Certificate number: 05747/G0 BV
File number: AP 1913
Product code: 3991I

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

PRAXIS AUTOMATION TECHNOLOGY B.V.

LEIDERDORP - NETHERLANDS

for the type of product

MAIN ALARM SYSTEMS

G-DATA, MAXI/MEGA-GUARD, Integrated Alarm, Monitoring and Control System.

Requirements:
BV Rules for the Classification of Steel Ships.
IACS UR E27 Rev.1 Sep 2023 Cyber resilience of on-board systems and equipment.
IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008)
EC Code: 31/41

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 14 Oct 2030

For Bureau Veritas Marine & Offshore,
At BV GRONINGEN, on 14 Oct 2025,
Olaf RUITER

This certificate was created electronically and is valid without signature

This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

Type **G-Data, Mega-Guard, Maxi-Guard,** Integrated Alarm- Monitoring and Control System consisting of:

1.1 - Hardware:

	Technical Data / Application Range
OWS	Operator Work Station (also named 'All in one' Work Station) for the following typical processes: - Alarm/Control and Monitoring - Pump- and Valve Control - Duty Alarm System - Patrol Alarm System - Electrical Power Management - Main Engine Control - PID Control - Graphic presentation of ship's data The OWS comprises the following components: - Model 6001 Marine Personal Computer ; including redundant network interface (type 98.6.001.7xx, 98.6.001.8xx) - TFT colour Graphic screen (type 98.6.02x.6xx) - Panel PC 10" (type 98.6.022.84x.x) - Panel PC 15.6" (type 98.6.022.86x.x) - Panel PC 17" (type 98.6.022.87x.x) - Panel PC 19" (type 98.6.022.82x.x) - Panel PC 22" (type 98.6.022.88x.x) - Panel PC 24" (type 98.6.022.885.x) - Panel PC 26" (type 98.6.022.89x.x) - Operator Keyboard (type 93.6.02x.00x) - Engineering Keyboard (type 76.0.200) - Keyboard/Tracker ball (type 93.6.02x.x0x) - Trackerball Controller (type 98.6.022.632) - Joystick Controller(type 98.6.022.631) - Ethernet switches (type 76.0.81x, 76.0.84x, 76.0.85x) - 8-Ports Ethernet Switch (98.6.040.802) - 18-Ports Ethernet Switch (98.6.040.803) - DIN module media converter RJ45/Fiber ST (98.6.040.806)
EAS	Extension Alarm System for the remote alarm indication consisting of: - Local Operator Panel (type 98.6.02x.6xx, 93.0.96x, 93.0.98x.x) - Watch Entrance Unit (type 93.0.37x) - Reset Box (type 93.0.37x) - Bedroom Buzzer (type 93.0.35x)
PCU	Process Control Units Maxi-Guard/Mega-Guard DIN Rail Model (also called DPU or SAU) for processing of inputs, outputs, alarms and control loops, consisting of: - Model 6030, 18 x Digital input / 18 x Digital output executed as Din rail model (Type 98.6.030.8xx). - Model 6034, 24 x Analog input /mixed input output executed as Din rail model (type 98.6.034.8xx) - Model 6032, 36 x Digital input unit executed as Din rail model (type 98.6.032.8xx) - Display Panel (type 98.6.02x.6xx) - Serial Interface Converter (type 98.6.040.80x) - Alarm Panel 16 Ch. (type 93.0.92x) - Window Wiper Panel (type 93.0.95x, 93.0.98x.x) - Window Wiper I/O Module (type 98.6.030.80x) - LCD Operator Panel (type 93.0.96x) - 4-Port NMEA interface (type 91.6.040.801) - 8-Port NMEA Interface (98.6.040.804) - Control Processor E-series 4xLAN (type 98.6.049.80x) - Nav. Lights I/O-module (type 98.6.030.8xx) - TFT 5.7" Touch Operator Panel (type 93.0.98x.x) - Thruster Controller(type 98.6.049.801) - Model 6049, Control Processor executed as Din rail model with redundant network interface executed as Din rail model (type 98.6.049.8xx)
UPS	230 VAC & 24 VDC Uninterruptible Power Supply consisting of: - Distribution Panel (type 93.4.50x) - Praxis Earth Fault Detection Module (type 91.6.040.20x) - Power supply (type 76.7.139.2)

	- UPS input module (type 93.4.504) - UPS distribution module (type 93.4.503) - Power supply (type 76.7.13x.x) (PULS CP10.241, PULS CPS20.241, PULS QS40.241) . - Power Supply Unit (*Phoenix Quint4-PS/1AC/24DV/40) covered on TA: 44621/XX BV
BMS	Bridge Manoeuvring system (also called PCS) consisting of: - All models mentioned under PCU - BMS Telegraph Panel (type 98.6.02x.62x) - Telegraph and Safety Panel (type 98.6.02x.63x) - 8.4 inch TFT (type 98.6.02x.6xx) - 5.7” TFT Operator Panel (type 93.0.98x.x) - Azimuth and Control levers (type 98.6.022.621x, 98.6.022.622x, 98.6.022.623x, 98.6.022.624x)
AHS	Anti Heeling System comprising of: - All models under OWS - All models under PCU - Inclinometer (98.0.23x)
PMS	Power Management System consisting of: - All models mentioned under PCU - PMS input/output Din module (type 98.6.034.7xx, 98.6.034.8xx) - Local Operator Panel (type 98.6.02x.6xx) - 7" TFT Operator Panel (type 98.6.02x.6xx) - 5.7” TFT Operator Panel (type 93.0.98x.x) - Display and Operating module (type 98.6.02x.6xx, 930.96x.x) Overload trip, Reverse Power Trip, Low-/High Frequency Trip/ Low-/High Voltage Trip, Standby Start, Synchronising, Preferential Trip, Load Sharing, Low Load Stop, Manual Start/Stop, Safety System Application software version 1.x (up to 3 DG’s), version 2.x (up to 5 DG’s)

1.2 - Basic Software / Firmware Versions:

Module Name	Revision
CAMMAIN.EXE	: 4.xx & 5.xx
Mega-Guard.exe	: 6.xx
60XX_xxx.HEX	: 1xx, 2xx, 3xx, 4xx
LOP_xxx.HEX	: 1xx
Functional Keyboard	: 2.xx & 3.xx
IOSERVER CAMCLIENT	: 6.xx
DIN	: 2.x
IO MODULE	: 2.x
PMS IO MODULE	: 2.x
ALARM PAN.	: 1.x
WINDOW WIPER	: 1.x

2. DOCUMENTS AND DRAWINGS:

For previous Versions:

PRAXIS Automation Technology:

- Mega- Guard - Power Management System - Operator Guide Rev. 6.40 dated 11 Jan. 2005
- Mega- Guard - Process Control Unit - Operator Guide Rev. 5.30 dated 14 Jun. 2006
- According to documents filed in AP 3350 & AP 1913.
- Mega- Guard - Product Technical Description (OWS/PCU/SPC/PMS/BMS/PCM), Engineering Guide Rev. 6.03 dated 10 Feb. 2012
- Mega- Guard - Product Technical Description - Installation Guide Rev. 3.6 dated 29 Dec. 2010
- Mega- Guard - Operator Workstation Guide (including EAS) Rev. 6.11 dated 30 Aug. 2011
- Mega- Guard - Bridge Manoeuvring System with 7" TFT Operator Panels, Operator Guide Rev. 2.1 dated 30 Oct. 2009
- Mega- Guard - Operator Workstation (including EAS) - Operator Guide Rev. 1.11 dated 30 Aug. 2011
- Mega- Guard E-series - Power Management System - Operator Guide Rev. 1.3 dated 5 Dec. 2011
- Alarm Panel - Manned Engine Room Applications - Operator Guide dated 16 Nov. 2011
- Fire Alarm Panel - Operator Guide dated 18 March 2010
- Wiper Control System - Operator Guide dated 16 Nov. 2011
- Navigation Light Control System - Operator Guide dated 09 Sept. 2010
- Mega- Guard E-series - Power Management System - Product Guide Rev. 1.3 dated 5 Dec. 2011
- Extension Alarm System for Alarm Panels - Operator Guide dated 1 Feb. 2012
- Mega-Guard series - Ship Builder Installation Manual Rev. 2.1 dated 2 Feb. 2012
- Development Guidelines (Software) dated 20 May 2006
- Mega- Guard - Software Description Rev. 001 dated 04 Jan. 2012
- Test an Evidence Table according to UR E22 with Praxis Remarks, unreferenced and undated document
- Set of Application Notes (Remote Data.. Plugin) filed in AP 1913
- Software Revision List, Rev. 1.22 dated 26 August 2009
- Software Revision List, Rev. 1.23 dated 24 November 2011
- MEGA-GUARD PCS/BMS FMEA Document, Rev. 1.0 dated May 3, 2012.
- Drawings for UPS-500 (NI12.0303-C02/A01 Rev.A, NI12.0309-M01/A01 Rev.A), UPS-750 (NI12.0403-C02/A01 Rev.A, NI12.0411-M01/A01 Rev.A), UPS-1000 (NI12.0506-C02/A01 Rev.A, NI12.0503-C02/A01 Rev.A) and UPS-1500 (NI12.0603-C02/A01 Rev.A, NI12.0609-C02/A01 Rev.A)
- Operator Guide MEGA-GUARD Addressable Fire Alarm System, Rev. 1.7, dated October-21, 2013
- General Drawings for FAS (NYY.XX50-F01 Rev.G, NYY.XXO4-F11 Rev.C, NYY.XX04-F21 Rev.C, NYY.XXO4-F22 Rev.B, NYY.XXO4-F23 Rev.B, NYY.XX04-F24 C)
- FAS/BNWAS Cabinet Drawings (NYY.XX60-F01 Rev. C, 93.0.9608-M01 Rev.B, 93.0.9608-F01 Rev.A, NYY.XX60-M01 Rev.D, 98.63.034.804-M01 Rev.B, 98 6 034 804-F01 Rev.B)
- FAS Detectors Drawings (76.4.400-M01 Rev.A, 76.4.401-M01 Rev.A, 76.4.402-M01Rev.A, 76.4.408-M01 Rev.B, 76.4.449-M01 Rev.B, 76.4.403-M01 Rev.A, 76.4.447-M01 Rev.A, 76.4.409-M01 Rev.B, 76.4.411-M01 Rev.A, 76.4414-M01 Rev.B, 76.4446-M01 Rev.A, 76.4.413-M01 Rev.A, NYY.XX81-M01 Rev.B, 76.4.415-M01 Rev.B, 93.0.1570-M01 Rev.B).
- LOP Mounting and dimension drawings 98.6.021.608-M01 Rev.B, dated 12-03-2008, M02 Rev.A, dated 07-06-2008 & M03 Rev.A, dated 08-08-2008.

For Modification F0 version:

PRAXIS Automation Technology:

- Drawings :

Control Lever (No. 98.6.022.6235-M01 Rev. A, dated 27-01-2014)
Azimuth Lever (No. 98.6.022.62401-M01 Rev. C, dated 30-07-2014)
5.7" TFT Operator Panel (No. 93.0.980-M01 Rev. A, dated 27-01-2014)
UPS Distribution board (No. 93.4.503-M01 Rev. B, dated 22-10-2013)
UPS Input Modul (No. 93.4.504-M01 Rev. E, dated 19-04-2014)
Ethernet Switch (No. 98.6.040.802-M01 Rev. A, dated 22-01-2015; No. 98.6.040.803-M01 Rev. A, dated 04-12-2014)
Trackerball Operator Panel (No. 98.6.022.632-M01 Rev. B, dated 13-05-2015)
Joystick Operator Panel (No. 98.6.022.631-M01 Rev. E, dated 26-01-2016)
8-Channel NMEA Interface (No. 98.6.040.804-M01 Rev. A, dated 22-05-2015)
Marine PC Drawings (No. 98.6.022.821.x-M01 Rev.A, No. 98.6.022.840.x-M01 Rev.A, No. 98.6.022.871.x-M01 Rev.C, No. 98.6.022.881.x-M01 Rev.A, No. 98.6.022.891.x-M01 Rev.A)
Thruster Controller (No. 98.6.049.801-M01 Rev. B, dated 11-06-2015)
Control Processor Module (No. 98.6.049.802-F01 Rev. B, dated 12-10-2016, No. 98.6.049.802-M01 Rev. C, dated 14-02-2017)
NAV Light I/O Module (No. 98.6.030.804-F01 Rev. A, dated 09-09-2017, No. 98.6.030.804-M01 Rev. A, dated 13-09-2017)
Marine PC (No. 98.6.001.830-M01 Rev. B, dated 08-11-2016, No. 98.6.001.830-F01 Rev. A, dated 28-09-2015)
5.7" TFT Operator Panel Touch Screen (No. 93.0.983-M01 Rev. D, dated 09-02-2018)

- Software Revision List_Rev 1.24, dated 18-11-2013.

For Modification G0 version:

Marine Pc Drawing: 98.6.001.830-M01-Model-RevC , dated 18-12-2018.
Marine Pc Drawing: 98.6.022.860.x-M01-Model-RevA , dated 01-04-2020.
Marine Pc Drawing: 98.6.022.885.x-M01-Model-RevD , dated 03-06-2024.
PULS CP10 Datasheet Rev.1.7 DS -CP10.241-EN, dated Janv. 2023.
PULS QS40 Datasheet Rev.1.4 DS -QS40.241-EN, dated Jul. 2023.
PULS CP10 Datasheet Rev.1.7 DS -CP20.241-EN, dated Janv. 2025.

3. TEST REPORTS:

For previous Versions:

Praxis Automation Technology:

- Test report issued by Kema (Arnhem, Netherlands), dated 02/09/99 and referenced 93130-KRQ/EMC 99-4334b
- Praxis Automation Technology environmental test report rev.1.0 dated 12/Jun./2009 (The test were witnessed by a Society Surveyor)
- DARE Consultancy test report N° 09C00180RPT01 dated 07/May/2009
- TNO Test report N° TNO-034-DTM-2009-00269 dated 16/Feb./2009
- Praxis Automation Technology environmental test report rev.1.0 dated 15/Apr./2009
- Praxis Automation Technology environmental test report rev.1.0 dated 09/Apr./2009
- Praxis Automation Technology environmental test report rev.1.0 dated 14/Apr./2009
- Praxis Automation Technology environmental test report rev.1.0 dated 17/Jun./2009 (Part one) (The test were witnessed by a Society Surveyor)
- Praxis Automation Technology environmental test reports rev.1.0 dated 17/Jun./2009 (Part two).
- Environmental Test Report Ship Automation System, Rev. 1.0 dated 30 Jan. 2008
- Environmental Test Report Ship Automation System, Rev. 1.0 dated 12 Jun. 2009
- Environmental Test Report Ship Automation System, Rev. 1.2 dated 21 Jun. 2011
- Test Report - FAT E-series, Project Nr. NI10-006 dated 05-09-2010
- Environmental Test Report Rev. 1.2 dated 09 Sep. 2010
- Mega-Guard-E, EMC Tests Report Rev. 1.1 dated 09 Sep. 2010
- Mega-Guard, EMC Tests Report Rev. 1.2 dated 07 Nov. 2011
- Insulation Test Report Rev. 1.0 dated 08 Sep. 2010
- Dry Heat Test Report Rev. 1.0 dated 09 Sep. 2010
- Dry Heat Test Report Rev. 1.0 dated 08 Jun. 2011
- Damp Heat Test Report Rev. 1.1 dated 09 Sep. 2010
- Low Temperature Test Report Rev. 1.0 dated 09 Sep. 2010
- Low Temperature Test Report Rev. 1.0 dated 21 Jun. 2011.
- Type Approval EMC Tests report Augustus 2014 rev 1.0
- Environmental test report rev 1.3 dated 19 Augustus 2013
- Type Approval ESD Tests report Augustus 2014 rev 1.0
- Cold Endurance test report October 2013
- Damp Heat Test Report November 2013
- Dry Heat Test Report June 2013
- EMC Test Report November 2013
- Low Temperature Test Report October 2013
- Power Supply Failure and Power Supply Variation Test Report September 2013

TNO:

- TNO Vibration Test Report No. TNO-034-DTM-2010-00283 dated 25 Jan. 2010.

BICON:

- EMC Test Report No. PRA-20091214-X1 dated 2010-04-01
- EMC Test Report No. PRA-20100715-X1 dated 2010-08-02
- EMC Test Report No. PRA-20100805-X1 dated 2010-08-27
- EMC Test Report No. PRA-20111004-X1 dated 2011-05-02
- EMC Test Report No. PRA-20111004-X2 dated 2011-04-28.
- Bicon EMC Test Report No. PRA 20130529-X1-07 dated 2013-10-17
- Bicon EMC Test Report No. PRA 20130529-X1-03 dated 2013-10-17
- Bicon EMC Test Report No. PRA 20130529-X1-02 dated 2013-10-17
- Bicon EMC Test Report No. PRA 20130529-X1-01 dated 2013-10-17
- Bicon EMC Test Report No. PRA 20130529-X1-09 dated 2013-10-17
- Bicon EMC Test Report No. PRA 20130529-X1-06 dated 2013-10-17

Sebert:

- Sebert M13.001-P13.001 Maritime Vibrations on parts of megaguard E series dated 1 July 2013

For Modification F0 version & G0 :

Praxis Automation Technology:

- Environmental Test Report Rev. 1.2, File: Type Approval test document 2015-Set1, dated 4-12-2015
- Environmental Test Reprot Rev.1.1, File: Type Approval test document 2016-Set2, dated 28-04-2016
- Damp Heat Test Report Rev. 1.0, dated 26-02-2016
- Damp Heat Test Report Rev. 1.0, dated 28-04-2016
- Dry heat Test Report Rev.1.1, dated 04-12-2015
- Dry heat Test Report Rev.1.1, dated 28-04-2016
- Low Temperature Test Report Rev.1.0, dated 22-02-2016
- Low Temperature Test Report Rev.1.0, dated 26-06-2016
- EMC test report Rev. 1.2, dated 26-02-2016
- EMC test report Rev. 1.1, dated 28-04-2016
- Power Supply Failure and Power Supply Variation Test Report Rev. 1.1, dated 28-04-2015
- Power Supply Failure and Power Supply Variation Test Report Rev. 1.2, dated 04-12-2015
- Dry Heat Test Report Rev 1.0, dated 16-08-2018
- Power Supply Failure and Power Supply Variation Test Report Rev 1.0, dated 16-08-2018
- Low Temperature Test Report Rev 1.0, dated 16-08-2018
- Damp Heat Test Report Rev 1.0, dated 27-02-2019
- EMC Test Report Rev 1.0, dated 11-02-2019
- Environmental Test Report for Marine PC, Control Processor E-series 4xLAN, HCS Operator Control Panel, DINIO-module, TFT5.7 Touch Operator Panel, Version 2 dated 04-04-2019
- Visual and Performance Test Reprot Rev.1.00, dated 20-04-2023
- Power Failure and Power Supply Variation Test Report Rev. 1.00, dated 20-04-2023
- Inclination Test Report Rev. 1.00, dated 25-04-2023
- EMC Test Report Rev. 1.10, dated 10-07-2023
- Low Temperature Test Report Rev. 1.10, dated 14-07-2023
- Damp Heat Test Report Rev. 1.10, dated 17-07-2023
- Dry heat Test Report Rev. 1.10, dated 20-07-2023
- Environmental Test Reprot Rev.1.10, File: Type Approval Test Description -2023-R1.10, dated 03-05-2024

BICON:

- EMC Test Report No. PRA-20151120-X1-01-EMC, dated 15-03-2016
- Test Report No. PRA-20151120-X1-01-ANS, dated 15-03-2016
- Test Report No. PRA-20151120-X1-02-CSD, dated 15-03-2016
- Test Report No. PRA-20151120-X1-03-CSD, dated 15-03-2016
- Test Report No. PRA-20151120-X1-04-CSD, dated 15-03-2016
- Test Report No. PRA-20151120-X1-05-CSD, dated 15-03-2016
- Test Report No. PRA-20151120-X1-06-CSD, dated 15-03-2016
- EMC Test Report No. PRA-20160415-X1, dated 03-05-2016
- EMC Test Report No. PRA-20160415-X2, dated 03-05-2016
- Test Report No. PRA-20180824-X1, dated 15-11-2018
- Test Report No. PRA-20180824-X1-01-ANS, dated 15-11-2018
- Test Report No. PRA-20180824-X1-01-CSD, dated 15-11-2018
- Test Report No. PRA-20180824-X1-02-ANS, dated 15-11-2018
- Test Report No. PRA-20180824-X1-02-CSD, dated 15-11-2018
- Test Report No. PRA-20180824-X1-03-CSD, dated 15-11-2018
- Test Report No. PRA-20180824-X1-04-CSD, dated 15-11-2018
- Test Report No. PRA-20180824-X1-05-CSD, dated 15-11-2018
- Bicon EMC Test Report No. PRA 20210930-X1-01 dated 2021-11-17
- Bicon EMC Test Report No. PRA 20210930-X1-02-SE dated 2021-10-28
- Bicon EMC Test Report No. PRA 20210930-X1-03 dated 2021-10-28
- Bicon EMC Test Report No. PRA 20210930-X1-04 dated 2021-11-17
- Bicon EMC Test Report No. PRA 20230725-X2-SE dated 2023-10-05
- Bicon Acoustic Noise and signal Test Report No. PRA 20230725-X3-ANS dated 2023-10-16
- Bicon Compass Safe distance Test Report No. PRA 20230725-X3-CSD dated 2023-10-16
- Bicon Acoustic Noise and signal Test Report No. PRA 20230725-X3-ANS dated 2023-10-16

Sebert:

- Maritime vibration test on a Type Approval set No. M16.001-P16.001, dated 10-10-2016
- Maritime vibration test on a Type Approval set 2015-1 No. M15.001-P15.001, dated 14-10-2015
- Maritime vibration test on a Media Converter No. 16.003-P16.002, dated 10-10-2016
- Maritime vibration test on an Azimuth Lever No. 16.002-P16.001, dated 10-10-2016
- Vibration test on Maritime Control Equipment, No. M18.001-P18.001, dated 05-10-2018

- Maritime Shock and Vibration test on a Two Marine Panel Toch Screenst No. M23.003-P23.003, dated 01-09-2023

Puls:

- Puls Test Report No. TR2-GL05-BS1_XV_2014-01-10 dated 2014-01-10.
- Puls Test Report No. TR2-GL06-BS1_XV_2015-01-10 dated 2015-02-18.
- Puls Test Report No. TR2-GL07-BS1_XV_2016-02-12 dated 2016-02-19.
- Puls Test Report QS40 CMI TESTCOM N°8551-PT-E0019-21 , dated 2021-02-10.
- Puls Test Report QS40 CMI TESTCOM N°8551-PT-E0040-22 , dated 2022-02-21.

4. APPLICATION / LIMITATION:

4.1 - BV Rules for the Classification of Steel Ships.

4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-IMS, AUT-CCS, AUT-PORT**.

4.3 - BUREAU VERITAS Environmental Category, **EC Code: 31/41**.

4.4 - Only Hardware and Firmware / Software successfully tested together in compliance with the rules as referred to in cover page, according to the declaration of the manufacturer are covered by this certificate.

4.5 - Any modification of the hardware, firmware or software having an impact on the product performance or functionality has to be validated with type testing.

4.6 . In accordance with IACS UR E22 and as applicable to programmable devices for computer based systems of Category II or III, for each ship application:

- Ship specific documentation is to be submitted including software documentation and categorization of the computer based system.
- Inspection and testing before installation onboard is to be performed under the surveillance of the Society.

4.7 - Equipment covered by this Type Approval Certificate has been assessed in compliance with IACS UR E27 rev.1 as described in Annex.

4.8 - Equipment covered by this Type Approval certificate has been tested according to requirements of IACS UR E10 rev 9.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above products are to be supplied by **Praxis Automation Technology B.V.** in compliance with the type and the requirements described in this certificate.

5.2 - This type of product is within the category IBV of Bureau Veritas Rule Note NR320.

5.3 - BV product certificate is required.

5.4 -The components listed in (*) have to be covered by a valid type approval certificate, issued by the Society.

5.5 - For information, **Praxis Automation Technology B.V.** has declared to Bureau Veritas the following production site(s):

ZIJLDIJK 24A
2352 AB LEIDERDORP
NETHERLANDS

6. MARKING OF PRODUCT:

- Maker's name or trade mark,
- Serial number of the units,
- Equipment type number or model identification under which it was type-tested,
- Bureau Veritas' Marks.

7. OTHERS:

7.1 - It is **Praxis Automation Technology B.V.**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate No. 05747/F0 BV issued by the Society.

***** END OF CERTIFICATE *****

Marine & Offshore

Attestation number: 77204/A0 BV

File number: TCD06_90

Product code: RA-CYBER

This attestation is not valid when presented without the full attached schedule composed of 7 sections

REVIEW ATTESTATION

This attestation is issued to

PRAXIS AUTOMATION TECHNOLOGY B.V.

LEIDERDORP - NETHERLANDS

for

CYBERSECURITY REVIEW

MEGA-GUARD Main Alarm Systems & Fleet Management System/Shipview

Requirements:
NR659 Bureau Veritas Rules on cyber security for the classification of marine units
IACS UR E27 Rev.1 Sep 2023 Cyber resilience of on-board systems and equipment

This document is issued to attest that BUREAU VERITAS Marine & Offshore reviewed the technical documentation submitted for the equipment identified above. Details of this review are to be found in the "Schedule of Review" in the subsequent pages of this attestation.

For Bureau Veritas Marine & Offshore,
At BV GRONINGEN, on 15 Jul 2024,
Olaf RUITER

This attestation was created electronically and is valid without signature

This attestation will not be valid if the applicant makes any changes or modifications to the product which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. This attestation is issued within the scope of the General Conditions of BUREAU VERITAS Marine & Offshore Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgment, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

SCHEDULE OF REVIEW

1. PRODUCT DESCRIPTION :

MEGA-GUARD MAIN ALARM SYSTEMS are described in the certificate 05747.

2. DOCUMENTS AND DRAWINGS :

Filename	Reference
FAT_Protocol_Rev0.5.pdf	V5.0
NetworkSecurityEquipment_Rev1.0.pdf	V1.0
NP22-127 Asset Inventory REV_B.pdf	V2.0
NP22-127 Drawing Overview AMCS + BTCS + PCS REV_E.pdf	V5.0
NP22-127 Drawing Package AMCS REV_D.pdf	V4.0
PTD_Fleet_Management_System_Rev6.04.pdf	V6.04
PTD_Mega-Guard_Engineering_Guide_Rev6.33.pdf	V6.33
PTD_Mega-Guard_E-Series_OWS_Rev1.39.pdf	V1.39
RecoveryPlan_Rev1.2.pdf	V1.2
WI - PI - 02 - Development Guidelines_Rev12.pdf	V12

No departure from the above documents shall be made without the prior consent of the Society. The manufacturer must inform the Society of any modification or changes to these documents and drawings.

3. TEST REPORTS :

Test report 'UR_E27_FAT_Protocol_Rev0.5_Bureau_Veritas_Signed_20240627.pdf' by BV Surveyor on 27/06/2024:

The following subjects were investigated :

- Alarm System : Verify alarming
- Extension Alarm System / Watch Responsibility System
- System Diagnostics: Network Redundancy Servers
- System Diagnostics: Network Redundancy Devices
- System Diagnostics: Power and recovery
- Verify Anti Malware Features
- Verify Windows Resource Management
- Verify Correct File Permissions Operator
- Verify AppLocker Feature
- Verify Write Filter functionality
- Verify if USB devices are blocked
- Verify Audit Logging Features

- Verify HMI Authentication Features
- Verify Keyboard Filter Functionality
- Verify Security on ethernet connections to external systems
- Network Port Diagnostics
- Verify FMS External Connection

All tests were successful and elements demonstrating compliance are provided in the section "further information".

4. APPLICATION / LIMITATION :

4.1 This attestation is an intermediate document and does not constitute by itself a BV Type Approval Certificate. This attestation is limited to cyber resilience of product described in 1. as per UR E27 Rev. 1 dated Sept.2023.

4.2 This attestation is only valid when attached to the valid Type Approval Certificate 05747.

4.3. This attestation has been issued based on the review of documentation provided for the Type Approval Certificate 05747/G0 BV. It is manufacturer’s responsibility to inform the Society of any modification or changes which could impact the validity of this attestation.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - For information PRAXIS AUTOMATION TECHNOLOGY B.V. has declared to Bureau Veritas the following production site(s):

ZIJLDIJK 24A
2352 AB LEIDERDORP
NETHERLANDS

6. MARKING OF PRODUCT :

N/A - Software.

7. OTHERS :

N/A

***** END OF ATTESTATION *****