

EUROPEAN UNION RECOGNISED ORGANISATION (EU RO) MUTUAL RECOGNITION TYPE APPROVAL CERTIFICATE

Certificate No:
MRA0000020

In accordance with Article 10.1 of EU Regulation 391/2009

This Certificate is issued to

ADZ NAGANO GmbH
Ottendorf-Okrilla, Sachsen, Germany

for

Pressure Transmitter

with type designation(s)

SCP-40.0

The product is found to comply with

EU RO Mutual Recognition Technical Requirements for Sensors

Intended service

Applicable for a ship as defined in Mutual Recognition Provisions Article 10 Regulation on Common Rules and Standards for Ship Inspection and Survey Organizations.

Temperature [°C]: -25°C ~ +70°C

Vibration: All Locations Except masts

EMC: All locations except Bridge and open deck

IP Code: See Product Description page 2

This is to certify:

that the Product referred to herein has been inspected for the Manufacturer, pursuant to the relevant requirements of the European Union Recognised Organisation Mutual Recognition procedure, required by Article 10.1 of EU Regulation 391/2009, and has been found in accordance with those requirements.

This Certificate is valid until **2023-09-13**.

Issued at **Hamburg** on **2018-09-14**

DNV GL local station: **Hamburg**

for **DNV GL**

Approval Engineer: **Didier Girardin**

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Joannis Papanuskas
Head of Section

When a product is presented with this EU RO MR Type Approval Certificate for given application, its acceptability with regards to the limitations stated in the certificate conditions defined in 1b, 1c and 1d of the applied Technical Requirement will be evaluated by the EU RO in charge of classing the ship or being in charge of the unit/system certification.

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

ADZ Electronic Absolute Pressure Transducer

The pressure sensor SCP-40.0 consists of a main metallic body to protect the electronic components (barrier) and the sensor head. The sensor head with the pressure diaphragm is constructed as an external part. Both parts are electrically connected with a cable and mechanically attached by a flexible fabric hose. The sensor head with its pressure port is to install on the gas rail of an engine. The gas rail with the sensor head is located in an external inert gas filled tank. The barrier is to install with a flange plate on the outside of the external tank. Inside the external inert gas tank there is no dust and no water, protective enclosure is not necessary.

Type	Max. Pressure Span, Output Signal	Special Application	Article-Number
SCP-40.0	10 bar(a), 0,5 ... 4,5 V	Gas Rail at Engine	810243

Pressure sensor cells: Oil filled stainless steel membrane with silicon sensor chip

Electronics: non ratiometric voltage output 0.4 ...4.5V
supply 8 ... 13,6 ... 32 V DC
included ATEX Barrier

Protective Enclosure: Barrier part outside flange plate with connected cable IP66 and IP69

Manufactured by

ADZ NAGANO GmbH, Gesellschaft für Sensortechnik,
Germany, Bergener Ring 43, 01458 Ottendorf-Okrilla

Application/Limitation

- The Type Approval covers hardware listed under type designation
- Mounting according manual for installation and maintenance
- Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/Special Condition for Safe Use listed in valid Ex-Certificate issued by a notified/recognized Certification Body.

Type Approval documentation

Doc ID.	Rev.	Issuing Date
Test Reports:		
1088-17-EA-17-PP002	2	2017-11-21
1088-17-EE-17-PP001	1	2017-11-13
1088-17-GG-18-PP001	1	2018-04-19
Compliance_Table_to_IEC60092-504		
Compliance_Table_to_IEC60533		
Technical Drawings:		
AZ-810243-G	G	2018-01-10
OV_810243G		2018-09-10
Manual for Installation and Maintenance:		
MA-300001-A_180910_DNVGL_e	A	2018-09-10

Marking of product

Job Id: **262.4-000070-1**
Certificate No: **MRA0000020**

The products to be marked with:

- manufacturer name
- model name
- unique serial number

Other Conditions

ADZ Pressure transmitter have been verified for compliance with EU Mutual Recognition Technical Requirements for PRESSURE GAUGES – TRANSMITTERS version 0.0, dated 01-July-2016

Environmental test parameters:

DNV-GL
location classes

Temperature	IEC 60068-2-1/ -2-2	-25°C ~ +70°C	D
Vibration	IEC 60068-2-6 Test Fc	± 1,6mm/± 4,0g at 2-25Hz/25-100Hz	B
Humidity	IEC 60068-2-30 test Db	93% to 98%RH, +55°C, 48 h	B
EMC	All Location Except bridge and open deck		A
Enclosure	IP66, IP69		C

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 annually and at renewal of this certificate.

END OF CERTIFICATE