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

### SAREx 25.1 – SAREx 30.1 AUMA NORM

Туре	Output speed rpm		Torque range <sup>1)</sup>					Number of starts	Dura- tion of impulse <sup>3)</sup>	Back- lash	Valve attachment		Valve stem diameter	Handwheel		
				S4-25% S5-25%	S4-50%	S4-25%	S4-50%				Standard	Option	for rising valve stem <sup>4)</sup>			
			min.	max.	max.	max.	max.	max.	min.	max.	EN ISO	DIN	max.		Reduc-	approx.
	50 H	z 60 Hz	Nm	Nm	Nm	Nm	Nm	c/h	ms	ms	5210	3210	mm	Ø mm	tion ratio	kg <sup>5)</sup>
SAREx	4 5.6	4.8 6.7	1.000	2.000	1,400	800	400	300	100	275 220	F25	G4	95	400	45 : 1 32 : 1	155
25.1	8 11	9.6 13	1,000	2,000	1,400	800	400	000	100	155 130	123	U4	95	400	45 : 1 32 : 1	133
SAREX	4 56	4.8 6.7				1,600	800			275 220					45 : 1 32 : 1	
30.1	8 11	9.6 13	2,000	4,000	2,800	1,400	700	300	100	155 130	F30	G5	115	500	45 : 1 32 : 1	195

### **General information**

General information							
For operation of multi-turn actuato	ors AUMA NOF	RM, electric actuator controls are required.					
Features and functions							
Explosion protection	Standard: Options:	II2G EEx ed IIB T4 II2G c IIB T4 II2D Ex tD A21 IP 6X T130 °C II2G EEx ed ib IIB T4 (with RWG) II2G c IIB T4					
EC type examination certificate	PTB 03 ATE	X 1123					
Type of duty <sup>6)</sup>	Standard: Option:	Intermittent duty S4 - 25 % Intermittent duty S4 - 50 %					
Motors	3-phase asy	nchronous motor, type IM B9 according to IEC 34					
Insulation class	Standard: Option:	F, tropicalized H, tropicalized					
Motor protection	Standard:	PTC thermistors (according to DIN 44082) <sup>7)</sup>					
Self-locking	Yes						
Torque switching	Torque switch Standard: Options:	hing for directions OPEN and CLOSE, adjustable to any position Single switch (1 NC and 1 NO) for each direction 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: Options:	Resistance type heater, 6 W, 220 – 240 V AC/DC 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 operation. Option:	e for setting and emergency operation, handwheel does not rotate during motor  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.

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



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AUMA NORM			ase AC motors					
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 5298)	Standard:	IP 67						
EN 60 529 <sup>8)</sup>	Option:	IP 68						
Corrosion protection	Standard:	KN	with a low pollutant concentration					
	Options:	KS	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 hig 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:							
	Option: Other colours are possible upon request							
Ambient temperature <sup>9)</sup>	Standard:	d: -40 °C to +40 °C/60 °C						
	Options:	-50 °C to +40 °C/60 °C (low temperature)						
Lifetime <sup>10)</sup>	Tyoe		Starts in millions					
	SAREx 25.1		min. 2.5					
	SAREX 30.1		2.5					
	67 ti 12x 66:1							
Further information								
EU Directives	ATEX Directive: (94/9/EC)							
	Electromagnetic Compatibility (EMC): (2004/108/EC)							
	Low Voltage Directive: (2006/95/EC)							
	Machinery D							
Reference documents			"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 da	ta SARE	Ex 25.1 – SAREx 30.1					

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

<sup>9)</sup> Under certain conditions (special sizing), possible up to +60  $^{\circ}\text{C}$ 

<sup>10)</sup> 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.