

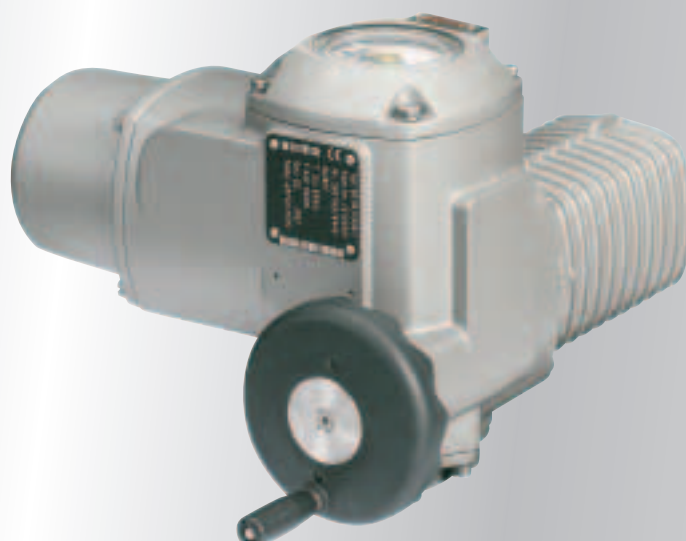


## *Electric part-turn actuators*

SG 03.3 – SG 04.3

AUMA NORM

Torques up to 63 Nm





## Electric part-turn actuators

### Smaller and lighter..

“To design a small and lightweight electric actuator for the automation of small OPEN-CLOSE part-turn valves with low torque requirement, but which meets the high AUMA standards,” this was the task given to the AUMA design engineers.

The result are the SG 03.3 and SG 04.3 part-turn actuators for open-close duty, which extend the torque range of the reliable part-turn actuator range SG 05.1 – SG 12.1 to the lower torques.

Due to consistent lightweight design and the use of a compact gear technology patented by AUMA, the task could be fulfilled.

### Service conditions

#### Enclosure protection IP

AUMA products in the standard version conform to enclosure protection IP 67 according to EN 60 529. IP 67 means protection against immersion up to max. 1 m head of water for max. 30 minutes.

For higher requirements the actuators are available in increased enclosure protection IP 68.

#### Corrosion protection

The standard AUMA corrosion protection KN is a high quality coating. This is suitable for outdoor installation and for slightly aggressive atmospheres with a low level of pollution.

For exposure to more aggressive substances, the devices are available in the protection classes KS and KX.

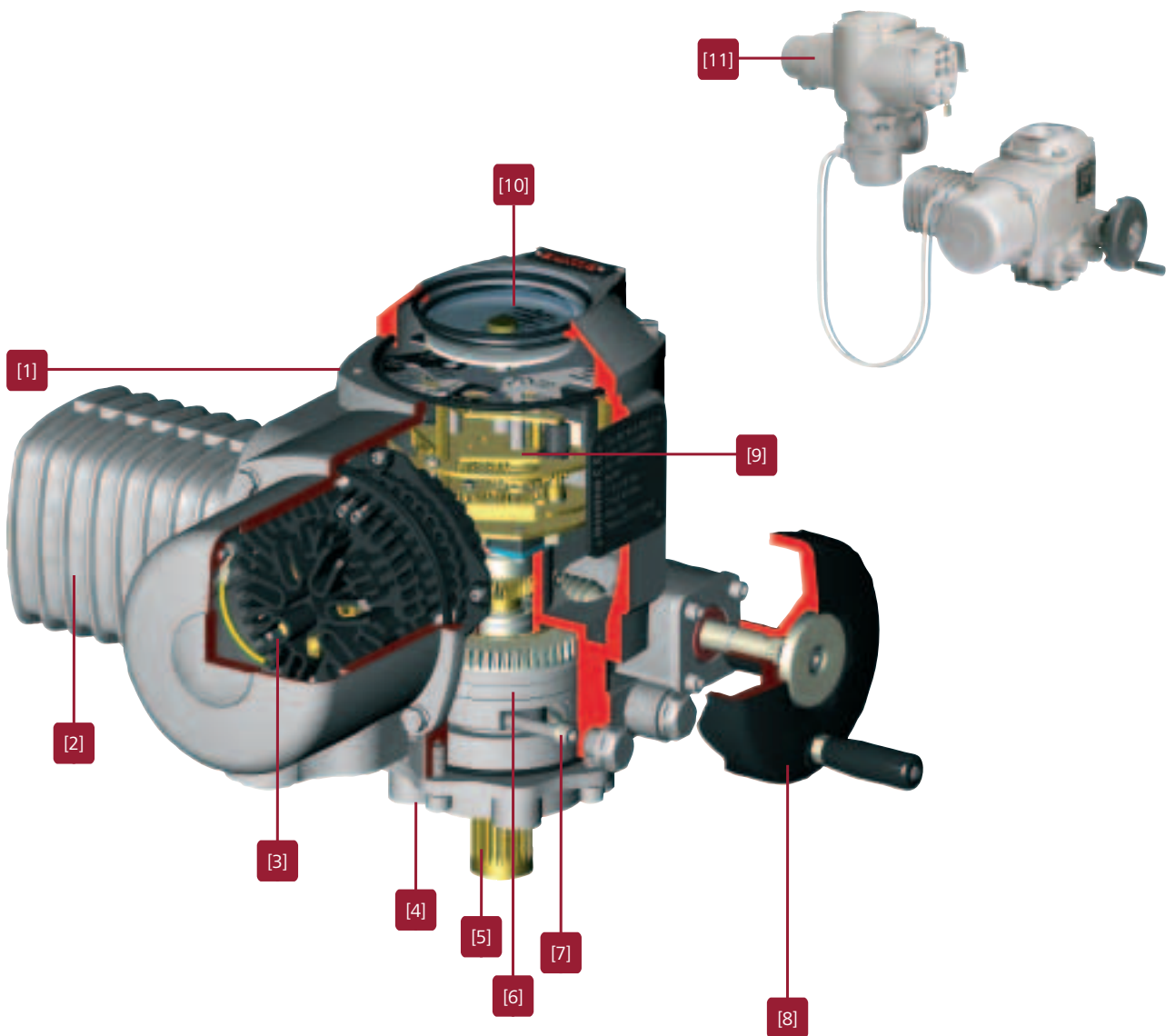
#### Ambient temperatures

- -25 °C ... +70 °C

### Technical data

For detailed device configuration please refer to separate technical data sheet SG 03.3 – SG 04.3

		SG 03.3	SG 04.3
Output torque max. [Nm]		32	63
Valve attachment	Standard	F05/F07	F05/F07
	Option	F04	F04
Operating time for 90° at 50 Hz [s]	1-phase AC	8, 11, 16, 22	8, 11, 16, 22, 32
	3-phase AC	8, 11	8, 11, 16, 22, 32, 45
Swing angle (standard)		adjustable between 82° and 98°	
Motor	1-phase AC	220 – 240 V 50 Hz/110 – 120 V 60 Hz	
	3-phase AC	50 Hz: 220 V, 230 V, 240 V, 380 V, 400 V, 415 V; 60 Hz: 440 V, 460 V, 480 V	



**[1] Housing**

The housing is the crucial component for the light weight. It is manufactured of a high quality aluminium alloy.

**[2] Motor**

The actuators can be equipped with 1-ph or 3-ph AC motors, which were specially developed for the special requirements in valve automation.

**[3] Electrical connection**

The connections for motor and control cables are made on a 50-pole AUMA plug/socket connector.

Advantage: The correct wiring remains undisturbed if the actuator is removed from the valve for maintenance.

**[4] Valve attachment**

The valve attachment is according to EN ISO 5211. The actuator can be positioned on the valve at every 90°.

**[5] Coupling**

The separate coupling enables easier mounting of the actuator to the valve. The coupling with bore is placed on the valve shaft and secured against axial movement. Subsequently the actuator is fitted on the valve flange.

**[6] Gearing**

Principal item is the patented ellipto-centric gearing, which enables a reduction ratio of 80:1 in one stage. This contributes decisively to the exceptional small size of the part-turn actuators.

**[7] End stops**

When operating the actuator manually the end stops define the end position.

**[8] Handwheel**

For commissioning or in an emergency, the part-turn actuator can be operated with the handwheel. The manual drive is designed as an over-riding gear arrangement. A change-over to manual operation is not required.

**[9] Control unit**

The control unit contains the limit switching with the end position switches. They are sized in such a way that, if the actuator is equipped with a 1-ph AC motor, the motor current can be switched directly by them. When a switch is tripped in the end position, the motor power supply is immediately interrupted.

**[10] Position indicator**

The mechanical position indicator is coupled directly to the output drive and therefore to the valve shaft.

**[11] Integral controls (option)**

As it is for all AUMA actuator type ranges, the SG 03.3 and SG 04.3 part-turn actuators can also be supplied with AUMA actuator controls. These can be mounted directly to the actuator or separately from the actuator on a wall bracket. Equipped with such controls the actuator is immediately ready for operation after installation.

[1] Multi-turn actuators  
SA 07.1 – SA 48.1  
Torques from 10 to 32,000 Nm  
Output speeds from 4 to 180 rpm

[2] Multi-turn actuators SA/SAR  
with controls AUMATIC  
Torques from 10 to 1,000 Nm  
Output speeds from 4 to 180 rpm

[3] Linear actuators SA/LE  
Combination of multi-turn actuator SA  
with linear thrust unit LE  
Thrusts from  
4 kN to 217 kN  
Strokes up to 500 mm  
Linear speeds  
from 20 to 360 mm/min

[4] Part-turn actuators  
SG 05.1 – SG 12.1  
Torques from 100 to 1,200 Nm  
Operating times for 90° from 4 to 180 s

[5] Part-turn actuators SA/GS  
Combination of multi-turn actuator SA with  
part-turn gearbox GS  
Torques up to 675,000 Nm

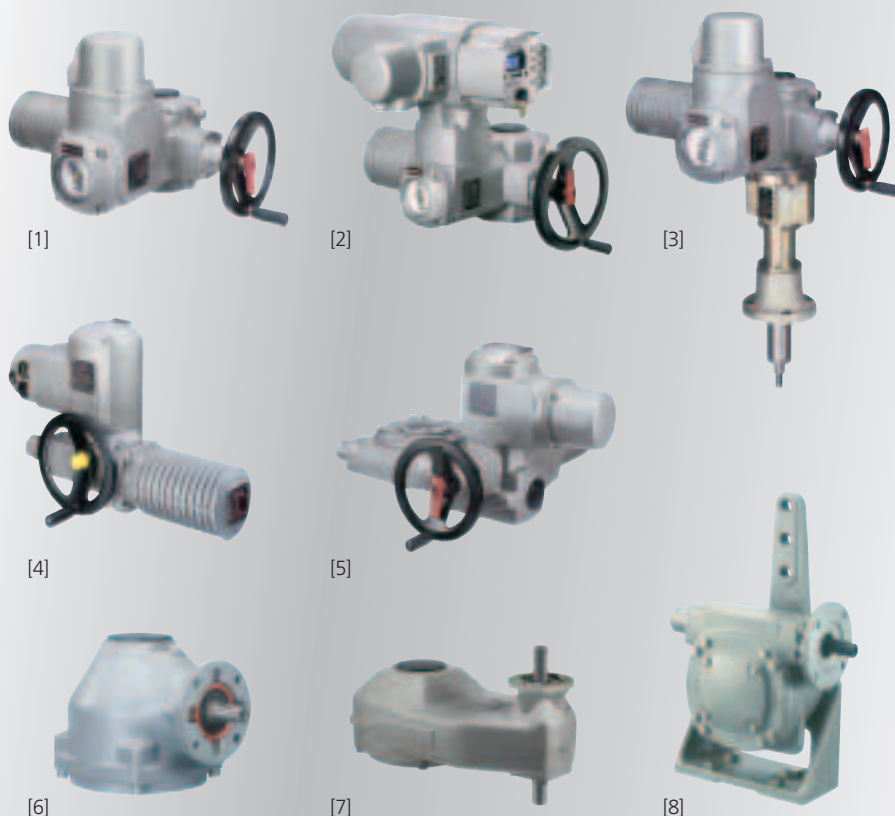
[6] Bevel gearboxes  
GK 10.2 – GK 40.2  
Torques up to 16,000 Nm

[7] Spur gearboxes  
GST 10.1 – GST 40.1  
Torques up to 16,000 Nm

[8] Worm gearboxes with base and lever  
GF 50.3 – GF 250.3  
Torques up to 32,000 Nm

**AUMA Riester GmbH & Co. KG**

P.O.Box 1362  
D-79379 Muellheim  
Tel +49 7631-809-0  
Fax +49 7631-809-1250  
riester@auma.com



Subject to change without notice.  
The product features and technical data provided do not express or imply any warranty.  
Y000.218/002/en/1.07

