MESCO
Engineering

Standard module for drives with integrated safety functions

Software Library simplifies the development of safe drives in accordance with IEC 61800-5-2

During the development of safe drives a substantial portion of the effort (and costs) involved can be attributed to the implementation of safety functions.

MESCO Systems has put together many safety-related functions in one software library. It can be universally deployed and thus allows drive manufacturers to significantly reduce their development costs and shorten development times.

The entry into the world of development of safety-related drive systems can present prospective project participants with major challenges. On top of the usual cost and time pressure, extensive normative and legislative requirements have to be met during the entire product life cycle.

The relevant requirements for safe drive functions are based on IEC 61800-5-2. This product standard defines in its current version 17 safety features that can be used to reduce risk in processes involving motion/movement. A significant part of these functions can be fully represented in the software.

Key safety functions

Drive manufacturers were previously forced to either implement these functions themselves or to make use of specialized engineering service providers, to have them implemented for them.

Standard software modules 'spanning' across many manufacturers were previously unavailable. In order to close this gap, MESCO has now put together the most important safety functions in one software library.

The library contains the basic design of eight most commonly used safety functions (SS1, SS2, SOS, SLS, SLP, SLI, SDI, SBC, SSM) in accordance with *IEC 61800-5-2*.

Additional safety features are gradually being integrated into the library, such that drive manufacturers can 'retrofit' these themselves via firmware updates.

The library is provided as source code and is optimized for use on 32-bit microcontrollers. It is a pre-certified 'Safety Element out of Context' (SEooC) and hence does not need to be examined in detail during the validation of the drive. "By using this library manufacturers can achieve significant savings of both time and money during the development, and also minimize their risks." emphasizes Peter Bernhardt, Head of Marketing & Sales.

The library can be used up to SIL 3 in accordance with *IEC 61508 / IEC 62061* und *Performance Level e* according to *ISO 13849*.

Safety-competence for industrial automation

MESCO provides the library as part of an all-inclusive package that, in addition to the software, is comprised of a comprehensive integration manual and technical support.

In addition, MESCO Engineering supports its customers with optional hardware and software development services, from concept to certification.

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