DNV·GL

Certificate No:
TAA00000T1

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Electric Actuator

with type designation(s)
SGC/SGCR 04.1, SGC/SGCR 05.1, SGC/SGCR 07.1, SGC/SGCR 10.1, SGC/SGCR 12.1

Issued to
AUMA Industry & Marine GmbH
Villingen- Schwenningen, Germany

is found to comply with
DNV GL rules for classification – Ships

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Type	Temperature	Humidity	Vibration	EMC	Enclosure
SGC/SGCR 04.1	**D**	**B**	**B**	**A**	**C**
SGC/SGCR 05.1	**D**	**B**	**B**	**A**	**C**
SGC/SGCR 07.1	**D**	**B**	**B**	**A**	**C**
SGC/SGCR 10.1	**D**	**B**	**B**	**A**	**C**
SGC/SGCR 12.1	**D**	**B**	**B**	**A**	**C**

This Certificate is valid until **2021-10-13**.

Issued at **Hamburg** on **2016-10-14**

for **DNV GL**

DNV GL local station: **Augsburg**

Approval Engineer: **Marco Rinkel**

Duy Nam Le
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.

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Job Id:
Certificate No: **TAA00000T1**

Product description

Part-turn actuators (I/O InterfaceParallel, Profibus-DP or Modbus) for valves

Torque range, Adjustable in 8 steps:

- SGC/SGCR 04.1: 25 – 63 Nm
- SGC/SGCR 05.1: 50 – 125 Nm
- SGC/SGCR 07.1: 100 – 250 Nm
- SGC/SGCR 10.1: 200 – 500 Nm
- SGC/SGCR 12.1: 400 – 1000 Nm

Operating time for 90° Adjustable in 9 steps:

- SGC/SGCR 04.1: 4 – 63 s
- SGC/SGCR 05.1: 4 – 63 s
- SGC/SGCR 07.1: 4 – 63 s
- SGC/SGCR 10.1: 5.6 – 90 s
- SGC/SGCR 12.1: 20 – 275 s

Application/Limitation

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, 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 report :
TBV-11/003_Rev02, dated 2012-11-21 (Initial TA in 2012
TBV-11/003_Rev03, dated 2014-09-30 (adding of MODBUS)
Report 4221-00 (Vibration for SGC12.1)

Initial Assessment report, 2016-02-26

Tests carried out

Applicable tests according to Class Guideline DNVGL CG-0339, November 2015.

Marking of product

[1] Name of manufacturer
[2] Address of manufacturer
[3] Type designation
[4] Commission number
[5] Actuator series number
[6] Operating time
[7] Torque range
[8] Current type, mains voltage, mains frequency
[9] Electric power (motor)
[10] Wiring diagram number
[11] Control
[12] Can be assigned as an option upon customer request
[13] Enclosure protection
[14] Type of lubricant
[15] Swing angle
[16] Permissible ambient temperature
[17] Nominal current
[18] Type of duty

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 at least once during the validity period and at renewal of this certificate.

END OF CERTIFICATE