SQR 05.2 – SQR 14.2

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

Intermittent duty S4 - 25 %, 400 V/50 Hz

Part-turn actuator			Motor								AUMA power class for switch-gear	
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]	Contac-tor	Thyristor
SQR 05.2	8	150	VD0R063-4-0,04	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		VD0R063-4-0,02	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		SD0R063-4-0,01	0.01	1,400	0.3	0.3	0.7	0.38	0.3	A1	B1
	63		SD0R063-8-0,01		700	0.4	0.4	0.5	0.61	0.4	A1	B1
SQR 07.2	8	300	VD0R063-4-0,06	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		VD0R063-4-0,03	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		SD0R063-4-0,01	0.01	1,400	0.3	0.3	0.7	0.38	0.3	A1	B1
	63		SD0R063-8-0,01		700	0.4	0.4	0.5	0.61	0.4	A1	B1
SQR 10.2	11	600	VD0R063-4-0,10	0.10	1,400	0.8	0.9	2.0	0.48	0.9	A1	B1
	16		SD0R063-4-0,06	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		SD0R063-4-0,04	0.04	1,400	0.5	0.5	1.0	0.48	0.5	A1	B1
	42					0.5	0.5	1.0	0.48	0.5	A1	B1
	63		SD0R063-4-0,02	0.02	1,400	0.3	0.3	0.7	0.43	0.3	A1	B1
SQR 12.2	16	900	VD0R063-4-0,10	0.10	1,400	0.8	1.0	2.0	0.48	1.0	A1	B1
	22	1,200				0.8	0.9	2.0	0.48	0.9	A1	B1
	32		SD0R063-4-0,06	0.06	1,400	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		SD0R063-4-0,04	0.04	1,400	0.5	0.5	1.0	0.48	0.5	A1	B1
	84					0.5	0.5	1.0	0.48	0.5	A1	B1
	125		SD0R063-4-0,02	0.02	1,400	0.3	0.3	0.7	0.43	0.3	A1	B1
SQR 14.2	36	1,800	VD0R063-4-0,10	0.10	1,400	0.8	0.9	2.0	0.48	0.9	A1	B1
	48	2,400				0.8	0.9	2.0	0.48	0.9	A1	B1
	72		SD0R063-4-0,06	0.06	1,400	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	To protect against overheating, thermoswitches or PTC thermistors are embedded in the motor windings. **Actuators without integral actuator controls (AUMA NORM):** Thermoswitches or PTC thermistors have to be considered within the external controls (refer to terminal plan). **Note: Failure to connect thermoswitches or PTC thermistors shall void the warranty for the motor.** **Rating of the thermoswitches**

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

Actuators with AM or AC integral actuator controls:

Thermal motor protection is already integrated.

Mains voltage, mains frequency	Permissible variation of mains voltage: ±10 % Permissible variation of mains frequency: ±5 %
Switchgear sizing	For motor operation, reversing contactors (mechanically, electrically and electronically locked) or thyristors (electronically locked) can be used. **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. Switchgear assignment to AUMA power classes:

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**	
	400 V AC	480 V AC	600 V AC
A1	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

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.

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). The consumed electrical power can be calculated using the following formula: $P = U \times I \times \cos \varphi \times \sqrt{3}$
2) Nominal current I_N	Current at run torque
3) Max. current I_{max}	Current at maximum torque

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