



Confirmation of Product Type Approval

Company Name: KLAY INSTRUMENTS B.V.

Address: NIJVERHEIDSWEG 5 7991 CZ Netherlands

Product: Electronic Pressure and Level Transmitter

Model(s): 8000/8000-SAN/CER-8000, 2000/2000-SAN/CER-2000, HYDROBAR-FR/I

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	20-LD1958486-PDA	20-MAR-2020	19-MAR-2025
Manufacturing Assessment (MA)	20-4268882	06-MAY-2020	05-MAY-2025
Product Quality Assurance (PQA)	NA	NA	NA

Tier

3

Intended Service

ABS Classed Vessels and Offshore Installations in accordance with the listed ABS Rules and International Standards for the level and pressure measurements of liquid, gases and vapours in oil or chemical tankers.

Description

Solid state, stainless steel pressure and level transmitters based on either a ceramic pressure cell or piezo-resistive mono-crystalline silicon sensor with a stainless steel diaphragm. All transmitters are fully temperature compensated. The amplifier contained within the sensor housing is based on a single integrate circuit to provide a linear 4 to 20 mA output representing 0 to 100% process signal.

The series 8000, 8000-SAN and CER-8000 are Conventional pressure and level transmitters with internally adjustable for zero and span by 2 potential meters. The Series 2000, 2000-SAN and CER-2000 are Intelligent transmitters with display unit, which can be calibrated without test pressure by 3 push buttons. The Series HYDROBAR are submersible pressure and level transmitters consisting of HYDROBAR-FR cable, HYDROBAR-Cable range, HYDROBAR-EXTD, HYDROBAR-I cable and 2000-Hydrobar-cable.

Ratings

Power Supplies: 13 to 36VDC, 24VDC Typical;

Output: 4 to 20 mA 2 wires;

Accuracy: 0.2% or 0.1%;

Pressure range: 0.04 to 100 Bar;

Process temperature range: -20 to 100Degree C;

Enclosure Rating Submersible: IP66/68;

Certification: Intrinsically safe to CE 0344 KEMA 03ATEX1219X (issue 5) , 03ATEX1092X (issue 3), II 1 G EEX ia IIC T4 and DEKRA 20ATEX0025X (issue 0), II 1G Ex ia IIC T4 Ga

Service Restrictions

Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Comments

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

Notes, Drawings and Documentation

Drawing No. 19103101.e01, EMC Test Report EN55032, E10-Test Specification, Date: 16-Jan-2020, TUV Rheinland, Revision: 02, Pages: 1

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 19/Mar/2025 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

- Marine Vessel Rules (2020): 1-1-4/7.7, 1-1-A3&A4, 4-8-3/1.7, 4-9-9/7, 4-9-9/13, 4-9-9/Table1;
- Facilities on Offshore Installations (2020): 1-1-4/9.7, 1-1-A2&A3;
- Mobile Offshore Units (2020): 1-1-4/9.7, 1-1-A2&A3, 4-1-1/7.9, 4-3-1/11, 6-1-1/9, 6-1-1/13;
- Steel Vessels for Service on Rivers and Intracoastal Waterways (2020): 1-1-4/7.7, 1-1-A3&A4;
- High Speed Crafts (2020): 1-1-4/11.9, 1-1-A2&A3, 4-6-1/11, 4-7-9/7, 4-7-9/15, 4-7-9/Table 9;
- Steel Barge Rules (2020): 1-1-4/7.9, 1-1-A3&A4;

International Standards

IACS UR E10 Rev.7: 2018 (EMC Requirements)

EU-MED Standards

NA

National Standards

NA

Government Standards

NA

Other Standards

NA



A handwritten signature in blue ink, appearing to read "Joseph W. White".

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 15-May-2020 5:24

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.