



CERTIFICATE NUMBER	23-2470726-PDA
EFFECTIVE DATE	16-Nov-2023
EXPIRY DATE	15-Nov-2028
ABS TECHNICAL OFFICE	Hamburg Engineering Department

CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

NORIS AUTOMATION GMBH

located at

F-BARNEWITZ-STR. 10, , D-18119 ROSTOCK, Germany

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product: Position Reference Sensor

Model: DWA-Q

Endorsements:

Tier: 2 - PDA Issued

This Product Design Assessment (PDA) Certificate remains valid until 15/Nov/2028 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.

American Bureau of Shipping


Efstratios Maliatsos, Engineer Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

NORIS AUTOMATION GMBH

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Web: www.noris-group.com

Tier: 2 - PDA Issued

Product: Position Reference Sensor

Model: DWA-Q

Endorsements:

Intended Service:

Rotary position sensor for marine applications on AMS, ACC, ACCU, ABCU Classed Vessels.

Description:

DWA-Q sensor converts mechanical rotation angle of a shaft (50°, 70°, 90°, 180°, 240°, 320°) into an electrical signal for e.g. measuring rudder angle or adjusting the pitch and is available in two variants, with ohmic resistor connection (-R1) and analogue voltage output (-U2).

- DWA-Q1: 62x62x115mm design with terminals and 40mm connector pin
- DWA-Q2: 62x62x66mm design with cable and 30mm connector pin

Rating:

Supply voltage: 15 ... 30 VDC (for -U2)

Output signal: 0 ... 2 k Ohm (Type -R1), 2 ... 10 VDC (Type -U2)

Operating temperature: -25°C to +70°C

Degree of protection: IP66, IP68

Service Restriction:

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/Drawing/Documentation:

Drawing No. 093.002.03.101.B, DWXXX-Q1-XX, Drawing, Revision: B

Drawing No. 093.002.03.102.B, DWXXX-Q2-XX, Drawing, Revision: B

Drawing No. SAR54-c_1A1_Schematic, Connecting Adapter, Revision: c

Drawing No. SAR54-c_2A1_Schematic, Connecting Adapter, Revision: c

Drawing No. SAR54-c_3A1_Schematic, Connecting Adapter, Revision: c

Drawing No. DB-DWA-Q-EN_V01 01-min, Technical Data, Rotary piston sensor

Test Reports

Drawing No. 237-17_V1U-min, Test Report, Environmental, 237-17, TREO, 20/11/2017

Drawing No. 346-17_V1Udocx-min, Test Report, Environmental, 346-17, TREO, 25/06/2018

Drawing No. ECL-EMC-TR-16-133-V01, Test Report, EMC, 16-133, Bureau Veritas, 10/06/2016

Drawing No. NAR-PB-0116-1-en_V101, Test Report, Environmental, Noris, 27/06/2018

Drawing No. em-4394 MABxx_ENA, Test Report, 4394, Schwille Elektronik, 06/04/2011

Drawing No. ECL-ENV-TR-16-010-V01 10, Test Report, 16-010, Bureau Veritas, 02/11/2016

Drawing No. 204792b01_NORIS_DWA70-Q1-U2, EMC Test Report (6GHz), AMETEK CTS Europe GmbH, 28-09-2021

Drawing No. NAR-PB-0116-3-en_V101_DWA-Q_Product Test Report_6GHz, Product Test Report - 6GHZ, Noris, 14-10-2021

Terms of Validity:

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STANDARDS

ABS Rules:

2023 Marine Vessel Rules: 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-8-3/1.7, 4-8-3/1.11.1, 4-8-3/1.17.1, 4-9-8/7, 4-9-8/13, 4-9-8/17.1

2023 Mobile Offshore Units Rules: 1-1-4/9.7, 1-1-A2, 1-1-A3, 4-3-1/11, 4-3-1/15, 4-3-1/17.1

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA