



Confirmation of Product Type Approval

Company Name: GREEN INSTRUMENTS A/S

Address: ERHVERVSPARKEN 29 Denmark

Product: Programmable Control/Monitoring Unit

Model(s): G6200

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	22-2223396-PDA	01-APR-2022	31-MAR-2027
Manufacturing Assessment (MA)	20-4468965	06-OCT-2020	02-NOV-2025
Product Quality Assurance (PQA)	NA	NA	NA

Tier

3 - Type Approved, unit certification not required

Intended Service

ABS Classed vessels and offshore installations according to the listed ABS Rules and International Standards.

Description

Water monitoring system, intended for the measurement of the wash-water condition on exhaust gas cleaning systems.

The sensor modules measures PAH, turbidity, pH and temperature in accordance with MEPC.340(77).

The G6200 Water monitor is configured from the following components:

- G6111 PAH Module
- G6120 Turbidity Module
- G6121 Turbidity Module
- G6130 pH/Temperature Module

Ratings

Power Supply: 400-440 VAC

Frequency: 50/60Hz

IP Rating: IP65

Max. Ambient Temperature: 45°C (Tested to 55°C)

Service Restrictions

1. Unit Certification is not required for this product. If the manufacturer or purchaser requests an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.
2. G6200 System is not to be installed in hazardous areas.

Comments

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes, Drawings and Documentation

Green Instruments, Performance Test Report for Type Approval G6200 Water Monitoring System dated 09-12-2021, Revision: 0, Pages: 12

Green Instruments, Additional Performance Type Test Report PAH with turbidity compensation approved by ClassNK dated 10-09-2021, Revision: 0, Pages: 18

EKTOS Testing & Reliability Services Report No. P20-0184-2, Turbidity Transmitter AWT420 Environmental Test Report dated 20-04-2021, Revision: 0, Pages: 113

EKTOS Testing & Reliability Services Report No. P21-0087-1, G6200 Environmental Test Report dated 21-09-2021, Revision: 0, Pages: 62

EKTOS Testing & Reliability Services Report No. P21-0087-3, G6200 Flame Retardant Test Report dated 21-10-2021, Revision: 0, Pages: 26

Drawing No. 103864, G6200 Operation Manual, Revision: 1.0, Pages: 35

Drawing No. 11076, Electrical drawings - G6200, Revision: 0, Pages: 54

Drawing No. 11182, PID for G6200 Water Monitoring System, Revision: A, Pages: 1

Drawing No. 11246, Installation Layout - Water Monitoring System G6200, Revision: A, Pages: 1

Drawing No. 11247, Component Layout - G6200 Water Monitoring System, Revision: 0, Pages: 1

Drawing No. G6200, G6200 About the product type approval revision 2022-03-14, Revision: 0, Pages: 7

Drawing No. G6200 FAT, G6200 FAT, Revision: 0, Pages: 1

Drawing No. G6200 FMEA v.1.2, G6200 FMEA v.1.2, Revision: 0, Pages: 3

Drawing No. ISO 9001, ISO 9001, Revision: 0, Pages: 1

Drawing No. LR21187327TA, Turbidity transmitter AWT420 TAC, Revision: 0, Pages: 2

Drawing No. NA 12, G6200 Flame retardant assessment, Revision: 0, Pages: 2

Drawing No. NA 3, G6200 IP rating assessment, Revision: 0, Pages: 18

Drawing No. NA 4, G6200 Performance Test Plan, Revision: 0, Pages: 10

Drawing No. NTU 0, Certificate of Analysis, Revision: 0, Pages: 2

Drawing No. NTU 10, Certificate of Analysis, Revision: 0, Pages: 2

Drawing No. NTU 20, Certificate of Analysis, Revision: 0, Pages: 1

Drawing No. NTU 30, Certificate of Analysis, Revision: 0, Pages: 1

Drawing No. NTU 40, Certificate of Analysis, Revision: 0, Pages: 2

Drawing No. NTU 5000, Certificate of Analysis, Revision: 0, Pages: 1

Drawing No. PAH 0, Certificate of Analysis, Revision: 0, Pages: 2

Drawing No. PAH 100, Certificate of Analysis, Revision: 0, Pages: 4

Drawing No. PAH 200, Certificate of Analysis, Revision: 0, Pages: 2

Drawing No. PAH 400, Certificate of Analysis, Revision: 0, Pages: 4

Drawing No. PAH 50, Certificate of Analysis, Revision: 0, Pages: 4

Drawing No. PAH 800, Certificate of Analysis, Revision: 0, Pages: 2

Drawing No. pH 1,68, Certificate of Analysis, Revision: 0, Pages: 1

Drawing No. pH 10, Certificate of Analysis, Revision: 0, Pages: 1

Drawing No. pH 12,45, Certificate of Analysis, Revision: 0, Pages: 1

Drawing No. pH 4, Certificate of Analysis, Revision: 0, Pages: 1

Drawing No. pH 7, Certificate of Analysis, Revision: 0, Pages: 1

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 31/Mar/2027 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

ABS Rules

2022 Rules for Conditions of Classification 1-1-4/7.7, 1-1-A3 and A4, which covers the following:

2022 Rules for Building and Classing Marine Vessel Rules: 4-1-1/Table 3, 4-9-3/11, 4-9-9/3, 4-9-9/7, 4-9-9/13, 4-9-9/Table 1

2022 Rules for Conditions of Classification - Offshore Units and Structures 1-1-4/9.7, 1-1-A2 and A3, which covers the following:

2022 Rules for Building and Classing Mobile Offshore Units: 6-1-7/Table 1

2022 Rules for Conditions of Classification - Light and High Speed Craft 1-1-4/11.9, 1-1-A2 and A3, which covers the following:

2022 Rules for Building and Classing High Speed Crafts: 4-7-8/7, 4-7-9/3, 4-7-9/7, 4-7-9/15, 4-7-9/Table 9

International Standards

IACS UR E10 (Rev.8) - 2021 Test Specification for Type Approval

MEPC.340(77) - 2021 Guidelines for Exhaust Gas Cleaning Systems

EU-MED Standards

NA

National Standards

NA

Government Standards

NA

Other Standards

NA



A handwritten signature in blue ink, appearing to read 'Joseph W. ...', is positioned above the printed name.

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 06-Apr-2022 8:21

ABS has used due diligence in the preparation of this certificate, and it represents the information on the product in the ABS Records as of the date and time the certificate is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the product design assessment. Unless specifically indicated in the description of the product, certification under type approval does not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.