

SQ 05.2 – SQ 14.2

Electrical data Part-turn actuators for open-close duty with 3-phase AC motors

Short-time duty S2 - 15 min, 400 V/50 Hz

Part-turn actuator			Motor									
Type	Operating time for 90° in seconds	Max. torque [Nm]	Motor type	Nominal power ¹⁾ P _N [kW]	Speed [rpm]	Nominal current ²⁾ I _N (A)	Max. current ³⁾ I _{max} [A]	Starting current I _A [A]	cos φ	Overcurrent protection device setting [A]	AUMA power class for switch-gear	
											Contact-tor	Thyristor
SQ 05.2	4	150	VD00063-2-0,06	0.06	2,800	0.6	0.6	1.9	0.42	0.6	A1	B1
	5.6					0.6	0.6	1.9	0.42	0.6	A1	B1
	8		VD00063-4-0,04	0.04	1,400	0.4	0.4	1.0	0.50	0.4	A1	B1
	11					0.4	0.4	1.0	0.50	0.4	A1	B1
	16		VD00063-4-0,02	0.02	1,400	0.4	0.4	1.0	0.40	0.4	A1	B1
	22					0.4	0.4	1.0	0.40	0.4	A1	B1
	32		SD00063-4-0,01	0.01	1,400	0.3	0.3	0.7	0.38	0.3	A1	B1
63	0.4	0.4				0.5	0.61	0.4	A1	B1		
SQ 07.2	4	300	VD00063-2-0,12	0.12	2,800	0.7	0.9	3.0	0.52	0.9	A1	B1
	5.6					0.7	0.9	3.0	0.52	0.9	A1	B1
	8		VD00063-4-0,06	0.06	1,400	0.6	0.7	1.6	0.38	0.7	A1	B1
	11					0.6	0.7	1.6	0.38	0.7	A1	B1
	16		VD00063-4-0,03	0.03	1,400	0.4	0.5	1.0	0.43	0.5	A1	B1
	22					0.4	0.5	1.0	0.43	0.5	A1	B1
	32		SD00063-4-0,01	0.01	1,400	0.3	0.3	0.7	0.38	0.3	A1	B1
63	0.4	0.4				0.5	0.61	0.4	A1	B1		
SQ 10.2	8	450	VD00063-4-0,10	0.10	1,400	0.8	1.0	2.0	0.48	1.0	A1	B1
	11					0.8	0.9	2.0	0.48	0.9	A1	B1
	16	600	SD00063-4-0,06	0.06	1,400	0.6	0.7	1.6	0.38	0.7	A1	B1
	22					0.6	0.7	1.6	0.38	0.7	A1	B1
	32					0.5	0.5	1.0	0.48	0.5	A1	B1
	45					0.5	0.5	1.0	0.48	0.5	A1	B1
	63					0.3	0.3	0.7	0.43	0.3	A1	B1
SQ 12.2	11	900	VD00063-2-0,19	0.19	2,800	1.0	1.2	3.5	0.53	1.2	A1	B1
	16					0.8	1.0	2.0	0.48	1.0	A1	B1
	22	1,200	VD00063-4-0,10	0.10	1,400	0.8	0.9	2.0	0.48	0.9	A1	B1
	32					0.6	0.7	1.6	0.38	0.7	A1	B1
	45					0.6	0.7	1.6	0.38	0.7	A1	B1
	63					0.5	0.5	1.0	0.48	0.5	A1	B1
	90					0.5	0.5	1.0	0.48	0.5	A1	B1
125	0.3	0.3	0.7	0.43	0.3	A1	B1					
SQ 14.2	24	1,800	VD00063-2-0,19	0.19	2,800	1.0	1.2	3.5	0.53	1.2	A1	B1
	36					0.8	0.9	2.0	0.48	0.9	A1	B1
	48	2 400	VD00063-4-0,10	0.10	1,400	0.8	0.9	2.0	0.48	0.9	A1	B1
	72					0.6	0.7	1.6	0.38	0.7	A1	B1
	100					0.6	0.7	1.6	0.38	0.7	A1	B1

1) – 3) Refer to Notes on Electrical data SQ .2/SQR .2 part-turn actuators with 3-phase AC motors

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

Installation and sizing																	
Motor data	Motor data is approximate. Due to usual manufacturing tolerances, there may be deviations from the values given.																
Motor protection	<p>To protect against overheating, thermostats or PTC thermistors are embedded in the motor windings.</p> <p>Actuators without integral actuator controls (AUMA NORM): Thermostats or PTC thermistors have to be considered within the external controls (refer to terminal plan).</p> <p>Note: Failure to connect thermostats or PTC thermistors shall void the warranty for the motor.</p> <p>Rating of the thermostats</p> <table border="1"> <thead> <tr> <th colspan="2">AC current</th> <th colspan="2">DC current</th> </tr> </thead> <tbody> <tr> <td colspan="2">250 V, 50 – 60 Hz</td> <td>60 V</td> <td>1.0 A</td> </tr> <tr> <td>cos φ = 1</td> <td>2.5 A</td> <td>42 V</td> <td>1.2 A</td> </tr> <tr> <td>cos φ = 0.6</td> <td>1.6 A</td> <td>24 V</td> <td>1.5 A</td> </tr> </tbody> </table> <p>Actuators with AM or AC integral actuator controls: Thermal motor protection is already integrated.</p>	AC current		DC current		250 V, 50 – 60 Hz		60 V	1.0 A	cos φ = 1	2.5 A	42 V	1.2 A	cos φ = 0.6	1.6 A	24 V	1.5 A
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Mains voltage, mains frequency	<p>Permissible variation of mains voltage: ±10 %</p> <p>Permissible variation of mains frequency: ±5 %</p>																
Switchgear sizing	<p>For motor operation, reversing contactors (mechanically, electrically and electronically locked) or thyristors (electronically locked) can be used.</p> <p>Actuators without integral actuator controls (AUMA NORM): Switchgear are supplied by the customer. We recommend specification of switchgear suitable for their rated operating power/motor power in compliance with the assigned AUMA power class.</p> <p>Switchgear assignment to AUMA power classes:</p> <table border="1"> <thead> <tr> <th rowspan="2">AUMA power class</th> <th rowspan="2">Reversing contactor Rated operating power acc. to EN 60947-4-1 Utilization category AC-3</th> <th colspan="2">Reversing contactor Motor power according to UL/CSA at</th> </tr> <tr> <th>480 V AC</th> <th>600 V AC</th> </tr> </thead> <tbody> <tr> <td>A1</td> <td>400 V AC 4.0 kW</td> <td>5.0 hp</td> <td>5.0 hp</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th rowspan="2">AUMA power class</th> <th rowspan="2">Thyristor Rated operating current acc. to EN 60947-4-2 Utilization category AC-53a</th> </tr> <tr> <th>400 V AC</th> </tr> </thead> <tbody> <tr> <td>B1</td> <td>6 A</td> </tr> </tbody> </table> <p>Actuators with AM or AC integral actuator controls: Required switchgear in power classes A1 or B1 are directly integrated in AM or AC actuator controls.</p>	AUMA power class	Reversing contactor Rated operating power acc. to EN 60947-4-1 Utilization category AC-3	Reversing contactor Motor power according to UL/CSA at		480 V AC	600 V AC	A1	400 V AC 4.0 kW	5.0 hp	5.0 hp	AUMA power class	Thyristor Rated operating current acc. to EN 60947-4-2 Utilization category AC-53a	400 V AC	B1	6 A	
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Notes on Electrical data SQ .2/SQR .2 part-turn actuators with 3-phase AC motors	
1) Nominal power P _N	Mechanical power output at motor shaft at run torque of part-turn actuator (corresponds to approx. 35 % of maximum torque).
2) Nominal current I _N	Current at run torque
3) Max. current I _{max}	Current at maximum torque