



Certificate no.:
TAA00003UM

TYPE APPROVAL CERTIFICATE

This is to certify:

that the **Control and Monitoring System**

with type designation(s)

GEA IO Control Generation for Marine Solutions

issued to

GEA Westfalia Separator Group GmbH
Oelde, Nordrhein-Westfalen, Germany

is found to comply with

DNV rules for classification – Ships Pt.6 Ch.5 Sec.21 Cyber security

Application:

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

This type approval covers security capabilities for DNV Cyber security profile level 1 (SP1) and IACS UR E27, subject to conditions stated in this certificate

Issued at **Høvik** on **2026-03-03**

This Certificate is valid until **2028-03-02**.

for **DNV**

DNV local unit: **Essen**

Approval Engineer: **Mirza Muqadam Baig**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to USD 300 000.

Product description

GEA Westfalia Separator Control System (GEA IO Control Generation for Marine Solutions) is an automated unit that manages the operation of:

- Marine Separator for Fuel Oil & Lube Oil Treatment – GEA Energy Master
- Bilge Water Treatment – GEA Bilge Separator, Bilge Master, Safety Master, GEA BilgEGR Solution
- Water Treatment in Exhaust Gas Recirculation – GEA NOx Separator, GEA bilgEGR Solution
- Scrubber Water Treatment – GEA SOx Separator
- Sea Water Desalination / Fresh Water Generation – SWD
- Visco Booster Unit (VBU)
- Methanol Booster Unit (MBU)
- Methanol Valve Train (MVT)

The system consists of Siemens PLC along with its I/Os, a managed switch, HMIs and a gateway to connect to third party systems.

The following table enlists main hardware comprising the system that has been type approved:

No.	Component Description	Manufacturer	Type Designation	OS	Firmware	Application
1	Network Managed Switch	Siemens	Scalance XC208	-	V4.7.0	-
2	PLC	Siemens	CPU S71215C	-	V4.6	IO.S.Marine. 17.09.000.245 1346808_78
3	HMI	Siemens	TP900	Win CE V6.0	V17.0.0.9	
			TP700			
			KPT400			
4	Gateway	HMS	ABC4022-A	-	V1.01.01	-
			ABC4013-A	-	V2.03.01	-
			ABC4017-A	-	V2.04.01	-
5	Frequency Converter / Motor Control	Danfoss	FC302P Series	-	8.23	-

Application conditions

The following conditions shall be satisfied when the system is installed and used on a vessel where the class notation Cyber secure(Essential) applies:

- The type approved products shall be installed in restricted areas. Access to the components shall be restricted and controlled.
- The type approved products shall only be interfaced to the third party systems complying with requirements enlisted in DNV-RU-SHIP Pt.6 Ch.5 Sec.21 July 2024 version.

When the control system is allocated to a security zone on board, it shall be delivered with product certificate in accordance with DNV-RU-SHIP Pt.6 Ch.5 Sec.21. This certification shall be based on approval of the documents listed below:

- Project specific asset inventory (F071), demonstrating consistency with the type approved asset inventory.
- Project specific system topology (F030), demonstrating system architecture and interfaces with other systems and equipment as per type approved topology.
- Declaration (F262) demonstrating configuration of security capabilities as per type approved documents:
 - Rev 0_2 HMI Procedure
 - Rev 0_1 FC302 Procedure
 - Rev 0_4 Configuration CPU 1215 Procedure
 - Rev 0_3 F141 XC208 Procedure
- Relevant description of any differences in the delivered system compared with the type approved system.

If any modifications in the firmware and software occur they must align with the modification strategy described in the Rev 0_2 GEA_F259_I320_Z100 document.

Tests carried out

Tested in accordance with requirements for DNV rules Pt.6 Ch.5 Sec.21 security profile 1, edition July 2024 as per the supplier's F252 document. Relevant manuals and instructions of GEA's management system have been verified for compliance with DNV-RU-SHIP Pt.6 Ch.5 Sec.21 [3.3].

Marking of product

- Hardware devices are marked with serial numbers
- Software version(s) can be seen via each product's management interface

Renewal assessment

A renewal assessment will be performed at renewal of the certificate.

The scope of the renewal assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software version, components and/or materials.

The main elements of the assessment are:

- Ensuring that type approved documentation is available
- Inspecting of factory samples, selected at random from the production line (where practicable)
- Reviewing production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Reviewing possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate
- Reviewing documented evidence of adherence to Secure Development Lifecycle processes.



Job ID: 262.1-040395-1
Certificate no.: TAA00003UM

Manufactured by:

**GEA Westfalia Separator Group GmbH
Werner-Halbig-Str. 1**

**GEA Mechanical Equipment (Tianjin) Co., Ltd
No.8 Quanda Road, Wuqing Development Area, China**

**GEA Westfalia Separator India Pvt. Ltd
Bengaluru, Karnataka, India**

**GEA Mechanical Equipment US, Inc
400 S Wuthering Hills Dr Janesville WI, USA**

**GEA Westfalia Separator Group GmbH
Hamburg, Germany**

**GEA Westfalia Separator Group GmbH
Niederahr, Germany**

The validity of the certificate can be checked on <https://approvalfinder.dnv.com/>