

Functional Safety

Regulatory compliance and good practice



Helping you meet your regulatory and company compliance requirements through our offering:

- Independent functional safety audits,
- Functional safety assessments,
- IEC 61508/61511 benchmarking.

The international safety standards IEC 61508 and IEC 61511 for the process sector are setting global benchmarks as “good practice” in functional safety.

These standards are impacting not only traditional safety sectors such as oil, gas, and petrochemicals but also the chemical, pharmaceutical, pulp and paper, metals, and utility industries. Throughout the safety supply chain, demonstrable evidence of compliance to the functional safety management requirements of these standards is increasingly seen as a prerequisite to demonstrate good practice safety management

Minimizing risk to people, property, and environment



The development and operation of an organization functional safety management system typically runs in parallel with independent functional safety audits and functional safety assessments. Audits and assessments of installed safety systems are becoming common practice. With the publication of IEC 61508 Edition 2, compliance with the requirements of the Safety Manual(s) for compliant items, for example the AC 800M HI controller, will become more important.

For newly installed systems, ABB is able to offer their 800xA HI clients functional safety system audits of 800HI safety platforms against the requirements of the Safety Manual. This service is particularly relevant to those clients who undertake their own application design and engineering and system integrators who purchase hardware and then design and engineer the specific application.

The 800xAHI safety controller is third-party certified by TUV, compliance with the requirements of the Safety Manual is therefore a pre-requisite and failure to comply with the requirements of the Safety Manual could invalidate the certificate in respect of use of the safety controller for a specific safety system application.

For systems that have been installed and operating for a number of years, the audit process also provides the asset owner with an independent assessment of the 'health' of the logic solver sub-system taking into account the impact of any system modifications or changes to key functional safety data parameters that may have resulted from the client's management of change processes.

The audit can therefore form part of a regular functional safety performance review methodology undertaken by the client on an appropriate frequency i.e. within every 3-5 year period.



System 800xA Functional Safety Audit

An independent analysis of the logic solver installation is performed on-site, checking the relevant points stated within the AC 800M HI Safety Manual and other ABB documentation referenced within in order to avoid a negative impact in both, safety level and availability.

Relevant information related to the installed ABB product release is scanned, analyzed and provided to the customer in order to assist them in the understanding of product bulletins and improve his interaction with the support line.

You will get the additional benefits of the auditor feedback, based on good practices and installed base, allowing them to improve their design and maintenance tasks and above all ensure functional safety for the logic solver is being maintained.

Benefits – why use ABB

ABB offers unparalleled experience and expertise in functional safety management, System 800xA HI safety-system design engineering, audits and assessments. Through its global IEC 61508 and 61511 third-party certified Safety Execution Centers, TÜV certified FSEng functional safety consultants and competent auditors and FS assessors, are able to deliver a range of independent and well trusted audit and assessment services. These independent and unbiased services utilize proven methodologies designed to provide clients with confidential and structured outputs enabling them to cost effectively implement improvement and compliance programs.

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