

## SQR 05.2 – SQR 14.2

### Electrical data Part-turn actuators for modulating duty with 1-phase AC motors

#### Intermittent duty S4 - 20 %, 110 V – 120 V/50 Hz

Part-turn actuator			Motor										
Type	Operating time for 90° [in seconds]	Max. torque [Nm]	Motor type	Nominal power <sup>1)</sup> P <sub>N</sub> [kW]	Speed [rpm]	Operating capacitor <sup>2)</sup> [μF]	Nominal current <sup>3)</sup> I <sub>N</sub> [A]	Max. current <sup>4)</sup> I <sub>max</sub> [A]	Starting current I <sub>A</sub> [A]	cos φ	Overcurrent protection device setting [A]	AUMA power class switchgears	
												Contact-	Thyristor
												tor	unit
SQR 05.2	8	150	VW0R063-4-0.04	0.04	1,400	50	2.3	2.7	4.6	0.97	2.7	A1	B1
	11						2.3	2.6	4.6	0.97	2.6	A1	B1
	16		SW0R063-4-0.01	0.01	1,400	35	1.8	1.9	4.1	0.84	1.9	A1	B1
	22						1.8	1.8	4.1	0.84	1.8	A1	B1
	32						1.8	1.8	4.1	0.81	1.8	A1	B1
SQR 07.2	8	300	VW0R063-4-0.06	0.06	1,400	70	3.5	4.0	7.0	0.88	4.0	A1	B1
	11						3.5	3.8	7.0	0.88	3.8	A1	B1
	16		VW0R063-4-0.03	0.03	1,400	50	2.3	2.6	4.6	0.96	2.6	A1	B1
	22						2.3	2.6	4.6	0.96	2.6	A1	B1
	32						1.8	1.9	4.1	0.81	1.9	A1	B1
SQR 10.2	11	600	VW0R063-4-0.10	0.10	1,400	80	3.9	4.6	7.4	0.94	4.6	A1	B1
	16		SW0R063-4-0.06	0.06	1,400	60	3.1	3.5	6.8	0.84	3.5	A1	B1
	22						3.1	3.4	6.8	0.84	3.4	A1	B1
	32		SW0R063-4-0.04	0.04	1,400	50	2.3	2.7	4.6	0.97	2.7	A1	B1
	45						2.3	2.6	4.6	0.97	2.6	A1	B1
63	1.8	1.9					4.1	0.84	1.9	A1	B1		
SQR 12.2	16	900	VW0R063-4-0.10	0.10	1,400	80	3.9	4.5	7.4	0.94	4.5	A1	B1
	22						3.9	4.6	7.4	0.94	4.6	A1	B1
	32	SW0R063-4-0.06	0.06	1,400	60	3.1	3.5	6.8	0.84	3.5	A1	B1	
	45					3.1	3.4	6.8	0.84	3.4	A1	B1	
	63					2.3	2.7	4.6	0.97	2.7	A1	B1	
SQR 14.2	36	1,800	VW0R063-4-0.10	0.10	1,400	80	3.9	4.5	7.4	0.94	4.5	A1	B1
	48						3.9	4.6	7.4	0.94	4.6	A1	B1
	72	2,400	SW0R063-4-0.06	0.06	1,400	60	3.1	3.5	6.8	0.84	3.5	A1	B1
	100						3.1	3.4	6.8	0.84	3.4	A1	B1

#### Notes on table

1) Nominal power P <sub>N</sub>	Mechanical power output at motor shaft at running torque of part-turn actuator (corresponds to approx. 35 % of maximum torque). The consumed electrical power can be calculated using the following formula: $P = U \times I \times \cos \varphi$
2) Operating/starting capacitor	For VW/SW motors, operating capacitors are integrated within the motor.
3) Nominal current I <sub>N</sub>	Current at running torque
4) Max. current I <sub>max</sub>	Current at maximum torque

#### Notes on installation and sizing

Motor data	Motor data is approximate. Due to usual manufacturing tolerances, there may be deviations from the values given.																
Thermoswitches/PTC thermistors	To protect against overheating, thermoswitches or PTC thermistors are embedded in the motor windings. <b>Actuators without integral controls (AUMA NORM):</b> Thermoswitches or PTC thermistors have to be considered within the external controls (refer to terminal plan). <b>Note: Failure to connect thermoswitches or PTC thermistors shall void or warranty for the motor.</b> <b>Rating of the thermoswitches</b> <table border="1" style="margin-left: 20px;"> <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>	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	Permissible variation of the mains voltage: ±10 % Permissible variation of the mains frequency: ±5 %																

Terminal plan	<table border="1"> <thead> <tr> <th>Part-turn actuators</th> <th>Motor (type)</th> <th>Terminal plan</th> </tr> </thead> <tbody> <tr> <td>SQR 05.2 – SQR 14.2</td> <td>VW.../SW...</td> <td>TPA01R1AA-001-000</td> </tr> </tbody> </table>	Part-turn actuators	Motor (type)	Terminal plan	SQR 05.2 – SQR 14.2	VW.../SW...	TPA01R1AA-001-000																				
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<p>For further information refer to "Technical data Part-turn actuators SQR 05.2 – SQR 14.2 for modulating duty with 1-phase AC motors".</p>																											
Switchgear sizing	<p>For motor operation, reversing contactors (mechanically, electrically and electronically locked) or thyristors (electronically locked) can be used.</p> <p><b>Actuators without integral controls (AUMA NORM):</b></p> <p>Switchgears are supplied by the customer. We recommend specification of switchgears 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>																										
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