



**Lloyd's Register EMEA**  
*Rotterdam Technology Support Office*  
*K.P.v.d.Mandelelaan 41a,3062 MB Rotterdam, The Netherlands*  
*Telephone 003110104145088*

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Document number PRJ110999320-1
Issue number 0

## DESIGN APPRAISAL DOCUMENT

Date 8 May 2019	Quote this reference on all future communications ROT/ PRJ110999320-1
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**LLOYD'S REGISTER TYPE APPROVAL SYSTEM, 2017.**  
**Issued to: Praxis Automation Technology BV, Leiderdorp, The Netherlands**  
**For: MEGA - GUARD, Integrated Alarm, Monitoring and Control System.**  
**Type: G-Data, Maxi/Mega Guard Pro-Series and Maxi/Mega Guard E-Series**  
**TYPE APPROVAL CERTIFICATE No. 19/30011**

The undernoted documents have been reviewed for compliance with the requirements of Lloyd's Register's Type Approval System, 2017 and this Design Appraisal Document is a supplement to the Certificate.

### APPROVAL DOCUMENTATION

See previous Approval documentation

98.6.049.802-F01-Model Control Processor E-series 4xLAN  
98.6.049.802-M01 Control Processor E-series 4xLAN  
98.6.030.804-F01 DIN IO-Module 24ssdo (nav.lights bulb-LED)  
98.6.030.804-M01 DIN IO-Module 24ssdo (nav.lights bulb-LED)  
93.0.990-F01 HCS Operator Control Panel  
93.0.990-M01 HCS Operator Control Panel  
98.6.001.830 Marine PC  
NI18-1100-F01 Test Setup Drawing  
93.0.982-F01 TFT 5.7 Touch Operator Panel  
93.0.982-M01 TFT 5.7 Touch Operator Panel  
93.0.982-M11 TFT 5.7 Touch Operator Panel  
91.6.010.811 Rev C Control Processor E-series 4xLAN  
91.6.010.8003 Rev B DIN IO-Module 24ssdo (nav.lights bulb-LED)  
91.9.009 Rev A1 HCS Operator Control Panel  
91.6.049.310 Rev K Marine PC  
91.9.012 Rev A TFT 5.7 Touch Operator Panel

### TEST REPORTS

Environmental test report Rev 1.2 dated 4 December 2015  
Test reports Control Lever dated 11 September 2015  
Test reports Azimuth Control Lever dated 11 September 2015  
Test reports 5,7" TFT dated 11 September 2015  
Test reports UPS input module dated 11 September 2015  
Test reports UPS Distribution board dated 11 September 2015  
Test reports 8 ports Ethernet Switch dated 11 September 2015  
Test reports 18 ports Ethernet Switch dated 11 September 2015  
Power supply failure and power supply variation test report Rev 1.1 dated 4 December 2015  
Test report vibration with reference M15.001-P15.001 Rev.01 dated 26 November 2015  
Damp heat test report Rev 1.0 dated 26 February 2016  
Dry heat test report Rev 1.1 dated 4 December 2015  
Low temperature test report Rev 1.0 dated 22 February 2016  
EMC test reports Rev 1.2 dated 26 February 2016



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EMC test reports with reference PRA-20151120-X1-01-EMC dated 15 March 2016  
Acoustic noise test report with reference PRA-20151120-X1-01-ANX dated 15 March 2016  
Compass safe distance test reports with reference PRA-20151120-X1-01-CSD dated 15 March 2016

Environmental test report Rev 1.1 dated 28 April 2016  
Test reports Trackerball Controller dated 28 April 2016  
Test reports Joystick Controller dated 28 April 2016  
Test reports USB 8-port NMEA Interface dated 28 April 2016  
Test reports DP Thruster Controller dated 28 April 2016  
Test reports Panel PC 10 Inch dated 28 April 2016  
Test reports Panel PC 17 Inch dated 28 April 2016  
Test reports Panel PC 19 Inch 28 April 2016  
Test reports Panel PC 22 Inch 28 April 2016  
Test reports Panel PC 26 Inch 28 April 2016  
Test reports Media Conv RJ45 - Fiber ST 28 April 2016  
Power supply failure and power supply variation test report Rev 1.0 dated 28 April 2016  
Test report vibration with reference M16.001-P16.001 dated 31 March 2016  
Damp heat test report Rev 1.0 dated 28 April 2016  
Dry heat test report Rev 1.1 dated 28 April 2016  
Low temperature test report Rev 1.0 dated 28 April 2016  
EMC test reports Rev 1.1 dated 28 April 2016  
EMC test reports with reference PRA-20160415-X1 dated 03 May 2016

01- Test reports 5.1 Marine PC V2 dated 28 February 2019  
02- Test reports 5.2 Control Processor E-series 4xLAN V2 dated 28 February 2019  
03- Test reports 5.3 HCS Operator Control Panel V2 dated 28 February 2019  
04- Test reports 5.4 DIN IO-module (nav.lights bulb-LED) V2 dated 22 March 2018  
05- Test reports 5.5 TFT 5.7" Touch Operator Panel V2 dated 22 March 2018  
06 - Type Approval Power Failure and Variation Test Report - 2018 - R1.01 dated 16 August 2018  
07 - Type Approval Damp Heat Test Report - 2018 - R1.01 dated 27 February 2019  
08 - Type Approval Dry Heat Test Report - 2018 - R1.01 dated 16 August 2018  
09 - Type Approval Low Temp Test Report - 2018 - R1.01 dated 16 August 2018  
10 - Type Approval EMC Test Report - 2018 - R1.01 dated 11 February 2019  
11 - M18.001-P18.001 Praxis Automation Report dated 5 October 2018  
12 - BICON Report PRA-20180824-X1-EMC dated 15 November 2018  
13 - BICON Report PRA-20180824-X1-01-ANS dated 15 November 2018  
14 - BICON Report PRA-20180824-X1-01-CSD dated 15 November 2018  
15 - BICON Report PRA-20180824-X1-02-ANS dated 15 November 2018  
16 - BICON Report PRA-20180824-X1-02-CSD dated 15 November 2018  
17 - BICON Report PRA-20180824-X1-03-CSD dated 15 November 2018  
18 - BICON Report PRA-20180824-X1-04-CSD dated 15 November 2018  
19 - BICON Report PRA-20180824-X1-05-CSD dated 15 November 2018  
Type Approval Test Descriptions - 2018 - R1.10 dated 16 August 2018



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### Supplementary Type Approval Terms and Conditions

*LR Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.*

*LR Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules of Lloyd's Register of Shipping are complied with.*

*This LR Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations of Lloyd's Register.*

*Lloyd's Register reserves the right to cancel or withdraw this LR Type Approval Certificate in accordance with the LR Type Approval System Procedure.*



A.W. van der Velden  
Lead Surveyor  
Type Approval Department