

TYPE APPROVAL CERTIFICATE**This is to certify:****That the Level Transmitter**

with type designation(s)

Pulse Radar Level Instrument - SC R5

Issued to

Scanjet Ariston AS**PORSGRUNN, Norway**

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:**

Temperature	D
Humidity	B
Vibration	A
EMC	B
Enclosure	C

Issued at **Høvik** on **2018-07-06**for **DNV GL**This Certificate is valid until **2023-07-05**.DNV GL local station: **Sandefjord**Approval Engineer: **Frode Nygård****Odd Magne 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.



Job Id: **262.1-027246-1**
Certificate No: **TAA00001T1**

Product description

Scanjet high frequency Pulse Radar Level Instrument - SC R5 is a high performance instrument for measurement of level/ullage in tanks.

The SC R5 consists of a stand alone microprocessor based transmitter and has the following specification:

Power supply	2-wire HART 21.6-26.4 VDC
Output	DC 4-20mA /HART /RS 485
Housing	SS 316L Mo 2.8
Connections	Cable Conduit M20 x 1.5
Measuring Range	20m
Microwave Frequency	Pulse 26 GHz Radar
Accuracy	±3mm

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.

Application/Limitation

The installation instructions for marine application according to document SA-Atex-0057 are to be observed.

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 Excertificate issued by a notified/recognized Certification Body.

Type Approval documentation

DNV GL No	Document	Doc. Ref. No.	Date/Rev.
8	Datasheet: ScanjetRadar	ScanRad	2016/07 R1
7	Instruction manual: ScanRad	SA-Atex-0057	2016-09-20
4	Technical Manual Pulse Radar Level Instrument - GDRD	GDRD-XX-SMS	2015-08-28
1	Report: SP, Envir. Test Report ScanRad SC-R5	7P01871	2017-03-30
10	Report: SP, SP Compass Safe Distance GDRD57	5P07751	2016-02-04
11	Report: SP, Envir. Test Report ScanRad SC-PR01	4P03508-E1	2016-07-07
12	Report: SP, EMC Test Report Radar GDRD57 11 appdx.	4P06268-E1	2014-10-23
13	Report: SP, EMC Test Report Radar GDRD57 3 appdx.	6P03508-E1	2016-07-07
	Type approval assessment report, DNV GL Sandefjord	-	2017-12-14

Tests carried out

Applicable tests according to Class Guideline DNVGL-CG-0339, Edition November 2016.

Marking of product

The products to be marked with:

- Manufacturer's name
- Type designation
- model name
- serial number

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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