

Certificate



No.: 968/FSA 1239.00/21

Functional Safety Assessment

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|----------------------------|---|--|------------------------|
| Certificate Holder | Breda Energia S.p.A. Viale Sarca 336 20126 Milano Italy | Manufacturer | see certificate holder |
| Subject | Design and engineering (safety life cycle phase 4 of IEC 61511) of the Smart Subsea Control Module (SSCM) prototype (including corresponding design and engineering documentation). Prototype conceptual design of a SSCM, including following SIFs: SIL 3 for HIPPS;ASD,ESD1 and ESD2 SIL 2 for PSD | | |
| Type Designation | SMART SUBSEA CONTROL MODULE (SSCM) Breda Energia Job No.: 920471 S/N 002889900039 | | |
| Codes and Standards | IEC 61511-1:2016 + Corr.1:2016 + AMD1:2017 (in extracts) | IEC 61508 Parts 1-7:2010 (in extracts) | |
| Scope and Result | Scope is the stage 2 (phase 4) assessment of the design, engineering and system integration (up to the FAT stage in Italy) of Breda Energia S.p.A. - Eni S.p.A. SSCM prototype project. The final subsea installation and commissioning is not covered. Result: The presented system design, engineering and validation activities, including functional safety management activities (fault avoidance measures) comply with the requirements for up to SIL 3 (including SIL 2) of the applicable life cycle phases. | | |
| Specific Provisions | The safety documentation delivered by the component suppliers have to be observed. For details see test report 968/FSA 1239.00/21. Any change in type or firmware of used hard- or software modules and changes in the SSCM design requires a reconsideration of the whole system. | | |

Valid until 2026-04-14

The assessment report-no.: 968/FSA 1239.00/21 dated 2021-03-24 is an integral part of the certificate. This certificate is specifically valid for the above mentioned system/subsystem/safety function only. It becomes invalid, if any unapproved changes are implemented without prior assessment/approval by the certification body. Authenticity and validity of this certificate can be verified through the above indicated QR-code or at <http://www.fs-products.com>.

TÜV Rheinland Industrie Service GmbH

Bereich Automation
Funktionale Sicherheit

Am Grauen Stein, 51105 Köln

Köln, 2021-04-14

Certification Body for FS-Applications

Dr.-Ing. Thorsten Gantevoort