

Technical data Part-turn actuators for open-close duty with 3-phase AC motors

SG 05.1 – SG 12.1 AUMA NORM

Type	Operating time for 90° in seconds		Torque range ¹⁾		Running torque ²⁾	Valve attachment		Valve shaft			Handwheel		appr. kg ³⁾
	50 Hz	60 Hz	min. Nm	max. 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°	
SG 05.1	4	3	100	150	75	F 05	F 07	25.4	22	22	160	58	18
	5.6	4.5											
	8	6											
	11	9											
	16	12											
	22	18											
SG 07.1	5.6	4.5	120	300	150	F 07	F 10	25.4	22	22	160	58	18
	8	6											
	11	9											
	16	12											
	22	18											
	32	25											
SG 10.1	11	9	250	600	300	F 10	F 12	38	30	27	160	107	24
	16	12											
	22	18											
	32	25											
	45	35											
	63	50											
SG 12.1	22	18	500	840	420	F 12	F 14	50	36	41	160	110	28
	32	25		1,200	600								
	45	35		840	420								
	63	50		1,200	600								

General information

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

Features and functions

Type of duty ⁴⁾	Short-time duty S2 - 15 min
Motors	3-ph AC asynchronous motor, type IM B9 according to IEC 34
Insulation class	Standard: F, tropicalized Option: H, tropicalized
Motor protection	Standard: Thermostats (NC) Option: PTC thermistors (according to DIN 44082)
Self-locking	Yes
Swing angle	Standard: 80° to 110° adjustable between min. and max. value. Options: 30° – 40°, 40° – 55°, 55° – 80°, 110° – 160°, 160° – 230° or 230° – 320°
Limit switching	Counter gear mechanism for end positions OPEN and CLOSED Standard: Single switch (1 NC and 1 NO) for each end position, not galvanically isolated Options: Tandem switch (2 NC and 2 NO) for each end position, switches galvanically isolated Triple switch (3 NC and 3 NO) for each end position, switches galvanically isolated Intermediate position switch (DUO limit switching), available for any intermediate position
Torque switching	Torque switching for direction OPEN and CLOSE, infinitely adjustable Standard: Single switch (1 NC and 1 NO) for each direction, not galvanically isolated Options: Tandem switch (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 AC actuator controls)
Position feedback signal, analogue (options)	Potentiometer or 0/4 – 20 mA (RWG) For further details see separate data sheet
Torque feedback signal, analogue (option)	Only in combination with magnetic limit and torque transmitter MWG and AUMATIC AC actuator controls
Mechanical position indicator	Continuous indication, adjustable indicator disc with symbols OPEN and CLOSED
Running indication (option)	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 AUMA MATIC AM or AUMATIC AC actuator controls.
Motor heater (option)	12.5 W

1) Tripping torque adjustable for both directions

2) Permissible average torque for the whole travel of 90°

3) Weight for AUMA NORM part-turn actuator with 3-phase AC motor, standard electrical connection, unbored coupling and handwheel

4) Based on 20 °C ambient temperature at an average load with running torque.

We reserve the right to alter data according to improvements made. Previous documents become invalid with the issue of this document.

auma®

Issue **1.07**

SG 05.1 – SG 12.1 AUMA NORM		Technical data Part-turn actuators for open-close duty with 3-phase AC motors	
Manual operation	Manual drive for setting and emergency operation, handwheel does not rotate during electric operation. Option: Handwheel lockable		
Electrical connection	Plug/socket connector with screw type connection		
Threads for cable glands	Standard: Metric threads Options: Pg-threads, NPT-threads, G-threads		
Terminal plan	KMS TP 100/001 (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			
Mounting position	Any position		
Enclosure protection according to EN 60 529 ⁵⁾	Standard: IP 67 Options: IP 68 IP 67-DS (Double Sealed) IP 68-DS (Double Sealed) (Double Sealed: terminal compartment additionally sealed against interior)		
Corrosion protection	Standard: KN Suitable for installation in industrial units, in water- or power plants with a low pollutant concentration Options: KS Suitable for installation in occasionally or permanently aggressive atmosphere with a moderate pollutant concentration (e.g. in waste-water treatment plants, chemical industry) KX Suitable for installation in extremely aggressive atmosphere with high humidity and high pollutant concentration KX-G Same as KX, however aluminium-free version (outer parts)		
Finish coating	Standard: Two-component iron-mica combination		
Standard colour	Standard: Grey (DB 702, similar to RAL 9007) Option: Other colours are possible on request		
Ambient temperature ⁶⁾	Standard: – 25 °C to + 80 °C Options: – 40 °C to + 60 °C (low temperature) – 50 °C to + 60 °C (extreme low temperature) – 60 °C to + 60 °C (extreme low temperature)		
Lifetime	Operating cycles (OPEN - CLOSE - OPEN) for 90° SG 05.1 – SG 07.1: 20,000 SG 10.1: 15,000 SG 12.1: 10,000		
Other information			
EC directives	Electromagnetic Compatibility (EMC): (89/336/EEC) Low Voltage Directive: (73/23/EEC) Machinery Directive: (98/37/EC)		
Reference documents	Product description "Electric part-turn actuators SG" Dimension sheets SG Electrical data SG		
5) For version in enclosure protection IP 68 higher corrosion protection KS or KX is strongly recommended. Additionally, for enclosure protection IP 68 we recommend to use the double sealed terminal compartment DS.			
6) Version with RWG from – 40 °C to + 70 °C			
We reserve the right to alter data according to improvements made. Previous documents become invalid with the issue of this document.			
Page 2 of 2		auma [®]	
Issue	1.07	Y000.221/002/en	