

SAVEx 07.2 – SAVEx 16.2

Technical data Multi-turn actuators for open-close duty

General information

multi-turn actuators with variable speed. AUMA actuator controls of type are required to change the output speed.

Table 1: Type of duty S2 - 15 min

Type	Output speed rpm	Torque range ¹⁾		Run torque ²⁾	Number of starts	Available mains voltage/mains frequency			
						1-phase AC		3-phase AC	
	50 Hz	Min. [Nm]	Max. ³⁾ [Nm]	Max. [Nm]	Starts Max. [1/h]	110 – 120 V/ 50 – 60 Hz	220 – 240 V/ 50 – 60 Hz	220 – 240 V/ 50 – 60 Hz	380 – 480 V/ 50 – 60 Hz
SAVEx 07.2	6 – 60	10	30	11	60	■ ⁴⁾	■	■	■
	12 – 108			■		■	■	■	
	24 – 216		25	9		■	■	■	■
SAVEx 07.6	6 – 60	20	60	21	60	■	■	■	■
	12 – 108			■		■	■	■	
	24 – 216		50	15		■	■	■	■
SAVEx 10.2	6 – 60	40	120	42	60	● ⁵⁾	■	■	■
	12 – 108			—		■	■	■	
	24 – 216		100	35		—	■	■	■
SAVEx 14.2	6 – 60	100	250	88	60	—	■	■	■
	12 – 108			—		●	●	■	
	24 – 216		200	70		—	—	▲ ⁶⁾	■
SAVEx 14.6	6 – 60	200	500	125	60	—	—	▲	■
	12 – 108			—		—	—	●	
	24 – 216		400	100		—	—	—	●
SAVEx 16.2	6 – 60	400	1,000	200	60	—	—	—	●

- 1) The tripping torque is adjustable for directions OPEN and CLOSE within the indicated torque range.
- 2) Permissible average torque for 15 min or 30 min running time and at maximum output speed.
- 3) Maximum torque to approx. 50 % of maximum output speed.
- 4) Square = Without restrictions for temperature class T3 up to ambient temperature +60 °C and for temperature class T4 up to ambient temperature +40 °C.
- 5) Circle = For ambient temperatures exceeding +40 °C, restrictions may occur for maximum permissible run torque, mode of operation and running time. Detailed information on request.
- 6) Triangle = Special sizing on request

Table 2: Type of duty S2 - 30 min

Type	Output speed rpm	Torque range ¹⁾		Run torque ²⁾	Number of starts	Available mains voltage/mains frequency			
						1-phase AC		3-phase AC	
	50 Hz	Min. [Nm]	Max. ³⁾ [Nm]	Max. [Nm]	Starts Max. [1/h]	110 – 120 V/ 50 – 60 Hz	220 – 240 V/ 50 – 60 Hz	220 – 240 V/ 50 – 60 Hz	380 – 480 V/ 50 – 60 Hz
SAVEx 07.2	6 – 60	10	20	6	60	■ ⁴⁾	■	■	■
	12 – 108			■		■	■	■	
	24 – 216			■		■	■	■	
SAVEx 07.6	6 – 60	20	40	11	60	● ⁵⁾	■	■	■
	12 – 108		8	●		■	■	■	
	24 – 216			30		●	■	■	■
SAVEx 10.2	6 – 60	40	90	21	60	▲ ⁶⁾	■	■	■
	12 – 108		18	—		■	■	■	
	24 – 216			70		—	■	■	■
SAVEx 14.2	6 – 60	100	180	50	60	—	■	■	■
	12 – 108		40	—		●	●	■	
	24 – 216			140		—	—	▲	■
SAVEx 14.6	6 – 60	200	360	65	60	—	—	▲	■
	12 – 108		50	—		—	—	●	
	24 – 216			290		—	—	—	●
SAVEx 16.2	6 – 60	400	710	100	60	—	—	—	●

- 1) The tripping torque is adjustable for directions OPEN and CLOSE within the indicated torque range.
- 2) Permissible average torque for 15 min or 30 min running time and at maximum output speed.
- 3) Maximum torque to approx. 50 % of maximum output speed.
- 4) Square = Without restrictions for temperature class T3 up to ambient temperature +60 °C and for temperature class T4 up to ambient temperature +40 °C.
- 5) Circle = For ambient temperatures exceeding +40 °C, restrictions may occur for maximum permissible run torque, mode of operation and running time. Detailed information on request.

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6) Triangle = Special sizing on request

Table 3: Valve attachments and weights

Type	Output speed rpm	Valve attachment ¹⁾			Handwheel		Weight ²⁾
		Standard EN ISO 5210	Option DIN 3210	Max. Ø rising stem [mm] [mm]	Ø [mm]	Reduction ratio	approx. [kg]
SAVEx 07.2	6 – 60	F07 F10	– G0	26 34	160	8 : 1	20
	12 – 108					8 : 1	
	24 – 216					4 : 1	
SAVEx 07.6	6 – 60	F07 F10	– G0	26 34	160	8 : 1	21
	12 – 108					8 : 1	
	24 – 216					4 : 1	
SAVEx 10.2	6 – 60	F10	G0	40	200	8 : 1	25
	12 – 108					8 : 1	
	24 – 216					4 : 1	
SAVEx 14.2	6 – 60	F14	G1/2	58	315	8 : 1	48
	12 – 108					8 : 1	
	24 – 216					4 : 1	
SAVEx 14.6	6 – 60	F14	G1/2	58	400	8 : 1	53
	12 – 108					8 : 1	
	24 – 216					4 : 1	
SAVEx 16.2	6 – 60	F16	G3	77	500	8 : 1	79

1) Indicated flange sizes apply for output drive types A and B1. Refer to separate dimension sheets for further output drive types.

2) Indicated weight includes AUMA NORM multi-turn actuator with 3-phase AC motor, electrical connection in standard version, output drive type B1 and handwheel.

Features and functions		
Explosion protection	Standard:	II 2G Ex db eb IIC T4 or T3 Gb II 2G Ex h IIC T4 or T3 Gb II 2D Ex tb IIIC T130°C or T190°C Db
	Options:	II2 G Ex db IIC T4 or T3 Gb II2 G Ex h IIC T4 or T3 Gb
Product certificates	DEKRA 11ATEX0008 X	
Type of duty	Standard:	Short-time duty S2 - 15 min, classes A and B according to EN ISO 22153
	Option:	Short-time duty S2 - 30 min, classes A and B according to EN ISO 22153
	For 100 % nominal voltage and +40 °C ambient temperature and at run torque load at maximum output speed.	
Motors	3-phase AC asynchronous squirrel-cage motor, type IM B9 according to IEC 60034-7, IC410 cooling procedure according to IEC 60034-6	
Mains voltage, mains frequency	For available mains voltage and mains frequency, refer to tables on page 1. Permissible variation of mains voltage: ±10 % Permissible variation of mains frequency: ±5 %	
Overvoltage category	Category III according to IEC 60364-4-44	
Insulation class	Standard:	F, tropicalized
	Option:	H, tropicalized
Motor protection	PTC thermistors (according to DIN 44082)	
Self-locking	Self-locking: Speed ranges 6 – 60 rpm and 12 – 108 rpm	
	NON-self-locking: Speed range variant 24 – 216 rpm Multi-turn actuators are self-locking if the valve position cannot be changed from standstill while torque acts upon the output drive.	
Motor heater (option)	Voltages: 110 – 120 V AC, 220 – 240 V AC or 380 – 480 V AC	
	Power 12.5 W	
Manual operation	Manual drive for setting and emergency operation, handwheel does not rotate during electrical operation.	
	Options:	Handwheel lockable Handwheel stem extension Power tool for emergency operation with square 30 mm or 50 mm
Indication for manual operation (option)	Indication whether manual operation is active/not active via single switch (1 change-over contact)	
Electrical connection	Standard:	AUMA Ex plug/socket connector (KT); screw-type motor terminals; control terminals in spring clamp terminal technology
	Option:	AUMA Ex plug/socket connector with terminal blocks (KES)

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Threads for cable entries	Standard:	Metric threads
	Option:	Pg threads, NPT threads, G threads
Wiring diagram	TPA00R2AA-101-000 (basic version in combination with PTC thermistors)	
Valve attachment	Standard:	B1 in accordance with ISO 5210
	Options:	A, B2, B3, B4, C, D according to ISO 5210
		A, B, D, E according to DIN 3210
		C according to DIN 3338
Special valve attachments: AF, AK, AG, B3D, ED, DD, IB1, IB3		
A prepared for permanent lubrication of stem		
Electromechanical control unit		
Limit switching	Counter gear mechanism for end positions OPEN and CLOSED	
	Turns per stroke: 2 to 500 (standard) or 2 to 5,000 (option)	
	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, switch galvanically isolated
Triple switch (3 NC and 3 NO) for each end position, switch galvanically isolated		
Intermediate position switches (DUO limit switching), adjustable for each direction of operation		
Torque switching	Torque switching adjustable for directions OPEN and CLOSE	
	Standard:	Single switch (1 NC and 1 NO) silver contact (Ag) for each direction, not galvanically isolated
	Option:	Tandem switch (2 NC and 2 NO) for each direction, switch galvanically isolated
Switch contact materials	Standard:	Silver (Ag)
	Option:	Gold (Au), recommended for low voltage actuator controls
Position feedback signal, analogue (options)	Potentiometer or 0/4 – 20mA (electronic position transmitter)	
Mechanical position indicator (option)	Continuous indication, adjustable indicator disc with symbols OPEN and CLOSED	
Running indication	Blinker transmitter	
Heater in switch compartment	Resistance type heater with 5 W, 24 V DC	
Electronic control unit (option)		
Non-intrusive settings	Magnetic limit and torque transmitter (MWG)	
	Turns per stroke: 2 to 500 (standard) or 10 to 5,000 (option)	
Position feedback signal	Via actuator controls	
Torque feedback signal	Via actuator controls	
Mechanical position indicator (option)	Continuous self-adjusting indication with symbols OPEN and CLOSED	
Running indication	Blinking signal via actuator controls	
Heater in switch compartment	Resistance type heater with 5 W, 24 V AC	
Service conditions		
Use	Indoor and outdoor use permissible	
Mounting position	Any position	
Installation altitude	≤ 2,000 m above sea level	
	> 2,000 m above sea level on request	
Ambient temperature	Standard:	–30 °C to +40 °C/+60 °C
	Options:	–40 °C to +40 °C/+60 °C
		–60 °C to +40 °C/+60 °C
Humidity	Up to 100 % relative humidity across the entire permissible temperature range	
Enclosure protection in accordance with IEC 60529	IP68 with AUMA 3-phase AC motor	
	Terminal compartment additionally sealed against interior of actuator (double sealed)	
	According to AUMA definition, enclosure protection IP68 meets the following requirements:	
	<ul style="list-style-type: none">• Depth of water: maximum 8 m head of water• Continuous immersion in water: maximum 96 hours• Up to 10 operations during immersion	
Pollution degree according to IEC 60664-1	Pollution degree 4 (when closed), pollution degree 2 (internal)	

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Service conditions	
Vibration resistance according to IEC 60068-2-6	2 g, 10 to 200 Hz (AUMA NORM) 1 g, 10 to 200 Hz (for actuators with actuator controls) Resistant to vibration during start-up or for plant failures. However, a fatigue strength may not be derived from this. Not valid in combination with gearboxes.
Corrosion protection	Standard: KS: Suitable for use in areas with high salinity, almost permanent condensation, and high pollution.
	Options: KX: Suitable for use in areas with extremely high salinity, permanent condensation, and high pollution. KX-G: Same as KX, however aluminium-free version (outer parts)
Coating	Double layer powder coating
Colour	Standard: AUMA silver-grey (similar to RAL 7037)
	Option: Available colours on request
Lifetime	AUMA multi-turn actuators meet or exceed the lifetime requirements of EN ISO 22153. Detailed information can be provided on request.
Sound pressure level	< 72 dB (A)
Further information	
EU Directives	ATEX Directive 2014/34/EU Machinery Directive 2006/42/EC Low Voltage Directive 2014/35/EU EMC Directive 2014/30/EU RoHS Directive 2011/65/EU
Reference documents	Dimensions SAVEx 07.2 – SAVEx 16.2/SARVEx 07.2 – SARVEx 16.2 with 01.2 Electrical data 07.2 – 16.2 Technical data 01.2