

Technical data Part-turn actuators for open-close duty with 3-phase AC motors	SGExC 05.1 – SGExC 12.1 AUMA NORM
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Type	Operating time for 90° in seconds		Torque range ¹⁾		Running torque ²⁾ max. Nm	Valve attachment		Valve shaft			Handwheel		Weight approx. kg ³⁾
	50 Hz	60 Hz	min. Nm	max. Nm		Standard EN ISO 5211	Option EN ISO 5211	Cylindrical max. mm	Square max. mm	Two-flat max. mm	Ø mm	Turns for 90°	
SGExC 05.1	4	3	100	150	75	F05	F07	25.4	22	22	160	58	18
	5.6	4.5											
	8	6											
	11	9											
	16	12											
	22	18											
32	25												
SGExC 07.1	5.6	4.5	120	210	105	F07	F10	25.4	22	22	160	58	18
	8	6											
	11	9											
	16	12											
	22	18											
	32	25											
SGExC 10.1	11	9	250	420	210	F10	F12	38	30	27	160	107	24
	16	12											
	22	18											
	32	25											
	45	35											
	63	50											
SGExC 12.1	22	18	500	840	420	F12	F14	50	36	41	160	110	28
	32	25											
	45	35											
	63	50											
	1,200	600											
1,200	600												

General information


Part-turn actuators AUMA NORM require external controls. AUMA offers actuator controls AUMA MATIC or AUMATIC. These can also easily be mounted to the actuator at a later date.

Features and functions

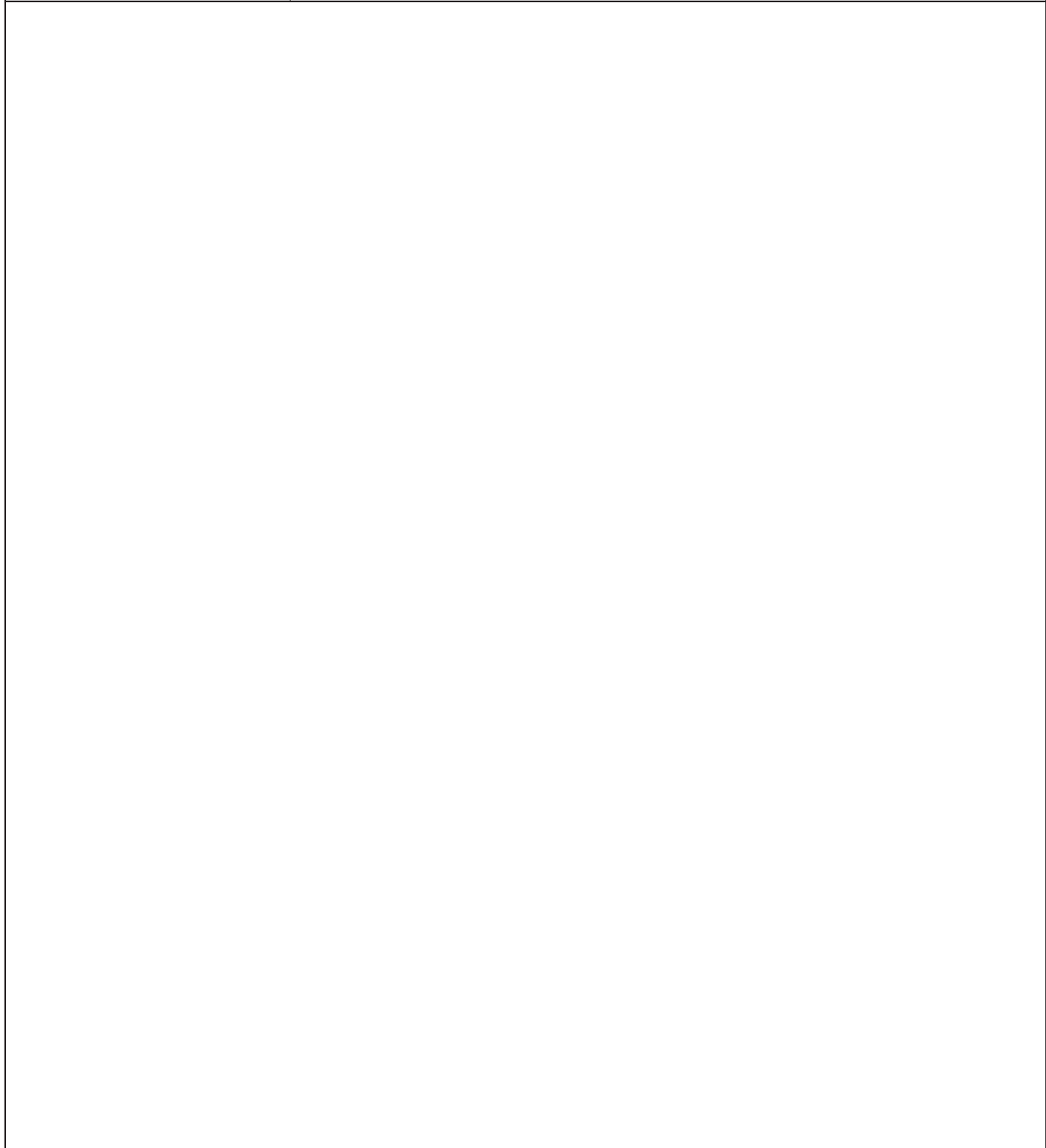
Explosion protection	Standard: II2G Ex de IIC T4 II2G c IIC T4 Option: II2G Ex d IIC T4 II2G c IIC T4																																																			
EC type examination certificate	PTB 01 ATEX 1119																																																			
Types of explosion protection	Motor compartment: d flameproof enclosure Ex d Switch compartment: d flameproof enclosure Ex d Terminal compartment: e increased safety Ex e (optional d)																																																			
Type of duty ⁴⁾	Short-time duty S2 - 10 min																																																			
Motors	3-ph AC asynchronous motor, type IM B9 according to IEC 60034																																																			
Mains voltage, mains frequency	Standard voltages: <table border="1" style="width: 100%; border-collapse: collapse; margin: 5px 0;"> <tr><th colspan="12">3-phase AC voltages/frequencies</th></tr> <tr><th>Volt</th><td>220</td><td>230</td><td>240</td><td>380</td><td>400</td><td>415</td><td>440</td><td>460</td><td>480</td><td>500</td><td></td></tr> <tr><th>Hz</th><td>50</td><td>50</td><td>50</td><td>50</td><td>50</td><td>50</td><td>60</td><td>60</td><td>60</td><td>50</td><td></td></tr> </table> Special voltages: <table border="1" style="width: 100%; border-collapse: collapse; margin: 5px 0;"> <tr><th colspan="5">3-phase AC voltages/frequencies</th></tr> <tr><th>Volt</th><td>525</td><td>575</td><td>660</td><td>690</td></tr> <tr><th>Hz</th><td>50</td><td>50</td><td>50</td><td>50</td></tr> </table> Permissible variation of the mains voltage: ±10 % Permissible variation of the mains frequency: ±5 %	3-phase AC voltages/frequencies												Volt	220	230	240	380	400	415	440	460	480	500		Hz	50	50	50	50	50	50	60	60	60	50		3-phase AC voltages/frequencies					Volt	525	575	660	690	Hz	50	50	50	50
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Hz	50	50	50	50																																																
Overvoltage category	Category III according to IEC 60364-4-443																																																			
Insulation class	F, tropicalized																																																			
Motor protection	Standard: PTC thermistors (according to DIN 44082) ⁵⁾ Option: Thermostiches (NC) ⁶⁾																																																			
Self-locking	Yes																																																			
Swing angle	Standard: 80° to 110° adjustable between min. and max. values Options: 30° – 40°, 40° – 55°, 55° – 80°, 110° – 160°, 160° – 230° or 230° – 320°																																																			

1) Tripping torque adjustable for both directions
2) Permissible average torque for a travel of 90°
3) Weight for part-turn actuator AUMA NORM with 3-phase AC motor, standard electrical connection, unbored coupling and handwheel
4) For nominal voltage and 20 °C ambient temperature and at average running torque load. The type of duty must not be exceeded.
5) PTC thermistors additionally require a suitable tripping device in the actuator controls.
6) According to EN 60079-14, a thermal overcurrent protection device (e.g. motor protection switch) must be installed for explosion-proof actuators in addition to the thermostiches.

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SGExC 05.1 – SGExC 12.1 AUMA NORM	Technical data Part-turn actuators for open-close duty with 3-phase AC motors
Limit switching	Counter gear mechanism for end positions CLOSED and OPEN Standard: Single switches (1 NC and 1 NO) for each end position, switches not galvanically isolated Options: Tandem switches (2 NC and 2 NO) for each end position, switches galvanically isolated Triple switches (3 NC and 3 NO) for each end position, switches galvanically isolated Intermediate position switch (DUO limit switching), adjustable for any position
Torque switching	Torque switching adjustable for directions OPEN and CLOSE Standard: Single switch (1 NC and 1 NO) for each direction, switches not galvanically isolated Options: Tandem switches (2 NC and 2 NO) for each direction, switches galvanically isolated
Non-intrusive setting (option)	Magnetic limit and torque transmitter MWG (only possible in combination with AUMATIC actuator controls)
Position feedback signal, analogue (options)	Potentiometer or 0/4 – 20 mA (RWG)
Torque feedback signal, analogue (option)	Only in combination with magnetic limit and torque transmitter MWG and AUMATIC actuator controls
Mechanical position indicator	Continuous indication, adjustable indicator disc with symbols OPEN and CLOSED
Running indication	Blinker transmitter
Heater in switch compartment	Standard: Self-regulating PTC heater, 5 – 20 W, 110 – 250 V AC/DC Options: 24 – 48 V AC/DC or 380 – 400 V AC A resistance type heater (5 W, 24 V DC) is installed in the actuator in combination with the actuator controls AUMA MATIC or AUMATIC.
Motor heater (option)	12.5 W
Manual operation	Manual drive for setting and emergency operation, handwheel does not rotate during electrical operation. Option: Handwheel lockable
Electrical connection	Standard: Plug/socket connector with screw-type terminals (KP) Option: Plug/socket connector with terminal blocks (KES)
Threads for cable entries	Standard: Metric threads Options: Pg-threads, NPT-threads, G-threads
Terminal plan	TPA00R2AA-101-000 (basic version)
Splined coupling for connection to the valve shaft	Standard: Coupling without bore Options: Machined coupling with bore and keyway, square bore or bore with two-flats according to EN ISO 5211
Valve attachment	Dimensions according to EN ISO 5211
Service conditions	
Use	Indoor and outdoor use permissible
Mounting position	Any position
Installation altitude	Standard: ≤ 2,000 m above sea level Option: > 2,000 m above sea level, please contact AUMA
Ambient temperature	Standard: –40 °C to +40 °C/+60 °C Options: –50 °C to +40 °C/+60 °C
Enclosure protection according to EN 60529	Standard: IP 67 Options: IP 68 For both enclosure protection types (IP 67 and IP 68), the terminal compartment is additionally sealed against the interior – double sealed.
Pollution degree	Pollution degree 4
Corrosion protection	Standard: KS Suitable for installation in occasionally or permanently aggressive atmosphere with a moderate pollutant concentration (e.g. in waste water treatment plants, chemical industry) Options: KX Suitable for installation in extremely aggressive atmospheres with high humidity and high pollutant concentration KG Same as KX, however aluminium-free version (outer parts)
Finish coating	Powder coating
Colour	Standard: AUMA silver-grey (similar to RAL 7037) Option: Other colours are possible on request
Lifetime	Operating cycles (OPEN-CLOSE-OPEN) for 90° SGExC 05.1 – SGExC 07.1 20,000 SGExC 10.1: 15,000 SGExC 12.1: 10,000
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Further information	
EU Directives	ATEX Directive: (94/9/EC) Electromagnetic Compatibility (EMC): (2004/108/EC) Low Voltage Directive: (2006/95/EC) Machinery Directive: (2006/42/EC)
Reference documents	Product description “Electric part-turn actuators SG” Information “Electric actuators and valve gearboxes according to ATEX directive 94/9/EC for the use in potentially explosive atmospheres” Dimension sheets SGExC 05.1 – SGExC 12.1 Electrical data SGExC 05.1 – SGExC 12.1 Technical data for switches Technical data Electronic position transmitter/potentiometer



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