Security for Safety - Understanding the security requirements for safety

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Key words: *dependency, functional safety, cybersecurity, standards*

In our modern world, IT networks for offices and industrial automation are growing together. Today's safety-related automation solutions are no longer in separated islands. Therefore they are required not only to provide functional safety but to also to enforce cyber security.

Functional safety on the one hand serves to protect human beings, assets and the environment. Cybersecurity on the other hand, focuses on the availability, integrity and confidentiality of both data and software.

It is well known that the states of absolute safety and absolute security are not achievable. Therefore both concepts follow the idea of risk reduction. Even though this basic idea (and some others) might be similar it is crucial to understand that the circumstances differ and some fundamental differences do exist.

Cybersecurity is nothing that can be bought. It's not a product and it's not a software. So first of all a mindset for security has to be established. Raising the awareness of security risks among the Management and workforce is the initial step to avoid human errors. Secondly, good engineering practice helps to create and maintain applications with reduced cyber security risks. It is crucial to create network diagrams, develop recovery strategies, use passwords, train personnel, organize reviews and so forth. These organizational measures and all the supporting technical measures have to be tailored to each individual application. And for sure they have to be designed in a way to support the special needs of industrial environment.

➔It is better to increase security now than to search for a perfect solution!