

Technical data Part-turn actuators for open-close and modulating duty

General information

Part-turn actuators for controlling and automating final elements within the field of process engineering with part-turn movements between 90° and 180° for e.g. butterfly valves and ball valves.

Type	Torque range		Operating time for 90° in seconds			Motor protection ¹⁾	Valve attachment	Weight
	Open-close duty Min. [Nm]	Modulating duty Max. [Nm]	AC 50 Hz	AC 60 Hz ²⁾	DC ³⁾			
ED 25	25	25	15	12	6	B	F03, (F04) ⁴⁾ , F05, F07	4.0
			30	25	10	B		
			70	59	18	B		
ED 50	50	50	15	12	7	T	F03, (F04) ⁴⁾ , F05, F07	4.0
			30	25	10	B		
			70	59	18	B		

- 1) B = Stall-proof motor (S1 - 100 %), T = thermoswitch for temperature monitoring
- 2) Power consumption is increased by 20 % compared to the 50 Hz AC variant
- 3) For DC, the operating time is reduced with increasing load. The indicated operating time is valid for no load
- 4) Offset by 45°, F12 on request

Features and functions of actuator

Type of duty	Open-close duty:	Short-time duty S2 - 15 min, class A								
	Modulating duty:	Intermittent duty S3 - 50 %, S4 - 50 % or S1 - 100 % with maximum number of starts of 1,200 starts per hour. Specific data for the respective model, refer to electrical data.								
		Intermittent duty S1 - 100 % with maximum number of starts of up to 1,200 starts per hour; not available for all versions (option)								
		For nominal voltage and +40 °C ambient temperature and at run or modulating torque load. The type of duty must not be exceeded.								
Motor	Synchronous motor									
Mains voltage, mains frequency	Standard voltages:									
	1-phase AC									
	Voltages/frequencies									
	Volt	230	220							
	Hz	50	60							
	Options:									
	3-phase AC					1-phase AC			DC current	
	Voltages/frequencies					Voltages/frequencies			Voltage	
	Volt	380	400	400	440	24	24	115	110	24
	Hz	50	50	60	60	50	60	50	60	–
	Further voltages on request									
	Permissible variation of mains voltage: ±10 %									
	Permissible variation of mains frequency: ±5 %									
Insulation class	E, B, F									
Motor protection	Without torque switches and, therefore, without motor protection as standard.									
Heater (option)	Heating resistor with thermoswitch against moisture with autonomous temperature control, max. 15 W, supply voltage 24, 115, 230 V/50/60 [HZ/WP]									
Self-locking	Yes									
Swing angle	90°, 120°, 150°, 180°									
Manual operation	Emergency manual operation with hexagon socket									
Electrical connection	Internal terminal rail, for terminal assignment refer to terminal plan									
Cable entry	2 blanking plugs M16 x 1.5									
Hood	Standard:	Polycarbonate (flammability class V0)								
	Options:	Aluminium with indicator glass								

Technical data Part-turn actuators for open-close and modulating duty

Features and functions of actuator controls		
Limit switching and digital outputs	Standard:	2 switches for limit seating in the end positions. Used to set the limit positions for the end positions.
	Options:	<ul style="list-style-type: none"> Additional limit switches for signalling the end positions or intermediate positions, freely adjustable max. 250 V AC, max. 10 A (resistive load), max. 5 A (inductive load), max. 2 switches [2WE] Additional limit switches for signalling the end positions or intermediate positions, freely adjustable with gold-plated contacts for low voltage, max. 30 V AC, max. 0.1 A (resistive load), max. 2 switches [2WE-G]
Digital inputs	Standard:	None
	Options:	With 2 inputs (reversing contactors) for OPEN and CLOSE, option for: <ul style="list-style-type: none"> 24 V DC; 1,7 W appropriate for PLC [WSE] 24 V AC/DC 110 V AC 230 V AC
Positioner (option)	Positioning electronics for actuator control [PEL100, PEL-GL] Input 0 – 10 V, 0/4 – 20 mA, output 0 – 10 V, 0/4 – 20 mA	
Position feedback signal, analogue (options)	<ul style="list-style-type: none"> Potentiometer 100/130/200/500/1 000/5 000 Ω or 10 kΩ [POT] Linearity fault $\leq 0.5\%$, max. 1.5 W, wiper current 30 mA, max. 2 units Electronic position feedback signal 2/3-wire technology [ESR100] Output 0/4 – 20 mA, connecting voltage 24 V DC 	

Service conditions		
Mounting position	Any position, but not suspended downward	
Installation altitude	$\leq 2,000$ m above sea level $> 2,000$ m above sea level on request	
Ambient temperature	Standard:	0 °C to +60 °C with options (a.o. electronic sub-assembly) 0 °C to +50 °C with positioner option (PEL)
	Option:	–20 °C to +60 °C (heater required)
Enclosure protection according to EN 60529	Standard:	IP67 IP65 for versions with local controls, FSC module or transformer
	Option:	IP68 (version with larger output drive unit and valve attachment F05/F07/F10) 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 Duration of continuous immersion in water: Max. 96 hours
Explosion-protection (option)	Ex II 3D IP65 T 150°C Dc [A-Ex]	
Corrosion protection	C2 according to EN ISO 12944-2	
Coating	Powder coating	
Colour	AUMA silver-grey (similar to RAL 7037)	
Lifetime	AUMA part-turn actuators meet or exceed the lifetime requirements of EN 15714-2. Detailed information can be provided on request.	

Further information	
EU Directives	Machinery Directive 2006/42/EC Low Voltage Directive 2014/35/EU EMC Directive 2014/30/EU RoHS Directive 2011/65/EU