Technical data Multi-turn actuators for modulating duty with 3-phase AC motors

SAREx 25.1 – SAREx 30.1 AUMA NORM

Type	Output speed rpm		Torque range[1]			Modulating torque[2]		Number of starts	Duration of impulse[3]	Backlash	Valve attachment		Valve stem diameter	Handwheel		
	50 Hz	60 Hz	min. Nm	S4-25% S5-25% max. Nm	S4-50% max. Nm	S4-25% max. Nm	S4-50% max. Nm	max. c/h	min. ms	max. ms	Standard EN ISO 5210	Option DIN 3210	for rising valve stem[4] max. mm	Ø mm	Reduction ratio	approx. kg[5]
SAREx 25.1	4	4.8	1,000	2,000	1,400	800	400	300	100	275	F25	G4	95	400	45 : 1	155
	5.6	6.7								220					32 : 1	
	8	9.6								155					45 : 1	
	11	13								130					32 : 1	
SAREx 30.1	4	4.8	2,000	4,000	2,800	1,600	800	300	100	275	F30	G5	115	500	45 : 1	195
	5.6	6.7								220					32 : 1	
	8	9.6				1,400	700			155					45 : 1	
	11	13								130					32 : 1	

General information	
For operation of multi-turn actuators AUMA NORM, electric actuator controls are required.	
Features and functions	
Explosion protection	Standard: II2G EEx ed IIB T4 II2G c IIB T4 II2D Ex tD A21 IP 6X T130 °C Options: II2G EEx ed ib IIB T4 (with RWG) II2G c IIB T4
EC type examination certificate	PTB 03 ATEX 1123
Type of duty[6]	Standard: Intermittent duty S4 - 25 % Option: Intermittent duty S4 - 50 %
Motors	3-phase asynchronous motor, type IM B9 according to IEC 34
Insulation class	Standard: F, tropicalized Option: H, tropicalized
Motor protection	Standard: PTC thermistors (according to DIN 44082)[7]
Self-locking	Yes
Torque switching	Torque switching for directions OPEN and CLOSE, adjustable to any position Standard: Single switch (1 NC and 1 NO) for each direction Options: Tandem switches (2 NC and 2 NO) for each direction, switches galvanically isolated
Limit switching	Counter gear mechanism for end positions OPEN and CLOSED for 1 to 500 turns per stroke (optional 1 to 5,000 turns per stroke) Standard: Single switch (1 NC and 1 NO) for each end position 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 switches (DUO limit switching), adjustable to any position
Position feedback signal, analogue (options)	Potentiometer or 0/4 – 20 mA (RWG, intrinsically safe) For further details refer to separate data sheet
Mechanical position indicator (option)	Continuous indication, adjustable indicator disc with symbols OPEN and CLOSED
Running indication (option)	Blinker transmitter
Heater in switch compartment	Standard: Resistance type heater, 6 W, 220 – 240 V AC/DC Options: 110 – 120 V AC/DC, 48 V AC/DC, 24 V AC/DC
Motor heater (option)	110 – 120 V AC/DC: 50 W 220 – 240 V AC/DC: 50 W 380 – 400 V AC/DC: 22 W
Manual operation	Manual drive for setting and emergency operation, handwheel does not rotate during motor operation. Option: Handwheel lockable
Electrical connection	Standard: Terminals
Threads for cable entries	Standard: Metric threads Options: Pg-threads, NPT-threads, G-threads

1) Tripping torque adjustable for both directions
2) Permissible average torque for modulating duty
3) For identical direction of rotation
4) For output drive types A and B1
5) Weight for multi-turn actuator AUMA NORM with 3-phase AC motor, standard electrical connection, output drive type B1 and handwheel
6) For nominal voltage and 20 °C ambient temperature and at average modulating torque load. The type of duty must not be exceeded.
7) PTC thermistors additionally require a suitable tripping device within the actuator controls.

Terminal plan	KMS TP200/001 (basic version)		
Output drive types	A, B1, B2, B3, B4 according to EN ISO 5210 A, B, D, E according to DIN 3210 C according to DIN 3338 Special output drives AF, B3D, DD, ED, IB1, IB3		
Service conditions			
Mounting position	Any position		
Enclosure protection according to EN 60 529[8)]	Standard:	IP 67	
	Option:	IP 68	
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 wastewater 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	
Colour	Standard:	AUMA silver-grey (similar to RAL 7037)	
	Option:	Other colours are possible upon request	
Ambient temperature[9)]	Standard:	–40 °C to +40 °C/60 °C	
	Options:	–50 °C to +40 °C/60 °C (low temperature)	
Lifetime[10)]	**Tyoe**	**Starts in millions** min.	
	SAREx 25.1	2.5	
	SAREx 30.1	2.5	
Further information			
EU Directives	ATEX Directive: (94/9/EC) Electromagnetic Compatibility (EMC): (2004/108/EC) Low Voltage Directive: (2006/95/EC) Machinery Directive: (98/37/EC)		
Reference documents	Product description “Electric multi-turn actuators SA” Information “Electric actuators and valve gearboxes according to ATEX Directive...” Dimensions SAEx 25.1 – SAEx 40.1/SAREx 25.1 – SAREx 30.1 Electrical data SAREx 25.1 – SAREx 30.1		

8) For version in enclosure protection IP 68, higher corrosion protection KS or KX is strongly recommended.

9) Under certain conditions (special sizing), possible up to +60 °C

10) The lifetime in operation hours (h) depends on the load and the number of starts. A high starting frequency will rarely improve the modulating accuracy. To reach the longest possible maintenance-free and fault-free operating time, the number of starts per hour chosen should be as low as possible for the process.