



Certificate No:
TAA00002XD

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Peripheral Equipment

with type designation(s)
Asset Health Monitor A5820

Issued to

Emerson Automation Solutions - epro GmbH
Gronau (Westf.), Nordrhein-Westfalen, Germany

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	C
Humidity	B
Vibration	A
EMC	A
Enclosure	B

Issued at **Hamburg** on **2021-01-05**

This Certificate is valid until **2026-01-04**.

DNV local station: **Essen**

for **DNV**

Approval Engineer: **Heinz Scheffler**

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Joannis Papanuskas
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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Form code: TA 251

Revision: 2021-03

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Product description

The Asset Health Monitor A5820 is designed for machine health prediction. The device is a modular system consisting of the integrated mainboard, the Power-Module and the CHARMS. The device offers the possibility of installing up to 12 CHARMS. CHARMS measure the electrical value from the sensors. For each sensor type and sensor an individual CHARM (Characterization Module) is needed. This means the device can handle up to 12 different sensors. Allowed CHARMS are Piezo-CHARM, Tach-CHARM, Voltage-CHARM.

Hardware:

- AM5820-IM and AM5820-SI with Mainboard as integral part
- AM5730 Power Module
- AM5125 Piezo CHARM
- AM5620 Voltage CHARM
- AM5312 Tach-CHARM

Use of elements from TAA00000XX

- KL4501X1 CHARM Address Plugs
- KL4501X1-BA1, Plug 1
- KL4501X1-BB1, Plug 2
- KL4501X1-BC1, Plug 3
- KL4501X1-BD1, Plug 4
- KL4501X1-BE1, Plug 5
- KL4501X1-BF1, Plug 6
- KL4501X1-BG1, Plug 7
- KL4501X1-BH1, Plug 8
- KL4502X1-DA1 CHARM-Address-Terminal (Address Plug Holder)
- KL4502X1-BA1 CHARM Terminal

Firmware:

- A5820-IM/SI Version 1.60.0
- AM5125 Piezo-CHARM 1.05
- AM5312 Tach-CHARM 1.09
- AM5620 Voltage-CHARM 0.04

Application/Limitation

Location class Enclosure: IP66

The TAA00000XX for the use of elements must be valid.

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 Ships Pt.4 Ch.9 Control and Monitoring Systems.

Type Approval documentation

Test Reports: 0026~H0203~0000195901 Rev. 00.6; 0026~H0203~0000195819 Rev. 00; NT2031512 Rev. 1.0; BVSPS29530 dated 14.12.2018

Documents: Installation Guide MHM-97929-PBF, Rev 1.0; MHM-97930-PBF, Rev 1.0; MHM-97925-PBF, Rev 1.0; MHM-97923-PBF, Rev 1.0; Operating Manual MHM-97924-PBF, Rev 1.3; Bill of Material AM5820 Rev.00 dated 14.12.2020

Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, December 2019.

Marking of product

The products to be marked with:

- Model name
- Manufacturer name
- Serial number

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