CAN SIC XL standardized in ISO DIS 11898-2

The ISO DIS 11898-2 standard specifying the CAN physical medium attachments (PMA) has passed the Draft International Standard (DIS) ballot, but with comments. Most of comments were of editorial and general nature. However, some technical comments were submitted, too.

The most important change is the introduction of PMAs supporting the PWM (pulse-width modulation) coding as specified in CiA 610-1 (CAN XL). This coding allows data phase bit rates up to 20 Mbit/s. Of course, the achievable bit rate depends highly on the network topology and the selected cables as well as connectors. The CAN SIC (signal improvement capability) XL approach is able to suppress ringing on the cable. It uses the same mechanism as the so-called CAN SIC transceivers originally specified in CiA 601-4. This CiA specification has also been introduced into the ISO DIS 11898-2:2023 standard. *hz*

Further readings

Since 2022, the section “Standards and specifications” provides brief news in the CAN Newsletter magazine issues. Here’s an overview on all published ones until now:

- ◆ [CAN Newsletter March 2022](#)
- ◆ [CAN Newsletter June 2022](#)
- ◆ [CAN Newsletter September 2022](#)
- ◆ [CAN Newsletter December 2022](#)
- ◆ [CAN Newsletter March 2023](#)



CAN in Automation

CANopen Product Panels – Increase your visibility

Join CiA at Interlift 2023 and SPS 2023. Take advantage of the CANopen product panels and showcase your CANopen-based solutions. The CANopen panel wall is prominently displayed at the CiA booth. By participating in the CANopen panel wall you will increase the visibility of your CAN-based products, your company as well as your brand. Additionally, you present your company to tradeshow visitors as an CAN solution provider, connected to the CiA community.



- ▶ Targeted Audience: Present your CANopen solutions to a focused audience.
- ▶ Industry Collaboration: Fostering innovation and knowledge sharing in the CiA community.
- ▶ Market Positioning: Present your active involvement and expertise in the CAN application field.

- ▶ Increased Visibility: Showcase your company, CANopen-related products, and solutions.
- ▶ Enhanced Reach: Present detailed product information to an enhanced audience, based on your product's CiA Product Guide entry.



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