



CERTIFICATE NUMBER	19-HG1935515-PDA
EFFECTIVE DATE	22-Jan-2020
EXPIRY DATE	21-Jan-2025
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

**MUGGENHOFER STRASSE 95, D-90429 NUERNBERG, 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 Speed Sensor**

**Model FA54 series (FAH54, FAHZ54, FAHS54, FAHD54, FAHQ54, FAHY54)**

This Product Design Assessment (PDA) Certificate remains valid until 21/Jan/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.

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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**Tier: 2 - PDA Issued**

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**Product:** Speed Sensor

**Model:** FA54 series (FAH54, FAHZ54, FAHS54, FAHD54, FAHQ54, FAHY54)

**Intended Service:**

Sensing device used to detect the speed of rotating/moving mechanical components.

### Description:

Non-contacting speed sensor type FA54 with aluminum flange and stainless steel sensor tube. The different sensor variants allow measurements with up to two measuring channels and up to four output signals for measurement of frequencies from 0 to 20 kHz. Thus, they are suitable for standstill detection and for rotational direction detection by using phase shifted signals. They are suitable for scanning ferromagnetic objects, such as toothed wheels, bolt heads, drillings/boreholes, gaps, grooves or impulse bands.

### Rating:

Supply Voltage: 9 ... 32 VDC

Nominal Voltage: 15 VDC

Current Consumption: < 20 mA (without output current PNP)

Operating Temperature: -40 °C to 120 °C

Degree of Protection: Housing: IP66/IP68, Connection: IP66/IP68

Frequency Range: 0 ... 20,000 Hz

### 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. 1, KE1246-TB1\_FA54\_Äbersicht, Revision: 01, Pages: 1

Drawing No. 2, NORIS\_DIN\_EN\_ISO\_9001\_E, Revision: 01, Pages: 1

Drawing No. 3, Akkreditierungsurkunde-BV-CPS D-PL-12024-06-02, Revision: 01, Pages: 1

Drawing No. 4, KE1246-TBE1\_FA54-Rev-A\_@ECL-EMC-TR-19-122-V02.00, EMC Test Report, Bureau Veritas, 21.08.2019, Revision: 02, Pages: 1

Drawing No. 5, KE1246-TBK1\_FA54-Rev-A\_@ECL-ENV-TR-19-043-V01.00, ENV Test Report, Bureau Veritas, 16.10.2019, Revision: 01, Pages: 1

Drawing No. 6, 42.254.311.001.1, Revision: 01, Pages: 1

Drawing No. 7, 42.254.411.001.1, Revision: 01, Pages: 1

Drawing No. 8, 42.254.511.001.1, Revision: 01, Pages: 1

Drawing No. 9, 42.254.511.002.1, Revision: 01, Pages: 1

Drawing No. 10, 42.854.231.001.1, Revision: 01, Pages: 1

Drawing No. 11, 42.854.231.002.1, Revision: 01, Pages: 1

Drawing No. 12, DB-FA54-EN\_V01.00, Revision: 01, Pages: 1

### Terms of Validity:

This Product Design Assessment (PDA) Certificate remains valid until 21/Jan/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).

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**STANDARDS**

**ABS Rules:**

2019 Marine Vessels Rules: 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-8-3/1.7, 4-8-3/1.11, 4-8-3/1.17.1, 4-9-9/13.1

**National:**

NA

**International:**

NA

**Government:**

NA

**EUMED:**

NA

**OTHERS:**

NA