



TYPE APPROVAL CERTIFICATE
No. **ELE132210XG**

This is to certify that the product below is found to be in compliance with the applicable requirement of the RINA type approval system.

<i>Description</i>	Alarm, monitoring and control system
<i>Type</i>	G-DATA / Mega-Guard / Maxi-Guard
<i>Applicant</i>	PRAXIS AUTOMATION TECHNOLOGY Willem Barentszstraat 1, 2315 TZ Leiden THE NETHERLANDS
<i>Manufacturer</i>	PRAXIS AUTOMATION TECHNOLOGY
<i>Place of manufacture</i>	Willem Barentszstraat 1, 2315 TZ Leiden THE NETHERLANDS
<i>Reference standards</i>	Rules for the Classification of Ships- Part C - Machinery, Systems and fire protection - Ch.3 ; Sect. 6, Tab.1

Issued in **Hamburg** on **November 12, 2010**. *This Certificate is valid until* **November 11, 2015**

RINA
Daniele Chirulli

This certificate consists of this page and 1 enclosure



TYPE APPROVAL CERTIFICATE
No. ELE132210XG
Enclosure - Page 1 of 4
G-DATA / Mega-Guard / Maxi-Guard

G-DATA, MAXI /MEGA GUARD consisting of:

- 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
 - Dynamic Positioning

The OWS comprises the following components:

- Model 6001 Marine Personal Computer; including redundant network interface (type 98.6.001.7xx)
- TFT colour Graphic screen (type 98.6.02x.6xx)
- Operator Keyboard (type 93.6.02x.00x)
- Engineering Keyboard (type 76.0.200)
- Keyboard/Tracker ball (type 93.6.02x.x0x)
- Ethernet HUB/Router (type 76.0.81x)
- 6010 Fieldbus Driver Board (type 98.6.010.7x0)

EAS Extension Alarm System for the remote alarm indication consisting of:

- Local Operator Panel (type 98.6.02x.6xx)
- 3 / 8 Channel LED Panel (type 93.0.31x)
- Fire Alarm Panel (type 98.6.021.60x)
- Watch Entrance Unit (type 93.0.359)
- Reset Box (type 93.0.351)
- Bedroom Buzzer (type 93.0.363)

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, 12 x Digital input / 8/12 x Digital output executed as Din rail model (Type 98.6.030.7xx).
- Model 6030, 18 x Digital input / 18x Digital output executed as Din rail model (type 98.6.030.80x).
- Model 6032, 24 x Digital Input unit executed as Din rail model (type 98.6.032.7xx).
- Model 6034, 16 x Analog input /mixed input output executed as Din rail model (type 98.6.034.7xx)
- Model 6049, Control Processor with redundant network interface executed as Din rail model (type 98.6.049.7xx).
- Display Panel (type 98.6.02x.6xx)
- Serial Interface Converter (type 91.6.040.40x)
- Sensor Supply Module (type 98.6.010.7xx)
- Alarm Panel 16 Channel (type 93.0.92x)
- Navigation Lights Panel (type 93.0.93x)
- Nav. Lights I/O-module (type 98.6.030.80x)
- Fire Alarm Panel (type 93.0.94x)
- Window Wiper Panel (type 93.0.95x)
- Window Wiper I/O-module (type 98.6.030.80x)
- LCD Operator Panel (type 93.0.96x)



TYPE APPROVAL CERTIFICATE

No. ELE132210XG

Enclosure - Page 2 of 4

- BMS** Bridge Manoeuvring system (also called PCS) consisting of:
- All models mentioned under PCU
 - Bridge/Control Room control Lever and Telegraph Panel (type 98.6.02x.62x)
 - Emergency Stop DIN Module (type 98.6.034.7xx)
 - Bridge/Engine Room Telegraph Panel (type 98.6.02x.6xx)
 - Electronic Drive Unit (type 98.6.010.7xx)
 - Electronic Actuator (type 98.0.3xx)
 - 7" TFT Operator Panel (type 98.6.02x.6xx)
 - BMS Indication Panel (type 98.6.02x.64x)
 - BMS Indication Module (type 98.6.034.7xx)
- AHS** Anti Heeling System comprising of:
- Model 6001 Marine Personal Computer; including redundant network interface (type 98.6.001.7xx)
 - TFT colour Graphic screen (type 98.6.02x.6xx)
 - Operator Keyboard (type 93.6.02x.00x)
 - Keyboard/Tracker ball (93.6.02x.x0x)
 - All models under PCU
- PMS** Power Management System consisting of:
- All models mentioned under PCU
 - PMS input/output Din module (type 98.6.034.7xx)
 - PMS input/output Din module (type 98.6.034.80x)
 - Local Operator Panel (type 98.6.02x.6xx)
 - 7" TFT Operator Panel (type 98.6.02x.6xx)
 - Display and Operating module (type 98.6.02x.6xx)
- 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), version 3.x (up to 8 DG's)
- BNWAS** Bridge Navigational Warning & Alarm System comprising of:
- All models mentioned under PCU
 - Local Operator Panel (type 98.6.02x.6xx and 93.0.96x)
- DP** Dynamic Positioning system comprising of:
- Model 6001 Marine Personal Computer; including redundant network interface (type 98.6.001.7xx)
 - TFT colour Graphic screen (type 98.6.02x.6xx)
 - Operator Keyboard (type 93.6.02x.00x)
 - Keyboard/Tracker ball (93.6.02x.x0x)
 - All models under PCU
 - 7" TFT Operator Panel (type 98.6.02x.6xx)
 - Joystick and Rate Of Turn Panel (type 98.6.02x.6xx)
- UPS** Uninterruptible Power Supply comprising of :
- 230VAC Series UPS: (type UPS-250: 98.0.504); (type UPS-500: 98.0.500)
(type UPS-750: 98.0.505); (type UPS-1000: 98.0.501)
(type UPS-1500: 98.0.502)
 - 230VAC/24VDC Series UPS: (type PSU-250: 98.0.504.1); (type PSU-500: 98.0.500.1)



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TYPE APPROVAL CERTIFICATE

No. ELE132210XG

Enclosure - Page 3 of 4

Technical Documents

Operator Guides

MEGA-GUARD OPERATOR WORKSTATION and Extension Alarm System

(File PTD_Mega-Guard-OWS_Rev6.9)

MAXI-GUARD OPERATOR WORKSTATION and Extension Alarm System

(File PTD_Maxi-Guard-OWS_Rev6.6)

MEGA-GUARD PROCESS CONTROL UNIT

(File PTD_Mega-Guard-PCU_Rev5.30)

MAXI-GUARD PROCESS CONTROL UNIT

(File PTD_Maxi-Guard-PCU_Rev5.30)

MEGA-GUARD POWER MANAGEMENT SYSTEM

(Files PTD_Mega-Guard-PMS-LOP-Rev.6.46; PTD_Mega-Guard-PMS-LED Rev.6.37 and

PTD_Mega-Guard_E-series_PMS_Rev1.10.doc)

MEGA-GUARD BRIDGE MANOUVRING SYSTEM

(File PCM_Mega-Guard_BMS-TFT_MBD_Rev3.11)

MEGA-GUARD DYNAMIC POSITIONING SYSTEM

(Files PTD_Mega-Guard-DP0-Rev0.2, PTD_Mega-Guard-DP1-Rev0.1 and

PTD_Mega-Guard-DP2-Rev0.2.doc)

MEGA-GUARD ANTI HEELING SYSTEM

(File PTD_Mega-Guard-AHS-TFT_Rev1.0)

MEGA-GUARD WINDOW WIPER SYSTEM

(File PTD-Wiper-Control-System-R1.02)

MEGA-GUARD NAVIGATION LIGHT SYSTEM

(File PTD-Navigation-Light-Control-System-R1.06)

MEGA-GUARD FIRE ALARM SYSTEM

(File PTD-Fire-Alarm-Panel-R1.05)

MEGA-GUARD ALARM PANEL

(File PTD-Alarm-Panel-Manned-Engine-Room-R1.04)

Test Reports

Test reports issued by Kema (Arnhem, Netherlands, dated 02/09/99 and referenced 93130-KRQ/EMC 99-4334b.

TNO 2003-CMC-B01/WSS (2003-02-05)

TNO 2003-CMC-B02/WSS (2003-03-03)

TNO 2003-CMC-M0291/WSS (2003-12-08)

TNO Test report N° TNO-034DTM-2009-00269 dated 16/Feb./2009

DARE Consultancy test report N° 09C00180RPT01 dated 07/May/2009

1 Mega-Guard-Type Approval augustus 2006 Rev 1.0

2 Mega-Guard Type Approval 2008_2 Rev 1.0

3 Mega-Guard-Type Approval 2008_3 Rev 1.0

4 Mega-Guard-Type Approval 2008_4 Rev 1.1

5 Mega-Guard-Type Approval 2008_5 Rev 1.0

Type Approval Flammability test report june 2009 Rev 1.1 signed

Mega-Guard-Type Approval test document november 2008 all parts

Mega-Guard-Type Approval EMC Bridge equipment all parts

Mega-Guard-Type Approval test document february 2009 Rev 1.0

Type Approval test document december 2009 Rev 1.3. Total



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TYPE APPROVAL CERTIFICATE

No. ELE132210XG

Enclosure - Page 4 of 4

Marking of the Product/Modules:

- The Manufacturer name or trade mark is Praxis Automation Technology G-DATA/MEGA-Guard/Maxi-Guard
- Serial numbers on the units: The serial number is indicated on each modul on attached label
- Type of equipment or identification according to the type approval certificate: The part number is indicated on each component on attached label

Remarks

The following documentation is to be sent to RINA for approval before each delivery on board:

- Drawings showing the systems layout and the details of power supply to the various subsystems.
- Description of functions / controls implemented and the relevant F.M.E.A., to prove the compliance case by case with the applicable Marine Requirements (eg. SOLAS)
- Documentation of the applied software versions.

This Certificate replace the certificate ELE277205CS



Roberto Phelli

Hamburg November 12, 2010