



Certificate No:
TAA000037M

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Engine Control System

with type designation(s)
WICE

Issued to

Winterthur Gas & Diesel Ltd.
Winterthur, ZH, Switzerland

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 security profile 1, subject to conditions stated in this certificate.

Temperature

Humidity

Vibration

EMC

Enclosure

Issued at **Høvik** on **2022-10-21**

This Certificate is valid until **2024-10-20**.

for **DNV**

DNV local unit: **Essen**

Approval Engineer: **Qitao Gan**

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Jarle Coll Blomhoff
Head of Section

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 300,000 USD.



Form code: TA 251

Revision: 2022-09

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Product description

The following components of the WiCE – Engine Control System are covered:

Component Description	Type Designation /HW version	OS/Platform SW version	Application SW version
Main Control Unit (MCU)	2.2.3 (updated revision) 1.2.x (legacy revision) ^[1] 1.1.1 (legacy revision)	4.4.0 ^[5]	3.7.0 ^[5]
Cylinder Control Unit (CCU)	2.4.2 (updated revision) 1.4.x (legacy revision) 1.2.1 (legacy revision) ^[2]	4.4.0 ^[5]	3.7.0 ^[5]
Gateway Unit (GTU)	2.2.3 (updated revision) 1.1.1 (legacy revision) ^[3]	4.4.0 ^[5]	3.7.0 ^[5]
Manual Control Panel (MCP)	Pro Display 10 v1.4 (legacy revision) ^[4] Pro Display 10 v1.3 (legacy revision)	UXP 1.4.3 ^[5]	MENU 1.9 MENUSYSTEM 1.8 MAINTENANCE_APP 1.3, WINGD_STARTAPP 1.0 MCP 3.0 iCER 1.3 ^[5]
Angle Calculation Module (ACM-20)	03	SW for ACM-20 is contained inside WiCE ECS Product SW (3.7.0) and not versioned as standalone SW	
Commissioning Tool	Any Service PC (Personal Computer)	Windows OS (8, 10, 11)	flexView2 (fv2) 2.5.3

Note:

The following HW versions cannot be tested due to limited availability of parts. Compatibility claimed by evidence of claim:

^[1] MCU 1.2.0, 1.2.1

^[2] CCU 1.3.1

^[3] GTU 1.2.0, 1.2.1, 1.2.2

^[4] MCP {1.2, 1.5, 1.6, 1.7}(legacy revision), 1.8 (updated revision)

^[5] updated version, backward compatible (BWC) w/ all legacy HW

Application/Limitation

This type approval covers cyber security capabilities at DNV security profile 1 (SP1) in accordance with IEC 62443-3-3 for hardware and software listed in Product description.

The verified security capabilities are implemented in the product which provides services to WinGD's customers. Customer data/application is not necessarily subject to the same security functions.

The approval is valid when the internal network interface is connected to a trusted zone. Any external network connections to an untrusted zone must go through an approved gateway.

If the WinGD product is to be used for applications subject to DNV rules for classification, documentation of the application is to be submitted in each case.

Changes affecting the type approved security capabilities shall be informed to DNV. Major modifications may require witnessing of type testing and update of this type approval certificate to reflect new products or versions listed in Product description.

Type Approval documentation

Tests carried out

All hardware (2.4.2) and software versions (3.7.0) were tested September 28th ~ 30th 2022 at WinGD site in Winterthur, Switzerland, in accordance with requirements for DNV security profile 1 (SP1) for Cyber Secure (Essential), ref. DNV-RU-SHIP Pt.6 Ch.5 Sec.21 (2021-07 Edition).

Marking of product

- The type designation and
 - the manufacturer name and contact address
- shall be affixed visibly, legibly and indelibly to the product. In addition, the product shall be marked with:
- model name
 - serial number
 - power supply rating

Place of manufacture

- Winterthur Gas & Diesel Ltd. (WinGD), Winterthur, Switzerland

Periodical assessment

The scope of the periodical 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 versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of 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
- Review of 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

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

END OF CERTIFICATE