DNV·GL

TYPE APPROVAL CERTIFICATE

Certificate No:
TAA00000T1
Revision No:
3

This is to certify:

That the Electric Actuator

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

Issued to
AUMA Riester GmbH & Co. KG
Müllheim, Germany

is found to comply with
DNV 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.

Type	Temperature	Humidity	Vibration	EMC	Enclosure
SGM/SGC/SGCR 04.1	D	B	B	B	D(/IP68)
SGM/SGC/SGCR 05.1	D	B	B	B	D(/IP68)
SGM/SGC/SGCR 07.1	D	B	B	B	D(/IP68)
SGM/SGC/SGCR 10.1	D	B	B	B	D(/IP68)
SGM/SGC/SGCR 12.1	D	B	B	B	D(/IP68)

This Certificate is valid until **2026-12-14**.
Issued at **Hamburg** on **2021-12-15**

DNV GL local station: **Augsburg**

Approval Engineer: **Dariusz Lesniewski**

for **DNV GL**

Digitally Signed By: Papanuskas, Joannis
Location: DNV GL SE Hamburg, Germany

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.

Job Id: **262.1-021915-5**
Certificate No: **TAA00000T1**
Revision No: **3**

Product description

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

Torque range, adjustable in 8 steps:

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

Operating time for 90° adjustable in 9 steps:

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

Approval conditions

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 rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Type Approval documentation

Test reports:
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)
TREO no. 075-16, Issue 2, dated 2016-06-30
TREO no. 096-16, Issue 1, dated 2021-06-16
Type approval assessment report issued at Augsburg on 2021-12-14.

Tests carried out

Applicable tests according to class guideline DNV-CG-0339, August 2021.

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

Place of production

AUMA Riester GmbH & Co. KG, Location Ostfildern, Germany

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 typeapproved 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