

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Level Indicator

with type designation(s)

Sensors: 600ES, 600IM, 600IS, 600IS(T), 600SM,

Indicators: 100 mm, 160 mm

Issued to

AJD Instruments

Lindfield, West Sussex, United Kingdom

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Location classes:

Type	Temperature	Humidity	Vibration	EMC	Enclosure
Sensors	D	B	A	Not relevant	IP68
Indicators	D	B	A	Not relevant	IP56

Issued at **Høvik** on **2017-12-07**

for **DNV GL**

This Certificate is valid until **2022-12-31**.

DNV GL local station: **London**

Approval Engineer: **Jens Erling Bråten**

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Odd Nesvåg
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Product description

Series 600 self powered hydrostatic contents gauges, including

- Sensors 600ES, 600IM, 600IS, 600IS(T) and 600SM
- Indicators, 100 mm and 160 mm

Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV GL rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

As long as the units are covered by the Type Approval, a product certificate according to Pt.4 Ch.9 Sec.1 [1.4] will not be required. Correct configuration and set up for each delivery to be tested during commissioning after installation.

Type Approval documentation

Environmental data test report, Test File No. TL1330, dated 2009-09-07
Enclosure class (IP rating) test report, Test File No. TL1330-B, dated 2009-11-12
Initial survey report, AJD Instrumentation Level Indicators, dated 2008-12-10
Environmental data information letter from AJD
Fire Resistance test, Test File No. TL1330-A, dated 2009-09-07
Type approval renewal assessment report by Shaughn Quinn, DNV GL London, dated 2017-11-20

Tests carried out

- Applicable tests according to Standard for Certification No. 2.4, April 2006.
- Fire Resistance Test, AJD instruments, Test File No. TL1330-A, documenting compliance with IACS P2.11.5.5.6.

Marking of product

The products to be marked with:

- manufacturer name
- model name
- serial number
- power supply ratings

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE