

SAFE TORQUE OFF

Functional safety for CANopen motor

Dunkermotoren has added safe torque off (STO) function for its BG DC servo drive series. One of the products in this series is the CANopen-based BG 66 dPro motor.



The BG 66 dPro provides CANopen connectivity (Source: Dunkermotoren)

available with functional safety. All motors and external controllers with dPro functionality can be fully integrated with STO. The BG 66 dPro motor from the series comes with CANopen connectivity. It supports the CiA 301 CANopen application layer and communication profile and the CiA 402-2 CANopen device profile for drives and motion control (IEC 61800-7-201). Part 2 features operation modes and application data. The CANopen interface CiA 402 can be used to enter parameters of a path curve, such as position, speed, and acceleration values. The CANopen interfaces supports profile position mode, velocity mode, profile velocity mode, torque profile mode, homing mode, interpolated position mode, as well as cyclic sync position mode.

Where energy-hungry and space-consuming mechanical relays are currently still used, integrated electronic circuits ensure that motors are switched torque-free in accordance with relevant standards when required, explained the company. Since the logic voltage is maintained when STO is triggered, time-consuming referencing after restarting is also eliminated, they added.

With the certified STO function, the company has integrated a function that makes applications safer, especially in the fields of industrial automation, intralogistics, medical technology, and door automation. By combining the motors with components from the modular system, the motors with certified STO can be individually adapted to various applications. If necessary, also for the textile industry in the production of double seams.

Just a few decades ago, fast-rotating saws without contact protection or transport of goods according to the principle "mass has right of way" were common. Today, working even alongside power-packed cobots or gigantic driverless transport systems is safer than with a capricious stapler, concludes the company.

Even our grandparents knew that double stitching holds better. The principle of redundancy contained therein is one of the core principles of functional safety: If, for example, any component fails, then another component must compensate for the defect. Dunkermotoren applies this principle in DC servomotors (BG series) so that, if necessary, they can also quite safely no longer generate torque.

The reason for this is functional safety, which systematically helps to avoid dangers with many standards. In the future, the company's motors in the 20 W to 3900 W range will also be

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