

Technical data AUMA part-turn actuators

SG 05.1 - SG 12.1

Application:	Electrical operation of valves (e.g. butterfly valves and ball valves).
Valve attachment:	Dimensions according to ISO 5211.
Coupling:	unbored splined coupling for connection to the valve shaft, part-turn actuator can be repositioned 4 x 90° on coupling
Self-locking:	yes
Type of duty:	short-time duty S 2 - 15 min ¹⁾
Swing angle:	standard: 80° to 110° adjustable between min. and max. value options: 25° - 40°, 40° - 55°, 55° - 80°, 110° - 160°, 160° - 230° or 230° - 320°
Limit switching:	counter gear mechanism for end positions CLOSED / OPEN
Torque switching:	adjustable torque switching for closing and opening direction
Operating time:	for 1-phase AC special motors adjustable (see below), for 3-phase AC motors in steps (see next page)
Position indicator:	mechanical, continuous
Heater in switch compartment:	5 - 20 W, self-regulating 110 - 250 V AC / DC (standard) 24 - 48 V (when with AUMA MATIC)
Motors:	3-phase AC motor or 1-phase AC special motor
Insulation class:	F, tropicalized
Motor protection:	thermoswitches
Electrical connection:	AUMA multi-pin plug, internal wiring of motor and controls on plug/socket connector
Terminal plan:	KMS TP 100/001 (basic version)
Manual operation:	Manual drive for setting and emergency operation, handwheel does not rotate during electric operation.
Ambient temperature:	standard: - 25 °C to + 70 °C ²⁾ option: - 40 °C to + 60 °C (low temperature L)
Enclosure:	IP 67 according to EN 60 529, dust and water tight
Corrosion protection:	standard: KN, suitable for installation in industrial units, in water- or power plants ³⁾ option: KS, recommended for installation in aggressive atmospheres, e.g. maritime climate or aggressive chemical substances, as present in certain sections of waste water treatment plants
Finish coating:	standard: two-component iron-mica combination
Standard colour:	silvergrey (DB 701, similar to RAL 9007)
Reference documents:	brochure SG 05.1 - SG 12.1 dimension sheet SG 05.1 - SG 12.1

with 1-phase AC motors

1-phase AC (standard voltages and frequencies)

Volt	110 - 120	220 - 240
Hz	50 / 60	50 / 60

Tripping torque ⁴⁾ both directions		Valve mounting flange ISO 5211		Valve shaft			AUMA part-turn actuator type	220 - 240 V; 50/60 Hz (at 110 - 120 V double current values)						
min. Nm	max. Nm	Standard	Special	Ø max. mm	Square max. mm	Two-flat max. mm	Operating time for 90° adjustable	Motor power ⁵⁾	Nominal current	Current at max. torque and shortest operating time	Starting current	Handwheel diameter	Turns for 90°	Weight ⁶⁾
								kW	A	appr. A	appr. A	mm		appr. kg
90	150	F 05	F 07	25,4	22	22	SG 05.1 – 5,6 s – 45 s	0,115	1,5	3	3	160	58	19
120	300	F 07	F 10	25,4	22	22	SG 07.1 – 11 s – 90 s	0,115	1,5	3	3	160	58	19
250	600	F 10	F 12	38	30	27	SG 10.1 – 11 s – 90 s	0,230	2	4	4	160	107	25
500	1200	F 12	F 14	50	36	41	SG 12.1 – 22 s – 180 s	0,230	2	4	4	160	110	29

- Based on 20 °C ambient temperature and on an average load equal to approx. 50 % of max torque
- Version AUMA NORM with 3-phase AC motor up to + 80 °C
- If permanently or occasionally exposed to aggressive substances, a higher corrosion protection KS or KX must be chosen.
- adjustable between min. and max. values
- at shortest operating time
- with unbored coupling

Notes:

AUMA motors are provided with thermostiches to protect the windings (refer to terminal plans KMS). Our warranty will lapse if those thermostiches are not connected in the control circuit.

Motor data are approximate. Due to usual manufacturing tolerances there may be deviations from the values given.

Continuation see next page

We reserve the right to alter data according to improvement made. Previous data sheets become invalid with the issue of this data sheet.

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with 3-phase AC motors				3-phase AC (standard voltages and frequencies)												
				Volt	220	230	240	380	400	415	440	460	500			
				Hz	50	50	50	50	50	50	60	60	50			
Tripping torque ¹⁾ both directions		Valve mounting flange ISO 5211		Valve shaft			AUMA part-turn actuator type	400 V 50 Hz						Handwheel diameter	Turns for 90°	Weight ³⁾
								min. Nm	max. Nm	Standard	Special	∅ max. mm	Square max. mm			
								kW	1/min	A	appr. A	appr. A	cos φ	mm		appr. kg
90	150	F 05	F 07	25,4	22	22	SG 05.1 – 4	0,160	2800	0,60	0,8	1,7	0,67	160	58	18
							SG 05.1 – 5,6	0,160	2800	0,60	0,7	1,7	0,67			
							SG 05.1 – 8	0,090	2800	0,50	0,6	1,0	0,58			
							SG 05.1 – 11	0,080	1400	0,55	0,6	0,9	0,60			
							SG 05.1 – 16	0,045	1400	0,35	0,4	0,5	0,60			
							SG 05.1 – 22	0,045	1400	0,35	0,4	0,5	0,60			
120	300	F 07	F 10	25,4	22	22	SG 07.1 – 5,6	0,160	2800	0,60	0,8	1,7	0,67	160	58	18
							SG 07.1 – 8	0,160	2800	0,60	0,8	1,7	0,67			
							SG 07.1 – 11	0,160	2800	0,60	0,7	1,7	0,67			
							SG 07.1 – 16	0,090	2800	0,50	0,6	1,0	0,58			
							SG 07.1 – 22	0,080	1400	0,55	0,6	0,9	0,60			
							SG 07.1 – 32	0,080	1400	0,55	0,6	0,9	0,60			
250	600	F 10	F 12	38	30	27	SG 10.1 – 11	0,160	2800	0,60	0,9	1,7	0,67	160	107	24
							SG 10.1 – 16	0,160	2800	0,60	0,9	1,7	0,67			
							SG 10.1 – 22	0,160	2800	0,60	0,8	1,7	0,67			
							SG 10.1 – 32	0,090	2800	0,50	0,7	1,0	0,58			
							SG 10.1 – 45	0,080	1400	0,55	0,6	0,9	0,60			
							SG 10.1 – 63	0,080	1400	0,55	0,6	0,9	0,60			
500	840	F 12	F 14	50	36	41	SG 12.1 – 22	0,160	2800	0,60	0,9	1,7	0,67	160	110	28
	1200						SG 12.1 – 32	0,160	2800	0,60	0,9	1,7	0,67			
	840						SG 12.1 – 45	0,080	1400	0,55	0,7	0,9	0,60			
	1200						SG 12.1 – 63	0,080	1400	0,55	0,7	0,9	0,60			

1) adjustable between min. and max. values
 2) at 50 Hz
 3) with unbored coupling

Notes:

AUMA motors are provided with thermostats to protect the windings (refer to terminal plans KMS). Our warranty will lapse if those thermostats are not connected in the control circuit.
 Motor data are approximate. Due to usual manufacturing tolerances there may be deviations from the values given.
 Permissible fluctuation of nominal voltage: ± 5 %. If voltage drops below there may be a reduction of nominal output torque.

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